

EZ STEEL GROUP

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EZ STEEL INDUSTRIAL CO., LTD

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Best quality + Fastest delivery time + VIP service = Long term cooperation



EZ STEEL GROUP



Brief introduction

EZ STEEL INDUSTRIAL CO.,LTD is the export division and window company of EZ STEEL GROUP, which was founded in 1994 .

The series of products including gate valve , stop valve , ball valve , check valve , butterfly valve , plug valve , water supply and drainage valve etc . Our products are manufactured in accordance with ANSI1 , AP1 , J1S , BS , NF , D1N and GB standards with thousands of specification and varieties . The main materials of products include WCB , LCB ,WC6 ,WC9 ,CF8 ,CF8M ,CF3 ,CF3M ,CN7M ,C5 ,C12 etc . The driving mode: manual , electric , pneumatic , hydraulic and electric- hydraulic , etc . The nominal diameter from DN25mm-3200mm (1"- 128") and normal pressure from PN0 .6MPa to 42MPa(150lb-2500lb) and working temperature from - 196°Cto 680°C .

With the products of "EZ Steel" brand as leader , science and technological innovation as pilot , top quality as the base , the sincere service as aim , good price as the direction , J1NGJ1A has obtained many users' trust . Thus ,EZ Steel group will continuously adhere to the principle "seeking better instead of best" to provide the clients more satisfactory sales and service .

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Yoke sleeve

The upper portion of the Yoke sleeve is hexagonally tapered to fix the handwheel. The standard material of the Yoke sleeve is Nodular Ni-resist D2 with over 1150°C(2100. F) dissolution point in accordance with AP1 std. specifications.

Bolting

The body-bonnet bolts are manufactured in accordance with AP1 std. 600specifications. The nuts also strictly conform with ANs1 B 1. 1. The stud-bolt nuts+ hexagonal+ rigid and hot-forged+ bear material notation as well as do the bolt nuts made according to ANs1 B 18.2.2.

Bonnet

The bonnet and valve body have the same wall thickness. The body-bonnet flange drilling is spot-faced to exactly meet stud-bolt nuts. The bonnet back seat bushing guarantees packing replacement even with when the valve is fully opened. The stem packing dimensions of the stuffing box are in accordance with AP1 specifications.

Stem

The machined forged stem comes with a T -shape head+ which connects the slot of the wedge. The spherically shaped contacting surface of the head gives greater strength and durability. The stem dimensions are in accordance with AP1 std. 600 specifications. The heat treated stem delivers adequate mechanical properties as well as excellent surface hardness. Further. Opening/shutting friction 1s minimized by accurated machining and tapping.

Seatring

Bonttom seated type seat rings are welded or screwed into the body. The seating surface is finished by lapping. They are forings that have been heat treated delived the best mechanical properties and required hardness. The difference in hardness between seats and wedgd is in accordance with AP1 specifications.

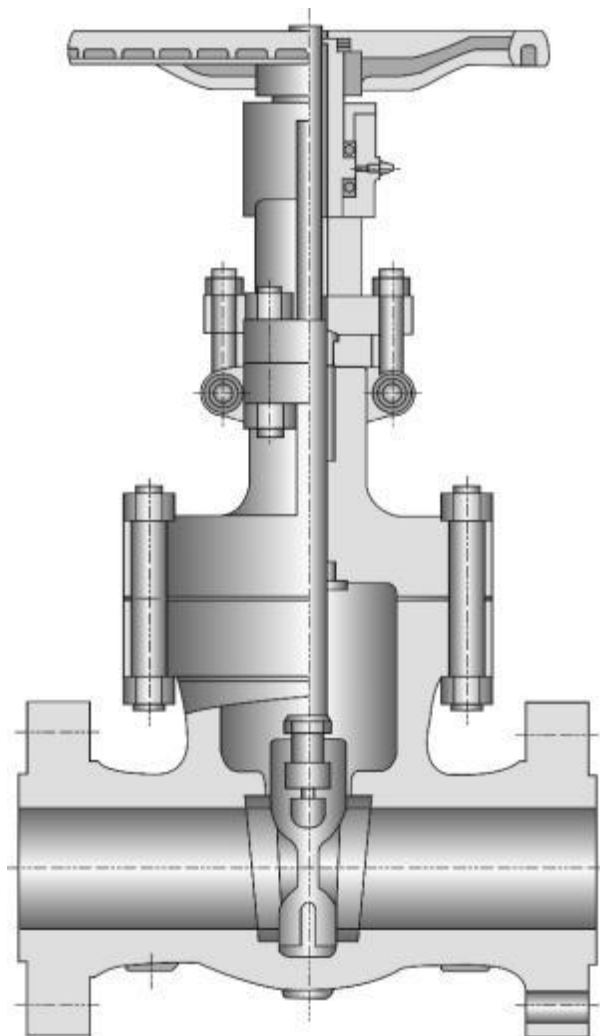
Flexible wedge

The standard disc of our valves is a one-piece flexible wedge.

Body The wedge is machined on both sides of the wedge to allow it to travel correctly in the integrally cast body guides.

The wedge seating surfaces have been accurately machined, grind and lapped to a mirror finish to prevent leakage and eliminate galling.

The Cast steel body is designed to insure a wall thickness which is greater at any point than the minimum specified by AP1 std. 600. special care has been taken with the design of the Class 150 valve body so that the elliptically shaped center section is free from intensified stresses in the critical area. The body of above Class 300 are made circular in shape as much as possible to minimize distortion even under extreme operating conditions. 1nlet and outlet port dimensions conform with ANs1 B 16 .5 Pipe Fitting The welded in type seat ring is standard to insure interchangeability. Except for Class 150 the standard body - bonnet joint is mate and femate.



Design

EZ Steel cast steel check valve are designed and manufactured to provide maximum service life and dependability. All gate valves are full ported and meet the design requirements of American Petroleum Institute standard API 600 & API 6D+ Standard BS1414&BS EN 1984 and generally conform to American society of Mechanical Service.

Engineers standard ASME B16.34. Valves are available in a complete range of body/bonnet materials and trims.

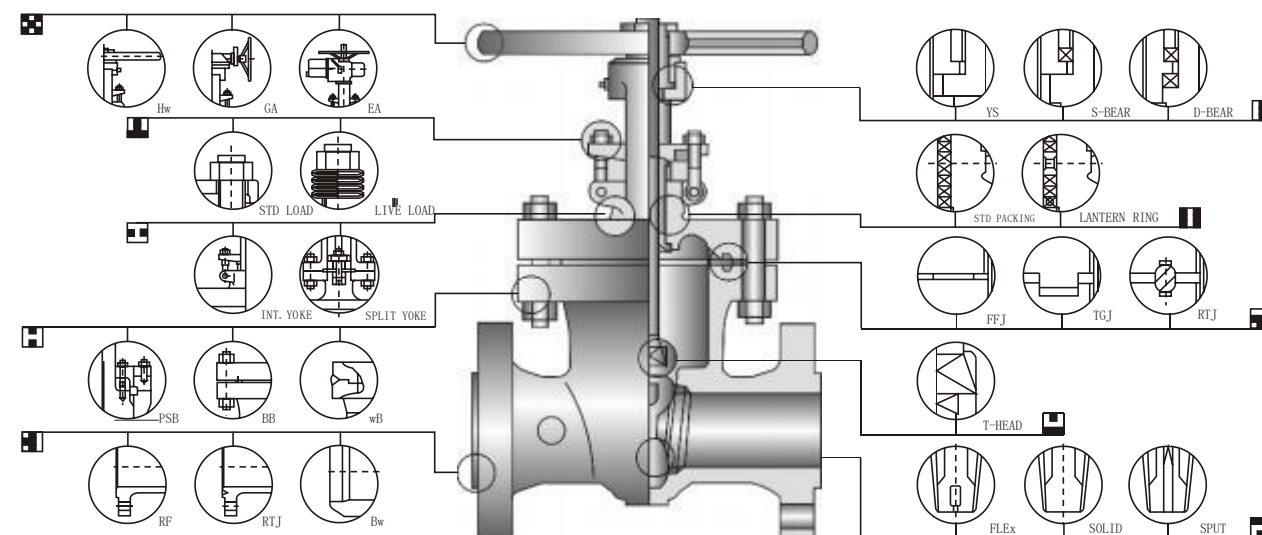
Rang of Materials

standard body/ bonnet materials include nine grades of carbon+ low alloy and stainless steels+ For special apolications they can be supplied in other grades of alloy and stainless steel. There's a full ranged of trim materials to match any service. Optional packing and gasket materials are available for a full range of service conditions.

Available Modifications for Cast Steel Valves

- *Trim Changes
- *End Connection Modifications
- *Pack ing and gasket Changes
- *Operator Mounting
- *Handwheel Extensions

- *Pressure Equalizing
- *By- pass
- *Customer Specified Coatings
- *weld End Bore Changes
- *Oxygen & Chlorine Cleaning & Packaging



Operating

Large handwheels for easy operation. Also available with gearing motor actuators, pneumatic or hydraulic actuators for more difficult services.

OS & Y

Outside Screw and Yoke. Cast steel gate valve yoke integral with bonnet for 150Lb-8", 300Lb-8", 600Lb-6", 900Lb-4" & Small.

End Connections

A choice of Flanged, RTJ flanged or Buttwelding end for piping flexibility.

Lantern ring and double packing set

Lantern ring with leak-off fitting connection and double packing stack is optionally available for critical services.

Live Load Packing

In services requiring frequent cycling or with high pressure/ temperature variations, live loading extends the service life between maintenance periods by requiring less frequent packing gland adjustments. Belleville spring are employed to provide constant packing gland stress.

BB

Bolted bonnet. Welding bonnet and pressure seal bonnet in services requiring frequent cycling or with high pressure/temperature variations.

Yokesleeve

Extra long thread engagement between yoke sleeve and stem provide long thread life. Valves of sizes larger than 150Lb-12" 300Lb-10", 600Lb-6", 900Lb/1500Lb/2500Lb-4" are regularly provided with roll bearing yokes.

Body-to-Bonnet JointB

A flat face gasket joint is used in the 150Lb valves. A male and female joint is used in 300Lb to 600Lb valves. Ring joint is used in the body to bonnet connection in 900Lb & higher rated valves.

Wedge

Integral guide rib faces assure self-centering of wedge. Flexible stems. By forging the T-head, the stem at the stem-wedge connection is strengthened. This design also allows the wedge to self-align, eliminating the possibility of a bent stem jamming the wedge. Available in solid, flex split and HIS designs.

Stem

All wedge gate valves are provided with uspet forged T-head stems. By forging the T-head, the stem at the stem-wedge connection is strengthened. This design also allows the wedge to self-align, eliminating the possibility of a bent stem jamming the wedge. Available in solid, flex split and HIS designs.



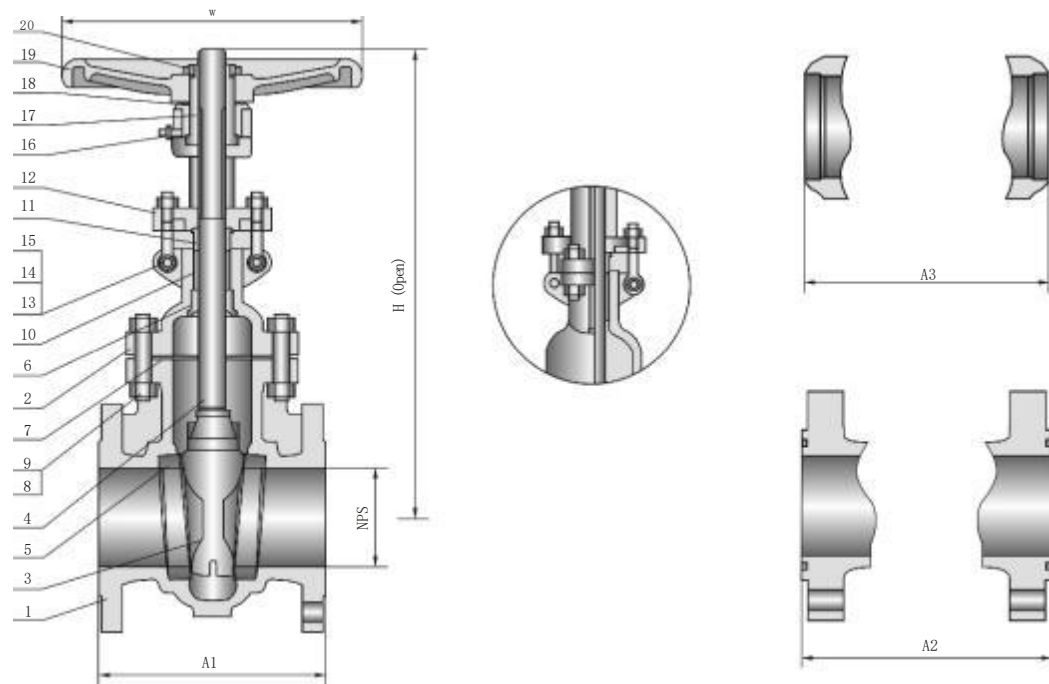


Applicable Standards

- ★Steel Gate Valves, API 608/API 6D
- ★Steel Gate Valves, ISO 10434/ISO 143 13
- ★Steel Valves, ASME b 16.34
- ★Face To Face, ASME b 16. 10
- ★End Flanges, ASME b 16. 5
- ★Buttweld ing Ends, ASME b 16.25
- ★Inspect ion And Test, API 598/API6D

Design Description

- ▲Full Port Des ign
- ▲OS&Y, Outs ide Screw And Yo ik
- ▲BB, Bolted Bonnet
- ▲Flex ible wedge, Fully Gu ided
- ▲Cho ice Of Sol id Or Spl it wedge
- ▲Renewable Seat R ings
- ▲Forged T-head Stem
- ▲R is ing Stem And Non-r is ing Handwheel
- ▲Flanged Or Buttwld ing Ends
- ▲Ava ilable w ith Be Operator



NO.	Part Name	ASTM Material							
		Carbon steel	1.25Cr-0.5Mo	2.25Cr-1Mo	304 Type	316 Type	304L Type	316L Type	20Alloy
1	Body	A216 WCB	A217 WC6	A217 WC9	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A351 CN7M
2	Bonnet	A216 WCB	A217 WC6	A217 WC9	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A351 CN7M
3	Wedge	WCB+13Cr*1	A217 WC6+HF	A217 WC6+HF	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A351 CN7M
4	Stem	A182 F6a	A182 F11	A182 F22	A182 F304	A182 F316	A182 F304L	A182 F316L	20-Alloy
5	Seat Ring	A105+13Cr*1	A182 F11+HF	A182 F22+HF	NA				NA
6	Back Seat	A276 410	A276 410	A276 410	NA				NA
7A	Bonnet Gasket	304+graphite	304+graphite	304+graphite	304+graphite	316+graphite	304L+graphite	316L+graphite	316+graphite
7B	Ring Gasket	Soft steel	A182 E304	A182 E304	A182 E304	A182 E316	A182 E304L	A182 E316L	20-Alloy
8	Bonnet bolt	A193 B7	A193 B7	A193 B16	A193 B8	A193 B8M	A193 B8	A193 B8M	A193 B8M
9	Bonnet Nut	A194 2H	A194 7	A194 7	A194 8	A194 8M	A194 8	A194 8M	A194 8M
10	Packing	Graphit	Graphite	Graphite	Graphite #2	Graphite #2	Graphite #2	Graphite #2	Graphite #2
11	Gland	A276 410	A276 410	A276 410	A276 304	A276 316	A276 304L	A276 316L	20-Alloy
12	Gland Flange	A216 WCB	A216 WCB	A216 WCB	A351 CF8	A351 CF8	A351 CF8	A351 CF8	A351 CF8
13	Eyebolt	Carbon steel	A193 B7	A193 B7	A193 B8	A193 B8	A193 B8	A193 B8	A193 B8
14	Eyebolt Nut	Carbon steel	A194 2H	A194 2H	A194 8	A194 8	A194 8	A194 8	A194 8
15	Eyebolt Pin	A276 410	A276 410	A276 410	A276 304	A276 304	A276 304	A276 304	A276 304
16	Grease Fitting								Commercial
17	Stem Nut								Bronze
18	Jam Nut		Commercial						Stainless steel
19	Hand Wheel		Bronze #3						Malleable iron
20	Wheel Nut		Carbon steel				Stainless steel		Carbon steel+Zn
*1			Malleable iron						
*2			Carbon steel						
*3									
NA	PN≥600CLASS sealing Face will be HF								
	PTFE Optional								
	Ductile Ni-Resist iron Optional								
	Integral with vessel								



