



ISO 9001



ISO 9008



CE 9035



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XINHAI VALVE



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AGENT:



XINHAI VALVE CO.,LTD.



COMPANY INTRODUCTION

Xinhai Valve Co., Ltd. With more than 33 years experience, the company now become a professional valve manufacturer concentrated by developing, manufacturing, marketing and servicing. It covers an area of 25,000 square meters and has two subsidiary factories.

The product includes gate, check, globe, ball, butterfly, plug, strainer and other valves. The valves are manufactured according to ANSI, API, DIN, GOST, BS, JIS, Chinese GB standards and the customers' requirements. These products have been installed throughout the world, having a wide variety of applications in the Gas, Oil, Refining, Chemical, Marine, Power Generation and Pipeline Transmission industries.

Pressure range: Class125-Class2500, PN6-PN420.
Size range: NP51Q-NP948.

Operation type: manual, gearbox, chain wheel, pneumatic, electronic, etc.

Connection End: flanged, BW, SW, NPT, outlet type, etc.

Materials (casting): WCB, WCC, LCC, LC1-3, CF8, CF3, CF8M, CF3M, CF8C, CN7M, CA15, C5, WC6, WC9, Monel, etc.

Materials (forging): A105, LF1, LF2, F304, F304L, F316, F316L, F11, F22, P6, F51, F316H, F321, F347, Inconel, etc.

In order to introduce the international quality management systems, Xinhai have got the approval of ISO 9001, API-6D, CE and Chinese TSG certification. Also, Xinhai established a multi-functional phys-chemical lab to fulfill service the quality time to time and fitted out spectrum analyzer, portable spectrograph(PM), impact tester, hardness meter, tensile tester, thickness meter, magnetic particle tester, fugitive emission tester, and NDE testing equipment.

The main target of Xinhai is to offer a high quality products and service to ensure the highest degree of satisfaction and fidelity of our customers. Welcome the new and old customers to cooperate with Xinhai to explore wider global markets and create more brilliant future together!

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Quality First, Customer Oriented.



XINHAI VALVE CERTIFICATE



API 6D

CE

API 607

ISO 9001

ISO 14001

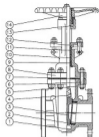
Pursuing excellence, innovative thinking;
Improve the quality, offer perfect service;
Management create benefit, System improve result;
We would like to share our success with you for common development.

PRODUCTION FACILITIES



QUALITY CONTROL





STANDARD MATERIAL TO API 600

Trim Code	Seat Ring Part No.2	Wedge Part No.3	Stem Part No.4	Backseat Part No.9
1	F6	F6	F6	F6
2	F304	F304	F304	F304
5	Stellite	Stellite	F6	F6
8	Stellite	F6	F6	F6
9	Monel	Monel	Monel	Monel
10	F316	F316	F316	F316
13	Alloy 20	Alloy 20	Alloy 20	Alloy 20

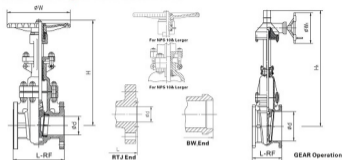
Note: Usually, trim2 and trim10 are not adopted because the sealing face would be destroyed easily.

Standard Material specifications

Parts name	Carbon Steel to ASTM		Alloy Steel to ASTM				Stainless Steel to ASTM			
1 Body	A216 WCB	A352 LCB	A217 WC1	A217 WC8	A217 WC9	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
8 Bonnet	A216 WCB	A352 LCB	A217 WC1	A217 WC8	A217 WC9	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
6 Bolts	A193 B7	A320 L7	A193 B7	A193 B16	A193 B16	A193 B16	A193 B8	A193 B8	A193 B8	A193 B8
5 Nuts	A194 2H	A194 4	A194 2H	A194 4	A194 4	A194 4	A194 8	A194 8	A194 8	A194 8
11 Gland	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F304	A182 F316	A182 F304L	A182 F316L
12 Gland Flange	A216 WCB	A352 LCB	A217 WC1	A217 WC8	A217 WC9	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
2 Disc	A216 WCB	A352 LCB	A217 WC1	A217 WC8	A217 WC9	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
7 Outlet	SS Spiral Wound W/graphite, or SS Spiral Wound W/PTFE, or Reinforced PTFE									
10 Packing	Braided graphite, or Die-formed graphite ring or PTFE									
13 Stem Nut	Copper Alloy or A492 D2									
14 Hand wheel	Ductile iron or Carbon steel									

Note: The chart above only lists out some common composition of steel gate valve parts. We may provide other different parts material composition according to the customer's request or the actual valve working condition.

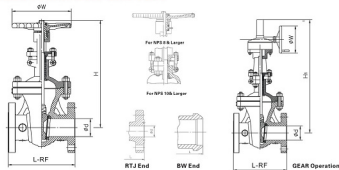
Class 150 & JIS 10K Gate Valve



Class	Size		Dimensions(mm)							Weight (Kg)		
	NPS	DN	L			d	H	H1	W	W1	H/W	G/O
			R F	RTJ	BW							
150 10K	1/2	15	108	119	108	14	218	-	120	-	4	-
	3/4	20	117	130	117	19	190	-	120	-	5	-
	1	25	127	140	127	25	256	-	140	-	7	-
	1 1/4	32	140	153	140	31	268	-	180	-	10	-
	1 1/2	40	165	178	165	38	326	-	200	-	15	-
	2	50	178	191	234	50	340	-	200	-	20	-
	2 1/2	65	191	203	241	63	365	-	200	-	23	-
	3	80	203	216	283	76	410	-	250	-	36	-
	4	100	229	241	305	100	485	-	280	-	54	-
	5	125	254	267	381	127	520	-	280	-	82	-
	6	150	267	279	401	150	595	795	300	310	82	104
	8	200	292	305	429	200	755	1015	360	310	126	150
	10	250	310	343	457	250	895	1210	400	310	194	215
	12	300	356	368	502	300	1040	1405	450	460	299	315
	14	350	381	394	572	350	1145	1535	500	460	381	451
	16	400	406	419	610	387	1233	1780	500	460	536	597
	18	450	432	445	660	428	1420	1900	600	460	608	651
	20	500	457	470	711	488	1625	2220	500	530	827	843
	24	600	508	521	813	590	1862	2857	800	530	1262	1357
	26	650	559	-	864	633	-	2600	-	530	1281	1550
28	700	610	-	914	684	-	2800	-	530	-	1880	
30	750	610	-	914	735	-	3110	-	600	-	2300	
32	800	711	-	965	779	-	3250	-	600	-	2550	
34	850	711	-	1016	830	-	3500	-	600	-	2650	
36	900	711	-	1016	874	-	3640	-	600	-	3300	
40	1000	812.8	-	1067	-	-	4300	-	1000	-	3642	
48	1200	1067	-	1168	-	-	5020	-	1000	-	5530	

Note: We may provide other different actuators according to the customer's request, such as pneumatic, electric, hydraulic actuators, the details of them according to the actual valve working condition.

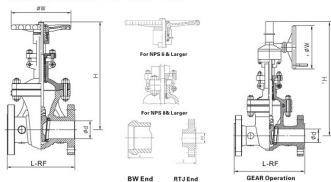
Class 300 & 15 20K Gate Valve



Class	Size		Dimensions (mm)									Weight (Kg)	
	NPS	DN	L			d	H	H1	W	W1	H/W	G/O	
			R.F	RTJ	BW								
300 20K	1/2	15	140	151	140	14	198	-	120	-	6	-	
	3/4	20	152	165	152	19	215	-	140	-	7	-	
	1	25	165	178	165	25	230	-	160	-	8.5	-	
	1 1/2	32	178	191	178	31	266	-	180	-	15	-	
	2	50	190	203	190	38	352	-	200	-	18	-	
	2 1/2	40	216	232	216	50	364	-	200	-	24	-	
	3	50	216	232	216	50	364	-	200	-	24	-	
	3 1/2	65	241	257	241	63	385	-	200	-	34	-	
	4	80	283	298	283	76	460	-	250	-	55	-	
	5	100	305	321	305	100	540	650	280	310	67	100	
	5 1/2	125	381	397	381	127	548	750	300	310	99	126	
	6	150	403	419	403	150	649	835	350	310	147	186	
	8	200	419	435	419	200	798	1030	400	310	228	235	
	10	250	457	473	457	250	940	1254	450	460	332	416	
	12	300	502	518	502	300	1129	1460	500	460	512	582	
	14	350	562	578	562	336	1195	1585	600	460	715	756	
	16	400	618	634	618	387	1340	1830	600	460	850	965	
	18	450	914	930	914	431	1503	2000	650	460	1160	1234	
	20	500	991	1010	991	482	1625	2175	750	510	1300	1400	
	24	600	1143	1165	1143	584	1965	2620	900	510	2200	2385	
26	650	1245	1270	1245	633	-	-	-	600	-	3000		
28	700	1346	1372	1346	684	-	-	-	600	-	3300		
30	750	1397	1422	1397	735	-	-	-	600	-	3550		
32	800	1524	1553	1524	779	-	-	-	600	-	4400		
34	850	1626	1654	1626	830	-	-	-	600	-	5200		
36	900	1727	1756	1727	874	-	-	-	600	-	6050		
40	1000	1956	-	-	-	-	-	-	4340	-	8100		

Noted: We may provide other different actuators according to the customer's request, such as pneumatic, electric, hydraulic actuators, the details of them according to the actual valve working condition.

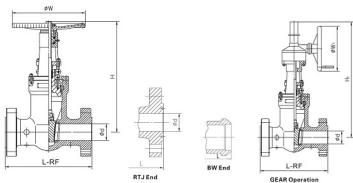
Class 600 & Class 900 Gate Valve



Class	Size		Dimensions (mm)									Weight (Kg)	
	NPS	DN	L			d	H	H1	W	W1	H/W	G/O	
			R.F	RTJ	BW								
600	2	50	292	295	292	50	380	-	200	-	37	-	
	2 1/2	65	330	333	330	63	420	-	210	-	50	-	
	3	80	354	359	354	76	500	585	200	310	82	87	
	4	100	432	435	432	100	575	695	300	310	142	154	
	5	125	508	511	508	127	740	790	350	310	175	227	
	6	150	559	562	559	150	750	900	450	460	245	296	
	8	200	660	664	660	199	850	1110	500	460	423	472	
	10	250	787	791	787	247	1005	1300	650	460	682	657	
	12	300	838	841	838	298	1130	1650	700	460	932	893	
	14	350	889	892	889	326	1270	1750	900	530	1177	1318	
	16	400	991	994	991	374	1365	1900	900	530	1513	1720	
	18	450	1092	1095	1092	419	-	-	2030	-	600	-	
20	500	1194	1200	1194	463	-	-	2172	-	600	-		
24	600	1397	1407	1397	558	-	-	2450	-	600	-		
900	2	50	368	371	368	47	500	-	200	-	70	-	
	2 1/2	65	419	422	419	57	450	-	200	-	110	-	
	3	80	381	384	381	72	585	-	300	310	140	167	
	4	100	457	460	457	98	575	625	350	310	178	227	
	5	125	559	562	559	125	630	740	400	310	258	285	
	6	150	610	613	610	146	795	900	500	460	358	396	
	8	200	737	740	737	190	815	1000	650	460	591	677	
	10	250	838	841	838	228	1035	1130	700	530	1060	1180	
	12	300	965	968	965	282	1180	1520	900	530	1213	1310	
	14	350	1029	1038	1029	311	1550	1600	900	530	1600	1665	
	16	400	1130	1140	1130	355	1900	2000	900	460	2150	2340	
	18	450	1219	-	-	400	-	-	2232	-	800	-	
20	500	1321	-	-	444	-	-	2435	-	800	-		

Noted: We may provide other different actuators according to the customer's request, such as pneumatic, electric, hydraulic actuators, the details of them according to the actual valve working condition.

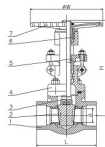
Class 1500 & Class 2500 Gate Valve



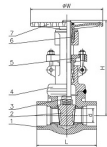
Class	Size		Dimensions (mm)								Weight (Kg)		
	NPS	DN	L				d	H	H ₁	W	W ₁	H.W	G.O
			RF	RTJ	BW (RB)	BW (PSB)							
1500	2	50	368	371	368	216	47	430	-	280	-	76	-
	2½	65	419	422	419	254	57	490	-	300	-	110	-
	3	80	470	473	470	303	69	540	660	350	310	175	202
	4	100	546	549	546	406	92	650	810	460	310	270	300
	5	125	673	676	673	483	125	780	930	450	310	378	405
	6	150	785	711	795	559	136	835	1015	560	460	520	575
	8	200	832	841	832	711	177	925	1180	730	530	820	915
	10	250	991	1000	991	864	222	1230	1525	960	600	1560	1750
	12	300	1130	1144	1130	991	265	-	1620	-	600	-	2120
	14	350	1257	1276	1257	1067	288	-	1965	-	600	-	3306
16	400	1384	1407	1384	1194	330	-	2358	-	600	-	3459	
2500	2	50	451	454	451	279	38	490	580	290	310	100	130
	2½	65	508	514	508	330	47	580	630	300	310	150	180
	3	80	578	584	578	368	57	630	765	330	310	245	275
	4	100	673	683	673	457	72	725	850	400	310	390	420
	5	125	794	807	794	533	96	900	960	500	460	550	580
	6	150	914	927	914	610	111	1040	1100	600	558	780	835
	8	200	1032	1038	1032	762	146	1150	1150	750	460	1260	1355
	10	250	1270	1282	1270	914	184	1480	1460	960	600	2360	2565
12	300	1422	1445	1422	1041	218	-	1660	-	600	-	3250	

Notes: We may provide other different actuators according to the customer's request, such as pneumatic, electric, hydraulic actuators, the details of them according to the actual valve working condition.

Class 150 ~ Class 1500 Forged steel Gate Valve



Bolted Bonnet Socket-Welding End



Welded Bonnet Socket-Welding End

Standards

Design and Manufacture	API 602			
Inspection and Test	API 598			
Socket-weld dimension	ASME B16.11			
End threads dimension	ASME B1.20.1			
Pressure-temperature ratings	ASME B16.34			
Part Name	Material			
1 Body	ASTM A105	ASTM A182 F304	ASTM A182 F316	ASTM A182 F316
2 Disc	ASTM A105	ASTM A182 F304	ASTM A182 F316	ASTM A182 F316
3 Stem	ASTM A182 F6	ASTM A182 F304	ASTM A182 F316	ASTM A182 F316
4 Bonnet	ASTM A105	ASTM A182 F304	ASTM A182 F316	ASTM A182 F316
5 Gland Flange	ASTM A105	ASTM A182 F304	ASTM A182 F316	ASTM A182 F316
6 Stem Nut	ASTM A328 410			
7 Handwheel	ASTM A197			

Class	Size		Dimensions (mm)				NPT	Weight (kg)
	NPS	DN	L	d	H	W		
150-800	½"	15	79	13	153	100	½"	2.0
	¾"	20	92	13	153	100	¾"	2.2
	1"	25	111	18	185	125	1"	3.6
	1½"	32	120	29	222	160	1½"	6.2
	2"	40	120	29	240	160	1½"	6.2
	2½"	50	140	36.5	279	180	2"	9.7
900-1500	½"	15	92	13	181	125	½"	3.5
	¾"	20	111	13	181	125	¾"	4.0
	1"	25	120	18	218	160	1"	6.0
	1½"	32	120	24	237	160	1½"	7.0
	2"	40	140	29	274	180	1½"	10.4
	2½"	50	160	36.8	319	200	2"	15.5
2500	½"	15	150	14	284	160	½"	10.0
	¾"	20	150	14	284	160	¾"	12.4
	1"	25	170	19	327	200	1"	22.5
	1½"	32	200	25	374	250	1½"	31.7
	2"	40	200	28	377	250	1½"	33.0
	2½"	50	250	35	434	300	2"	38.0



Standards

Design Standard: API 6D, ASME B 16.34

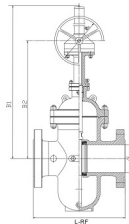
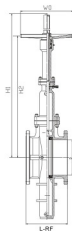
Face to Face: ASTM B 16.10, API6D

End flanges Dimensions: ASME B 16.5, MSS SP44

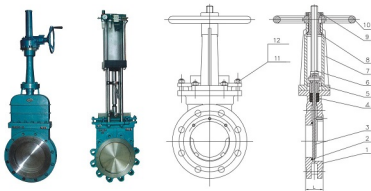
Inspection and Test: API 598, API 6D

Parts and material list

Part Name	Carbon Steel to ASTM		Alloy Steel to ASTM				Stainless Steel to ASTM			
1 Body	A216 WCB	A352 LCB	A217 WC1	A217 WC6	A217 WC9	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
2 Seat	A105+PTFE				SS+PTFE					
3 Slab	A105+ENP	A105+ENP	A105+ENP	A105+ENP	A105+ENP	A182 F304	A182 F316	A182 F304L	A182 F316L	
4 Stem	A276 420	A276 420	A276 420	A276 420	A276 420	A276 304	A276 316	A276 304L	A276 316L	
5 Gasket	Graphite+304, SS spiral Wound, PTFE, Reinforced PTFE, etc.									
6 Bonnet	A216 WCB	A352 LCB	A217 WC1	A217 WC6	A217 WC9	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
7 Bolt	A193 B7	A320 L7	A193 B7	A193 B16	A193 B16	A193 B16	A193 B8	A193 B8	A193 B8	A193 B8
8 Nut	A194 2H	A194 4	A194 2H	A194 4	A194 4	A194 8	A194 8	A194 8	A194 8	A194 8
9 Packing	Reinforced Graphite or PTFE									
10 Sealing Thread	A276 420	A276 420	A276 420	A276 420	A276 420	A276 304	A276 316	A276 304L	A276 316L	
11 Bolt	A193 B7	A320 L7	A193 B7	A193 B16	A193 B16	A193 B16	A193 B8	A193 B8	A193 B8	A193 B8
12 Nut	A194 2H	A194 4	A194 2H	A194 4	A194 4	A194 8	A194 8	A194 8	A194 8	A194 8
13 Yoke	A216 WCB	A352 LCB	A217 WC1	A217 WC6	A217 WC9	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
14 Stem nut	Copper Alloy or A439 D2									
15 Gland	A105	A105	A105	A105	A105	A182 F304	A182 F316	A182 F304L	A182 F316L	
16 Handwheel	Ductile iron or Carbon steel									
17 Stem Protector	Carbon Steel									
18 Position Indicator	SS304 or SS316									
19 Injection Fitting	SS304 or SS316									
20 Seatchcock	IC618N9T1, SS304 or SS316									
21 Spring	SS302, SS304 or SS316									



NPS	DN	Class 150								Class 300							
		Dimensions(mm)								Dimensions(mm)							
		L		Hand-operated		Gear-operated		L		Hand-operated		Gear-operated					
RF	BW	H ₁	H ₂	W	B ₁	B ₂	B ₃	RF	BW	H ₁	H ₂	W	B ₁	B ₂	B ₃		
1	25	127	127	360	250	180	-	-	165	165	370	260	180	-	-	-	
1½	40	165	165	410	290	250	-	-	190	190	420	300	250	-	-	-	
2	50	178	216	450	315	250	-	-	216	216	458	325	250	-	-	-	
2½	65	190	241	550	420	300	-	-	241	241	555	420	300	-	-	-	
3	80	203	283	610	428	300	-	-	283	283	615	430	300	-	-	-	
4	100	229	305	700	494	300	770	650	310	305	305	710	500	300	770	650	
6	150	267	403	895	625	350	965	800	310	403	403	900	625	350	965	800	
8	200	292	419	1130	784	350	1200	960	310	419	419	1135	790	350	1200	960	
10	250	330	457	1260	937	400	1560	1090	310	457	457	1401	1040	400	1560	1090	
12	300	356	502	1480	1080	450	1560	1200	310	502	502	1550	1150	450	1560	1200	
14	350	381	572	1660	1283	500	1740	1350	460	572	572	-	-	-	1740	1350	
16	400	406	610	1850	1417	500	1930	1540	460	610	610	-	-	-	1930	1540	
18	450	432	660	2080	1489	600	2160	1700	460	914	914	-	-	-	2160	1700	
20	500	457	711	2300	1672	700	2420	1850	460	991	991	-	-	-	2420	1850	
24	600	508	813	2680	2012	800	2800	2120	460	1143	1143	-	-	-	2800	2120	
28	700	610	914	3080	2250	800	3200	2460	460	1346	1346	-	-	-	3200	2460	
32	800	660	965	3491	2550	1000	3640	2800	460	1524	1524	-	-	-	3640	2800	
36	900	711	1016	3897	2850	1000	4050	3080	600	1727	1727	-	-	-	4050	3080	



Standards

Design standard: JB/T8691, MSS SP-81.

Face to Face dimension: GB/T15188.2, TAPPI TIS 405.8.

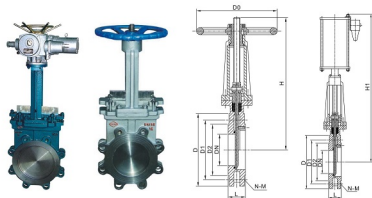
Flanged ends dimension: ANSI B 16.5, GB/T79-94.

Inspect and Test: MSS SP-81, GB/T13927.

Available with lever, chain, gear, electric, air and hydraulic actuation.

Parts and material list

Part Name	Carbon Steel to ASTM		Alloy Steel to ASTM				Stainless Steel to ASTM			
	A216 WCB	A352 LCB	A217 WC1	A217 WC6	A217 WC9	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
1 Body	A216 WCB	A352 LCB	A217 WC1	A217 WC6	A217 WC9	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
2 Seat	PTFE or NBR									
3 Knife	A216 WCB	A352 LCB	A217 WC1	A217 WC6	A217 WC9	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
4 Packing	Flexible Graphite-SS, PTFE									
5 Packing Flange	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F304	A182 F316	A182 F304L	A182 F316L	A182 F304L
6 Stem	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F304	A182 F316	A182 F304L	A182 F316L	A182 F304L
7 Yoke	A216 WCB	A352 LCB	A217 WC1	A217 WC6	A217 WC9	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
8 Stem Nut	Copper Alloy or A439 D2									
9 Nut	A194 2H	A194 4	A194 2H	A194 4	A194 4	A194 4	A194 8	A194 8	A194 8	A194 8
10 Handwheel	Ductile Iron or Carbon Steel									
11 Bolt	A193 B7	A320 L7	A193 B7	A193 B16	A193 B16	A193 B16	A193 B8	A193 B8	A193 B8	A193 B8
12 Nut	A194 2H	A194 4	A194 2H	A194 4	A194 4	A194 4	A194 8	A194 8	A194 8	A194 8



Class	Size		Dimensions (mm)								Weight (kg)
	DN	NPS	L	D	D ₁	D ₂	H/H ₁	N-M	D ₀		
150	50	2	43	152	129.5	92	285/335	4-19	180	8	
	80	3	46	190	152.5	127	315/395	4-19	220	12	
	100	4	52	229	190.5	157	365/465	8-19	220	14	
	125	5	56	254	216	186	400/530	8-22	230	22	
	150	6	56	279	241.5	216	475/630	8-22	280	28	
	200	8	60	343	294.5	270	540/750	8-22	360	38	
	250	10	68	406	362	324	630/900	12-25	560	66	
	300	12	78	483	432	381	780/1120	12-25	800	100	
	350	14	78	533	476	413	885/1260	12-29	800	119	
	400	16	102	597	540	470	990/1460	16-29	800	195	
	450	18	114	635	578	533	1100/1600	16-32	530	285	
	500	20	127	699	635	584	1200/1800	20-32	530	389	
	600	24	154	813	749.5	692	1450/2300	20-35	600	529	
	700	28	165	837	795	762	1700/2500	40-22	600	790	
	800	32	190	941	860	864	2000/2800	48-22	680	850	
	900	36	203	1057	1019	972	2300/3100	44-25	680	900	
1000	40	216	1175	1121	1080	2500/3400	44-29	700	1050		
1200	48	254	1392	1335	1289	2800/3600	44-32	800	1300		

Note: For the knife gate valve, the maximum pressure is 1.6 Mpa. The flange of valves can be PN6, PN10, PN16 according to the customer's request.



Cast Steel Trunnion Ball Valve



Forged Steel Trunnion Ball Valve



Floating Ball Valve

Construction and features of floating ball valve

Reliable seat seal

The structure design of elastic sealing ring has been adopted for floating ball valves. When the pressure of medium is low the contact area between valve seat insert and ball is relatively small, thus providing high sealing load to ensure dependable seating seal. When the pressure of medium is high, the contact area between valve seat insert and ball is relatively large, so that valve seat insert can endure the considerable medium thrust and without any damage.

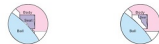


At lower medium pressure

At higher medium pressure

Fire safe design

In case of fire, the non-metal material parts such as seat sealing ring of PTFE, stem back seat gasket, gland packing and the sealing gasket between body and bonnet might be damaged due to the high temperature. As shown in the figure, our specially designed structure of secondary metal to metal seal is provided to effectively prevent both internal and external leakage of the valve. This design can meet requirement of API607.



Before fire

After fire

Anti blowout stem

The Anti-blowout design has been adopted for the stem to ensure that even if the pressure in the body cavity risen accidentally and the packing flange becomes invalid, the stem may not be blown out by medium. To prevent these possibilities, the stem is designed with a backseat, being assembled from underneath. The sealing force against the back seats higher as the medium pressure becomes higher. So the stem can be assured under variable medium pressure.



Wrong operation prevention

To prevent the ball valve from wrong operation. The fully opened or closed position of valve can be locked up, especially when are mounted outdoors or when valves are not allowed to be opened or closed by technical process.

Anti static device

As required by customers, an anti static device can be placed on the valve to derive the electric charge is accumulated on the ball from the static channel between the ball and stem, or between the stem and valve body.

Steel ball valve

Ball valve is suitable for using on various kinds of pipelines of Class 150 to Class 2500 to turn on / off the pipeline medium. Our steel ball valve have two types: floating ball valve and trunnion ball valve. Floating ball valve usually Class 150LB-608LB, Size 1/2-6". The Operation types include worm gear, manual, pneumatic or electric actuator.

Ball valve design construction and specifications

Our cast steel ball valve conforms to API 608, API 3SD, ANSI B16.34 and BS5351. Each is tested according to API 598, AP 9D and Marking is per MSS-SP-25.

Construction as follows

Full bore/Reduced bore
Turn 90 degree opening or close
Detachable seat PTFE/EPDM
Bolted cover/welded cover

Reliable seat seal
Fire safe design
Reliable stem seal
Anti-static device
Wing operation prevention

Standards and specification

Design & manufacture: API 608, API 3SD, ASME B16.34, ANSI AWWA C307 MSS SP-72 AWWA C307, MSS SP-72, BS 5351, BS 6364, BFCI 70-2, ISO 5211, NACE MR0175.
Connection end: ASME B16.5, ASME B16.47, API 605, MSS SP-44, ISO 7005-1, BS B2238, BS12827, ASME B16.25, ASME B16.11, BS 12560.
Face to face dimension: ASME B16.10, ISO 5752, BS 538, BS 12592.
Testing & inspection: API 598, API 6D, API 607, API 6FA, BS 6755, BS 12569, MSS SP-82, MSS SP-60.
Nominal pressure or rating: Class 150-Class 2500, JIS 10K-20K, PN10-PN420.
Nominal diameter or bore: NPS 1/2-NPS 18, DN15-DN250.
Applicable temperature: -196°C-540°C.
Operation type: Manual, worm gear, pneumatic, electric.

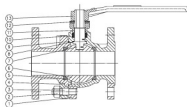


Standards compliance

Design and Manufacture: API 608, API 6D, BS5351
Face to face end to end: ANSI B 16.10, API 6D, JIS B 1002
Flanged connection: ANSI B16.5, BS8212-2214
Fire safe: API 607, API 6A
Ball welded end: ANSI B16.25
Test and inspection: API 598, API 6D, JIS B2000

Floating ball valve

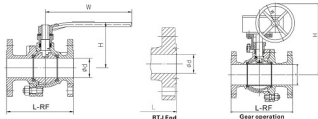
Ball: Ballonnet, Two-piece Body, floating Ball
Full or Reduced bore, Anti Blowout stem.
Fire safe and Anti-static
Stainless steel ball
ASTM A216 WCB/A351 CF8/A351 CF8M,
A351 CF3/A351 CF3M, A351 CF7M



Parts and material list

Parts No	Parts name	Material				
		WCB/13Cr	WCB/304	WCB/316	CF8/304	CF8M/316
1	Body	ASTM A216 WCB	ASTM A216 WCB	ASTM A216 WCB	ASTM A351 CF8	ASTM A351 CF8M
10	Packing	PTFE	PTFE	PTFE	PTFE	PTFE
11	Gland flange	ASTM A216 WCB	ASTM A216 WCB	ASTM A216 WCB	ASTM A351 CF8	ASTM A351 CF8M
12	Stop collar	Carbon steel	Carbon steel	Carbon steel	Carbon steel	Carbon steel
13	Lever	Carbon steel	Carbon steel	Carbon steel	Carbon steel	Carbon steel
8	Thread washer	PTFE	PTFE	PTFE	PTFE	PTFE
7	Stem	ASTM A182 F6a	ASTM A182 F304	ASTM A182 F316	ASTM A182 F304	ASTM A182 F316
6	Ball	ASTM A182 F6a	ASTM A182 F304	ASTM A182 F316	ASTM A182 F304	ASTM A182 F316
5	Seat	Reinforced PTFE	Reinforced PTFE	Reinforced PTFE	Reinforced PTFE	Reinforced PTFE
9	Gasket	PTFE	PTFE	PTFE	PTFE	PTFE
2	Body nut	ASTM A194 2H	ASTM A194 2H	ASTM A194 2H	ASTM A194 8	ASTM A194 8M
3	Body bolting	ASTM A193 B7	ASTM A193 B7	ASTM A193 B7	ASTM A193 B8	ASTM A193 B8M
4	Closeout	ASTM A216 WCB	ASTM A216 WCB	ASTM A216 WCB	ASTM A351 CF8	ASTM A351 CF8M

*Note: The chart above only lists out some common composition of steel ball valve parts, we may provide other different parts material composition according to the customer's request or the actual valve working condition.