Main Outline Dimensions & Weight Class 150/10K

VALVE SIZE		in	2	2.5	3	4	6	8	10	12	14	16	18	20	24	28	30	36	40	42	48	52
		mm	50	6.5	80	100	150	200	250	300	350	400	450	500	600	700	750	900	1000	1050	1200	1300
A ₁		in	7.0	7.5	8.0	9.0	10.5	11.5	13.0	14.0	15.0	16.0	17.0	18.0	20.0	24.0	24.0	28.0	30.0	31.0	34.0	36.0
		mm	178	190	203	229	267	292	330	356	381	406	432	457	508	610	610	711	762	813	864	914
A ₃		in	85	9.5	11.12	120	15.87	16.5	18.0	19.75	22.5	240	26.0	280	32.0	36.0	36.0	40.0	42.0	43.0	46.0	54
		mm	216	241	283	305	403	419	457	502	572	610	660	711	813	914	914	1016	1067	1092	1168	1372
H		in	15.4	16.7	181	22.8	30.6	38.4	46.4	54.6	60.0	68.7	79.1	91.7	1096	127.4	134.5	161.8	183.9	174.4	217.5	227
		mm	390	425	461	580	776	976	1178	1387	1523	1745	2010	2330	2784	3236	3417	4109	4670	4430	5525	5766
w		in	7.9	7.9	7.9	9.8	11.8	14.0	17.7	17.7	19.7	22.0	13.8	17.7	17.7	22.0	220	27.9	31.5	315	35.4	35.4
		mm	200	200	200	250	300	355	450	450	500	560	350	450	450	560	560	710	800	800	900	900
WEIGHT	RF	in	48.5	55.1	66.2	99.2	187	295.5	445	639	816	1177	1475	1786	3153	4557	4827	7856	10370	10143	15677	18742
		mm	22	25	30	45	85	134	202	290	370	534	669	810	1430	2067	2189	3563	4703	4600	7110	8500
	Bw	in	44.1	46.3	61.7	92.6	161	244	399	584	750	111	1365	1697	3336	4756	4981	8011	10436	10198	15545	18853
		mm	20	21	28	42	73	111	181	265	340	504	619	770	1513	2157	2259	3633	4733	4625	7050	8550

Main Outline Dimensions & Weight Class 300/20K

VALVE SIZE		in	2	2.5	3	4	6	8	10	12	14	16	18	20	24	28	30	36	40	42	48
		mm	50	65	80	100	150	200	250	300	350	400	450	500	600	700	750	900	1000	1050	1200
A ₁ & A ₃		in	8.5	95	11.12	120	15.88	16.5	180	19.75	30.0	33.0	36.0	39.0	45.0	53.0	55.0	68.0	760	780	87.2
		mm	216	241	283	305	403	419	457	502	762	838	914	991	1143	1346	1397	1727	1930	1981	2215
A ₂		in	9.12	10.12	11.75	1262	16.5	17.12	18.62	20.37	30.62	33.62	36.62	39.75	45.88	54.0	56.0	69.12	—	—	—
		mm	232	257	298	321	419	435	473	518	778	854	930	1010	1165	1372	1422	1756	—	—	—
H		in	162	17.7	19.0	23.7	32.0	40.2	48.8	56.8	66.1	78.4	85.9	93.5	112.6	130.0	148.5	169.8	1886	198.1	2174
		mm	412	450	483	601	813	1020	1239	1443	1679	1993	2181	2376	2860	3302	3772	4312	4791	5032	5522
w		in	7.9	7.9	8.8	9.8	140	15.7	17.7	19.7	17.7	17.7	22.0	22.0	27.9	35.4	35.4	30.0	30.0	30.0	30.0
		mm	200	200	224	250	355	400	450	500	450	450	560	560	710	900	900	760	760	760	760
wEIGHT	RF	in	63.9	88.2	105.8	1632	313.1	485.1	721.0	1094	1530	2170	2880	3409	5204	8070.3	9591.6	15104.3	18654.3	20947.5	27342
		mm	29	40	48	74	142	220	327	496	694	984	1306	1546	2360	3660	4350	6850	8460	9500	12400
	Bw	in	52.9	77.2	81.6	141.1	269.0	379.2	511.6	862	1420	1839	2317	2703	4212	6637	7629.3	11003	13582.8	14994	19845
		mm	24	35	37	64	122	172	232	391	644	834	1051	1226	1910	3010	3460	4990	6160	6800	9000

Main Outline Dimensions & Weight Class 600/40K

VALVE SIZE		in	2	2.5	3	4	6	8	10	12	14	16	18	20	24	28	30	36	40	42
		mm	50	65	80	100	150	200	250	300	350	400	450	500	600	700	750	900	100	1050
A ₁ & A ₃		in	11.5	13.0	140	17.0	22.0	260	31.0	330	35.0	39.0	43.0	47.0	55.0	610	65.0	82.0	94.0	98.0
		mm	292	330	356	432	556	660	787	838	889	991	1092	1194	1397	1594	1651	2083	2387	2489
A ₂		in	11.62	13.12	14.12	17.12	22.12	26.12	31.12	33.12	35.12	39.12	43.12	47.25	55.38	615	65.5	82.62	—	—
		mm	295	333	359	435	562	664	791	841	892	994	1095	1200	1406	1562	1663	2098	—	—
H		in	18.5	19.5	22.1	26.7	37.2	43.7	52.1	65.9	72.1	82.9	98.0	104.8	116.9	140.2	152.8	179.5	207.6	240.0
		mm	471	495	561	677	944	1110	1323	1675	1832	210.6	2489	2662	2970	3562	3880	4560	5273	6098
w		in	8.8	8.8	9.8	11.8	17.7	19.7	24.8	22.0	22.0	27.9	27.9	315	35.4	30.0	30.0	30.0	30.0	30.0
		mm	2224	224	250	300	450	500	630	560	560	710	710	800	900	760	760	760	760	760
WEIGHT	RF	in	94.8	132.3	1544	295.5	628	988	1499	2355	2836	4059	5700	6853	10337	133406	15313.7	21476.7	232628	241448
		mm	43	60	70	134	285	448	680	1068	1286	1841	2585	3108	4688	6050	6946	9740	10550	10950
	Bw	in	61.7	99.2	132.3	229.3	452	690	1180	2145	2571	332	4741	5640	8595	109809	12590.6	17948.7	18830.7	19337.9
		mm	28	45	60	104	205	313	535	973	1166	1511	2150	2558	3898	4980	5710	8140	8540	8770



Main Outline Dimensions & Weight Class 900

VALVE SIZE	in	2	2.5	3	4	6	8	10	12	14	16	18	20	24
	mm	50	6.5	80	100	150	200	250	300	350	400	450	500	600
A ₁ & A ₃	in	14.5	16.5	15.0	18.0	24.0	29.0	33.0	38.0	40.5	44.5	480	52.0	61.0
	mm	368	419	381	457	610	737	838	965	1029	1130	1219	1321	1549
A ₂	in	14.62	16.62	15.12	18.12	24.12	29.12	33.12	38.12	40.88	44.88	48.5	52.5	61.75
	mm	371	422	384	460	621	740	841	968	1038	1140	1232	1333	1568
H	in	21.2	26.4	26.4	30.8	424	55.5	67.7	77.4	74.9	80.7	88.8	1102	124.0
	mm	539	670	672	782	1076	1411	1720	1965	1902	2051	2256	2800	3150
w	in	11.8	11.8	14.0	15.7	22.0	17.7	22.0	22.0	24.0	24.0	30.0	30.0	24.0
	mm	300	300	35.5	400	560	450	560	560	610	610	760	760	610
WEIGHT	RF	in	181	342	364	384	999	1720	2752	3400	4895.1	6615.0	8533.4	10716.3
		mm	82	155	165	174	453	780	1248	1542	2220	3000	3870	7300
	Bw	in	130	375	287	295	789	1378	2267	2844	4167.5	3566.8	7276.5	8730.3
		mm	59	170	130	134	358	625	1028	1290	1890	2565	3300	4050

Main Outline Dimensions & Weight Class 1500

VALVE SIZE	in	2	2.5	3	4	6	8	10	12	14	16	18	20	24
	mm	50	6.5	80	100	150	200	250	300	350	400	450	500	600
A ₁ & A ₃	in	14.5	16.5	18.5	18.0	27.75	32.75	39.0	44.5	49.5	54.5	60.5	65.5	76.5
	mm	368	419	470	457	705	832	991	1130	1257	1384	1536	1664	1943
A ₂	in	14.62	16.62	18.62	18.12	28.0	33.13	39.38	45.12	50.25	55.38	61.38	66.38	77.62
	mm	371	422	473	460	711	841	1000	1146	1276	1406	1559	1686	1972
H	in	21.2	26.4	29.1	30.8	47.1	60.8	66.5	82.3	85.1	97.9	108.7	122.1	146.5
	mm	539	670	738	782	1196	1546	1688	2090	2162	2486	2762	3102	3721
w	in	11.8	11.8	15.7	15.7	13.8	22.0	27.9	27.9	30.0	30.0	30.0	24.0	24.0
	mm	300	300	400	400	350	560	710	710	760	760	760	610	610
WEIGHT	RF	in	181	341.8	401	384	1360	3175	4412	8414	9073.6	15324.8	19845	24541.7
		mm	82	155	182	174	617	1400	2001	3816	4115	6950	9000	11130
	Bw	in	130	286.7	324	295	975	2646	3541	7080	7056	13230	17066.7	21079.8
		mm	59	130	147	134	442	1200	1606	3211	3200	6000	7740	9560

Main Outline Dimensions & Weight Class 2500

VALVE SIZE	in	2	2.5	3	4	6	8	10	12
	mm	50	65	80	100	150	200	250	300
A ₁ & A ₃	in	17.75	20.0	22.75	26.5	36.0	40.25	50.0	56.0
	mm	451	508	578	673	914	1022	1270	1422
A ₂	in	17.87	20.25	23.0	26.88	36.5	40.87	50.88	56.88
	mm	454	514	584	683	927	1038	1292	1445
H	in	24.4	31.9	31.9	42.2	57.1	63.0	82.5	90.2
	mm	619	809	809	1073	1451	1600	2096	2292
w	in	11.8	17.7	17.7	24.8	24.0	24.0	24.0	30.0
	mm	300	450	450	630	610	610	610	760
WEIGHT	RF	in	205	331	443	1336	3506	5380.2	10085.7
		mm	93	150	201	606	1590	2440	4574
	Bw	in	128	221	289	1083	2866.5	4410	8379
		mm	58	100	131	491	1300	2000	3800



Yoke Sleeve

The standard material of the Yoke sleeve is Nodular Ni-resist D2 with over a 1150°C(2100. F)dissolution point in conformity with AP1 std . specifications .

Bolting

The body-bonnet bolts are manufactured in accordance with AP1 std. 600 specifications . The nuts also strictly conform with ANs1 B1 . 1 The stud-bolt nuts . hexagonal+ rigid and hot-forged+ bear material notation as well as do the bolt nuts made according to ANs1 B18.2.2

Bonnet

The bonnet is integral or separate with the yoke and is the same material as the body. The body-bonnet flange drilling is spot-faced to exactly meet stud bolt nuts . The back seat bushing in the bonnet guarantees that the packing can be replaced even when the valve is fully opened . The stem packing dimensions of the stuffing box are in accordance with AP1 std . specifications .

Stem

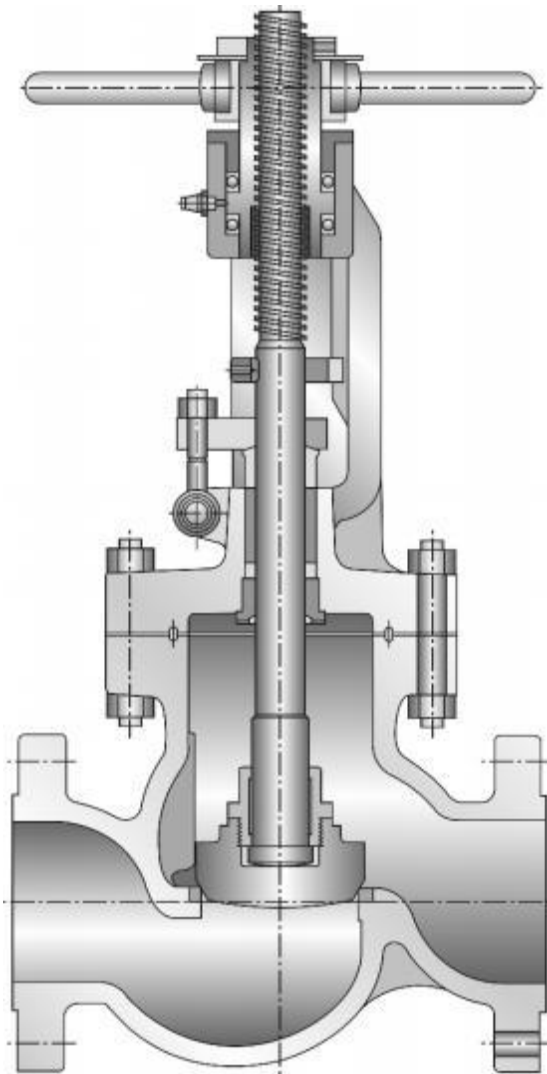
The heat-treated stems of one-piece construction insure adequate mechanical properties and surface hardness . Friction at the time of opening and shutting is reduced to a minimum friction to accurate machining and lapping . The round finished surface of the stem head helps to achieve point contact with the inside of the disc housing to eliminate friction .

Disc

The disc of our globe valves is a loose disc and can freely revolve around the stem . This prevents friction and galling with the seating surface when the valve is shut . The disc is furnished with a conical seating surface that has been ground and lapped to a mirror finish . 1 t is of one- piece construction+ and forged and heat-treated to deliver the required mechanical properties and hardness .

Body

The cast steel body is designed to insure a wall thickness which is greater at any point than the minimum specified by AP1 std . 600 . Port and seat passage d imensions contorm to ANs1 B16.5 Pipe Fitting . The screw-in type seat ring is standard to allow interchangeability . The standard boyd-bonnet joint is mate-femate . and the flange is round for all valves+ Accurate machining insures perfect ccaxiafity of the valve ends and seat ring in addition to exact perpendicularity of the body-bonnet flanges .



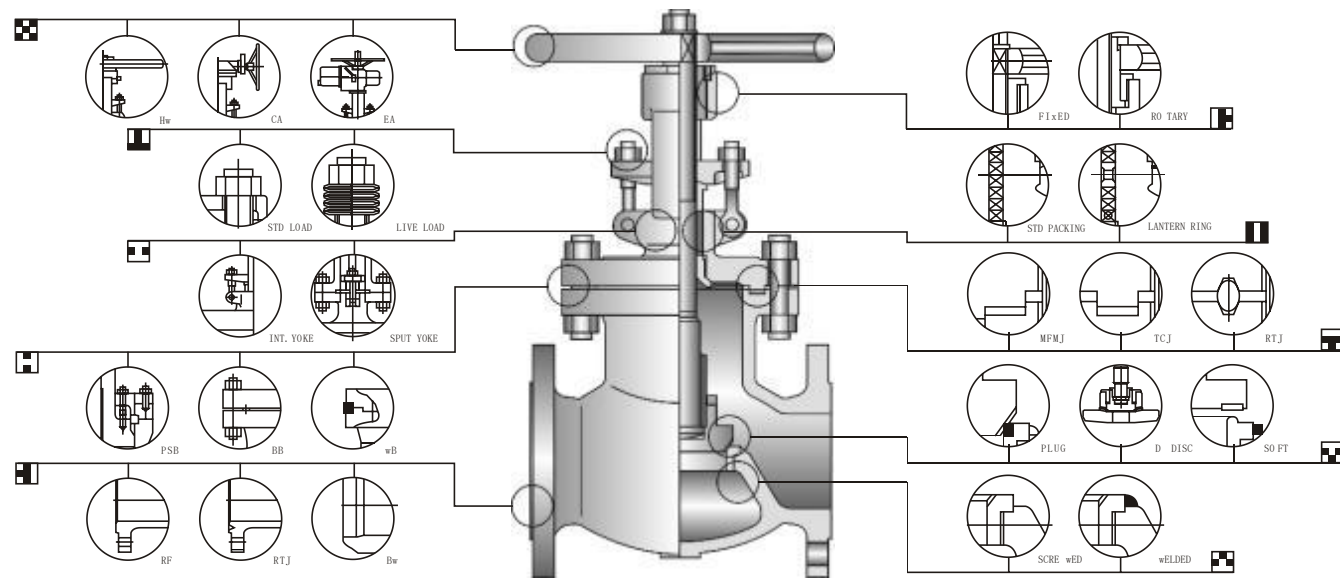


Design

EZ Steel cast steel globe valve are designed and manufactured to provide maximum service life and dependability . All globe valves are full ported and meet the design requirements of American Petroleum Institute standard AP1 600 & AP1 6D + Bs EN 13709 and generally conform to American society complete range of body/bonnet materials and trims .