Main size and weight

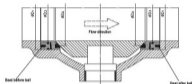
Class	Size			Dimensions (mm)						Weight (kg)	
	DN	NPS	d	L		W		H		Hand wheel	Gear box
				RF	RTJ	Hand wheel	Gear box	Hand wheel	Gear box		
150 10K	15	1/2	13	108	119	149	-	99	-	3.2	-
	20	3/4	19	117	130	160	-	98	-	5.3	-
	25	1	25	127	140	170	-	98	-	5	-
	32	1 1/4	32	140	153	183	-	101	-	6	-
	40	1 1/2	38	165	178	200	-	105	-	6	-
	50	2	49	178	191	220	-	105	-	11	-
	65	2 1/2	62	190	203	250	-	100	-	13.8	-
	80	3	75	203	216	260	-	115	-	19	-
	100	4	100	229	242	300	305	250	300	29	53
	125	5	127	256	269	330	335	280	405	49	79
300 20K	150	6	150	264	277	330	335	310	460	65	102
	200	8	203	277	290	350	355	350	510	115	185
	250	10	252	313	326	400	-	390	-	200	-
	15	1/2	13	140	151	180	-	85	-	5	-
	20	3/4	19	152	165	195	-	86	-	6	-
	25	1	25	165	178	208	-	88	-	6	-
	32	1 1/4	32	178	191	220	-	105	-	8	-
	40	1 1/2	38	190	203	230	-	126	-	11	-
	50	2	49	216	229	250	-	142	-	14	-
	65	2 1/2	62	241	254	280	-	165	-	22	-
600	80	3	74	283	296	350	-	178	-	30	52
	100	4	100	305	321	380	385	250	330	47	76
	125	5	127	341	357	420	425	300	380	74	124
	150	6	150	403	419	500	505	310	420	107	163
	200	8	203	462	478	580	585	350	480	153	267
	15	1/2	13	165	184	220	-	78	500	5	-
	20	3/4	19	180	198	240	-	83	7	7	-
	25	1	24	216	234	280	-	114	-	9	-
	32	1 1/4	32	239	259	300	-	120	-	13	-
	40	1 1/2	38	241	241	290	-	125	-	17	-
900	50	2	49	362	368	430	-	156	-	24	-
	65	2 1/2	62	330	333	400	-	172	-	42	-
	80	3	74	356	359	430	435	270	370	50	76
	100	4	100	432	435	500	505	250	400	85	123
	15	1/2	13	216	234	280	-	98	-	9	-
	20	3/4	19	239	259	300	-	105	-	13	-
	24	1	24	254	254	300	-	110	-	18	-
	32	1 1/4	32	279	279	320	-	120	-	24	-
	40	1 1/2	38	301	301	350	-	125	-	31	-
	50	2	49	368	371	430	-	160	-	45	-
1500	15	1/2	13	216	236	282	-	98	-	10	-
	20	3/4	19	240	249	290	-	125	-	14	-
	24	1	24	264	264	300	-	130	-	17	-
	32	1 1/4	32	279	279	300	-	153	-	25	-
	40	1 1/2	38	305	305	350	-	180	-	33	-
	50	2	49	368	371	430	-	225	-	48	-

*Note: We may provide other different actuators according to the customer's request, such as pneumatic, electric, hydraulic actuators, the details of them according to the actual valve working condition.

Construction and features of trunnion ball valve

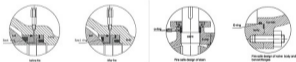
Seating structure

According to some special working conditions and customer's requirement, we provide the trunnion ball valve with the Bi-sealing design structure i.e. seat sealing in front of the ball and seat sealing behind the ball, thus the reliable sealing of the valve is ensured because the valve can perform normally even if one of the effective sealing designs becomes lost due to the abnormal condition.



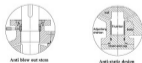
Fire safe design

In case of fire, the non-metal material parts such as seat sealing ring of PTFE, o-ring for the stem, and sealing gasket for body and bonnet, might be damaged due to high temperature. As showed in the figure, our special design structure of secondary metal to metal or the graphite seal is provided for the trunnion ball valve to effectively prevent both internal and external leakage of the valve. This design can meet the requirement of API 1607



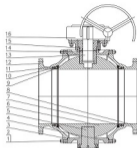
Anti blowout stem

Anti blowout structure is provided with for the stem, which is positioned by the up-end cap and screw, being guaranteed not to be blown-out by the medium even if even if at abnormal risen pressure in the cavity.



Anti-static design

The ball of the trunnion ball valve gets closed with each other through trunnion, adjusting cushion, and down-end cap, the passage of static electricity thus forms together with the valve, which may lead the static electricity caused by sparks generated by friction between the ball and seat during on and off performance to the ground to prevent the possible of fire or explosion



Class 150 ~ 1500 cast steel Trunnion ball valve

Ball: coated. Two-piece or three piece Body.

Anti Blowout stem.

Fire safe and Anti static:
ASTM A216 WCB, A351 CF8, A351 CF8M, A351 CF3, A351 CF3M, A351 CN7M

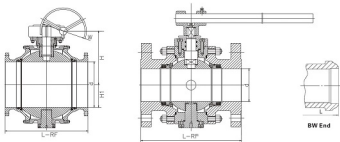
Standards compliance

Design and Manufacture: API 6D, API 608
Face to face (end to end): API 6D, JIS B2002
Flanged connection: ANSI B16.5, JIS B2212-2214
Fire safe: API 507, API 554
Butt welded and ANSI B16.35
Test and inspection: API 598, API 599

Parts and material list

Parts No.	Parts name	WCB/13Cr	WCB/304	WCB/316	CF8/304	CF8M/316
4	Body	ASTM A216 WCB	ASTM A216 9CB	ASTM A216 WCB	ASTM A216 CF8	ASTM A216 CF8M
10	O ring	Victon	Victon	Victon	Victon	Victon
13	Stem	ASTM A182 F4a	ASTM A182 F304	ASTM A182 F316	ASTM A182 F304	ASTM A182 F316
15	Gland	ASTM A305	ASTM A105	ASTM A305	ASTM A182 F304	ASTM A182 F316
16	Cap	Carbon steel/Inconel 718	Carbon steel/Inconel 718	Carbon steel/Inconel 718	Carbon steel/Inconel 718	Carbon steel/Inconel 718
6	Ball	ASTM A182 F4a	ASTM A182 F304	ASTM A182 F316	ASTM A182 F304	ASTM A182 F316
9	Seat	Refrinforced PTFE	Refrinforced PTFE	Refrinforced PTFE	Refrinforced PTFE	Refrinforced PTFE
14	O ring	Victon	Victon	Victon	Victon	Victon
7	Seat ring	ASTM A305	ASTM A105	ASTM A305	ASTM A182 F304	ASTM A182 F316
11	Spring	S304 or Inconel 718	S304 or Inconel 718	S304 or Inconel 718	S304 or Inconel 718	S304 or Inconel 718
1	Body bolting	ASTM A193 B7	ASTM A193 B7	ASTM A193 B7	ASTM A193 B8	ASTM A193 B8
2	Body nut	ASTM A194 2H	ASTM A194 2H	ASTM A194 2H	ASTM A194 4	ASTM A194 4
8	Cover	ASTM A216 WCB	ASTM A216 9CB	ASTM A216 WCB	ASTM A216 CF8	ASTM A216 CF8M
3	Gasket	PTFE	PTFE	PTFE	PTFE	PTFE
5	Low trunnion	ASTM A105	ASTM A305	ASTM A305	ASTM A182 F304	ASTM A182 F316
12	Cover	ASTM A216 WCB	ASTM A216 9CB	ASTM A216 WCB	ASTM A216 CF8	ASTM A216 CF8M

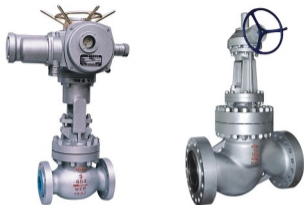
Note: The chart above only lists out some common composition of steel ball valve parts, we may provide other different parts material composition according to the customer's request or the actual valve working condition.



Class	Size		Dimensions (mm)						Weight (kg)
	DN	NPS	L		d	H	H ₁	W	
			RF	BW					
150 10k	100	4	229	305	100	250	135	300	68
	125	5	356	381	127	260	165	300	88
	150	6	384	457	150	285	193	400	101
	200	8	457	521	201	325	240	400	166
	250	10	533	595	252	370	300	500	283
	300	12	610	635	303	413	340	600	463
	350	14	686	762	334	455	372	600	622
	400	16	762	838	385	500	415	600	900
	450	18	864	914	436	540	462	600	1150
	500	20	914	991	487	590	511	600	1360
300 20k	600	24	1067	1143	589	680	601	600	2514
	650	26	1143	1245	635	806	700	600	3200
	700	28	1245	1346	686	940	760	700	4000
	750	30	1295	1367	735	1200	830	700	4000
	800	32	1372	1534	779	1350	870	700	5800
	900	36	1524	1727	874	1650	970	700	8000
	100	4	305	305	100	265	148	300	76
	125	5	381	381	127	260	170	300	95
	150	6	483	457	150	285	192	400	128
	200	8	502	521	201	325	246	400	254
250	10	568	595	252	370	300	500	483	
300	12	645	635	303	413	340	600	682	
350	14	762	762	334	455	378	600	882	
400	16	838	838	385	500	429	600	1273	
450	18	914	914	436	540	518	600	1450	
500	20	991	991	487	590	540	600	1700	
600	24	1143	1143	589	680	600	600	3100	
650	26	1245	1245	635	806	700	600	4100	
700	28	1346	1346	686	940	800	700	6000	
750	30	1367	1367	735	1200	860	700	7500	
800	32	1534	1534	779	1350	900	800	9000	
900	36	1727	1727	874	1650	1020	800	12000	

Noted: We may provide other different actuators according to the customer's request, such as pneumatic, electric, hydraulic actuators, the details of them according to the actual working condition.

Class	Size		Dimensions (mm)							Weight (kg)
	DN	NPS	L			d	H	H ₁	W	
			RF	RTJ	BW					
600	50	2	292	295	292	49	140	84	300	32
	65	2½	330	335	330	62	155	115	300	47
	80	3	356	359	356	74	190	136	300	68
	100	4	432	435	432	100	220	170	300	96
	125	5	508	511	508	127	245	180	300	130
	150	6	559	562	559	150	300	209	400	241
	200	8	660	664	660	201	345	263	600	444
	250	10	767	791	787	252	405	312	600	668
	300	12	838	841	838	303	445	354	600	1050
	350	14	889	892	889	334	505	389	600	1337
900	400	16	991	994	991	385	580	440	700	1880
	450	18	1092	1095	1092	436	700	530	700	2480
	500	20	1194	1200	1194	487	690	540	700	3080
	600	24	1397	1407	1397	538	1050	670	800	5480
	65	2½	368	371	368	49	170	88	300	45
	80	3	419	422	419	62	195	120	300	55
	100	4	457	460	457	100	245	162	350	94
	125	5	559	562	559	127	305	188	400	230
	150	6	610	613	610	150	335	213	400	325
	200	8	737	740	737	201	370	270	600	580
1500	250	10	838	841	838	252	475	322	600	850
	300	12	965	968	965	303	590	340	700	1130
	350	14	1029	1038	1029	332	700	400	700	1660
	400	16	1130	1140	1130	372	850	460	800	2280
	40	1½	305	305	305	38	280	100	300	44
	50	2	368	371	368	49	320	113	300	67
	65	2½	419	422	419	64	340	125	300	80
	80	3	470	473	470	74	385	138	300	130
	100	4	546	549	546	100	415	171	300	192
	125	5	673	676	673	125	480	200	400	335
2500	150	6	700	711	705	144	580	222	400	475
	200	8	832	841	832	193	584	290	400	820
	250	10	991	1000	991	229	650	340	500	1330
	300	12	1130	1146	1130	287	700	370	600	2080
	350	14	1284	1297	1284	340	790	450	600	2900
	400	16	1450	1464	1450	400	880	540	700	3900
	450	18	1620	1635	1620	460	980	630	800	5100
	500	20	1800	1815	1800	520	1080	720	900	6500
	550	22	2000	2015	2000	580	1180	810	1000	8100
	600	24	2200	2215	2200	640	1280	900	1100	9800
650	26	2400	2415	2400	700	1380	990	1200	11600	
700	28	2600	2615	2600	760	1480	1080	1300	13500	
750	30	2800	2815	2800	820	1580	1170	1400	15400	
800	32	3000	3015	3000	880	1680	1260	1500	17300	
850	34	3200	3215	3200	940	1780	1350	1600	19200	
900	36	3400	3415	3400	1000	1880	1440	1700	21100	
950	38	3600	3615	3600	1060	1980	1530	1800	23000	
1000	40	3800	3815	3800	1120	2080	1620	1900	24900	
1050	42	4000	4015	4000	1180	2180	1710	2000	26800	
1100	44	4200	4215	4200	1240	2280	1800	2100	28700	
1150	46	4400	4415	4400	1300	2380	1890	2200	30600	
1200	48	4600	4615	4600	1360	2480	1980	2300	32500	
1250	50	4800	4815	4800	1420	2580	2070	2400	34400	
1300	52	5000	5015	5000	1480	2680	2160	2500	36300	
1350	54	5200	5215	5200	1540	2780	2250	2600	38200	
1400	56	5400	5415	5400	1600	2880	2340	2700	40100	
1450	58	5600	5615	5600	1660	2980	2430	2800	42000	
1500	60	5800	5815	5800	1720	3080	2520	2900	43900	
1550	62	6000	6015	6000	1780	3180	2610	3000	45800	
1600	64	6200	6215	6200	1840	3280	2700	3100	47700	
1650	66	6400	6415	6400	1900	3380	2790	3200	49600	
1700	68	6600	6615	6600	1960	3480	2880	3300	51500	
1750	70	6800	6815	6800	2020	3580	2970	3400	53400	
1800	72	7000	7015	7000	2080	3680	3060	3500	55300	
1850	74	7200	7215	7200	2140	3780	3150	3600	57200	
1900	76	7400	7415	7400	2200	3880	3240	3700	59100	
1950	78	7600	7615	7600	2260	3980	3330	3800	61000	
2000	80	7800	7815	7800	2320	4080	3420	3900	62900	
2050	82	8000	8015	8000	2380	4180	3510	4000	64800	
2100	84	8200	8215	8200	2440	4280	3600	4100	66700	
2150	86	8400	8415	8400	2500	4380	3690	4200	68600	
2200	88	8600	8615	8600	2560	4480	3780	4300	70500	
2250	90	8800	8815	8800	2620	4580	3870	4400	72400	
2300	92	9000	9015	9000	2680	4680	3960	4500	74300	
2350	94	9200	9215	9200	2740	4780	4050	4600	76200	
2400	96	9400	9415	9400	2800	4880	4140	4700	78100	
2450	98	9600	9615	9600	2860	4980	4230	4800	80000	
2500	100	9800	9815	9800	2920	5080	4320	4900	81900	



The features of globe valve

Bolted Bonnet; Outside Screw and Yoke; Rising stems; Metallic seating surfaces.