Available Modifications for EZ Steel Cast Steel Valves

- * Trim Changes
- * End Connection Modifications
- * Packing and Gasket Changes
- * Operator Mounting
- * Handwheel Extensions
- * Pressure Equalizing
- * By-pass
- * Customer Specified Coatings
- * Weld End Bore Changes
- * Oxygen & Chlorine Cleaning & Packaging



Operating

Large handwheels for easy operation. Also available with gearing, motor actuators, pneumatic or hydraulic actuators for more difficult services.

OS & Y

Outside Screw and Yoke. Cast steel globe valve yoke integral with bonnet for 10& smaller.

End Connections

A choice of Flanged, RTJ flanged of Butt welding end for piping flexibility.

Lantern ring and double packing set

Lantern ring with leak-off fitting connection and double packing stack is optionally available for critical services.

Disc

Plug disc is stem guided on all sizes. Disc has a differential angle front the seat to provide a line contact for maximum sealing. The bottom of V-port disc is guided by the body seat ring for maximum disc stability in throttling applications. The soft TEFLON ring is excellent for lower temperature service where tight shutoff is required.

Live Load Packing

In services requiring frequent cycling or with high pressure / temperature variations, live loading extends the service life between maintenance periods by requiring less frequent packing gland adjustments. Belleville springs are employed to provide constant packing gland stress.

BB

Bolted bonnet. Welding bonnet and pressure seal bonnet in services requiring frequent cycling or with high pressure / temperature variations.

Yoke sleeve

Furnished in aluminum bronze to reduce operating torque. Most sizes furnished with ball bearing yokesleeves.

Body-to-Bonnet Joint

A Male and Female joint or Tongue and Groove joint is used 150Lb to 600Lb valves, Ring joint is used in the body to bonnet connection in 900Lb & higher rated valves.

Seat Rings

Separate heavy duty, full ported rings for easy maintenance. Screwed or welded connection into body.

Rang of Materials

standard body/bonnet materials include nine grades of carbon+ low alloy and stainless steels+ For special apolications they can be supplied in other grades of alloy and stainless steel+ There's' a full range of trim materials to match any service . Optional packing and gasket materials are available for a full range of service conditions .

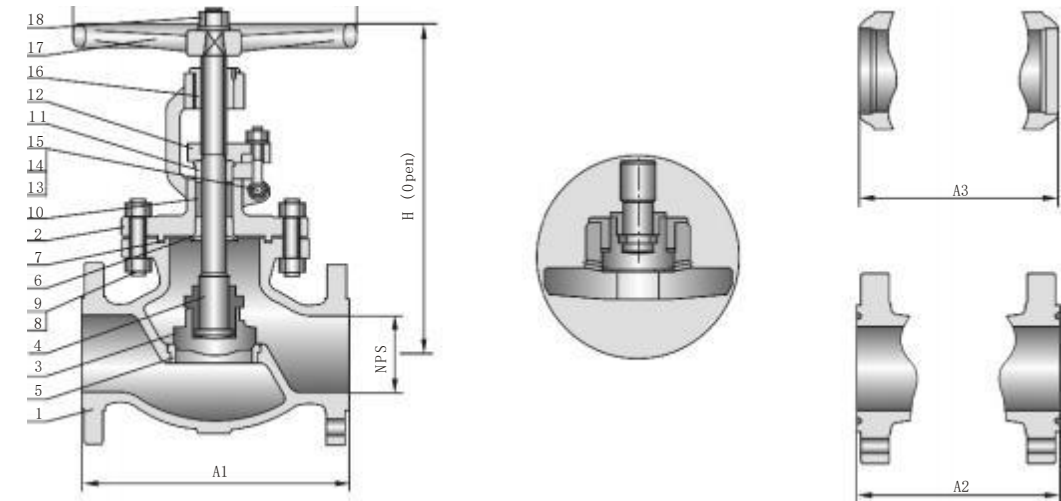


Applicable Standards

- ★Steel Globe Valves, BS EN 13709/API 600, JIS
- ★Steel Valves, ASME B16.34
- ★Face To Face, ASME B16.10, JIS
- ★End Flanges, ASME B16.5, JIS
- ★Butt welding Ends, ASME B16.25
- ★Inspection And Test, API 598

Design Description

- ▲Straight Pattern Body Design
- ▲OS & Y, Outside Screw And Yoke
- ▲BB, Bolted Bonnet
- ▲Yoke Integral With Bonnet
- ▲Rising Stem And Handwheel
- ▲Loose Disc, Choice Of Plug Or Ball
- ▲Renewable Seat Ring
- ▲Impact Handwheel For 10" & Above
- ▲Horizontal Service
- ▲Flanged Or Butt welding Ends
- ▲Available With BG Operator



Standard Material Specifiactions

NO.	Part Name	ASTM Material							
		Carbon steel	1.25Cr-0.5Mo	2.25Cr-1Mo	304 Type	316 Type	304L Type	316L Type	20 Alloy
1	Body	A216 WCB	A217 WC6	A217 WC9	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A351 CN7M
2	Bonnet	A216 WCB	A217 WC6	A217 WC9	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A351 CN7M
3	Disc	WCB+13Cr *1	A217 WC6+HF	A217 WC9+HF	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A351 CN7M
4	Stem	A182 F6a	A182 F11	A182 F22	A182 F304	A182 F316	A182 F304L	A182 F316L	20-Alloy
5	Seat Ring	A105+13Cr *1	A182 F11+HF	A182 F22+HF	NA				NA
6	Back Seat	A276 410	A276 410	A276 410	NA				NA
7A	Bonnet Gasket	304+graphite	304+graphite	304+graphite	304+graphite	316+graphite	304L+graphite	316L+graphite	316+graphite
7B	Ring Gasket	Soft steel	A182 F304	A182 F304	A182 F304	A182 F316	A182 F304L	A182 F316L	20/Alloy
8	Bonnet Bolt	A193 B7	A193 B7	A193 B16	A193 B8	A193 B8M	A193 B8	A193 B8M	A193 B8M
9	Bonnet Nut	A194 2H	A194 7	A194 7	A194 8	A194 8M	A194 8	A194 8M	A194 8M
10	Packing	Graphite	Graphite	Graphite	Graphite #2	Graphite #2	Graphite #2	Graphite #2	Graphite #2
11	Gland	A276 410	A276 410	A276 410	A276 304	A276 316	A276 304L	A276 316L	20/Alloy
12	Gland Flange	A216 WCB			A351 CF8	A351 CF8	A351 CF8	A351 CF8	A351 CF8
13	Eyebolt	Carbon steel	A193 B7	A193 B7	A193 B8	A193 B8	A193 B8	A193 B8	A193 B8
14	Eyebolt Nut	Carbon steel	A194 2H	A194 2H	A194 8	A194 8	A194 8	A194 8	A194 8
15	Eyebolt Pin	A276 410	A276 410	A276 410	A276 304	A276 304	A276 304	A276 304	A276 304
16	Yoke Sleeve	Bronze	Bronze #3	Bronze #3					
17	Hand Wheel								
18	Wheel Nut				Bronze				Bronze
*1		Malleable iron			Malleable iron				Malleable iron
*2		Carbon steel			Stainless steel				Stainless steel
*3	PN≥600 CLASS seal face will be HF								
NA	PTFE Optional								
	Ductile Ni-Resist iron Optional								
	Integral with vessell								



Main Outline Dimensions & Weight Class 150/10K

Valve S ize	in	2	2.5	3	4	6	8	10	12	14	16	18
	mm	50	65	80	100	150	200	250	300	350	400	450
A1 & A3	in	8.0	8.5	9.5	11.5	16.0	19.5	24.5	27.5	31.0	36.0	38.5
	mm	203	216	241	292	406	495	622	698	787	914	978
H	in	15.3	14.8	17.0	19.5	22.6	28.0	31.4	39.1	54.6	53.4	78.0
	mm	383	376	433	495	574	710	797	992	1387	1356	1980
w	in	7.9	8.8	8.8	9.8	14.0	14.0	17.7	17.7	22.0	220	240
	mm	200	224	224	250	355	355	450	450	560	560	610
weight	RF	lb	44.1	77.2	88.2	123.5	229.3	401.3	650.5	904	1510	1985
		kg	20	35	40	56	104	182	295	410	685	900
	Bw	lb	33.1	66.2	70.6	90.4	183.0	330.8	496.1	728	1312	1764
		kg	15	30	32	41	83	150	225	330	595	800

Main Outline Dimensions & Weight Class 300/20K

Valve S ize		in	2	2.5	3	4	6	8	10	12	14	16
		mm	50	65	80	100	150	200	250	300	350	400
A1 & A3		in	10.5	11.5	12.5	140	17.5	220	24.5	28.0	39.0	42.0
		mm	267	292	318	356	444	559	622	711	991	1067
A2		in	11.12	12.12	13.12	14.62	18.12	22.62	25.12	28.62	39.62	42.62
		mm	283	308	333	371	460	575	638	727	1006	1083
H		in	15.6	16.3	18.2	21.7	29.2	31.5	446	46.1	56.5	70.7
		mm	396	415	462	550	741	300	1132	1172	1435	1797
w		in	7.9	8.8	9.8	140	17.7	22.0	220	28.0	28.0	31.5
		mm	200	224	250	355	450	560	560	710	710	800
weight	RF	lb	70.6	92.6	141.0	220.5	419.0	595.4	1163.7	2240	2546.8	3748.5
		kg	32	42	64	100	190	270	530	1016	1155	1700
	Bw	lb	66.2	66.2	105.89	194.0	328.5	441	970.2	1997.7	2216	3309.7
		kg	30	30	48	88	149	200	440	906	1005	1501

Main Outline Dimensions & Weight Class 600/40K

Valve S size		in	2	2.5	3	4	6	8	10	12	14	16
		mm	50	65	80	100	150	200	250	300	350	400
A1 & A3		in	11.5	13.0	14.0	17.0	22.0	26.0	31.0	33.0	35.0	39.0
		mm	292	330	356	432	559	660	787	818	889	991
A2		in	11.62	13.12	14.12	17.12	22.12	26.12	31.12	33.12	35.12	39.12
		mm	295	333	359	435	562	664	792	841	892	994
H		in	16.0	19.8	19.9	22.4	29.9	51.8	59.5	69.9	70.9	76.0
		mm	407	502	505	165	759	1315	1511	1775	1800	1930
w		in	8.8	9.8	11.0	14.0	17.7	28.0	31.5	35.4	35.4	35.4
		mm	224	250	280	355	450	710	800	900	900	900
weight	RF	lb	94.8	154.4	172.0	300.0	619.6	1301	2099	3528	5953.5	7938.0
		kg	43	70	78	136	281	590	952	1600	2700	3600
	Bw	lb	72.8	121.3	132.3	216.1	454.2	1125	1746	3263.45	5534.6	7386.8
		kg	33	55	60	98	206	510	792	1480	2510	3350



Main Outline Dimensions & Weight Class 900

Valve S ize		in	2	2.5	3	4	6	8	10	12	14	16
		mm	50	65	80	100	150	200	250	300	350	400
A1 & A3		in	14.5	16.5	15.0	18.0	24.0	29.0	33.0	38.0	40.5	44.5
		mm	368	419	381	457	610	737	838	965	1029	1130
A2		in	14.62	16.62	15.12	18.12	24.12	29.12	33.12	38.12	40.88	44.88
		mm	371	422	384	460	613	740	841	968	1038	1140
H		in	27.4	27.3	30.5	33.7	50.7	65.6	63.0	67.1	87.0	103.1
		mm	695	695	77.5	855	1288	1665	1600	1705	2210	2620
w		in	15.7	15.7	15.7	15.7	22.0	31.5	31.5	35.4	35.4	35.4
		mm	400	400	400	400	560	800	800	900	900	900
weight	RF	lb	271.2	341.8	231.5	441	1101.5	2756.3	4520.3	5843.3	8048.3	9481.5
		kg	123	155	105	200	500	1250	2050	2650	3650	4300
	Bw	lb	205.1	264.6	196.2	335.2	903.2	2425.5	4123.4	5292.0	7386.8	8600.0
		kg	93	120	89	152	410	1100	1870	2400	3350	3900

Main Outline Dimensions & Weight Class 1500

Valve S ize		in	2	2.5	3	4	6	8	10	12	14	16
		mm	50	65	80	100	150	200	250	300	350	400
A1 & A3		in	14.5	16.5	18.5	21.5	27.75	32.75	39.0	44.5	49.5	54.5
		mm	368	419	470	546	705	832	991	1130	1257	1384
A2		in	14.62	16.62	18.62	21.62	28.0	33.13	39.38	45.12	50.25	55.38
		mm	371	422	473	549	711	841	1000	1146	1276	1407
H		in	27.4	27.3	31.5	40.0	53.0	77.2	91.0	105.1	126.0	160.0
		mm	695	695	799	1015	1345	1960	2310	2670	3200	4064
w		in	15.7	15.7	19.7	19.7	28.0	28.0	30.0	30.0	30.0	30.0
		mm	400	400	500	500	710	710	760	760	760	760
weight	RF	lb	271.2	341.8	396.9	749.7	1482	4630.5	7056.0	9702.0	11907.0	14773.5
		kg	123	155	180	340	672	2100	3200	4400	5400	6700
	Bw	lb	205.1	264.6	297.7	621.8	12171	4190.0	6174.0	8379.0	10363.5	12789.0
		kg	93	120	135	282	552	1900	2800	3800	4700	5800

Main Outline Dimensions & Weight Class 2500

Valve S ize		in	2	2.5	3	4	6	8	10	12
		mm	50	65	80	100	150	200	250	300
A1 & A3		in	17.75	20.0	22.75	26.5	36.0	40.25	50.0	56.0
		mm	451	508	578	673	914	1022	1270	1422
A2		in	17.87	20.25	23.0	26.88	36.5	40.87	50.88	56.88
		mm	454	514	584	683	927	10.38	1292	1445
H		in	28.3	31.5	34.8	50.0	75.0	97.0	110.2	138.0
		mm	720	800	885	1260	1905	2465	2800	3505
w		in	15.7	19.7	19.7	24.0	24.0	30.0	30.0	30.0
		mm	400	500	500	610	610	760	760	760
weight	RF	lb	419.0	661.5	771.8	1852.2	5071.5	105840	14994.0	18742.5
		kg	190	300	350	840	2300	4800	6800	8500
	Bw	lb	352.8	529.2	617.4	1521.5	4410.0	9702.0	13230.0	16537.5
		kg	160	240	280	690	2000	4400	6000	7500





Bolting

The body-cover bolting conforms with ANs1 B . 1 . 1
The nuts are manufactured to conform with ANs1 B18 .2 .2

Cover

The cover material is identical to the body .
Depending on the valve size and pressure class+ either a casting or a forging is used .

Hinge Pin

The hinge pin is inserted into the valve and held in position by plug .
The larger size valves are provided with bolted flanges instead of plugs .

Arm

The arm material is identical to the body .
Hinge bushing is provided in the larger valve sizes to minimize friction and eliminate seizing .

Seat Ring

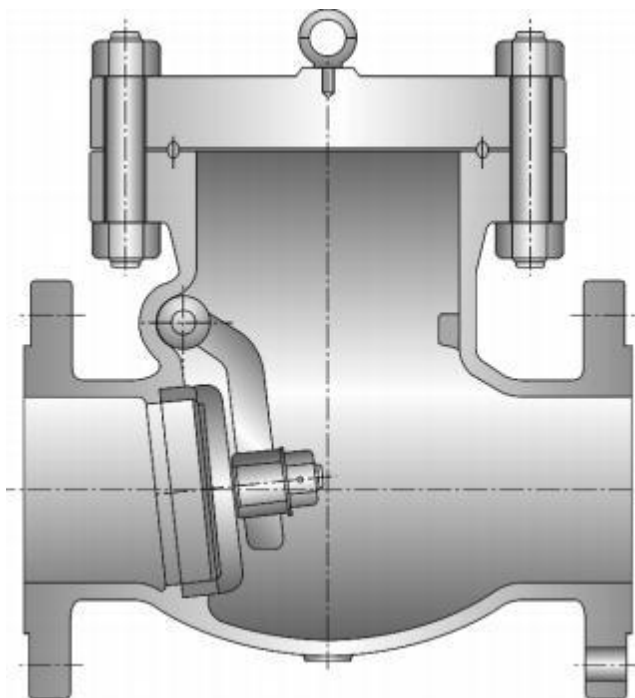
The bottom seated type seat ring is screwed into the body .
The seating surface is finished by lapping .
The forged seat ring is heat -treated to deliver the best mechanical properties and required hardness .

Disc

The disc has a sufficient seating surface area which is ground and lapped to a mirror finish .
It is of one-piece construction and is heat treated to deliver the required mechanical properties and hardness .

Body

The cast steel body is designed with a wall thickness which is greater at any point than the minimum requirement provided by AP1 std .600 or AP1 6D . Port and seat passage dimensions conform to ANs1 B16 .5 Pipe Fitting . The welded-in type seat ring is standard to allow interchangeability .
The standard body-bonnet joint is male-female+ and the flange is round for all valves .



Design

EZ Steel cast steel check valve are designed and manufactured to provide maximum service life and dependability . All check valves are meet the design requirements of American Petroleum Institute standard API 600 & API 6D+ BS EN 13709 and generally conform to American society of Mechanical

Engineers standard ASME B16 . 34 . Valves are available in a complete range of body/bonnet materials and trims .

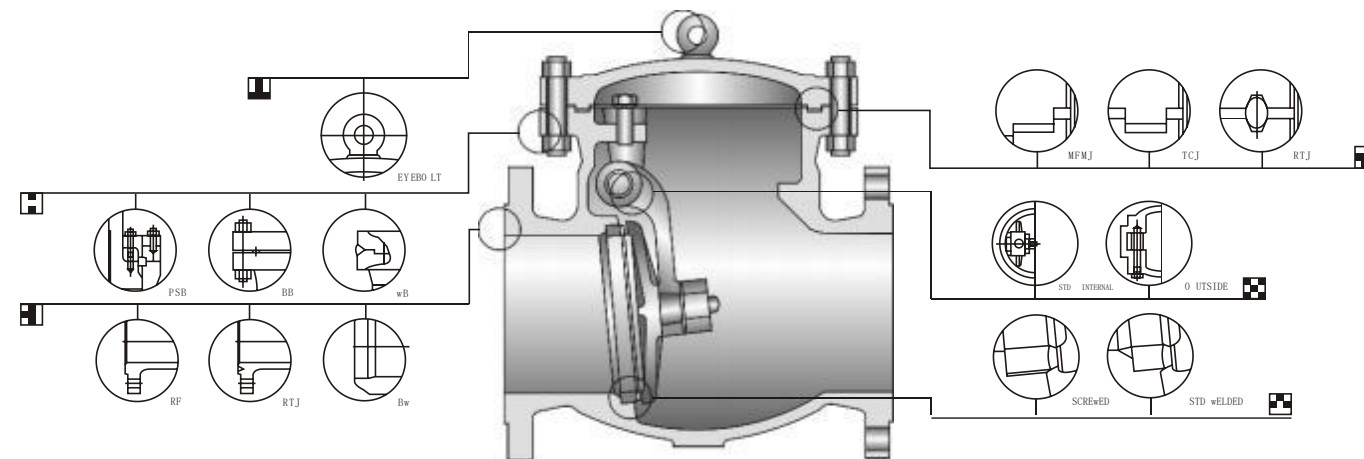
Rang of Materials

standard body/ bonnet materials include nine grades of carbon+ low alloy and stainless steels+ For special apolications they can be supplied in other grades of alloy and stainless steel .
There's a full ranged of trim materials to match any service . Optional packing and gasket materials are available for a full range of service conditions .

Available Modification for EZ Steel Cast Steel Valves

- * Trim Changes
- * End Connection Modifications
- * Gasket Changes
- * Outside Lever and Weight
- * Slam Retarders

- * Pressure Equalizing
- * Outside Lever and Weight
- * Customer Specified Coatings
- * Weld End Bore Changes
- * Oxygen & Chlorine Cleaning & Packaging



Eyebolt

For 150Lb-8" + 300Lb-8" +
600Lb-6" + 900Lb/1500Lb/
2500Lb-4" & Over

End Connections

A choice of Flanged +
RTJ flanged or Buttwelding
end for piping flexibility .

Outside Lever and Weight

All external hinge pin swing check valves 12" and smaller are available with an optional outside lever and weight . 1internal hinge available with all swing check valves .

Seat Rings

separate heavy duty . full ported rings for easy maintenance . screwed or welded connection into body .

BB

Bolted bonnet . welding bonnet and pressure seal bonnet in services requiring frequent cycling or with high pressure/ temperature variations .

Body+ to- Bonnet Joint

A Male and Female joint or Tongue and Groove joint is used 150Lb to 600Lb valves . Ring joint is used in the body . to bonnet connection in 900Lb & higher rated valves .

HCU Weighted Mechanical Accumulator

This design can be used to either dampen or assisist closing of the check valve disc depending on orientation . By using the Hydraulic Control Control Unit to buffer action the disc+ the valve opens at lower flow rates .

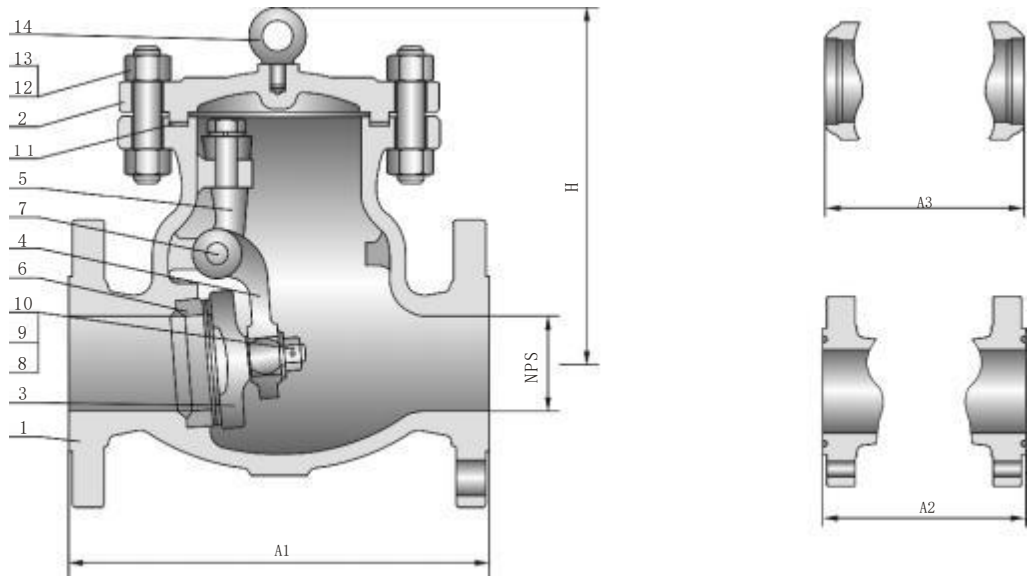


Applicable Standards

- ★Steel Check Valves, API 6D, JIS
- ★Steel Check Valves, ISO 143 13
- ★Steel Valves, ASME B 16.34
- ★Face To Face, ASME B 16. 10, JIS
- ★End Flanges, ASME B 16.5, JIS
- ★Buttwelding Ends, ASME B 16.25
- ★Inspection And Test, API 598/ API 6D

Design Description

- ▲BB. Bolted Bonnet Cap
- ▲Swing Type, Anti-rotation Disc
- ▲Renewable Seat Rings
- ▲Non-penetrate Disc Shaft
- ▲Horizontal Or Vertical Service
- ▲Flanged Or Buttwelding Ends



Standard Material Specifiactions

NO.	Part Name	ASTM Material							
		Carbon steel	1.25Cr-0.5Mo	2.25Cr-1Mo	304 Type	316 Type	304L Type	316L Type	20 Alloy
1	Body	A216 wCB	A217 wC6	A217 wC9	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A351 CN7M
2	Bonnet	A216 wCB	A217 wC6	A217 wC9	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A351 CN7M
3	Disc	wCB+13Cr *1	A217 wC6+HF	A217 wC9+HF	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A351 CN7M
4	Hinge	A216 wCB	A217 wC6	A217 wC9	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A351 CN7M
5	Arm	A216 wCB	A217 wC6	A217 wC9	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A351 CN7M
6	Seal Ring	A105+13Cr *1	A182 F11+HF	A182 F22+HF	NA				NA
7	Hinge Pin	A276 410	A276 410	A276 410	A276 304	A276 316	A276 304L	A276 316L	20 Alloy
8	Disc washer	Carbon steel	A276 410	A276 410	A276 304	A276 316	A276 304L	A276 316L	20 Alloy
9	Disc Nut	Carbon steel	A276 410	A276 410	A276 304	A276 316	A276 304L	A276 316L	20 Alloy
10	Disc Nut Pin	304 SS	304 SS	304 SS	304 SS	316 SS	304L SS	316L SS	20 Alloy
11A	Bonnet Gasket	304+graphite	304+graphite	304+graphite	304+graphite	316+graphite	304+graphite	316L+graphite	316+graphite
11B	Ring Gasket	Soft steel	A182 F304	A182 F304	A182 F304	A182 F316	A182 F304L	A182 F316L	20 Alloy
12	Bonnet Bolt	A193 B7	A193 B7	A193 B16	A193 B8	A193 B8	A193 B8	A193 B8	A193 B8
13	Bonnet Nut	A194 7	A194 7	A194 7	A194 8	A194 8	A194 8	A194 8	A194 8
14	Eyebolt	Carbon steel	Carbon steel	Carbon steel					
*1									
*2					Carbon steel+Zn				Carbon steel+Zn
NA	PN≥600 CLASS seal face will be HF								
	PTFE Optional								
	Integral with vessel								



Main Outline Dimensions & Weight Class 150/10K

Overall	NPS	inch	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	22"	24"	26"	28"	30"	32"	36"	40"	42"
	DN	mm	40	50	65	80	100	125	150	200	250	300	350	400	450	500	550	600	650	700	750	800	900	1000	1050
	A1	inch	6 1/2"	8"	8 1/2"	9 1/2"	11 1/2"	13"	14"	19 1/2"	24 1/2"	27 1/2"	31"	34"	38 1/2"	38 1/2"	42"	51"	51"	57"	60"	69"	77"	80 1/4"	80 1/4"
	A3	mm	105	203	216	241	292	330	356	495	622	699	787	864	978	978	1067	1295	1295	1448	1524	1753	1956	2038	2038
	A2	inch	7"	8 1/2"	9"	10"	12"	13 1/2"	14 1/2"	20"	25"	28"	31 1/2"	34 1/2"	39"	39"	42 1/2"	51 1/2"							
		mm	178	216	229	254	305	343	368	508	635	711	800	876	991	991	1080	1308							
	H	inch	108	152	152	190	216	263	267	346	381	441	521	556	575	616	663	711	991	1038	1057	1070	1079	1127	1137
		mm	20	55	71	84	121	150	212	353	540	840	1124	1455	1874	2315	2646	3197	4960	5073	5183	6393	7385	13669	16755
Net weight	RF	lbs.	9	25	32	38	55	68	96	160	245	381	510	660	850	1050	1200	1450	2250	2301	2351	2900	3350	6200	7600
		kg	19	51	57	64	79	132	165	287	463	677	981	1318	1587	1874	2537	2866	4846	4943	5040	6206	7132	13338	16391
	Bw	lbs.	8.5	23	26	29	36	60	75	130	210	307	445	598	720	850	1151	1300	2198	2242	2286	2815	3235	6050	3435
		kg																							

Main Outline Dimensions & Weight Class 300/20K

Overall	NPS	inch	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	22"	24"	26"	28"	30"	32"	36"	40"	42"
	DN	mm	40	50	65	80	100	125	150	200	250	300	350	400	450	500	550	600	650	700	750	800	900	1000	1050
	A1	inch	9 1/2"	10 1/2"	11 1/2"	12 1/2"	14"	15 3/4"	17 1/2"	21"	24 1/2"	28"	33"	34"	38 1/2"	40"	44"	53"	53"	59"	62 3/4"	60"	82"	82"	82"
	A3	mm	241	267	292	318	356	400	445	533	622	711	838	864	978	1016	1118	1346	1346	1499	1549	1524	2083	2083	2083
	A2	inch	10"	11 1/8"	12 1/8"	13 1/8"	14 5/8"	16 3/8"	18 1/8"	21 5/8"	25 1/8"	28 5/8"	33 5/8"	34 5/8"	39 1/8"	40 3/8"	44 7/8"	53 7/8"	54"	60"	63 3/4"				
		mm	254	283	308	333	371	416	460	549	638	727	854	879	994	1035	1140	1368	1372	1524	1618				
	H	inch	108	137	165	216	241	267	292	387	419	448	540	619	641	663	711	762	1029	1051	1070	1124	1092	1140	1150
		mm	31	77	82	132	181	207	342	591	838	1091	1565	2094	2646	2976	3252	4850	5291	7055	10196	11905	15873	18960	19334
Net weight	RF	lbs.	14	35	37	60	82	94	155	268	380	496	710	950	1200	1350	1475	2200	2400	3200	4625	5400	7200	8600	8770
		kg	26	62	35	99	139	201	265	406	728	847	1343	2271	2132	2535	2866	3307	5071	6724	9921	11177	14969	17505	17747
	Bw	lbs.	12	28	16	45	63	91	120	184	330	384	609	1030	967	1150	1300	1500	2300	3050	4500	5070	6790	7940	8050
		kg																							

Main Outline Dimensions & Weight Class 600/40K

Overall	NPS	inch	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	22"	24"	26"	28"	30"	32"	36"	40"	42"
	DN	mm	50	65	80	100	125	150	200	250	300	350	400	450	500	550	600	650	700	750	800	900	1000	1050
	A1	inch	11 1/2"	13"	14"	17"	20"	22"	26"	31"	33"	35"	39"	43"	47"	51"	55"	57"	63"	65"	70"	82"	82 3/4"	86 3/4"
	A3	mm	292	330	356	432	508	559	660	787	838	889	991	1092	1194	1295	1397	1448	1600	1651	1778	2083	2102	2203
	A2	inch	11 5/8"	13 1/8"	14 1/8"	17 1/8"	20 1/8"	22 1/8"	26 1/8"	31 1/8"	33 1/8"	35 1/8"	38 1/8"	43 1/8"	47 1/8"	51 3/8"	53 3/8"	57 1/2"	63 1/2"	65 1/2"	70 3/8"	83 1/8"		
		mm	295	333	359	435	511	562	664	791	841	892	994	1095	1200	1305	1407	1461	1613	1664	1794	2111		
	H	inch	200	216	225	290	330	368	429	505	594	629	724	819	975	1041	1111	1229	1349	1429	1429	1480	1559	1610
		mm	88	123	161	273	425	595	937	1488	2013	2429	3203	4109	4632	5622	6614	7826	9061	11023	12125	13779	14550	14740
Net weight	RF	lbs.	40	56	73	124	193	270	425	675	913	1102	1453	1900	2101	2550	3000	3550	4110	5000	5500	6250	6600	6690
		kg	73	104	134	190	346	500	807	1323	1764	1947	2515	3748	3642	4356	5071	6393	7729	9480	11684	13338	13999	14242
	Bw	lbs.	33	47	61	86	157	227	366	600	800	883	1141	1700	1652	1976	2300	2900	3506	4300	5300	6050	6350	6460
		kg																						