Body and Bonnet Connection

The body and bonnet of Class 150–Class900 globe valves are usually with studs And nuts. And the body and bonnet of Class 1500–Class2500 globe valve are usually of pressure seal design.

Gasket of Cover Flange

Stainless steel+flexible graphite wounded gasket is used for Class 150 and Class300 globe valve. Stainless steel+flexible graphite wounded gasket is used for Class600, and ring joint gasket is also optional for Class600. Ring joint gasket is used for Class900 globe valve. Pressure seal design is used for Class 1500–Class2500 globe valve.

Actuation

Hand wheel, impact hand wheel&gear box is usually used for globe valve actuation. Chain wheel and electric actuator can be also used for globe valve actuation if being requested by the customers.

Seat

For carbon steel globe valve, the seat is usually forged steel. The sealing surface of the seat is spray welded with hard alloy specified by the customer. The seat have two type: welded on seat and integral seal. For stainless globe valve, integral seat is usually adopted, or to weld hard alloy directly integrally. If the customer have any other request about the seat, please kindly advise before placing the order.



STANDARD MATERIAL TO API600

Item Code	Seat Ring Surface Part No. 2	Wedge Surface Part No. 3	Stem Part No. 4	Backseat Part No. 6
1	F6	F6	F6	F6
2	F304	F304	F304	F304
5	Stellite	Stellite	F6	F6
8	Stellite	F6	F6	F6
9	Monel	Monel	Monel	Monel
10	F316	F316	F316	F316
13	Alloy 20	Alloy 20	Alloy 20	Alloy 20

Standards

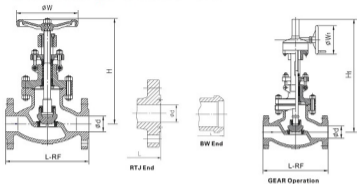
Design and Manufacture	BS 1873 and ASME B16.34
Inspection and Test	API598
End Flange dimension	ASME B16.5
HW end dimension	ASME B16.25
Socket-weld dimension	ASME B16.11
Face to Face	ASME B16.10
Pressure-temperature ratings	ASME B16.34

Parts and material list

Part Name	Carbon Steel to ASTM		Alloy Steel to ASTM				Stainless Steel to ASTM			
1 Body	A216WC8	A352LC8	A217WC1	A217WC8	A217WC9	A217C5	A351CF8	A351CF8M	A351CF3	A351CF3M
4 Bonnet	A216WC8	A352LC8	A217WC1	A217WC8	A217WC9	A217C5	A351CF8	A351CF8M	A351CF3	A351CF3M
6 Bolt	A193 B7	A320 L7	A193 B7	A193 B16	A193 B16	A193 B16	A193 B8	A193 B8	A193 B8	A193 B8
5 Nut	A194 2H	A194 2H	A194 2H	A194 4	A194 4	A194 4	A194 8	A194 8	A194 8	A194 8
11 Gland	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F6a	304	316	304L	316L
12 Gland Flange	A216WC8	A352 LCB	A217WC1	A217WC8	A217WC9	A217C5	A351CF8	A351CF8M	A351CF3	A351CF3M
3 Disc	A216WC8	A352 LCB	A217WC1	A217WC8	A217WC9	A217C5	A351CF8	A351CF8M	A351CF3	A351CF3M
7 Gasket	SS Spiral Wound Graphitic or SS Spiral Wound W/PTEE, or Reinforced PTFE									
10 Packing	Braided graphite or Die-formed graphite ring or PTFE									
13 Stem Nut	Copper alloy or A439 D2									
14 Hand Wheel	Ductile iron or Carbon steel									

Note: The chart above only lists out some common composition of steel globe valve parts. We may provide other different parts material composition according to the customer's request or the actual valve working condition.

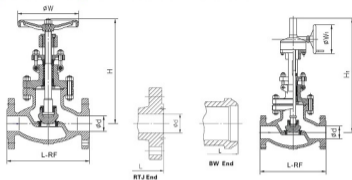
Class 150 & JIS 10K Globe Valve



Class	Size		Dimensions(mm)								Weight (Kg)	
	NPS	DN	L			d	H	H1	W	W1	H.W	G.O
			RF	RTJ	BW							
150	1/2	15	108	119	108	13	185	-	190	-	4	-
	3/4	20	117	130	117	19	190	-	190	-	4.5	-
	1	25	127	140	127	25	211	-	190	-	5.5	-
	1 1/4	32	140	152	140	32	220	-	135	-	8.5	-
	1 1/2	40	165	178	165	38	240	-	135	-	12	-
	2	50	203	216	203	51	328	-	290	-	18	-
	2 1/2	65	216	229	216	64	360	-	250	-	26	-
	3	80	241	254	241	76	373	-	290	-	43	-
	4	100	292	305	292	102	400	-	390	-	54	-
	5	125	356	369	356	127	435	-	350	-	71	-
	6	150	406	419	406	152	528	556	350	310	95	114
	8	200	495	508	495	203	680	658	490	310	160	158
	10	250	622	635	622	254	775	805	450	460	299	259
	12	300	698	711	698	305	880	955	590	460	373	378
	14"	350	787	800	787	337	-	1100	-	460	-	640
	16"	400	914	927	914	387	-	1175	-	460	-	920
20"	500	978	991	978	488	-	1450	-	600	-	1650	
24"	600	1295	1308	1295	590	-	1690	-	600	-	2200	

Noted: We may provide other different actuators according to the customer's request, such as pneumatic, electric, hydraulic actuators, the details of them according to the actual valve working condition.

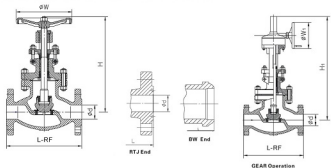
Class 300 & JIS 20K Cast Steel Globe Valve



Class	Size		Dimensions(mm)								Weight (Kg)	
	NPS	DN	L			d	H	H1	W	W1	H.W	G.O
			RF	RTJ	BW							
300	1/2	15	152	164	152	13	184	-	120	-	5	-
	3/4	20	178	191	178	19	226	-	160	-	6.5	-
	1	25	203	216	203	25	233	-	160	-	9	-
	1 1/4	32	216	229	216	32	253	-	160	-	12	-
	1 1/2	40	229	241	229	38	273	-	160	-	16	-
	2	50	267	283	267	51	346	-	200	-	29	-
	2 1/2	65	292	308	292	64	390	-	250	-	44	-
	3	80	318	333	318	76	403	-	290	-	59	-
	4	100	356	371	356	102	474	-	350	-	87	-
	5	125	400	416	400	127	540	-	350	-	131	-
	6	150	440	460	444	152	635	690	490	310	162	177
	8	200	559	575	559	203	870	850	550	460	281	389
	10	250	622	638	622	254	950	990	600	460	355	409
	12	300	711	727	711	305	1030	1155	700	460	575	635
	14	350	838	-	-	336	-	1155	-	600	-	880
	16	400	864	-	-	387	-	1325	-	600	-	1300
18	450	977	-	-	431	-	1473	-	720	-	1600	
20	500	1016	-	-	482	-	1574	-	720	-	2100	

Noted: We may provide other different actuators according to the customer's request, such as pneumatic, electric, hydraulic actuators, the details of them according to the actual valve working condition.

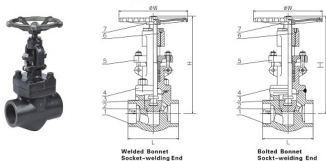
Class 600 & Class 1500 Globe Valve



Class	Size		Dimensions(mm)							Weight (Kg)			
	NPS	DN	L			d	H	H ₁	W	W ₁	H/W	G/O	
			RF	RTJ	BW								
600	2	50	292	292	292	51	360	-	250	-	33	-	
	2½	65	330	333	330	64	430	-	280	-	42	-	
	3	80	356	359	356	76	465	-	280	-	66	-	
	4	100	432	435	432	102	545	575	400	330	117	148	
	5	125	508	511	508	127	625	660	500	330	243	208	
	6	150	599	602	599	152	785	975	550	460	263	334	
	8	200	660	664	660	200	930	1120	650	460	489	544	
	10	250	787	791	787	248	-	1219	-	600	-	875	-
900	12	300	838	841	838	298	-	1570	-	600	-	1290	-
	2	50	368	371	368	48	480	-	350	-	53	-	
	2½	65	419	422	419	57	520	-	350	-	68	-	
	3	80	381	384	381	73	564	630	400	330	113	128	
	4	100	457	460	457	98	685	720	450	330	179	210	
	5	125	559	562	559	127	780	840	550	460	270	325	
	6	150	610	613	610	146	990	1015	650	460	429	480	
	8	200	737	740	737	199	1050	-	700	-	815	-	
1500	2	50	368	371	368	48	505	-	350	-	137	-	
	2½	65	419	422	419	57	550	-	400	-	141	-	
	3	80	470	473	470	70	630	765	450	330	261	320	
	4	100	546	549	546	92	808	890	460	330	336	397	
6	150	705	711	705	137	930	1020	610	530	966	1035		
8	200	832	841	832	178	1140	1230	610	530	1210	1290		

Notes: We may provide other different actuators according to the customer's request, such as pneumatic, electric, hydraulic actuators, the details of them according to the actual valve working condition.

Class 150~Class 1500 Forged Globe Valve



Welded Bonnet
Socket-welding End

Bolted Bonnet
Socket-welding End

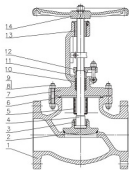
Standards

Design and Manufacture	API602.
Inspection and Test	API598.
Socket-weld dimension	ASME B16.11
End threads dimension	ASME B1.20.1
Pressure-temperature ratings	ASME B16.34.

Parts and material list

Part Name	Material
1 Body	ASTM A105 ASTM A182 F304 ASTM A182 F316
2 Disc	ASTM A105 ASTM A182 F304 ASTM A182 F316
3 Stem	ASTM A182 F4 ASTM A182 F304 ASTM A182 F316
4 Bonnet	ASTM A105 ASTM A182 F304 ASTM A182 F316
5 Gland Flange	ASTM A105 ASTM A182 F304 ASTM A182 F316
6 Stem Nut	ASTM A276 410
7 Handwheel	ASTM A197

Class	Size		Dimensions (mm)				NPT	Weight (kg)
	NPS	DN	L	d	H	W		
150-300	½"	15	79	10	158	100	½"	2.0
	¾"	20	92	13	158	100	¾"	2.2
	1"	25	111	17.5	192	125	1"	2.5
	1½"	32	120	23	227	160	1½"	5.5
	2"	40	152	28.5	240	160	2"	7.0
	2½"	50	172	33	279	180	2½"	11.5
500-1500	½"	15	92	10	187	125	½"	3.5
	¾"	20	111	13	187	125	¾"	4.0
	1"	25	120	17.5	227	160	1"	6.3
	1½"	32	152	23	242	160	1½"	8.0
	2"	40	172	28.5	278	180	2"	12.5
	2½"	50	220	33	325	200	2½"	19.5
2500	½"	15	150	11	293	160	½"	10.8
	¾"	20	150	11	293	160	¾"	12.0
	1"	25	170	14	344	200	1"	13.5
	1½"	32	200	16	383	250	1½"	18.5
	2"	40	200	23	383	250	2"	22.0
	2½"	50	250	28	442	300	2½"	37.0



Standards

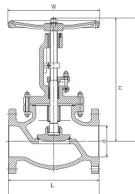
Design Standard	BS 1873
Face to Face	ASTM B 16.10
End flanges Dimensions	ASME B 16.5
Inspection and Test	API 598.

Structure Feature

1. Double seal, more reliable performance;
2. Stem lift position indication, more intuitive;
3. Small flow resistance, low pressure drop.