Main Outline Dimensions & Weight Class 900

Dverall	NPS	inch	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	22"	24"
	DN	mm	50	65	80	100	125	150	200	250	300	350	400	450	500	550	600
	A1	inch	141/2"	161/2"	15"	18"	22"	24"	29"	33"	38"	40 1/2"	44 1/2"	48"	52"	57"	61"
	A3	mm	368	419	381	457	559	610	737	838	965	1029	1130	1219	1321	1448	1549
	A2	inch	145/8"	165/8"	151/8"	181/8"	221/8"	241/8"	291/8"	331/8"	381/8"	407/8"	447/8"	481/2"	521/2"	571/2"	613/4"
		mm	371	422	384	460	562	613	740	841	968	1038	1140	1232	1334	1460	1568
	H	inch	131/8"	133/4"	125/8"	16"	173/8"	187/8"	221/4"	261/8"	301/2"	287/8"	33"	361/4"	143/8"	441/2"	471/4"
		mm	333	349	321	406	441	479	565	664	775	733	838	921	1051	1130	1200
Net weight	RF	lbs.	70	110	110	200	290	380	650	1150	1450	1750	2420	3250	4000	4900	5800
		kg	140	102	187	353	507	661	1146	2094	2601	3197	4519	5952	7275	8593	9921
	Bw	lbs.	50	87	85	160	230	300	520	950	1180	1450	2050	2700	3300	3900	4500
		kg															

Main Outline Dimensions & Weight Class 1500

Dverall	NPS	inch	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	22"	24"
	DN	mm	50	65	80	100	125	150	200	250	300	350	400	450	500	550	600
	A1	inch	141/2"	161/2"	181/2"	211/2"	261/2"	273/4"	323/4"	39"	441/2"	491/2"	541/2"	601/2"	651/2"	71"	761/2"
	A3	mm	368	419	470	546	673	705	832	991	1130	1257	1384	1537	1664	1803	1943
	A2	inch	145/8"	165/8"	185/8"	215/6"	265/8"	28"	331/8"	393/8"	451/8"	501/4"	553/8"	613/8"	663/8"	717/8"	775/8"
		mm	371	422	473	549	676	711	841	1000	1146	1276	1407	1559	1686	1826	1972
	H	inch	131/8"	133/4"	153/8"	161/2"	183/8"	201/8"	263/4"	293/4"	333/4"	395/8"	42"	471/8"	511/8"	541/8"	571/8"
		mm	333	349	391	419	467	511	679	756	857	1007	1067	1197	1299	1375	1451
Net weight	RF	lbs.	70	110	170	300	497	695	1150	1850	2750	3600	4900	6600	8150	9950	11750
		kg	110	192	298	540	886	1235	2127	3263	4806	6250	8598	11574	14220	17031	19841
	Bw	lbs.	50	87	135	245	402	560	965	1480	2180	2835	3900	5250	6450	7725	9000
		kg															

Main Outline Dimensions & Weight Class 2500

Dverall	NPS	inch	2"	2 1/2"	3"	4"	6"	8"	10"	12"	14"	16"
	DN	mm	50	65	80	100	150	200	250	300	350	400
	A1	inch	17.75"	20.0"	22.75"	26.5"	36.0"	40.25"	50.0"	56.0"	62.0"	68.0"
	A3	mm	451	508	578	673	914	1022	1270	1422	-	-
	A2	inch	17.87"	20.25"	23.0"	26.88"	36.5"	40.87"	50.88"	56.88"	-	-
		mm	454	514	584	683	927	1038	1292	1445		
	H	inch	16.4"	16.5"	17.4"	18.9"	20.1"	28.0"	33.5"	39.4"	47.2"	51.1"
		mm	416	419	441	479	511	711	851	1000	1200	1299
Net weight	RF	lbs.	150	240	350	650	1450	2550	3950	5700	-	-
		kg	264.6	430.0	617.4	1190.7	2646.0	4851.0	6945.8	10032.8	13671.0	17860.5
	Bw	lbs.	120	195	280	540	1200	2200	3150	4550	6200	8100
		kg										

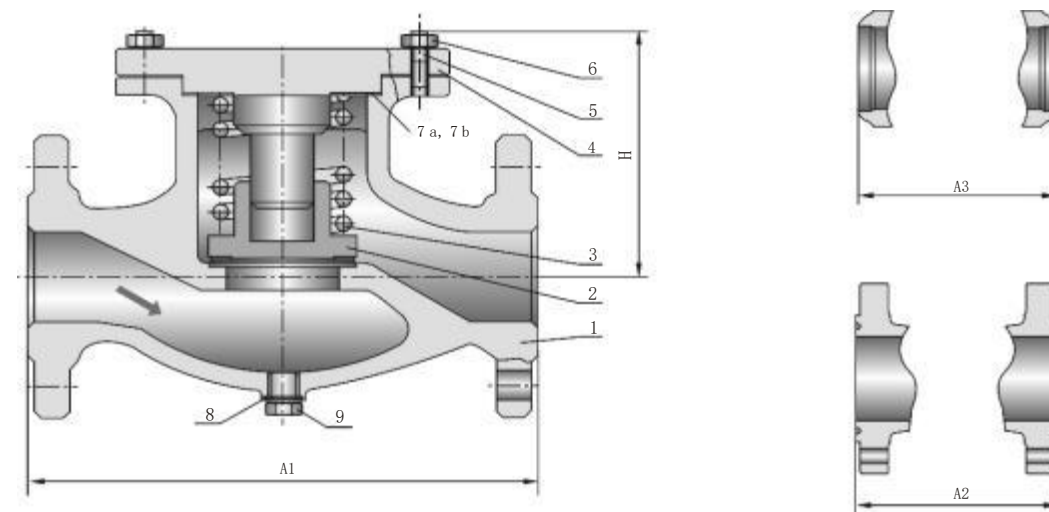


Applicable Standards

- ★Steel Globe Valves, BS EN 13709/API 600, JIS
- ★Steel Valves, ASME B 16.34
- ★Face To Face, ASME B 16.10, JIS
- ★End Flanges, ASME B 16.5, JIS
- ★Buttwelding Ends, ASME B 16.25
- ★Inspection And Test, API 598

Design Description

- ▲Straight Pattern Body Design
- ▲BB, Bolted Bonnet
- ▲Rising Stem And Handwheel
- ▲Loose Disc, Choice Of Plug Or Ball
- ▲Renewable Seat Ring
- ▲Horizontal Service
- ▲Flanged Or Buttwelding Ends



Standard Material Specifications

NO.	Part Name	AsTM Material							
		Carbon steel	1.25Cr -0.5Mo	2.25Cr - 1 Mo	304 Type	316 Type	304L Type	316L Type	20 Alloy
1	Body	A216 wCB	A217 wC6	A217 wC9	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A351 CN7M
2	Disc	wCB-13Cr)1	A217 wC6-HF	A217 wC9-HF	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A351 CN7M
3	spring	si-Mn steel	Cr-V steel	Cr-V steel	A313 304	A313 316	1nconel 750	1nconel 750	1nconel 750
4	Bonnet	A216 wCB	A217 wC6	A217 wC9	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A351 CN7M
5	Bonnet Nut	A194 2H	A194 7	A194 7	A194 8	A194 8M	A194 8	A194 8M	A194 8M
6	Bonnet Bolt	A193 B7	A193 B7	A193 B16	A193 B8	A193 B8M	A193 B8	A193 B8M	A193 B8M
7A	Bonnet Gasket	304-graphite	304-graphite	304-graphite	304-graphite	316-graphite	304L-graphite	316L-graphite	316-graphite
7B	Ring Gasket	soft steel	A182 F304	A182 F304	A182 F304	A182 F316	A182 F304L	A182 F316L	20-Alloy
8	Plug Gasket	copper	soft steel	soft steel	304 ss	316 ss	304L ss	316L ss	20 Alloy
9	Treaded Plug	A193 B7	A193 B7	A193 B16	304 ss	316 ss	304L ss	316L ss	20 Alloy
)1	PN≥600 Class seal face will be HF								
NA	Integral with vessell								



Main Outline Dimensions & Weight Class 150

Over all	NPs	inch	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"
	DN	mm	40	50	65	80	100	125	150	200	250	300
	A1	inch	6 1/2"	8"	8 1/2"	9 1/2"	11 1/2"	14"	16"	19 1/2"	24 1/2"	27 1/2"
	A3	mm	165	203	216	241	292	356	406	495	622	699
	A2	inch	7"	8 1/2"	9"	10"	12"	14 1/2"	16 1/2"	20"	25"	28"
		mm	178	216	229	254	305	368	419	508	635	711
Net weight	H	inch	4 3/4"	4 7/8"	6"	6 1/4"	6 3/4"	7 5/8"	8 5/8"	10 7/8"	12 3/4"	14 3/8"
		mm	121	124	152	159	172	194	219	276	324	365
	RF	lbs .	26	37	55	62	95	121	165	309	441	617
		kg	12	17	25	28	43	55	75	140	200	280
	Bw	lbs .	20	31	46	53	86	110	152	295	419	584
		kg	9	14	21	24	39	50	69	134	190	265

Main Outline Dimensions & Weight Class 300

Over all	NPs	inch	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"
	DN	mm	40	50	65	80	100	125	150	200	250	300
	A1	inch	9"	10 1/2"	11 1/2"	12 1/2"	14"	15 3/4"	17 1/2"	22"	24 1/2"	28"
	A3	mm	228	267	292	318	396	400	444	559	622	711
	A2	inch	9 1/2"	11 1/8"	12 1/8"	13 1/8"	14 5/8"	16 3/4"	18 1/8"	22 5/8"	25 1/8"	28 5/8"
		mm	241	283	308	333	371	416	460	575	638	727
Net weight	H	inch	4 3/4"	4 7/8"	6"	6 1/4"	6 3/4"	7 5/8"	8 5/8"	10 7/8"	12 3/4"	14 3/8"
		mm	121	124	152	159	172	194	219	276	324	365
	RF	lbs .	26	37	62	79	101	148	194	384	562	833
		kg	12	17	28	36	46	67	88	174	255	378
	Bw	lbs .	20	31	55	68	90	137	183	346	463	562
		kg	9	14	25	31	41	62	83	157	210	255

Main Outline Dimensions & Weight Class 600

NPs	2	2 1/2	3	4	5	6	8
DN	50	65	80	100	125	150	200
A1	292	330	356	432	508	559	660
A2	295	333	359	435	511	562	664
A3	292	330	356	432	508	559	660
d	51	64	76	102	125	152	200
H	152	167	178	215	240	279	328
weight (kg)	32	45	68	98	155	230	300

Main Outline Dimensions & Weight Class 900

NPs	2	2 1/2	3	4	5	6	8
DN	50	65	80	100	125	150	200
A1	368	419	381	457	559	610	737
A3	371	422	384	460	562	613	740
A2	368	419	381	457	559	610	737
d	50	64	74	100	125	150	200
H	180	200	235	270	300	350	400
weight (kg)	50	65	88	140	210	300	390

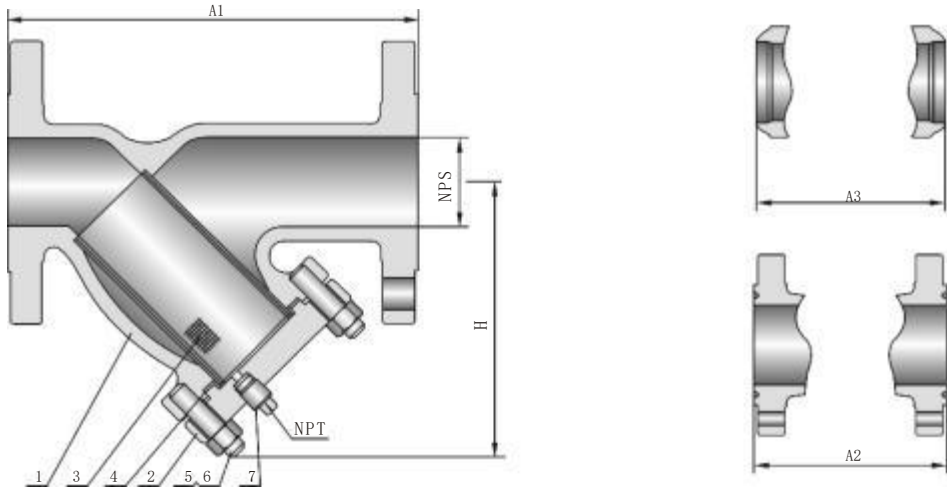


Applicable Standards

- ★Steel Valves. ASME B 16.34
- ★Face To Face. ASME B 16.10
- ★End Flanges, ASME B 16.5
- ★Buttwelding Ends, ASME B 16.25
- ★Inspection And Test, API 598

Design Description

- ▲Y- pattern Type
- ▲Bolted Bonnet Cap w ith Dra in Plug
- ▲Perforated Sta inless Steel Screen
- ▲Stra iner Dens ity 100 Mesh Des ign
- ▲Full Range Of Stra iner Dens ity
- ▲Renewable Stra iner Dens ity
- ▲Flanged Or Buttweld ing Ends



Standard Material Specifiactions

NO.	Part Name	AsTM Material						
		Carbon steel	Carbon steel	304 Type	316 Type	304L Type	316L Type	20 Alloy
1	Body	A216 wCB	A352 LCB	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A351 CN7M
2	Disc	A216 wCB	A352 LCB	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A351 CN7M
3	spring	A240-304	A240-304	A240-304	A240-316	A240-304L	A240-316L	20 Alloy
4	Bonnet	304-graphite	304-graphite	304-graphite	316-graphite	304-graphite	304-graphite	316-graphite
5	Bonnet Nut	A193 B7	A193 B7	A193 B8	A193 B8M	A193 B8	A193 B8M	A193 B8M
6	Bonnet Bolt	A194 2H	A194 7	A194 8	A194 8M	A194 8	A194 8M	A194 8M
7	Bonnet Gasket	A276 410	A276 410	304 ss	316 ss	304L ss	316L ss	20 Alloy

Main Outline Dimensions & Weight

NPS	DN	A1 / A3		H		PLUG (NPT)	wT (Kg)		A1 / A3		H		PLUG (NPT)	wT (Kg)	
		Class 150								Class 300					
1/2	15	5.50	140	3.38	87	1/8	2.1	0.8	5.50	140	3.38	87	1/8	2.5	1.2
3/4	20	6.00	152	4.12	105	1/2	2.3	1.2	6.00	152	4.12	105	1/2	3.4	1.8
1	25	6.50	165	4.50	114	1/2	3.1	1.4	6.50	165	4.50	114	1/2	4.2	2.3
1 1/2	40	8.00	203	6.12	156	1/2	6.2	3.7	8.00	203	6.12	156	1/2	8.6	4.8
2	50	9.00	229	7.12	181	1/2	9.7	6.7	9.00	229	7.12	181	1/2	11.2	8.2
2 1/2	65	11.00	279	10.25	259	3/4	23.5	16.5	11.00	279	10.25	259	3/4	29	20
3	80	12.50	318	11.50	293	3/4	28	22	12.50	318	11.50	293	3/4	38	27
4	100	14.50	368	12.75	324	3/4	37	28	14.50	368	12.75	324	3/4	57	39
6	150	18.50	470	17.62	448	3/4	67	59	18.50	470	17.62	448	3/4	105	74
8	200	23.50	597	21.00	535	3/4	91	78	23.50	597	21.00	535	3/4	176	131
10	250	26.50	673	27.12	690	1	135	113	26.50	673	27.12	690	1	230	164
12	300	30.50	775	30.75	780	1	168	151	30.50	775	30.75	780	1	360	268
in.	mm	in.	mm	in.	mm	in.	RF	Bw	in.	mm	in.	mm	in.	RF	Bw

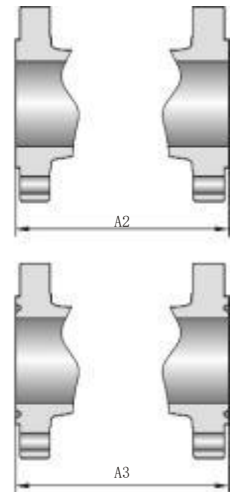
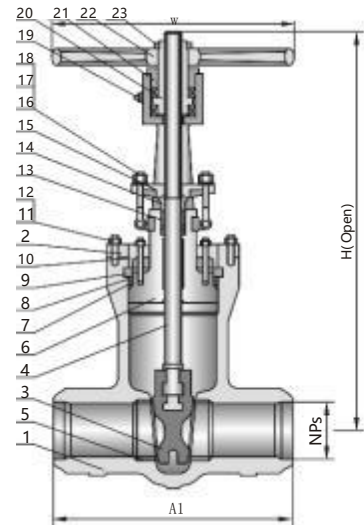


Applicable Standards

- ★Steel Gate Valves, API 600/API 6D
- ★Steel Gate Valves, ISO 10434/ISO 14313
- ★Steel Valves, ASME B16.34
- ★Face To Face, ASME B16.10
- ★End Flanges, ASME B16.5
- ★Butt welding Ends, ASME B16.25
- ★Inspection And Test, API 598/API 6D