Parts and material list

Part Name	Carbon Steel to ASTM		Alloy Steel to ASTM				Stainless Steel to ASTM			
1 Body	A216 WCB	A352 LCB	A217 WC1	A217 WC6	A217 WC9	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
2 Disc	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F304	A182 F316	A182 F304L	A182 F316L
3 Disc Cover	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F304	A182 F316	A182 F304L	A182 F316L
4 Stem	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F304	A182 F316	A182 F304L	A182 F316L
5 Bellows Seal	A182 F304	A182 F304	A182 F304	A182 F304	A182 F304	A182 F304	A182 F304	A182 F316	A182 F304L	A182 F316L
7 Bonnet	A216 WCB	A352 LCB	A217 WC1	A217 WC6	A217 WC9	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
8 Bolt	A193 B7	A320 L7	A193 B7	A193 B16	A193 B16	A193 B16	A193 B8	A193 B8M	A193 B8	A193 B8M
9 Nut	A194 2H	A194 4	A194 2H	A194 4	A194 4	A194 4	A194 8	A194 8M	A194 8	A194 8M
11 Gland	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F304	A182 F316	A182 F304L	A182 F316L
12 Gland Flange	A216 WCB	A352 LCB	A217 WC1	A217 WC6	A217 WC9	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
6 Gasket	Flexible Graphite/SS or PTFE									
10 Packing	Flexible Graphite or PTFE									
13 Stem Nut	Copper Alloy or A439 B2									
14 Handwheel	Ductile Iron or Carbon Steel									



Size		Class 150					Class 300						
		Dimensions (mm)					Wt (kg)	Dimensions (mm)					Wt (kg)
NPS	DN	L	d	H	W	H.W	L	d	H	W	H.W		
1/2	15	108	13	241	120	4	152	13	241	120	6		
3/4	20	117	19	241	140	5	178	19	241	140	7		
1	25	127	25	241	140	6	203	25	283	140	10		
1 1/4	32	140	32	280	180	10	215	32	320	180	15		
1 1/2	40	165	38	286	200	13	229	38	322	200	20		
2	50	203	51	368	220	18	267	51	399	220	25		
2 1/2	65	216	64	387	260	30	292	64	438	260	30		
3	80	241	76	400	280	35	318	76	450	280	32		
4	100	292	102	457	300	55	356	102	584	300	55		
5	125	356	127	520	320	75	400	127	630	320	75		
6	150	406	152	609	340	104	444	152	660	340	100		
8	200	495	203	698	400	200	559	203	762	400	259		
10	250	622	254	762	450	300	622	254	850	450	420		
12	300	698	305	876	450	390	711	305	1085	450	595		
14	350	787	337	990	450	610	762	336	1187	450	876		



The features of check valve

Bolted Bonnet, Swing and lift disc; Metallic seating surfaces. Bolted cover and pressure seal cover swing and lift disc. Threaded or welded seat ring.

Body and Bonnet Connection

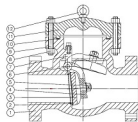
The body and bonnet of Class150-Class900 check valves are usually with studs and nuts. And the body and bonnet of Class1500-Class2500 check valves are usually of pressurized seal design

Gasket

Stainless steel + flexible graphite wounded gasket is used for Class150 and Class300 check valve; Stainless steel + flexible graphite wounded gasket is used for Class600 check valve, and joint gasket is also optional for Class600 check valve; Ring joint gasket is used for Class900 check valve; Pressurized seal design is used for Class1500-Class2500 check valves.

Seat

For carbon steel check valve, the seat is usually forged steel. The sealing surface of the seat is spray welded with hard alloy specified by the customer. Welded on seat is used of NPS 1/2-2 Renewable threaded seat is used for NPS < 8 check valves, and welded on seat can be also optional if being requested by the customer. Welded on seat is used for NPS > 8 carbon steel check valves. For stainless steel check valve, integral seat is usually adopted, or to weld hard alloy directly integrally. Threaded or welded on seat is also optional for stainless steel check valve if being requested by the customer. If the customers have any other request about the seat, please kindly advise before placing the order.



STANDARD MATERIAL TO API600

Trim Code	Seat Ring Surface Part No.2	Disc Surface Part NO.3	Hing pin Part No.6
1	F6	F6	F6
2	F304	F304	F304
5	Stellite	Stellite	F6
8	Stellite	F6	F6
9	Monel	Monel	Monel
10	F316	F316	F316
13	Alloy 20	Alloy 20	Alloy 20

Standards

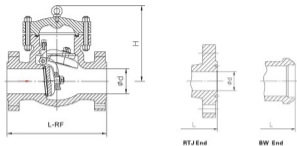
Design and Manufacture	BS 1868-1873, ASME B16.34, API6D
Inspection and Test	API598, API6D
End Flange dimension	ASME B16.5
End Flange dimension	ASME B16.47A, MSS SP-44
End Flange dimension	ASME B16.47B, AP0605
BFW end dimension	ASME B16.25
Face to face	ASME B16.10
Pressure-temperature ratings	ASME B16.34
Wall thickness dimension	API600 and BS 1868

STANDARD MATERIAL SPECIFICATIONS

Parts Name	Carbon Steel to ASTM	Alloy Steel to ASTM				Stainless Steel to ASTM				
1 BODY	A216 WCB	A352 LCB	A217 WC1	A217 WC6	A217 WC9	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
11 COVER	A216 WCB	A352 LCB	A217 WC1	A217 WC6	A217 WC9	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
3 DISC	A216 WCB	A352 LCB	A217 WC1	A217 WC6	A217 WC9	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
4 Hinge	A216 WCB	A352 LCB	A217 WC1	A217 WC6	A217 WC9	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
9 Bolt	A193 B7	A320 L7	A193 B7	A193 B16	A193 B16	A193 B16	A193 B8	A193 B8	A193 B8	A193 B8
8 Nut	A194 2H	A194 4	A194 2H	A194 4	A194 4	A194 4	A194 8	A194 8	A194 8	A194 8
5 Disc Nut	A194 2H	430	430	410	410	410	304	316	304L	316L
10 Gasket	SS Spiral Wound W/graphite, or SS Spiral Wound W/PTE, or Reinforced PTFE									
12 Eye bolt	Steel									
7 Yoke	A216 WCB	A352 LCB	A217 WC1	A217 WC6	A217 WC9	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M

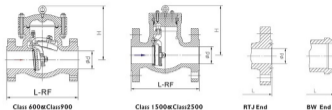
Noted: The chart above only lists out some common composition of steel check valve parts. We may provide other different parts material composition according to the customer's request or the actual valve working condition.

Class 150 & Class 300 Swing Check Valve



Size	Class 150 Dimensions(mm)						Class 300 Dimensions(mm)						
	L			d	H	Weight (Kg)	L			d	H	Weight (Kg)	
	R F	RTJ	BW				R F	RTJ	BW				
2	50	200	236	203	51	138	14	267	283	267	51	150	22
2½	65	216	229	216	64	160	19	282	308	292	64	178	35
3	80	241	254	241	76	172	24	318	333	318	76	223	44
4	100	292	305	292	102	245	43	356	371	356	102	255	57
5	125	330	343	330	127	280	59	400	416	400	127	280	80
6	150	356	368	356	152	289	72	445	460	445	152	310	120
8	200	495	508	495	203	347	124	533	549	533	203	355	194
10	250	622	635	622	254	399	196	622	638	622	254	445	290
12	300	699	711	699	305	435	330	711	727	711	305	485	420
14	350	787	800	787	337	465	417	838	854	838	337	515	587
16	400	864	876	864	387	523	583	864	879	864	387	560	761
18	450	978	991	978	438	589	659	978	994	978	432	620	1030
20	500	978	991	978	489	615	791	1016	1016	1016	483	685	1191
24	600	1295	1308	1295	591	719	969	1346	1368	1346	584	760	1892
26	650	1295	-	1295	633	840	1250	1346	1372	1346	633	850	2300
28	700	1448	-	1448	684	920	1580	1499	1524	1499	684	920	2600
30	750	1324	-	1324	735	980	1950	1594	1619	1594	735	1150	3200
32	800	1727	-	1727	779	1016	2000	1727	-	1727	779	1240	3700
36	900	1956	-	1956	874	1092	3200	2083	-	2083	874	1390	4500

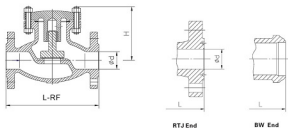
Class 600-Class2500 Swing Check Valve



Size	Class 600 Dimensions(mm)						Class 900 Dimensions(mm)						
	L			d	H	Weight (Kg)	L			d	H	Weight (Kg)	
	R F	RTJ	BW				R F	RTJ	BW				
2	50	292	295	292	51	170	26	368	371	368	51	183	72
2½	65	330	333	330	64	178	35	419	422	419	64	220	75
3	80	356	359	356	76	225	59	381	384	381	73	280	102
4	100	432	435	432	102	275	99	457	460	457	98	315	134
5	125	508	511	508	127	320	155	559	562	559	127	360	200
6	150	559	562	559	152	385	200	610	613	610	146	390	254
8	200	660	664	660	200	445	337	737	740	737	190	460	514
10	250	787	791	787	248	500	561	838	841	838	258	580	754
12	300	838	841	838	288	570	752	965	968	965	283	640	818
14	350	889	892	889	327	590	889	1029	1038	1029	311	680	1180
16	400	991	994	991	375	650	1285	1130	1140	1130	356	780	1909
18	450	1092	1095	1092	419	778	1800	1219	1252	1219	400	845	2300
20	500	1194	1200	1194	464	979	2150	1321	1354	1321	444	1050	2900
24	600	1397	1407	1397	559	1100	3200	1549	1565	1549	533	1200	4600

Size	Class 1500 Dimensions(mm)						Class 2500 Dimensions(mm)						
	L			d	H	Weight (Kg)	L			d	H	Weight (Kg)	
	R F	RTJ	BW				R F	RTJ	BW				
2	50	368	371	368	48	265	67	451	454	451	38	285	93
2½	65	419	422	419	57	240	75	508	514	508	48	305	100
3	80	470	473	470	70	303	188	578	584	578	57	350	190
4	100	546	549	546	92	340	210	673	683	673	73	410	410
5	125	673	676	673	127	330	294	794	807	794	96	490	440
6	150	705	711	705	137	430	473	914	927	914	111	540	568
8	200	832	841	832	178	500	634	1022	1038	1022	146	620	970
10	250	991	1000	991	222	605	1940	1270	1292	1270	184	705	1700
12	300	1130	1146	1130	264	785	1919	1422	1445	1422	219	855	2880
14	350	1257	1276	1257	289	830	2000	-	-	-	-	-	-
16	400	1384	1407	1384	330	950	2700	-	-	-	-	-	-
18	450	1537	1559	1537	371	1080	3940	-	-	-	-	-	-
20	500	1664	1686	1664	416	1145	4400	-	-	-	-	-	-

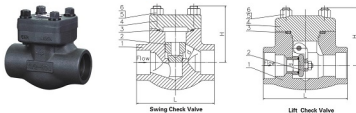
Class 150-Class900 Lift Check Valve



Size		Class150 Dimensions(mm)					Class300 Dimensions(mm)						
NPS	DN	RF	RTJ	BW	d	H	Weight (Kg)	RF	RTJ	BW	d	H	Weight (Kg)
1/2	15	104	119	108	13	76	3	152	162	152	13	78	5
3/4	20	117	130	117	19	76	4	178	191	178	19	82	6
1	25	127	140	127	25	98	5	203	216	203	25	102	8
1 1/4	32	140	153	140	32	102	7	216	229	216	32	106	11
1 1/2	40	165	178	165	38	115	8	229	242	229	38	118	13
2	50	203	216	203	51	140	15	267	283	267	51	140	26
2 1/2	65	216	229	216	64	162	22	292	308	292	64	164	33
3	80	241	254	241	76	168	28	318	335	318	76	178	50
4	100	292	305	292	102	194	42	356	371	356	102	195	66
5	125	356	368	356	127	210	60	409	416	400	127	223	120
6	150	406	419	406	152	226	75	445	460	445	152	245	180
8	200	495	508	495	203	250	118	533	549	533	203	280	220
10	250	622	635	622	254	275	194	622	638	622	254	336	310
12	300	699	711	699	305	332	320	711	727	711	305	380	510

Size		Class600 Dimensions(mm)					Class900 Dimensions(mm)						
NPS	DN	RF	RTJ	BW	d	H	Weight (Kg)	RF	RTJ	BW	d	H	Weight (Kg)
2	50	292	295	292	51	152	32	368	371	368	48	180	50
2 1/2	65	330	333	330	64	167	45	419	422	419	57	200	65
3	80	356	359	356	76	178	68	381	384	381	73	235	88
4	100	432	435	432	102	215	98	457	460	457	98	270	140
5	125	508	511	508	125	240	155	589	592	589	125	300	210
6	150	559	562	559	152	279	210	610	613	610	146	350	300
8	200	660	664	660	200	328	300	737	740	737	190	400	390

Class 150-Class1500 Forged Steel Check Valve



Standards

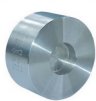
Design and Manufacture	API 602.
Inspection and Test	API 598.
Socket-weld dimension	ASME B16.11.
End threads dimension	ASME B1.20.1.
Pressure-temperature ratings	ASME B16.34.

Parts and material list

Part Name	Material		
1 Body	ASTM A105	ASTM A182 F304	ASTM A182 F316
2 Disc	ASTM A105	ASTM A182 F304	ASTM A182 F316
3 Gasket	Graphite/SS304	Graphite/SS316	Graphite/SS316
4 Bracket	ASTM A105	ASTM A182 F304	ASTM A182 F316
5 Bolt	A193 B7	A193 B8	A193 B8
6 Nut	A194 2H	A194 8	A194 8

Class	Size		Piston Check Valve				Swing Check Valve					
	NPS	DN	Dimensions(mm)			NPT	Weight (Kg)	Dimensions(mm)			NPT	Weight (Kg)
			L	d	H			L	d	H		
150-900	1/2"	15	79	10	54.5	1/2"	1.4	79	13	54.5	1/2"	1.3
	3/4"	20	92	13	54.5	3/4"	1.9	92	13	54.5	3/4"	1.7
	1"	25	111	17.5	72	1"	2.6	111	18	72	1"	2.4
	1 1/4"	32	120	23	81	1 1/4"	4.2	120	24	81	1 1/4"	4.0
	1 1/2"	40	152	28.5	94	1 1/2"	5.3	120	29	94	1 1/2"	5.1
	2"	50	172	35	112	2"	9.0	140	36.8	112	2"	8.8
900-1500	1/2"	15	92	10	73	1/2"	2.4	92	13	73	1/2"	2.2
	3/4"	20	111	13	73	3/4"	2.9	111	13	73	3/4"	2.7
	1"	25	120	17.5	84	1"	4.6	120	18	84	1"	4.4
	1 1/4"	32	152	23	97	1 1/4"	6.5	120	24	97	1 1/4"	6.3
	1 1/2"	40	172	28.5	115	1 1/2"	10.5	140	29	115	1 1/2"	10.3
	2"	50	220	35	132	2"	15.5	160	36.8	132	2"	15.3
2500	1/2"	15	150	11	102	1/2"	7.8	-	-	-	-	-
	3/4"	20	150	14	102	3/4"	8.5	-	-	-	-	-
	1"	25	170	19	107	1"	12.0	-	-	-	-	-
	1 1/4"	32	200	25	128	1 1/4"	18.2	-	-	-	-	-
	1 1/2"	40	200	28	128	1 1/2"	19.5	-	-	-	-	-
	2"	50	250	35	143	2"	27.0	-	-	-	-	-

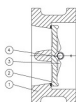
Wafer Type Swing Check Valve



Single Plate Check Valve



Dual Plate Check Valve



Dual Plate Check Valve

Standards

- Design and manufacture: API 594, API 6D;
- Face to Face: API 594, API 6D; DIN 3202;
- Pressure-temperature ratings: ASME B 16.34;
- Inspection and test: API 598, API 6D;
- End flange dimension: ASME B16.5, ASME B16.47, API605, MSS SP-44, ISO7005-1, DIN2543-2548.

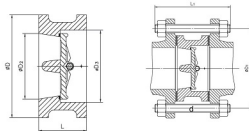
Structure features

- It is short in face to face dimensions, being 1/4-1/8 times that of traditional flange type check valve
- It is impact in volume size and light in weight of about 1/4-1/20 times that of traditional flange type check valve.
- The disc closes quickly with less water hammer pressure.
- It is convenient in installation, being available for use on level or vertical pipelines.
- Flow passage is fluent with less flow resistance.
- It acts sensitively with good sealing effect.
- Disc travel is short with less impact force caused by valve closing.
- It is impact in integral structure with nice outline view.
- It is longer for service life with high reliability.

Materials for main parts

Part Name	Material								
1	Body	A216WCB	A352LCB	A217WC6	A217WC9	A217C5	A217C12	A351CF8	A351CF8M
		A351CF8	A351CF8	A217WC6	A217WC9	A217C5	A217C12	A351CF8	A351CF8M
		A182F8a	A182F304	A182F304	A182F304	A182F304	A182F304	A182F304	A182F316
		Stainless steel/inconel							
3	Spring	Stainless steel/inconel							

Notes: The chart above only lists out some common composition of wafer type steel swing check valve parts. We may provide other different parts material composition according to the customer's request or the actual valve working condition.



Class	Size	Dimensions(mm)					Weight (kg)	Pipeline flanges					
		NPS	DN	L	D	D ₂		D ₃	D ₃	Number of bolts	d	mm	RF
150	2	50	60	103	51	56	2	120.5	4	3/8	M16	140	155
	2 1/2	65	67	122	65	73	3	139.5	4	3/8	M16	150	165
	3	80	73	135	80	88	4	152.5	4	3/8	M16	160	175
	4	100	73	151	100	108	6	170.5	8	3/4	M20	170	185
	5	125	86	195	127	132	8	216.0	8	3/4	M20	190	205
	6	150	98	220	152	160	13	241.5	8	3/4	M20	205	220
	8	200	127	277	200	210	25	298.5	8	3/4	M20	240	255
	10	250	146	337	254	266	39	362.0	12	1 1/8	M24	270	285
	12	300	181	407	305	310	54	432.0	12	1 1/8	M24	310	325
	14	350	194	448	350	355	80	476.0	12	1 1/8	M27	325	340
	16	400	191	512	400	405	117	540.0	16	1 1/2	M27	340	355
	18	450	203	547	450	455	118	576.0	16	1 1/2	M30	365	380
	20	500	219	604	500	505	163	635.0	20	1 3/8	M30	385	400
	24	600	222	715	600	605	233	749.5	20	1 3/8	M33	405	420
	28	700	305	773	700	700	388	795.5	40	3/4	M30	455	-
30	750	305	824	746	750	429	846.0	44	3/4	M30	455	-	
32	800	305	878	796	800	560	900.0	48	3/4	M30	460	-	
36	900	368	953	898	910	648	1009.5	48	3/4	M34	540	-	
42	1050	432	1142	1050	1055	960	1171.5	48	1	M37	625	-	
48	1200	524	1362	1200	1205	1400	1335.0	44	1 1/8	M30	740	-	
360	2	50	60	110	51	58	3	127.0	8	3/8	M16	155	175
	2 1/2	65	67	128	65	73	4	149.0	8	3/8	M20	175	185
	3	80	73	147	80	88	6	168.5	8	3/8	M20	190	210
	4	100	73	179	102	108	8	200.0	8	3/8	M20	195	215
	5	125	86	214	127	132	15	235.0	8	3/8	M20	215	235
	6	150	98	249	152	160	18	270.0	12	3/8	M20	240	250
	8	200	127	300	200	210	31	330.0	12	1/2	M24	260	280
	10	250	146	359	254	266	51	387.5	16	1	M27	315	335
	12	300	181	430	305	310	77	451.0	16	1 1/8	M30	365	385
	14	350	222	483	350	355	117	514.5	20	1 1/8	M33	410	430
	16	400	232	537	400	405	190	571.5	20	1 1/8	M33	435	455
	18	450	264	594	450	455	200	626.5	24	1 1/8	M33	475	485
	20	500	292	652	500	505	265	686.0	24	1 1/8	M33	510	535
	24	600	318	727	600	605	418	813.0	24	1 1/2	M39	560	585
	30	750	368	892	735	740	668	921.0	36	1 3/8	M36	650	-
36	900	463	1044	873	880	1020	1089.0	32	1 3/8	M42	800	-	
42	1050	568	1196	1035	1045	1520	1244.5	36	1 3/8	M45	930	-	
48	1200	679	1382	1179	1190	2260	1439.0	40	1 3/8	M48	1010	-	

Construction and feature of triple offset metal seal butterfly valve



Principle Of Operation

Our Triple Offset Butterfly Valve provides a bi-directional bubble tight shut-off. This geometry ensures that the disc seal contacts the body seat only at the final shut-off position without rubbing or galling, providing a torque generated resilient seal with sufficient "wedging" to ensure a uniform seal contact.

The Triple Offset Geometry

OFFSET 1

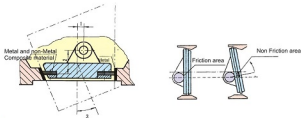
the shaft is offset behind the seat axis to allow complete sealing contact around the entire seat

OFFSET 2

the shaft's centerline is offset from the pipe and valve which provides interference opening and closing of the valve

OFFSET 3

The seat cone axis is offset from the shaft to eliminate friction during closing and opening and to achieve uniform compressive sealing around the entire seat.



Feature

1. Elastic property of the composite metal sealing ring perform zero leakage.
2. Torque seal to ensure persistent bidirectional zero leakage.
3. The triple offset metal-seated butterfly valve adopts one duo-eccentric structure plus one special oblique-conical elliptic sealing structure, the frictional torque force decreases substantially, a long service life is guaranteed, easy opening or closing is realized.



Standards

Standards Designing Specifications: API 609, ANSI B16.34

Inspection and test: API 598

Flanges Type & Dimensions: ASME B16.5, ASME B16.47

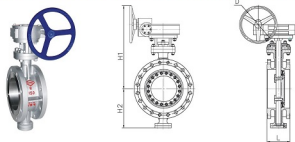
FACE TO FACE Dimensions: API 609

Parts and material list

Parts Number	Parts name	Material		
		WCB	CF8	CF8M
1	Cover	ASTM A195	ASTM A182 F304	ASTM A182 F316
2	Bolt	ASTM A193 B7	ASTM A193 B8	ASTM A193 B8
3	Gasket	Graphite	Graphite	Graphite
4	Split Ring	ASTM A182 F6a	ASTM A182 F304	ASTM A182 F316
5	Body	ASTM A216 WCB+13Cr	ASTM A351 CF8	ASTM A351 CF8M
6	Stem	ASTM A182 F6a	ASTM A182 F304	ASTM A182 F304
7	Handing	Copper alloy	Copper alloy	Copper alloy
8	Sealing ring	SS304+Graphite	SS304+Graphite	SS316+Graphite
9	Orland Retainer	ASTM A195	ASTM A182 F304	ASTM A182 F316
10	Bolt	ASTM A193 B7	ASTM A193 B8	ASTM A193 B8
11	Pin	ASTM A276 420	ASTM A276 304	ASTM A276 316
12	Handing	PTFE+Bronze	Lubricated Bronze	Lubricated Bronze
13	Stem packing	Graphite	Graphite	Graphite
14	Bolt	ASTM A193 B7	ASTM A193 B8	ASTM A193 B8
15	Nut	ASTM A194 2H	ASTM A194 8	ASTM A194 8
16	Gland Flange	ASTM A216 WCB	ASTM A351 CF8	ASTM A351 CF8M
17	Yoke	ASTM A216 WCB	ASTM A351 CF8	ASTM A351 CF8M
18	Blot	ASTM A193B7	ASTM A193 B8	ASTM A193 B8
19	Nut	ASTM A193 2H	ASTM A194 8	ASTM A194 8
20	Washer	Carbon steel	Carbon	Carbon
21	Gear	Carbon	Carbon	Carbon

Notes: The chart above only lists one some common composition of steel butterfly valve parts. We may provide other different parts material composition according to the customer's request or the actual valve working condition.

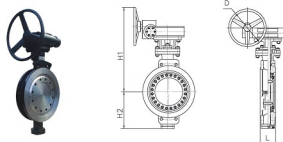
Class 150&Class300 triple offset flanged butterfly valve



Class	Size		Dimensions(mm)				Weight (kg)
	NPS	DN	L	H1	H2	D	
150	2	50	106	305	115	160	21
	2.5	65	132	315	125	160	24
	3	80	140	330	135	160	27
	4	100	127	360	140	160	28
	5	125	140	450	170	200	30
	6	150	160	475	175	200	30
	8	200	152	525	240	280	35
	10	250	165	570	270	280	100
	12	300	178	630	315	320	115
	14	350	190	675	345	350	190
	16	400	216	720	395	350	230
	18	450	222	805	405	350	300
	20	500	279	895	430	400	380
	24	600	287	960	480	400	600
	26	650	267	960	515	400	580
	28	700	292	1050	550	400	660
	30	750	308	1080	545	450	740
	32	800	318	1135	620	450	820
	36	900	330	1175	620	450	1100
	40	1000	410	1270	720	500	1430
48	1180	450	1355	768	500	2260	
300	2	50	150	325	115	160	22
	2.5	65	170	325	125	160	25
	3	80	180	340	135	160	27
	4	100	190	415	140	160	28
	5	125	200	475	170	200	30
	6	150	210	510	220	200	30
	8	200	230	520	240	200	30
	10	250	250	625	270	200	168
	12	300	270	670	320	250	248
	14	350	280	765	370	350	304
	16	400	310	810	410	360	320
	18	450	330	910	420	400	480
	20	500	350	980	440	400	600
	24	600	380	1080	540	400	784
	26	650	380	1130	585	450	920
	28	700	430	1175	640	450	1068
	30	750	430	1265	700	500	1184
	32	800	470	1300	765	500	1312
	36	900	510	1380	820	500	1780
	40	1000	550	1460	890	500	2288

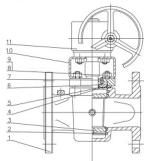
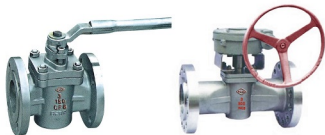
Noted: We may provide other different actuators according to the customer's request, such as pneumatic, electric, hydraulic actuators, the details of them according to the actual valve working condition.

Class 150&Class300 triple offset Wafer butterfly valve



Class	Size		Dimensions(mm)				Weight (kg)
	NPS	DN	L	H1	H2	D	
150	2	50	45	305	105	160	14
	2.5	65	46	315	115	160	15
	3	80	48	330	125	160	17
	4	100	54	360	150	160	20
	5	125	57	450	160	200	27
	6	150	57	475	185	200	31
	8	200	64	515	245	200	43
	10	250	71	540	275	200	86
	12	300	81	640	315	320	105
	14	350	92	670	330	350	135
	16	400	102	730	365	350	190
	18	450	114	810	390	350	218
	20	500	127	885	430	400	269
	24	600	134	940	470	400	407
	26	650	165	975	490	400	445
	28	700	165	1050	505	400	470
	30	750	190	1050	525	450	590
	32	800	190	1185	580	450	680
	36	900	200	1205	625	450	900
	40	1000	216	1260	685	500	1000
48	1200	234	1305	750	500	1570	
300	2	50	45	315	115	160	19
	2.5	65	46	325	125	160	22
	3	80	48	340	140	160	25
	4	100	54	440	170	200	30
	5	125	57	480	180	200	41
	6	150	59	515	220	200	47
	8	200	73	530	250	200	68
	10	250	83	640	300	350	130
	12	300	92	685	315	350	158
	14	350	117	730	370	350	216
	16	400	133	830	380	400	275
	18	450	149	915	470	400	327
	20	500	159	985	475	400	434
	24	600	181	1085	540	450	610
	26	650	-	-	-	-	-
	28	700	-	-	-	-	-
30	750	-	-	-	-	-	
32	800	-	-	-	-	-	
36	900	-	-	-	-	-	

Noted: We may provide other different actuators according to the customer's request, such as pneumatic, electric, hydraulic actuators, the details of them according to the actual valve working condition.