Design Description

- ▲PSB, Pressure Seal Bonnet
- ▲Flexible wedge, Fully Guided
- ▲Choice Of Solid Or Split wedge
- ▲Renewable Seat Rings
- ▲Forged T-head Stem
- ▲Rising Stem And Non-rising Handwheel
- ▲Flanged Or Butt welding Ends
- ▲Available with Bg Operator



Standard Material Specifications

No.	Part Name	AsTM Material							
		Carbon steel	1.25Cr-0.5Mo	2.25Cr- 1Mo	304 Type	316 Type	304L Type	316L Type	20 Alloy
1	Body	A216 wCB	A217 wC6	A217 wC9	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A351 CN7M
2	Yoke	A216 wCB	A217 wC6	A217 wC9	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A351 CN7M
3	wedge	wCB- HF	A217 wC6-HF	A217 wC9-HF	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A351 CN7M
4	stem	A182 F6a	A182 F11	A182 F22	A182 F304	A182 F316	A182 F304L	A182 F316L	20-Alloy
5	seat Ring	A105-HF	A182 F11-HF	A182 F22-HF	NA	NA	NA	NA	NA
6	Bonnet	A216 wCB	A217 wC6	A217 wC9	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A351 CN7M
7	Bonnet Gasket	304-Graphite	304-Graphite	304-Graphite	304-Graphite	316-Graphite	304L-Graphite	316L-Graphite	316-Graphite
8	Adapter Ring	soft steel	A182 F6a	A182 F6a	A182 F304	A182 F316	A182 F304L	A182 F316L	20-Alloy
9	Retainer	A182 F6a	A182 F6a	A182 F6a	A182 F304	A182 F304	A182 F304	A182 F304	A182 F304
10	Yoke Cap	A216 wCB	A217 wC6	A217 wC9	A351 CF8	A351 CF8	A351 CF8	A351 CF8	A351 CF8
11	Bonnet Bolt	A193 B7	A193 B7	A193 B16	A193 B8	A193 B8	A193 B8	A193 B8	A193 B8
12	Bonnet Nut	A194 2H	A194 7	A194 7	A194 8	A194 8	A194 8	A194 8	A194 8
13	Packing	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite
14	Gland	A276 410	A276 410	A276 410	A276 304	A276 316	A276 304L	A276 316L	20-Alloy
15	Gland Flange	A216 wCB	A216 wCB	A216 wCB	A351 CF8	A351 CF8	A351 CF8	A351 CF8	A351 CF8
16	Eyebolt	Carbon steel	A193 B7	A193 B7	A193 B8	A193 B8	A193 B8	A193 B8	A193 B8
17	Eyebolt Nut	Carbon steel	A194 2H	A194 2H	A194 8	A194 8	A194 8	A194 8	A194 8
18	Eyebolt Pin	A276 410	A276 411	A276 412	A276 304	A276 304	A276 304	A276 304	A276 304
19	Greas Fitting	Commercial	Commercial	Commercial	Commercial	Commercial	Commercial	Commercial	Commercial
20	stem Nut	Bronze	Bronze)1	Bronze)1	Bronze	Bronze	Bronze	Bronze	Bronze
21	Jam Nut	Carbon steel	Carbon steel	Carbon steel	stainless steel	stainless steel	stainless steel	stainless steel	stainless steel
22	Hand wheel	Malleable iron	Malleable iron	Malleable iron	Malleable iron	Malleable iron	Malleable iron	Malleable iron	Malleable iron
23	wheel Nut	Carbon steel	Carbon steel	Carbon steel	Carbon steel-Zn	Carbon steel-Zn	Carbon steel-Zn	Carbon steel-Zn	Carbon steel-Zn
)1	Ductile Ni-Resist iron Optional								
NA	Integral with vessell								



Main Outline Dimensions & Weight Class 600

Valve size		in	2	2.5	3	4	6	8	10	12	14	16	18	20	24
		mm	50	65	80	100	150	200	250	300	350	400	450	500	600
A ₁		in	7.0	8.5	10.0	12.0	18.0	23.0	28.0	32.0	35.0	39.0	43.0	47.0	55.0
		mm	178	216	254	305	457	584	711	813	889	991	1092	1194	1397
A ₂		in	11.5	13.0	14.0	17.0	22.0	26.0	31.0	33.0	35.0	39.0	43.0	47.0	55.0
		mm	292	330	356	432	556	660	787	838	889	991	1092	1194	1397
A ₃		in	11.62	13.12	14.12	17.12	22.12	26.12	31.12	33.12	35.12	39.12	43.12	47.25	55.38
		mm	295	333	359	435	562	664	791	841	892	994	1095	1200	1406
H		in	23.2	24.8	26.3	36.0	42.5	49.9	59.5	70.5	73.1	85.1	88.6	97.2	118.1
		mm	590	629	667	914	1080	1267	1511	1791	1857	2162	2251	2470	3000
w		in	7.9	9.8	9.8	11.8	19.7	22.0	27.2	35.8	24.0	24.0	24.0	24.0	30.0
		mm	200	250	250	300	500	560	690	610	610	610	610	610	760
weight	RF	lb	154.4	209.5	220.5	326.3	540.2	705.6	948.2	1135.6	1477.4	1995.5	2535.8	3186.2	4586.4
		kg	70	195	100	148	245	320	430	515	670	905	1150	1445	2080
	Bw	lb	136.7	176.4	165.2	253.6	377.1	474.1	590.9	701.2	959.2	1256.9	1587.6	1962.5	2833.4
		kg	62	80	84	115	171	215	268	318	435	570	720	890	1285

Main Outline Dimensions & Weight Class 900

Valve size		in	2	2.5	3	4	6	8	10	31020	31540	16	18	20	24
		mm	50	65	80	100	150	200	250			400	450	500	600
A ₁	in	8.5	10.0	12.0	14.0	20.0	26.0	31.0	36.0	39.0	43.0	46.5	50.0	59.5	
	mm	216	254	305	356	508	660	787	914	991	1092	1181	1283	1511	
A ₂	in	14.5	16.5	15.0	18.0	24.0	29.0	33.0	38.0	40.5	44.5	48.0	52.0	61.0	
	mm	368	419	381	457	610	737	838	965	1029	1130	1219	1321	1549	
A ₃	in	14.62	16.62	15.12	18.12	24.12	29.12	33.12	38.12	40.88	44.88	48.5	52.5	61.75	
	mm	371	422	384	460	612	740	841	968	1038	1140	1232	1333	1568	
H	in	23.4	29.6	29.8	34.0	39.9	50.2	60.7	70.1	79.8	89.0	97.2	108.3	1276	
	mm	594	753	756	864	1013	1276	1543	1781	2026	2261	2470	2750	3242	
w	in	11.8	17.7	17.7	19.7	22.0	18.1	24.0	24.0	24.0	24.0	29.9	29.9	24.0	
	mm	300	450	450	500	560	460	610	610	610	610	760	760	610	
weight	RF	lb	132.3	207.3	224.9	330.8	617.4	1455.3	2116.8	2976.8	3748.5	5292	7320.6	9702.0	14927.9
		kg	60	94	102	150	280	660	960	1350	1700	2400	3320	4400	6770
	Bw	lb	88.2	141.1	176.4	220.5	407.9	1091.5	1620.7	2315.3	3087.0	4299.8	6019.7	8125.4	11973.2
		kg	40	64	80	100	185	495	735	1050	1400	1950	2730	3685	5430

Main Outline Dimensions & Weight Class 1500

Valve size		in	2	2.5	3	4	6	8	10	12	14	16	18	20	24
		mm	50	65	80	100	150	200	250	300	350	400	450	500	600
A ₁	in	8.5	10.0	12.0	16.0	22.0	28.0	34.0	39.0	42.0	47.0	53.0	58.0	64.0	
	mm	216	254	305	406	559	711	864	991	1067	1194	1346	1473	1626	
A ₂	in	14.5	16.5	18.5	21.5	27.75	32.75	39.0	44.5	49.5	54.5	60.5	65.5	76.5	
	mm	368	419	470	546	705	832	991	1130	1257	1384	1536	1664	1943	
A ₃	in	14.62	16.62	18.62	21.62	28.0	33.13	39.38	45.12	50.25	55.38	61.38	66.38	77.62	
	mm	371	422	473	549	711	841	1000	1146	1276	1406	1559	1686	1972	
H	in	23.4	29.6	29.6	34.0	48.0	51.6	64.8	77.8	87.2	91.8	111.1	122.1	148.3	
	mm	594	753	753	864	1219	1311	1645	1975	2216	2331	2823	3102	3766	
w	in	11.8	17.7	17.7	19.7	24.0	24.0	24.0	24.0	29.9	29.9	29.9	24.0	24.0	
	mm	300	450	450	500	610	610	610	610	760	760	760	610	610	
weight	RF	lb	132.3	207.3	264.6	458.6	1058.4	2006.6	3109.1	4586.4	5755.1	7938	13141.8	16250.9	23395.1
		kg	60	94	120	208	480	910	1410	2080	2610	3600	5960	7370	10610
	Bw	lb	88.2	141.1	176.4	326.3	749.7	1499.4	2249.1	3197.3	3969	6063.8	10209.2	12612.6	18169.2
		kg	40	64	80	148	340	680	1020	1450	1800	2750	4630	5720	8240

Main Outline Dimensions & Weight Class 2500

Valve size		in	2	2.5	3	4	6	8	10	12	14	16	18
		mm	50	65	80	100	150	200	250	300	350	400	450
A ₁		in	11.0	13.0	14.5	18.0	24.0	30.0	36.0	41.0	44.0	49.0	55.0
		mm	279	330	368	457	610	762	914	1041	1118	1245	1397
A ₂		in	17.75	20.0	22.75	26.5	36.0	40.25	50.0	56.0	-	-	-
		mm	451	508	578	673	914	1022	1270	1422	-	-	-
A ₃		in	17.87	20.25	23.0	26.88	36.5	40.87	50.88	56.88	-	-	-
		mm	454	514	584	683	927	1038	1292	1445	-	-	-
H		in	23.4	29.6	29.6	34.3	47.3	57.1	63.4	82.5	90.2	97.2	116.1
		mm	594	753	753	870	1201	1451	1610	2096	2291	2470	2950
w		in	14.0	17.7	19.7	23.6	24.0	24.0	24.0	29.9	29.9	24.0	24.0
		mm	355	450	500	600	610	610	610	760	760	610	610
weight	RF	lb	172.1	273.4	334.1	702.7	1640.3	2673	4807.4	6925.5	-	-	-
		kg	85	135	165	347	810	1320	2374	3420	-	-	-
	Bw	lb	101.3	182.3	192.4	384.8	1053	1498.5	3240	6075	6885	8505	10125
		ka	50	90	95	190	520	740	1600	300	3400	4200	5000



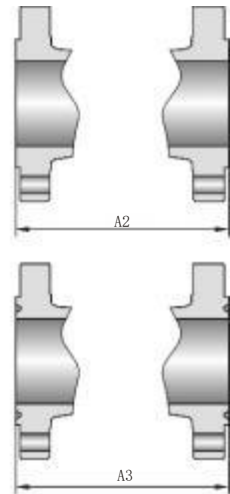
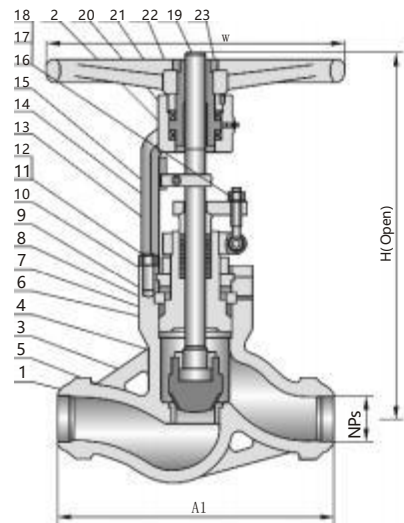


Applicable Standards

- ★Steel Globe Valves, BS EN 13709/API 600
- ★Steel Valves, ASME B16.34
- ★Face To Face, ASME B16.10
- ★End Flanges, ASME B16.5
- ★Buttwelding Ends, ASME B16.25
- ★Inspection And Test, API 598

Design Description

- ▲PSB, Pressure Seal Bonnet
- ▲Renewable Seat Rings
- ▲Forged T-head Stem
- ▲Rising Stem And Non-rising Handwheel
- ▲Flanged Or Buttwelding Ends
- ▲Available with Bg Operator



Standard Material Specifiactions

No.	Part Name	AsTM Material							
		Carbon steel	1.25Cr-0.5Mo	2.25Cr- 1Mo	304 Type	316 Type	304L Type	316L Type	20 Alloy
1	Body	A216 wCB	A217 wC6	A217 wC9	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A351 CN7M
2	Yoke	A216 wCB	A217 wC6	A217 wC9	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A351 CN7M
3	Disc	wCB- HF	A217 wC6-HF	A217 wC9-HF	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A351 CN7M
4	stem	A182 F6a	A182 F11	A182 F22	A182 F304	A182 F316	A182 F304L	A182 F316L	20-Alloy
5	seat Ring	A105-HF	A182 F11-HF	A182 F22-HF	NA	NA	NA	NA	NA
6	Bonnet	A216 wCB	A217 wC6	A217 wC9	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A351 CN7M
7	Bonnet Gasket	304-Graphite	304-Graphite	304-Graphite	304-Graphite	316-Graphite	304L-Graphite	316L-Graphite	316-Graphite
8	Adapter Ring	soft steel	A182 F6a	A182 F6a	A182 F304	A182 F316	A182 F304L	A182 F316L	20-Alloy
9	Retainer	A182 F6a	A182 F6a	A182 F6a	A182 F304	A182 F304	A182 F304	A182 F304	A182 F304
10	Yoke Cap	A216 wCB	A217 wC6	A217 wC9	A351 CF8	A351 CF8	A351 CF8	A351 CF8	A351 CF8
11	Bonnet Bolt	A193 B7	A193 B7	A193 B16	A193 B8	A193 B8	A193 B8	A193 B8	A193 B8
12	Bonnet Nut	A194 2H	A194 7	A194 7	A194 8	A194 8	A194 8	A194 8	A194 8
13	Packing	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite
14	Gland	A276 410	A276 410	A276 410	A276 304	A276 316	A276 304L	A276 316L	20-Alloy
15	Gland Flange	A216 wCB	A216 wCB	A216 wCB	A351 CF8	A351 CF8	A351 CF8	A351 CF8	A351 CF8
16	Eyebolt	Carbon steel	A193 B7	A193 B7	A193 B8	A193 B8	A193 B8	A193 B8	A193 B8
17	Eyebolt Nut	Carbon steel	A194 2H	A194 2H	A194 8	A194 8	A194 8	A194 8	A194 8
18	Eyebolt Pin	A276 410	A276 411	A276 412	A276 304	A276 304	A276 304	A276 304	A276 304
19	Greas Fitting	Commercial	Commercial	Commercial	Commercial	Commercial	Commercial	Commercial	Commercial
20	stem Nut	Bronze	Bronze)1	Bronze)1	Bronze	Bronze	Bronze	Bronze	Bronze
21	Jam Nut	Carbon steel	Carbon steel	Carbon steel	stainless steel	stainless steel	stainless steel	stainless steel	stainless steel
22	Hand wheel	Malleable iron	Malleable iron	Malleable iron	Malleable iron	Malleable iron	Malleable iron	Malleable iron	Malleable iron
23	wheel Nut	Carbon steel	Carbon steel	Carbon steel	Carbon steel-Zn	Carbon steel-Zn	Carbon steel-Zn	Carbon steel-Zn	Carbon steel-Zn
5	Back seat	A276 410	A276 410	A276 410	NA	NA	NA	NA	NA
)1	Ductile Ni-Resist iron Optional								
NA	Integral with vessell								



Main Outline Dimensions & Weight Class 600

Valve size	in	2	2.5	3	4	6	8	10	12	14	16
	mm	50	65	80	100	150	200	250	300	350	400
A ₁	in	7.0	8.5	10.0	12.0	18.0	23.0	28.0	32.0	35.0	39.0
	mm	178	216	254	305	457	584	711	813	889	991
A ₂	in	11.5	13.0	14.0	17.0	22.0	26.0	31.0	33.0	35.0	39.0
	mm	292	330	356	432	559	660	787	818	889	991
A ₃	in	11.62	13.12	14.12	17.12	22.12	26.12	31.12	33.12	35.12	39.12
	mm	295	333	359	435	562	664	792	841	892	994
H	in	21.7	24.8	26.8	29.5	45.3	49.2	55.1	61.0	70.9	85.0
	mm	550	630	680	750	1150	1250	1400	1550	1800	2160
w	in	9.8	11.8	11.8	17.7	23.6	18.1	24.0	24.0	24.0	29.9
	mm	250	300	300	450	600	460	610	610	610	760
weight	RF	lb	99.2	121.2	187.4	297.7	672.5	1367.1	2888.6	4189.5	5997.6
		kg	45	55	85	135	305	620	1310	1900	2720
	Bw	lb	77.2	99.2	132.3	209.5	507.2	1190.7	2535.8	3792.6	5578.7
		kg	35	45	60	95	230	540	1150	1720	2530

Main Outline Dimensions & Weight Class 900

Valve size	in	2	2.5	3	4	6	8	10	12	14	16
	mm	50	65	80	100	150	200	250	300	350	400
A ₁	in	8.5	10.0	12.0	14.0	20.0	26.0	31.0	36.0	39.0	43.0
	mm	216	254	305	356	508	660	787	914	991	1092
A ₂	in	14.5	16.5	15.0	18.0	24.0	29.0	33.0	38.0	40.5	44.5
	mm	368	419	381	457	610	737	838	965	1029	1130
A ₃	in	14.62	16.62	15.12	18.12	24.12	29.12	33.12	38.12	40.88	44.88
	mm	371	422	384	460	613	740	841	968	1038	1140
H	in	24.4	25.3	28.4	33.5	48.2	53.1	61.0	68.9	78.7	90.9
	mm	619	641	721	850	1225	1350	1550	1750	2000	2310
w	in	15.7	15.7	15.7	19.7	24.0	24.0	24.0	24.0	29.9	29.9
	mm	400	400	400	500	610	610	610	610	760	760
weight	RF	lb	176.4	242.6	231.5	374.9	926.1	2205.0	3792.6	5071.5	7386.8
		kg	80	110	105	170	420	1000	1720	2300	3350
	Bw	lb	121.3	176.4	176.4	286.7	793.8	1984.5	3351.6	4520.3	6725.3
		kg	55	80	80	130	360	900	1520	2050	3050

Main Outline Dimensions & Weight Class 1500

Valve size	in	2	2.5	3	4	6	8	10	12	14
	mm	50	65	80	100	150	200	250	300	350
A ₁	in	8.5	10.0	12.0	16.0	22.0	28.0	34.0	39.0	42.0
	mm	216	254	305	406	559	711	864	991	1067
A ₂	in	14.5	16.5	18.5	21.5	27.75	32.75	39.0	44.5	49.5
	mm	368	419	470	546	705	832	991	1130	1257
A ₃	in	14.62	16.62	18.62	21.62	28.0	33.13	39.38	45.12	50.25
	mm	371	422	473	549	711	841	1000	1146	1276
H	in	24.4	25.2	32.9	33.7	48.4	70.9	78.7	91.0	105.9
	mm	619	641	835	857	1230	1800	2000	2311	2691
w	in	15.7	15.7	19.7	19.7	24.0	24.0	29.9	29.9	29.9
	mm	400	400	500	500	610	610	760	760	760
weight	RF	lb	176.4	242.6	299.9	496.1	1433.3	3704.4	5909.4	7497.0
		kg	80	110	136	225	650	1680	2680	3400
	Bw	lb	121.3	176.4	209.5	352.8	1146.6	3153.2	5027.4	6240.2
		kg	55	80	95	160	520	1430	2280	2830

Main Outline Dimensions & Weight Class 2500

Valve size	in	2	2.5	3	4	6	8	10	12
	mm	50	65	80	100	150	200	250	300
A ₁	in	11.0	13.0	14.5	18.0	24.0	30.0	36.0	41.0
	mm	279	330	368	457	610	762	914	1041
A ₂	in	17.75	20.0	22.75	26.5	36.0	40.25	50.0	56.0
	mm	451	508	578	673	914	1022	1270	1422
A ₃	in	17.87	20.25	23.0	26.88	36.5	40.87	50.88	56.88
	mm	454	514	584	683	927	1038	1292	1445
H	in	24.3	30.7	31.5	51.2	53.9	85.0	100.0	106.0
	mm	616	781	800	1300	1370	2160	2540	2692
w	in	15.7	19.7	19.7	24.0	24.0	29.9	29.9	29.9
	mm	400	500	500	610	610	760	760	760
weight	RF	lb	220.5	341.8	463.1	1102.5	2756.3	5292.0	7276.5
		kg	100	155	210	500	1250	2400	3300
	Bw	lb	154.4	242.6	308.7	771.8	2094.8	4410.0	5512.5
		kg	70	110	140	350	950	2000	2500



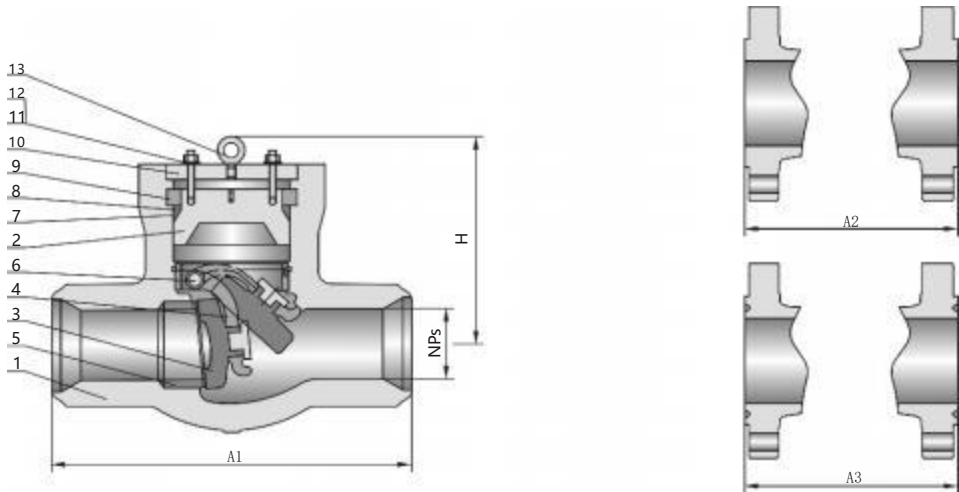


Applicable Standards

- ★Steel Check Valves, API 594/API 6D
- ★Steel Check VALVES, ISO 14313
- ★Steel Valves, ASME B16.34
- ★Face To Face, ASME B16.10
- ★End Flanges, ASME B16.5
- ★Inspection And Test, API 598/API 6D

Design Description

- ▲PSB, Pressure Seal Bonnet
- ▲Swing Type
- ▲Renewable Seat Rings
- ▲Von-penetrated Disc Shaft
- ▲Flanged Or Butt welding Ends



Standard Material Specifications

No.	Part Name	AsTM Material							
		Carbon steel	1.25Cr-0.5Mo	2.25Cr- 1Mo	304 Type	316 Type	304L Type	316L Type	20 Alloy
1	Body	A216 wCB	A217 wC6	A217 wC9	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A351 CN7M
2	Bonnet	A216 wCB	A217 wC6	A217 wC9	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A351 CN7M
3	Disc	wCB-13Cr)1	A217 wC6-HF	A217 wC9-HF	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A351 CN7M
4	Hinge	A216 wCB	A217 wC6	A217 wC9	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A351 CN7M
5	seat Ring	A105-13Cr)1	A182 F11-HF	A182 F22-HF	NA	NA	NA	NA	NA
6	Hinge Pin	A276 410	A276 410	A276 410	A276 304	A276 316	A276 304L	A276 316L	20-Alloy
7	Bonnet Gasket	304-Graphite	304-Graphite	304-Graphite	304-Graphite	316-Graphite	304L-Graphite	316L-Graphite	316-Graphite
8	Adapter Ring	soft steel	A182 F6a	A182 F6a	A182 F304	A182 F316	A182 F304L	A182 F316L	20-Alloy
9	Retainer	A182 F6a	A182 F6a	A182 F6a	A182 F304	A182 F304	A182 F304	A182 F304	A182 F304
10	Bonnet Clamp	A216 wCB	A217 wC6	A217 wC9	A351 CF8	A351 CF8	A351 CF8	A351 CF8	A351 CF8
11	Bonnet Bolt	A193 B7	A193 B7	A193 B16	A193 B8	A193 B8	A193 B8	A193 B8	A193 B8
12	Bonnet Nut	A194 2H	A194 7	A194 7	A194 8	A194 8	A194 8	A194 8	A194 8
13	Eyebolt	Carbon steel	Carbon steel	Carbon steel	Carbon steel-Zn	Carbon steel-Zn	Carbon steel-Zn	Carbon steel-Zn	Carbon steel-Zn
NA	Integral with vessel								
*1	PN≥600 Class seal face will be HF								



Main Outline Dimensions & Weight Class 900

Valve size		in	2	2.5	3	4	6	8	10	12	14	16	18	20	24
		mm	50	65	80	100	150	200	250	300	350	400	450	500	600
A ₁		in	8.5	10.0	12.0	14.0	20.0	26.0	31.0	36.0	39.0	43.0	46.5	50.5	59.5
		mm	216	254	305	356	508	660	787	914	991	1092	1181	1283	1511
A ₂		in	14.5	16.5	15.0	18.0	24.0	29.0	33.0	38.0	40.5	44.5	48.0	52.0	61.0
		mm	368	419	381	457	610	737	838	965	1029	1130	1219	1321	1549
A ₃		in	14.62	16.62	15.12	18.12	24.12	29.12	33.12	38.12	40.88	44.88	48.5	52.5	61.75
		mm	371	422	384	460	613	740	841	968	1038	1140	1232	1333	1568
H		in	9.5	10.4	10.6	12.5	15.7	23.1	23.9	27.4	29.5	28.7	33.5	33.3	37.8
		mm	241	264	270	318	400	587	606	695	749	730	851	864	959
weight	RF	lb	88.2	121.3	114.7	231.5	507.2	1256.9	1874.3	2866.5	3417.8	3638.3	5071.5	6615.0	9040.5
		kg	40	55	52	105	230	570	850	1300	1550	1650	2300	3000	4100
	Bw	lb	44.1	70.6	66.2	143.3	352.8	970.2	1521.5	2249.1	2690.1	2976.8	4079.3	5292.0	6394.5
		kg	20	32	30	65	160	440	690	1020	1220	1350	1850	2400	2900

Main Outline Dimensions & Weight Class 1500

Valve size		in	2	2.5	3	4	6	8	10	12	14	16	18	20	24
		mm	50	65	80	100	150	200	250	300	350	400	450	500	600
A ₁		in	8.5	10.0	12.0	16.0	22.0	28.0	34.0	39.0	42.0	47.0	53.0	58.0	64.0
		mm	216	254	305	406	559	711	864	991	1067	1194	1346	1473	1626
A ₂		in	14.5	16.5	18.5	21.5	27.75	32.75	39.0	44.5	49.5	54.5	60.5	65.5	76.5
		mm	368	419	470	546	705	832	991	1130	1257	1383	1537	1664	1943
A ₃		in	14.62	16.62	18.62	21.62	28.0	33.13	39.38	45.12	50.25	55.38	61.38	66.38	77.62
		mm	371	422	473	549	711	841	1000	1146	1276	1407	1559	1686	1972
H		in	9.5	10.4	10.6	12.5	15.7	18.9	23.3	25.4	28.0	29.5	34.6	37.4	43.3
		mm	241	264	270	318	400	479	591	645	711	749	880	949	1099
weight	RF	lb	88.2	121.3	220.5	308.7	882.0	1345.1	2315.3	3417.8	4630.5	5733.0	7276.5	9261.0	13230.0
		kg	40	55	100	140	400	610	1050	1550	2100	2600	3300	4200	6000
	Bw	lb	44.1	70.6	88.2	154.4	617.4	1058.4	1631.7	2425.5	3109.1	3528.0	4630.5	3733.0	7717.5
		kg	20	32	40	70	280	480	740	1100	1410	1600	2100	2600	3500

Main Outline Dimensions & Weight Class 2500

Valve size		in	2	2.5	3	4	6	8	10	12	14	16	18
		mm	50	65	80	100	150	200	250	300	350	400	450
A ₁	in	11.0	13.0	14.5	18.0	24.0	30.0	36.0	41.0	44.0	49.0	55.0	
	mm	279	330	368	457	610	762	914	1041	1118	1245	1397	
A ₂	in	17.75	20.0	22.75	26.5	36.0	40.25	50.0	56.0	62.0	68.0	-	
	mm	451	508	578	673	914	1022	1270	1422	1575	1727	-	
A ₃	in	17.87	20.25	23.0	26.88	36.5	40.87	50.88	56.88	-	-	-	
	mm	454	514	584	683	927	1038	1292	1445	-	-	-	
H	in	9.6	10.4	10.6	12.5	15.7	22.0	24.8	27.5	33.9	35.4	39.4	
	mm	245	264	270	318	400	559	629	699	860	899	1000	
weight	RF	lb	187.4	260.2	341.8	628.4	1653.8	2976.8	4740.8	6615.0	9216.9	11157.3	16493.4
		kg	85	118	155	285	750	1350	2150	3000	4180	5060	7480
	Bw	lb	110.3	154.4	187.4	363.8	1014.3	1984.5	2866.5	3969.0	5402.3	7056.0	8930.3
		kg	50	70	85	165	460	900	1300	1800	2450	3200	4050

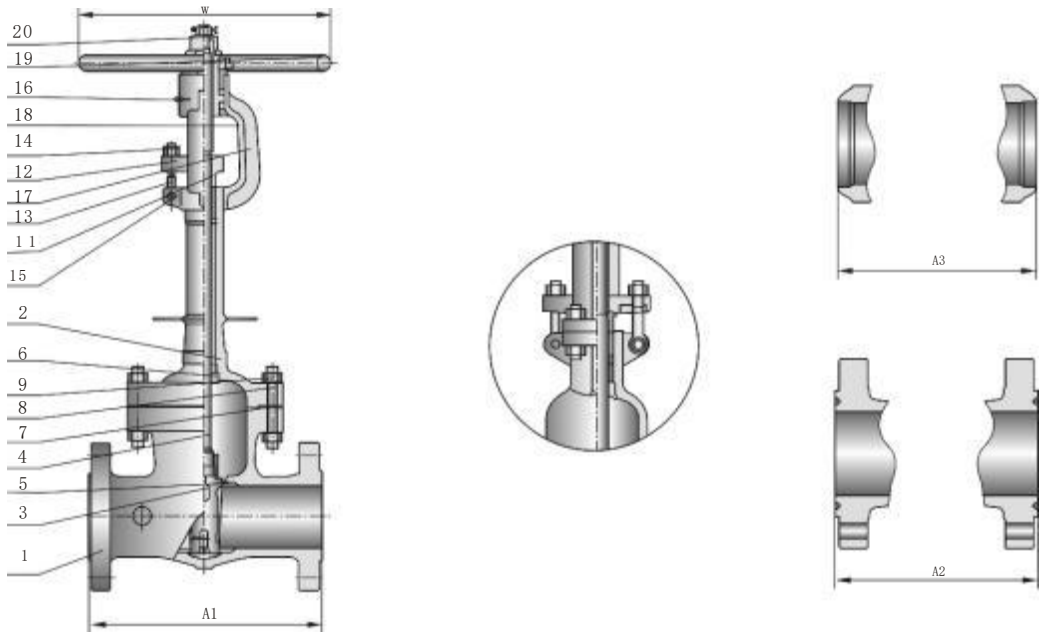


Applicable Standards

- ★Steel Gate Valves, API 600 / API 6D
- ★Steel Gate Valves, ISO 10434/ISO 14313
- ★Steel Valves, ASME B16.34
- ★Face To Face, ASME B16.10
- ★End Flanges, ASME B16.5
- ★Buttwelding Ends, ASME B16.25
- ★Inspection And Test, API 598/ API 6D

Design Description

- ▲Full Port Design
- ▲OS & Y, Outside Screw And Yoke
- ▲BB, Bolted Bonnet
- ▲Flexible wedge, Fully Guided
- ▲Choice Of Solid Or Split wedge
- ▲Renewable Seat Rings
- ▲Forged T-head Stem
- ▲Rising Stem And Non-rising Handwheel
- ▲Flanged Or Buttwelding Ends
- ▲Available with Bg Operator