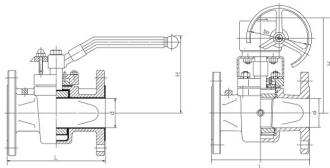
Standards

Design standard	API 599, API 6D
Face to face	ASME B16.10, API 6D
Butt welding end	ASME B 16.25
End flange	ASME B 16.5
Test and Inspection	API 598

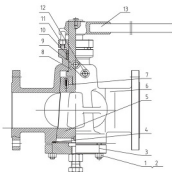
Parts and material list

Part Name		Carbon Steel to ASTM		Alloy Steel to ASTM				Stainless Steel to ASTM			
1	Body	A216 WCB	A352 LCB	A217 WC1	A217 WC6	A217 WC9	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
2	Sleeve	PTFE									
3	Plug	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F304	A182 F316	A182 F304L	A182 F316L
4	Cover	A216 WCB	A352 LCB	A217 WC1	A217 WC6	A217 WC9	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
5	Gasket	Flexible Graphite-SS, PTFE									
6	Adjusting gasket	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F304	A182 F316	A182 F304L	A182 F316L
7	Adjusting bolt	A193 B7	A320 L7	A193 B7	A193 B16	A193 B16	A193 B16	A193 B8	A193 B8	A193 B8	A193 B8
8	Bolt	A193 B7	A320 L7	A193 B7	A193 B16	A193 B16	A193 B16	A193 B8	A193 B8	A193 B8	A193 B8
9	Nut	A194 2H	A194 4	A194 2H	A194 4	A194 4	A194 4	A194 8	A194 8	A194 8	A194 8
10	Yoke	A216 WCB	A216 WCB	A216 WCB	A216 WCB	A216 WCB	A216 WCB	A351 CF8	A351 CF8	A351 CF8	A351 CF8
11	Worm	Cast Iron or Carbon Steel									

Class 150 & Class 300 Sleeve Soft sealing Plug Valve



Size		Class 150					Class 300				
		Dimensions (mm)				W1 (kg)	Dimensions (mm)				W1 (kg)
NPS	DN	L	d	H	Do	H.W	L	d	H	Do	H.W
1/2	15	108	13	110	175	8.5	140	13	110	175	9.5
3/4	20	117	19	115	175	9.5	152	19	115	175	10.5
1	25	127	25	115	175	10.5	165	25	115	175	12
1 1/4	32	140	32	135	220	12	178	32	135	220	14
1 1/2	40	165	38	340	280	14	190	38	140	280	16
2	50	178	49	350	305	18	216	49	150	305	20
2 1/2	65	190	62	365	350	22	241	62	165	350	24
3	80	203	74	380	405	26	283	74	180	405	29
4	100	229	100	380	500	40	305	100	380	500	55
5	125	254	127	460	500	60	381	127	460	500	75
6	150	267	150	520	520	70	405	150	520	520	85
8	200	292	201	580	520	130	419	201	580	520	185
10	250	330	252	620	550	219	457	252	620	550	230
12	300	356	303	680	580	301	502	303	680	580	300
14	350	381	334	760	450	570	762	334	760	450	550



Standards

Design standard	API 599, API 6D
Face to face	ASME B16.10, API 6D
Butt welding end	ASME B 16.25
End flange	ASME B 16.5
Test and Inspection	API 598

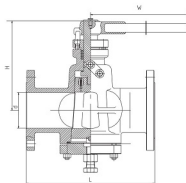
Specifications

Construction type: Pressure Balance;
Inverted Plug Valve
Operier type: Handwheel, Gear Operation

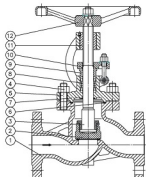
Parts and material list

Part Name	Carbon Steel to ASTM		Alloy Steel to ASTM				Stainless Steel to ASTM			
1 Bolt	A193 B7	A320 L7	A193 B7	A193 B16	A193 B16	A193 B16	A193 B8	A193 B8	A193 B8	A193 B8
2 Nut	A194 2H	A194 4	A194 2H	A194 4	A194 4	A194 8	A194 8	A194 8	A194 8	A194 8
3 Cover	A216 WCB	A352 LCB	A217 WC1	A217 WC6	A217 WC9	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
4 Gasket	Flexible Graphite+SS, PTFE									
5 Plug	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F304	A182 F316	A182 F304L	A182 F316L
6 Body	A216 WCB	A352 LCB	A217 WC1	A217 WC6	A217 WC9	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
7 Check Valve	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS
8 Stem	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F304	A182 F316	A182 F304L	A182 F316L
9 O-ring	NBR or Viton									
10 Packing	Flexible Graphite+SS, PTFE									
11 Gland	A216 WCB	A352 LCB	A217 WC1	A217 WC6	A217 WC9	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
12 Nozzle	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS
13 Wrench	Ductile Iron or Carbon Steel									

Class 150 & Class 300 Inverted Pressure Balance Lubricated Plug Valve



Size	Class 150						Class 300					
	NPS	DN	Dimensions (mm)			W1 (kg)	Dimensions (mm)			W1 (kg)		
		L	d	H	W	H.W	L	d	H	W	H.W	
1/2	15	108	13	180	400	10	140	13	180	400	12	
3/4	20	117	19	180	400	12	152	19	180	400	14	
1	25	127	25	185	500	14	165	25	185	500	16	
1 1/4	32	140	32	200	500	17	178	32	200	600	19	
1 1/2	40	165	38	214	600	19	190	38	210	600	21	
2	50	178	49	215	600	21	216	49	215	820	24	
2 1/2	65	190	62	250	820	29	241	62	250	1000	31	
3	80	203	74	270	820	33	283	74	270	1000	36	
4	100	229	100	300	900	48	305	100	300	900	61	
5	125	254	127	340	900	75	381	127	340	900	86	
6	150	267	150	365	920	98	405	150	365	920	130	
8	200	292	201	400	920	125	419	201	400	920	190	
10	250	330	252	450	950	171	457	252	450	950	255	
12	300	356	303	510	980	230	502	303	510	980	380	
14	350	381	334	580	980	370	762	334	580	980	500	



Standards

Design and Manufacture: BS 1873, BS EN 558-1

Face to Face Dimensions: DIN3202, EN 1092-1

Flange Ends Dimensions: DIN2543,

DIN2544, DIN2545, DIN2546,

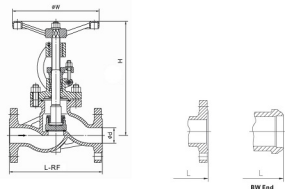
DIN2547, DIN2548

Test & Inspect: DIN 3230

Parts and material list

Part Name	Material					
	Trim 1	Trim 8	Trim 5			
1 Body	DIN 17245 GS-C25-CR13	DIN 17245 GS-C25-STL	DIN 17245 GS-C25-STL	DIN 17445 1.4308	DIN 17645 1.4408	
2 Disc	DIN 17245 GS-C25-CR13	DIN 17245 GS-C25-CR13	DIN 17245 GS-C25-STL	DIN 17445 1.4308	DIN 17645 1.4408	
7 Bonnet	DIN 17245 GS-C25-CR13	DIN 17245 GS-C25-CR13	DIN 17245 GS-C25-CR13	DIN 17445 1.4308	DIN 17645 1.4408	
9 Gland		ASTM A182 F6a		ASTM A182 F304	ASTM A182 F316	
10 Gland Flange		DIN 17245 GS-C25		DIN 17445 1.4308	DIN 17645 1.4408	
3 Stem		ASTM A182 F6a		ASTM A182 F304	ASTM A182 F316	
4 Nut		A194 2H		A194 8	A194 8	
5 Bolt		A193 B7		A193 B8	A193 B8	
6 Gasket	SS Spiral Wound W.graphite, or SS Spiral Wound W.PTFE, or Reinforced PTFE					
8 Packing	Braided Graphite or reinforced Graphite Ring or PTFE					
11 Stem Nut	Copper alloy or A439 D2					
12 Hand Wheel	Ductile iron or Carbon steel					

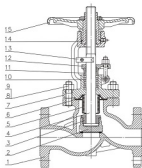
Noted: The chart above only lists out some common composition of steel globe valve parts. We may provide other different parts material composition according to the customer's request or the actual valve working condition.



Dimensions																				
PN16 (DIN 3202-F ₁)																				
DN	mm	15	20	25	32	40	50	6.5	80	100	125	150	200	250	300	350	400	470	500	
L-RF	mm	130	150	160	180	200	230	290	330	350	400	480	480	600	730	850	980	1100	1200	1250
L-BW	mm	130	150	160	180	200	230	290	330	350	400	480	480	600	730	850	980	1100	1200	1250
H	mm	190	210	235	235	285	310	340	370	420	440	510	610	770	800	-	-	-	-	-
W	mm	120	140	160	180	200	200	250	280	300	360	400	400	450	500	-	-	-	-	-
PN25 (DIN 3202-F ₁)																				
DN	mm	15	20	25	32	40	50	6.5	80	100	125	150	200	250	300	350	400	-	-	
L-RF	mm	130	150	160	180	200	230	290	330	350	400	480	480	600	730	850	980	1100	-	-
L-BW	mm	130	150	160	180	200	230	290	330	350	400	480	480	600	730	850	980	1100	-	-
H	mm	190	210	235	235	285	310	340	370	420	440	560	625	815	945	1015	1150	-	-	-
W	mm	120	140	160	180	200	200	250	280	300	360	400	400	450	500	-	-	-	-	-
PN40 (DIN 3202-F ₁)																				
DN	mm	15	20	25	32	40	50	6.5	80	100	125	150	200	250	300	350	400	-	-	
L-RF	mm	130	150	160	180	200	230	290	330	350	400	480	480	600	730	850	980	1100	-	-
L-BW	mm	130	150	160	180	200	230	290	330	350	400	480	480	600	730	850	980	1100	-	-
H	mm	190	210	235	235	285	310	340	370	420	440	560	625	815	945	1015	1150	-	-	-
W	mm	120	140	160	180	200	200	250	280	300	360	400	400	450	500	-	-	-	-	-
PN63 (DIN 3202-F ₁)																				
DN	mm	15	20	25	32	40	50	6.5	80	100	125	150	200	250	300	-	-	-	-	
L-RF	mm	210	230	230	260	260	300	340	380	430	500	550	650	775	900	-	-	-	-	
L-BW	mm	210	230	230	260	260	300	340	380	430	500	550	650	775	900	-	-	-	-	
W	mm	210	248	275	355	395	450	494	531	588	650	715	815	-	-	-	-	-	-	
PN100 (DIN 3202-F ₁)																				
DN	mm	15	20	25	32	40	50	6.5	80	100	125	150	200	250	300	-	-	-	-	
L-RF	mm	210	230	230	260	260	300	340	380	430	500	550	650	775	900	-	-	-	-	
L-BW	mm	210	230	230	260	260	300	340	380	430	500	550	650	775	900	-	-	-	-	
W	mm	210	248	275	355	395	450	494	531	588	650	715	815	-	-	-	-	-	-	

Noted: We may provide other different actuators according to the customer's request, such as pneumatic, electric, hydraulic actuators. The details of them according to the actual valve working condition.

Noted: The face to face dimension of BW-end valve is the same as that of flanged-end valve.



Standards

Design and Manufacture: DIN 3356, BS 173
 Face to Face Dimensions: DIN 3202, BS EN 558-1
 Flanged Ends Dimensions: DIN 2541-2545, EN 1092-1
 Test & Inspect: DIN 3230, BS EN 12569

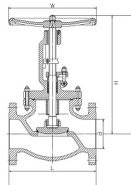
Structure Feature

1. Double seal, more reliable performance;
2. Stem lift position indication, more intuitive;
3. Small flow resistance, low pressure drop.

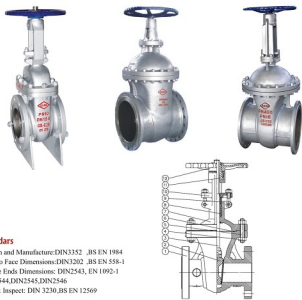
Parts and material list

Part Name	Material					
1 Body	DIN 17245 GS-C25+CR13	DIN 17245 GS-C25+STL	DIN 17245 GS-C25+STL	DIN 17445 1.4308	DIN 17445 1.4408	
2 Disc	DIN 17245 GS-C25+CR13	DIN 17245 GS-C25+CR13	DIN 17245 GS-C25+STL	DIN 17445 1.4308	DIN 17445 1.4408	
7 Bonnet	DIN 17245 GS-C25	DIN 17245 GS-C25	DIN 17245 GS-C25	DIN 17445 1.4308	DIN 17445 1.4408	
3 Disc Cover	ASTM A182 F6a		ASTM A182 F304		ASTM A182 F316	
4 Stem	ASTM A182 F6a		ASTM A182 F304		ASTM A182 F316	
5 Bellows Seal	SS304		SS316		SS316	
8 Bolt	ASTM A193 B7		ASTM A194 8		ASTM A194 8	
9 Nut	ASTM A194 2H		ASTM A193 B8		ASTM A193 B8	
11 Gland	ASTM A182 F6a		ASTM A182 F304		ASTM A182 F316	
12 Gland Flange	DIN 17245 GS-C25		DIN 17445 1.4308		DIN 17445 1.4408	
13 Guide Block	DIN 17245 GS-C25		DIN 17445 1.4308		DIN 17445 1.4408	
6 Gasket	Flexible Graphite/SS, PTFE or Reinforced PTFE					
10 Packing	Bridled Graphite or reinforced Graphite Ring or PTFE					
14 Stem Nut	Copper Alloy or A459 D2					
15 Handwheel	Ductile Iron or Carbon Steel					

Note: Connection flange of series valve may be manufactured by customer's requirement.



Dimensions															
PN16 (DIN 3202-F)															
DN	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350
L	130	150	160	180	200	230	290	310	350	400	480	600	730	850	980
H	195	200	220	225	235	250	260	265	370	400	515	550	600	630	680
W	120	120	140	160	160	180	200	220	250	300	350	400	450	500	500
PN25 (DIN 3202-F)															
DN	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350
L	130	150	160	180	200	230	290	310	350	400	480	600	730	850	980
H	195	200	220	225	235	250	260	265	370	400	515	550	600	630	680
W	120	140	140	160	160	180	200	220	250	300	350	400	450	500	500
PN40 (DIN 3202-F)															
DN	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350
L-RF	130	150	160	180	200	230	290	310	350	400	480	600	730	850	980
H	195	200	220	225	235	250	260	265	370	400	515	550	600	630	680
W	120	140	140	160	160	180	200	220	250	300	350	400	450	500	500



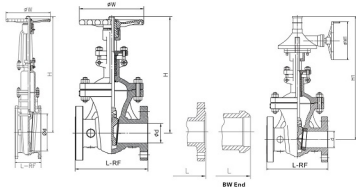
Standards

Design and Manufacture: DIN3352 ,BS EN 1984
 Face to Face Dimensions: DIN3202 ,BS EN 558-1
 Flange Ends Dimensions: DIN2543, EN 1092-1
 DIN2544, DIN2545, DIN2546
 Test & Inspect: DIN 3230, BS EN 12569

Standard Material Specifications

Part Name	Material					
	Trim 1	Trim 8	Trim 5			
1 Body	DIN 17245 GS-C25-CR13	DIN 17245 GS-C25+STL	DIN 17245 GS-C25+STL	DIN 17445 1.4308	DIN 17445 1.4308	
2 Wedge	DIN 17245 GS-C25-CR13	DIN 17245 GS-C25-CR13	DIN 17245 GS-C25+STL	DIN 17445 1.4308	DIN 17445 1.4308	
7 Bonnet	DIN 17245 GS-C25-CR13	DIN 17245 GS-C25-CR13	DIN 17245 GS-C25-CR13	DIN 17445 1.4308	DIN 17445 1.4308	
9 Gland		ASTM A192 F04		ASTM A192 F04	ASTM A192 F316	
10 Gland Flange		DIN 17245 GS-C25		DIN 17445 1.4308	DIN 17445 1.4308	
3 Stem		ASTM A192 F04		ASTM A192 F04	ASTM A192 F316	
4 Nut		A194 3H		A194 8	A194 8	
5 Bolt		A193 87		A193 88	A193 88	
6 Gasket	SS Spiral Wound Graphitic or SS Spiral Wound W-PTEF or Reinforced PTFE					
8 Packing	Braided Graphite or Duckered Graphitic Ring or PTFE					
11 Stem Nut		Copper alloy or A4-91 D2				
12 Hand Wheel		Ductile Iron or Carbon steel				

Note: The chart above only list out some common composition of steel gate valve parts. We may provide other different parts material composition according to the customer's request or the actual valve working condition.



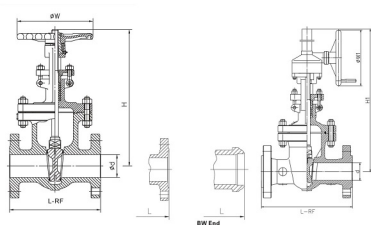
BW End

Dimensions																						
PN10 (DIN 1202-F4)																						
DN	25	32	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	800	900	1000	1200
L-RF	-	170	140	150	170	180	190	300	210	210	250	270	290	310	330	350	500	430	470	510	550	630
H	-	268	295	305	345	370	445	530	565	725	885	1010	1140	1295	1384	1535	1815	2155	-	-	-	-
H1	-	-	-	-	-	-	-	-	-	965	1270	1365	1545	1755	1896	2085	2415	2925	3275	3670	4270	4845
W	-	180	200	200	230	250	280	280	300	360	400	400	450	500	500	600	700	800	-	-	-	-
W1	-	-	-	-	-	-	-	-	-	310	310	310	360	400	400	400	530	530	530	530	530	530
Wt(g)	-	10	13	18	23	29	38	53	68	108	149	220	275	390	487	583	852	1230	1830	2295	3700	5030
PN25 (DIN 1202-F5)																						
DN	25	32	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	800	900	1000	1200
L-RF	160	180	240	250	270	280	300	325	350	400	450	500	550	600	650	700	800	900	1000	1100	1200	1400
H	205	270	305	325	350	415	465	545	610	775	905	1020	1180	1300	1420	1585	1810	-	-	-	-	-
H1	-	-	-	-	-	-	-	-	-	1220	1370	1525	1735	1890	2135	2385	2945	3345	3750	4005	4830	4830
W	160	180	200	200	230	250	280	280	300	360	400	400	450	500	500	600	600	600	-	-	-	-
W1	-	-	-	-	-	-	-	-	-	310	310	310	360	400	400	400	530	530	530	530	530	530
Wt(g)	10	15	18	23	25	38	45	72	97	169	258	330	470	572	816	1180	1450	1860	2461	3080	3940	6020
PN40 (DIN 1202-F7)																						
DN	25	32	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	800	900	1000	1200
L-RF	160	180	240	250	270	280	300	325	350	400	450	500	550	600	650	700	800	900	1000	1100	1200	1400
H	205	270	305	325	350	415	465	545	610	775	905	1020	1180	1300	1420	1585	1810	-	-	-	-	-
H1	-	-	-	-	-	-	-	-	-	1220	1370	1525	1735	1890	2135	2385	2945	3345	3750	4005	4830	4830
W	160	180	200	200	230	250	280	280	300	360	400	400	450	500	500	600	600	600	-	-	-	-
W1	-	-	-	-	-	-	-	-	-	310	310	310	360	400	400	400	530	530	530	530	530	530
Wt(g)	11	16	18	25	30	42	58	76	108	182	280	352	495	652	925	1250	1560	2038	2558	3870	4960	7558

Note: We may provide other different actuators according to the customer's request, such as pneumatic, electric, hydraulic actuators, the details of them according to the actual valve working condition.

Note: For DN<40, the face to face dimension conform to the P1 series

Note: The face to face dimension of BW-end-valve is the same as that of flanged-end-valve.

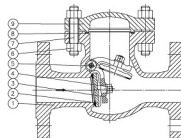


Dimensions

PN63 (DIN 3202-F7)										
DN	40	50	65	80	100	125	150	200	250	300
L-RF	240	250	290	310	350	400	450	550	650	750
H	323	360	410	450	525	605	675	820	975	1115
H1	-	-	-	-	-	890	1060	1285	1475	1635
W	180	200	250	250	300	300	360	400	450	500
W1	-	-	-	-	-	310	310	460	460	530
W(Kg)	22	32	39	53	78	123	176	240	435	560
PN100 (DIN 3202-F7)										
DN	40	50	65	80	100	125	150	200	250	300
L-RF	240	250	290	310	350	400	450	550	650	750
H	380	390	415	460	510	625	750	890	1050	1208
H1	-	-	-	-	-	890	1200	1415	1680	1900
W	180	200	250	250	300	360	450	500	650	700
W1	-	-	-	-	-	310	310	460	460	530
W(Kg)	28	42	55	63	101	147	228	449	608	1020
PN160 (DIN 3202-F8)										
DN	40	50	65	80	100	125	150	200	250	300
L-RF	270	300	360	390	450	525	600	750	900	1050
H	365	512	568	585	631	670	820	990	-	-
H1	-	-	-	-	-	840	955	1235	1500	1725
W	230	280	290	300	360	400	500	650	-	-
W1	-	-	-	-	-	310	310	460	530	-
W(Kg)	50	74	107	120	180	242	410	582	950	1380

Notes: We may provide other different actuators according to the customer's request, such as pneumatic, electric, hydraulic actuators, the details of them according to the actual valve working condition.

Notes: The face to face dimension of BW-end-valve is the same as that of flange-end-valve.



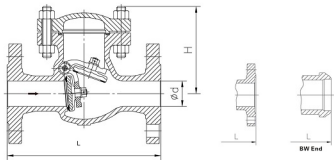
Standards

Design and Manufacture: DIN3840, BS EN 1868
 Face to Face Dimensions: DIN3202, BS EN 558-1
 Flange Ends Dimensions: DIN2543, BS EN 1092-1
 DIN2544, DIN2545, DIN2546, DIN2548
 Test & Inspect: DIN 3230, BS EN 12569

Parts and material list

Part Name	Material					
1 Body	DIN 17245 GS-C25-CR13	DIN 17245 GS-C25-STL	DIN 17245 GS-C25-STL	DIN 17445 1.4308	DIN 17445 1.4408	
2 Disc	DIN 17245 GS-C25-CR13	DIN 17245 GS-C25-CR13	DIN 17245 GS-C25-STL	DIN 17445 1.4308	DIN 17445 1.4408	
9 Cover	DIN 17245 GS-C25	DIN 17245 GS-C25	DIN 17245 GS-C25	DIN 17445 1.4308	DIN 17445 1.4408	
3 Arm	DIN 17245 GS-C25	DIN 17245 GS-C25	DIN 17245 GS-C25	DIN 17445 1.4308	DIN 17445 1.4408	
5 Pin	ASTM A182 F6a	ASTM A182 F6A	ASTM A182 F6a	ASTM A182 F304	ASTM A182 F316	
6 Nut	ASTM A194 2H			ASTM A194 8	ASTM A194 8	
7 Bolt	ASTM A194 B7			ASTM A193 B8	ASTM A193 B8	
4 Nut	ASTM A194 2H			ASTM A182 F304	ASTM A182 F316	
8 Gasket	SS Spiral Wound W/graphite, or SS Spiral Wound W/PTFE, or Reinforced PTFE					

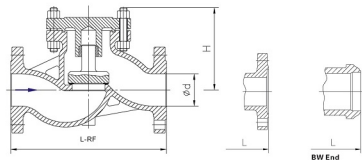
Notes: The chart above only lists out some common composition of steel check valve parts. We may provide other different parts material composition according to the customer's request or the actual valve working condition.



Dimensions

PN16 (DIN 3202-F6)																		
DN	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	800	900
L	180	200	240	260	300	350	400	500	600	700	800	900	1000	1100	1300	1500	1700	1900
H	129	147	161	178	190	205	285	345	394	420	455	520	565	610	740	895	1240	1450
W(kg)	13	16	23	31	40	53	80	116	216	316	440	513	582	800	1158	1380	1540	1790
PN25 (DIN 3202-F6)																		
DN	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	800	900
L	180	200	240	260	300	350	400	500	600	700	800	900	1000	1100	1300	1500	1700	1900
H	129	147	161	178	190	205	285	345	394	420	455	520	565	610	740	895	1240	1450
W(kg)	14	20	27	44	55	88	145	213	297	373	495	545	600	815	1200	1400	1620	1830
PN40 (DIN 3202-F1)																		
DN	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	800	900
L-RF	200	230	290	310	350	400	480	600	730	850	900	1100	1200	1250	1450	1650	1850	2050
H	135	152	178	185	210	200	310	365	445	480	510	545	595	655	860	-	-	-
W(kg)	15	22	29	40	46	58	92	168	310	430	558	780	915	1170	1330	-	-	-
PN63 (DIN 3202-F2)																		
DN	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600	-	-	-
L	260	300	340	380	430	500	550	650	775	900	1025	1150	1275	1400	1600	-	-	-
H	168	175	192	225	230	2108	335	390	452	520	570	626	695	770	905	-	-	-
W(kg)	40	48	62	80	114	187	214	329	418	640	911	1139	1320	1693	2015	-	-	-
PN100 (DIN 3202-F2)																		
DN	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600	-	-	-
L	260	300	340	380	430	500	550	650	775	900	1025	1150	1275	1400	1600	-	-	-
H	165	183	205	236	272	305	343	398	456	528	600	685	-	-	-	-	-	-
W(kg)	48	65	73	87	105	192	208	370	668	963	1100	1358	-	-	-	-	-	-

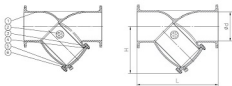
Note: The face to face dimension of BW-end-valve is the same as that of flanged-end-valve.



Dimensions

PN16 (DIN 3202-F1)																		
DN	mm	15	20	25	32	40	50	6.5	80	100	125	150	200	250	300	350	400	
L-RF	mm	130	150	160	180	200	230	290	310	350	400	400	400	400	730	850	900	1000
L-BW	mm	130	150	160	180	200	230	290	310	350	400	400	400	400	730	850	900	1000
H	mm	77	80	85	95	105	120	130	140	155	180	215	260	315	-	-	-	-
PN25 (DIN 3202-F1)																		
DN	mm	15	20	25	32	40	50	6.5	80	100	125	150	200	250	300	350	400	
L-RF	mm	130	150	160	180	200	230	290	310	350	400	400	400	400	730	850	900	1000
L-BW	mm	130	150	160	180	200	230	290	310	350	400	400	400	400	730	850	900	1000
H	mm	100	105	120	130	135	149	160	169	184	222	253	305	355	410	-	-	-
PN40 (DIN 3202-F1)																		
DN	mm	15	20	25	32	40	50	6.5	80	100	125	150	200	250	300	-	-	-
L-RF	mm	130	150	160	180	200	230	290	310	350	400	400	400	400	730	850	-	-
L-BW	mm	130	150	160	180	200	230	290	310	350	400	400	400	400	730	850	-	-
H	mm	100	105	120	130	135	149	160	169	184	225	253	305	360	415	-	-	-
PN63 (DIN 3202-F2)																		
DN	mm	15	20	25	32	40	50	6.5	80	100	125	150	200	250	300	-	-	-
L-RF	mm	210	230	230	260	260	300	340	380	430	500	550	650	775	900	-	-	-
L-BW	mm	210	230	230	260	260	300	340	380	430	500	550	650	775	900	-	-	-
H	mm	100	110	125	140	168	170	188	205	230	240	260	310	-	-	-	-	-
PN100 (DIN 3202-F2)																		
DN	mm	15	20	25	32	40	50	6.5	80	100	125	150	200	250	300	-	-	-
L-RF	mm	210	230	230	260	260	300	340	380	430	500	550	650	775	900	-	-	-
L-BW	mm	210	230	230	260	260	300	340	380	430	500	550	650	775	900	-	-	-
H	mm	100	110	125	140	170	185	200	225	265	310	350	400	-	-	-	-	-

Note: The face to face dimension of BW-end-valve is the same as that of flanged-end-valve.



Standards

Design and Manufacture: BS1873, BS EN 13709

Face to Face Dimensions: DIN3202, BS EN 558-1

Flange Ends Dimensions: DIN2543-2551, BS EN 1092-1

Test & Inspect: DIN 3230, BS EN 12569

Percentage open area

Even the mesh[®] is same:

open area not always same

due to the diameter of wire.

The details of wire as follows:

A: Number of Wire

B: Diameter of Wire

C: Width of Opening

D: Percentage of OPEN AREA

MESH	A SWG	B m/m	C m/m	D %
5	20	0.914	4.166	67.3
10	22	0.711	1.829	51.8
20	28	0.556	0.914	51.8
30	32	0.274	0.572	48.7
40	36	0.193	0.442	48.4
50	37	0.172	0.336	43.6
60	38	0.152	0.271	41.0
80	40	0.122	0.195	37.8
100	42	0.102	0.152	35.8
120	43	0.092	0.119	31.8
150	45 1/2	0.066	0.103	37.1
180	46 1/2	0.053	0.088	38.9
200	47	0.051	0.076	35.5
250	48	0.040	0.062	37.7
300	48	0.039	0.044	27.6

Parts and material list

Part Name	Material		
1 Body	DIN 17245 GS-C25	DIN 17445 1.4308	DIN 17445 1.4408
2 Screen	ASTM 182 F304	ASTM 182 F304	ASTM 182 F316
3 Bonnet Bolt	ASTM 193 B7	ASTM 193 B8	ASTM 193 B8
4 Bonnet Nut	ASTM 194 2H	ASTM 194 8	ASTM 194 8
5 Gasket	Graphite+SS304	Graphite+SS304	Graphite+SS316
6 Bonnet	DIN 17245 GS-C25	DIN 17445 1.4308	DIN 17445 1.4408

Dimensions

PN16 (DIN 3202-F₁)

DN	mm	15	20	25	32	40	50	6.5	80	100	125	150	200	250	300	350	400	500	600
L	mm	130	150	160	180	200	230	290	310	350	400	480	600	730	850	980	1100	1250	1450
H	mm	98	103	108	115	140	150	175	205	245	285	335	415	490	570	580	618	730	890

PN25 (DIN 3202-F₂)

DN	mm	15	20	25	32	40	50	6.5	80	100	125	150	200	250	300	350	400	500	600
L	mm	130	150	160	180	200	230	290	310	350	400	480	600	730	850	980	1100	1250	1450
H	mm	98	103	108	115	140	150	175	205	245	285	335	415	490	570	580	618	730	890

PN40 (DIN 3202-F₃)

DN	mm	15	20	25	32	40	50	6.5	80	100	125	150	200	250	300	350	400	500	600
L	mm	130	150	160	180	200	230	290	310	350	400	480	600	730	850	980	1100	1250	1450
H	mm	98	103	108	115	140	150	175	205	245	285	335	415	490	570	580	618	730	890

Notes: The chart above only lists out some common composition of steel strainer parts. We may provide other different parts material composition according to the customer's request or the actual valve working condition.