Standard Material Specifiactions

NO.	Part Name	ASTM Material							
		Carbon steel	2.5Ni	3.5Ni	304 Type	316 Type	304L Type	316L Type	20 Alloy
1	Body	A352 LCB	A352 LC2	A352 LC3	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A351 CN7M
2	Bonnet	A352 LCB	A352 LC2	A352 LC3	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A351 CN7M
3	wedge	LCB+304 *1	LCB+304 *1	LCB+304 *1	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A351 CN7M
4	Stem	A182 F304	A182 F304	A182 F304	A182 F304	A182 F316	A182 F304L	A182 F316L	20-Alloy
5	Seat Ring	A182+F304 *1	A182+F304 *1	A182+F304 *1	NA				NA
6	Back Seat	A276 304	A276 304	A276 304	NA				NA
7A	Bonnet Gasket	304+graphite	304+graphite	304+graphite	304+graphite	316+graphite	304L+graphite	316L+graphite	316+graphite
7B	Ring Gasket	Soft steel	A182 F304	A182 F304	A182 F304	A182 F316	A182 F304L	A182 F316L	20-Alloy
8	Bonnet Bolt	A193 L7	A193 L7	A193 L7	A193 B8	A193 B8M	A193 B8	A193 B8M	A193 B8M
9	Bonnet Nut	A194 4	A194 4	A194 4	A194 8	A194 8M	A194 8	A194 8M	A194 8M
10	Packing	Graphite	Graphite	Graphite	Graphite *2	Graphite *2	Graphite *2	Graphite *2	Graphite *2
11	Gland	A276 410	A276 410	A276 410	A276 304	A276 316	A276 304L	A276 316L	20-Alloy
12	Gland Flange	A352 LCB	A352 LC2	A352 LC3	A351 CF8	A351 CF8	A351 CF8	A351 CF8	A351 CF8
13	Eyebolt	A193 L7	A193 L7	A193 L7	A193 B8	A193 B8	A193 B8	A193 B8	A193 B8
14	Eyebolt Nut	A194 4	A194 4	A194 4	A194 8	A194 8	A194 8	A194 8	A194 8
15	Eyebolt Pin	A276 410	A276 410	A276 410	A276 304	A276 304	A276 304	A276 304	A276 304
16	Greas Fitting	Commercial	Commercial	Commercial	Commercial				Commercial
17	stem Nut	Bronze	Bronze	Bronze	Bronze				Bronze
18	Jam Nut	Carbon steel	Carbon steel	Carbon steel	Stainless steel				Stainless steel
19	Hand wheel	Malleable iron	Malleable iron	Malleable iron	Malleable iron				Malleable iron
20	wheel Nut	Carbon steel	Carbon steel	Carbon steel	Carbon steel+ Zn				Carbon steel+Zn
*1	PN≥600 CLASS seal face will be HF								
*2	PTFE Optional								
*3	Ductile Ni-Resist iron Optional								
NA	Integral with vessel								



Main Outline Dimensions & Weight Class 150

Valve S ize		in	2	2.5	3	4	6	8	10	12	14	16	18	20	24	28	30	36	40	42	48	52
		mm	50	6.5	80	100	150	200	250	300	350	400	450	500	600	700	750	900	1000	1050	1200	1300
A1	in	7.0	7.5	8.0	9.0	10.5	11.5	13.0	14.0	15.0	16.0	170	18.0	20.0	240	24.0	280	30.0	31.0	34.0	36.0	
	mm	178	190	203	229	267	292	330	356	381	406	432	457	508	610	610	711	762	813	864	914	
A3	in	8.5	9.5	11.12	12.0	15.87	16.5	18.0	19.75	22.5	240	26.0	280	32.0	38.0	38.0	400	42.0	43.0	46.0	54	
	mm	216	241	283	305	403	419	457	502	572	610	660	711	813	914	914	1016	1067	1092	1168	1372	
H	in	15.4	16.7	18.1	22.8	30.6	38.4	46.4	54.6	60.0	68.7	79.1	917	109.6	127.4	134.5	161.8	183.9	174.4	217.5	227	
	mm	390	425	461	580	77.6	976	1178	1387	1523	1745	2010	2330	2748	3236	3417	4109	4670	4430	5525	5766	
w	in	7.9	7.9	7.9	9.8	11.8	14.0	17.7	17.7	19.7	22.0	13.8	17.7	22.0	220	27.9	31.5	31.5	35.4	35.4		
	mm	200	200	200	250	300	355	450	450	500	560	350	450	450	560	560	710	800	800	900	900	
weight	RF	in	48.5	55.1	66.2	99.2	187	295.5	445	639	816	1177	1475	1786	3153	4558	4827	7856	10370	10143	15677	18742
		mm	22	25	30	45	85	134	202	290	370	534	669	810	1430	2067	2189	3563	4703	4600	7110	8500
	Bw	kg	44.1	46.3	61.7	92.6	161	244	399	584	750	1111	1365	1697	3336	4756	4981	8011	10436	10198	15545	18853
		lb	20	21	28	42	73	111	181	265	340	504	619	770	1513	2157	2259	3633	4733	4625	7050	8550
		kg																				

Main Outline Dimensions & Weight Class 300

Valve S ize		in	2	2.5	3	4	6	8	10	12	14	16	18	20	24	28	30	36	40	42	48
		mm	50	65	80	100	150	200	250	300	350	400	450	500	600	700	750	900	1000	1050	1200
A1 & A3		in	8.5	9.5	11.12	12.0	15.88	16.5	180	19.75	30.0	33.0	36.0	39.0	45.0	53.0	55.0	68.0	760	780	87.2
		mm	216	241	283	305	403	419	457	502	762	838	914	991	1143	1346	1397	1727	1930	1981	2215
A2		in	9.12	10.12	11.75	12.62	165.5	17.12	18.62	20.37	30.62	33.62	36.62	39.75	45.88	54.0	56.0	69.12	—	—	—
		mm	232	257	298	321	419	435	473	518	778	854	930	1010	1165	1372	1422	1756	—	—	—
H		in	162	17.7	19.0	23.7	32.0	40.2	48.8	56.8	66.1	78.4	85.9	93.5	112.6	130.0	148.5	169.8	1886	198.1	2174
		mm	412	450	483	601	813	1020	1239	1443	1679	1993	2181	2376	2860	3302	3772	4312	4791	5032	5522
w		in	7.9	7.9	8.8	9.8	140	15.7	17.7	19.7	17.7	17.7	22.0	22.0	27.9	35.4	35.4	30.0	30.0	30.0	30.0
		mm	200	200	224	250	355	400	450	500	450	450	560	560	710	900	900	760	760	760	760
weight	RF	1b	63.9	88.2	105.8	163.2	313.1	485.1	721.0	1094	1530	2170	2880	3409	5204	80703	9591.6	15104.3	18654.3	20947.5	27342
		kg	29	40	48	74	142	220	327	496	694	984	1306	1546	2360	3660	4350	6850	8460	9500	12400
	Bw	1b	52.9	77.2	81.6	141.1	269.0	379.2	5116	862	1420	1839	2317	2703	4212	6637	7629.3	11003	13582.6	14994	19845
		kg	24	35	37	64	122	172	232	391	644	834	1051	1226	1910	3010	3460	4990	6160	6800	9000

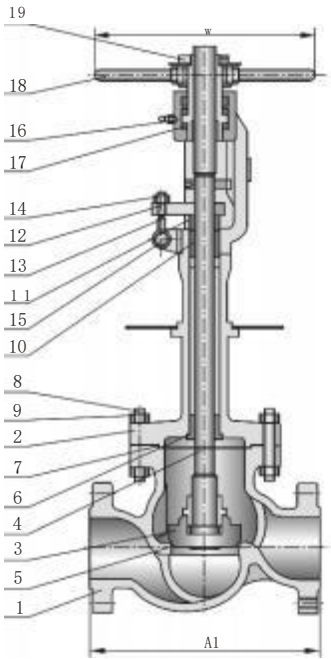
Main Outline Dimensions & Weight Class 600

Valve S ize		in	2	2.5	3	4	6	8	10	12	14	16	18	20	24	28	30	36	40	42
		mm	50	65	80	100	150	200	250	300	350	400	450	500	600	700	750	900	1000	1050
A 1 & A3		in	11.5	13.0	14.0	17.0	22.0	26.0	31.0	33.0	35.0	390	43.0	47.0	55.0	61.0	65.0	82.0	940	98.0
		mm	292	330	356	432	556	660	787	838	889	991	1092	1194	1397	1594	1651	2083	2387	2489
A2		in	11.62	13.12	14.12	17.12	22.12	26.12	31.12	33.12	35.12	39.12	43.12	47.25	55.38	61.5	65.5	82.62	—	—
		mm	295	333	359	435	562	664	791	841	892	994	1095	1200	1406	1562	1663	2098	—	—
H		in	18.5	19.5	22.1	26.7	37.2	43.7	52.1	65.9	72.1	82.9	98.0	104.8	116.9	140.2	152.8	179.5	207.6	240.0
		mm	471	495	561	677	944	1110	1323	1675	1832	2106	2489	2662	29.70	3562	3880	4560	5273	6098
w		in	8.8	8.8	9.8	11.8	17.7	19.7	24.8	22.0	22.0	27.9	27.9	31.5	35.4	30.0	300	30.0	30.0	300
		mm	224	224	250	300	450	500	630	560	560	710	710	800	900	512	512	512	512	512
weight	RF	1b	94.3	132.3	154.4	295.5	628	988	1499	2355	28.36	4059	5700	6853	10337	13340.6	15313.7	21476.7	23262.8	24144.8
		kg	43	60	70	134	285	448	680	1068	1286	1841	2585	3108	4688	6050	6945	9740	10550	10950
	Bw	1b	61.7	99.2	132.3	229.3	452	690	1180	2145	25.71	3332	4741	5640	8595	10980.9	12590.6	17948.7	18830.7	19337.9
		kg	28	45	60	104	205	313	535	973	1166	1511	2150	2558	3898	4980	5710	8140	8540	8770



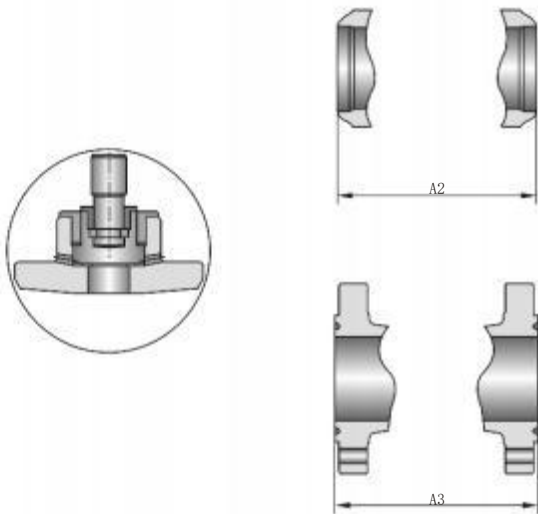
Applicable Standards

- ★Steel Globe Valves, BS EN 13709/API 600
- ★Steel Valves, ASME B16.34
- ★Face To Face, ASME B16.10
- ★End Flanges, ASME B16.5
- ★Buttwelding Ends, ASME B16.25
- ★Inspection And Test, API 598



Design Description

- ▲Straight Pattern Body Design
- ▲OS & Y, Outside Screw And Yoke
- ▲BB, Bolted Bonnet
- ▲Yoke Integral with Bonnet
- ▲Rising Stem And Handwheel
- ▲Loose Disc, Choice Of Plug Or Ball
- ▲Renewable Seat Ring
- ▲Impact Handwheel For 10" & Above
- ▲Horizontal Service
- ▲Flanged Or Buttwelding Ends
- ▲Available with BG Operator



Standard Material Specifiactions

NO.	Part Name	ASTM Material							
		Carbon steel	2.5Ni	3.5Ni	304 Type	3 16 Type	304L Type	316L Type	20 Alloy
1	Body	A352 LCB	A352 LC2	A352 LC3	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A351 CN7M
2	Bonnet	A352 LCB	A352 LC2	A352 LC3	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A351 CN7M
3	Disc	LCB+304 *1	LC2+304	LC3+304	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A351 CN7M
4	Stem	A182 F304	A182 F304	A182 F304	A182 F304	A182 F316	A182 F304L	A182 F316L	20-Alloy
5	Seat Ring	A105+304 *1	A182 F22+HF	A182 F22+HF	NA				NA
6	Back Seat	A276 304	A276 304	A276 304	NA				NA
7A	Bonnet Gasket	304+graphite	304+graphite	304+graphite	304+graphite	316+graphite	304L+graphite	316L+graphite	316+graphite
7B	Ring Gasket	A182 F304	A182 F304	A182 F304	A182 F304	A182 F316	A182 F304L	A182 F316L	20-Alloy
8	Bonnet Bolt	A193 L7	A193 L7	A193 L7	A193 B8	A193 B8M	A193 B8	A193 B8M	A193 B8M
9	Bonnet Nut	A194 4	A194 4	A194 4	A194 8	A194 8M	A194 8	A194 8M	A194 8M
10	Packing	Graphite	Graphite	Graphite	Graphite *2	Graphite *2	Graphite *2	Graphite *2	Graphite *2
11	Gland	A276 410	A276 410	A276 410	A276 304	A276 316	A276 304L	A276 316L	20-Alloy
12	Gland Flange	A216 wCB			A351 CF8	A351 CF8	A351 CF8	A351 CF8	A351 CF8
13	Eyebolt	A193 L7	A193 L7	A193 L7	A193 B8	A193 B8	A193 B8	A193 B8	A193 B8
14	Eyebolt Nut	A194 4	A194 4	A194 4	A194 8	A194 8	A194 8	A194 8	A194 8
15	Eyebolt Pin	A276 410	A276 410	A276 410	A276 304	A276 304	A276 304	A276 304	A276 304
16	Greas Fitting	Commercial			Commercial				Commercial
17	Yoke Sleeve	Bronze	Bronze *3	Bronze *3	Bronze				Bronze
18	Hand wheel	Malleable iron			Malleable iron				Malleable iron
19	wheel Nut	Carbon steel			Stainless steel				Stainless steel
*1	PN≥600 CLASS seal face will be HF								
*2	PTFE Optional								
*3	Duct ile Ni-Res ist iron Optional								
NA	Integral with vessell								



Main Outline Dimensions & Weight Class 150

Valve Size	in	2	2.5	3	4	6	8	10	12	14	16	18
	mm	50	65	80	100	150	200	250	300	350	400	450
A1 & A3	in	8.0	8.5	9.5	11.5	16.0	19.5	24.5	27.5	31.0	36.0	38.5
	mm	203	216	241	292	406	495	622	698	787	914	978
H	in	15.3	14.8	17.0	19.5	22.6	28.0	31.4	39.1	54.6	53.4	78.0
	mm	383	376	433	495	574	710	797	992	1387	1356	1980
w	in	7.9	8.8	8.8	9.8	14.0	14.0	17.7	17.7	22.0	220	240
	mm	200	224	224	250	355	355	450	450	560	560	610
weight	RF	lb	44.1	77.2	88.2	123.5	229.3	401.3	650.5	904	1510	1985
		kg	20	35	40	56	104	182	295	410	685	900
	Bw	lb	33.1	66.2	70.6	90.4	183.0	330.8	496.1	728	1312	1764
		kg	15	30	32	41	83	150	225	330	595	800

Main Outline Dimensions & Weight Class 300

Valve Size		in	2	2.5	3	4	6	8	10	12	14	16
		mm	50	65	80	100	150	200	250	300	350	400
A1 & A3		in	10.5	11.5	12.5	140	17.5	220	24.5	28.0	39.0	42.0
		mm	267	292	318	356	444	559	622	711	991	1067
A2		in	11.12	12.12	13.12	14.62	18.12	22.62	25.12	28.62	39.62	42.62
		mm	283	308	333	371	460	575	638	727	1006	1083
H		in	15.6	16.3	18.2	21.7	29.2	31.5	446	46.1	56.5	70.7
		mm	396	415	462	550	741	300	1132	1172	1435	1797
w		in	7.9	8.8	9.8	140	17.7	22.0	220	28.0	28.0	31.5
		mm	200	224	250	355	450	560	560	710	710	800
weight	RF	lb	70.6	92.6	141.0	220.5	419.0	595.4	1163.7	2240	2546.8	3748.5
		kg	32	42	64	100	190	270	530	1016	1155	1700
	Bw	lb	66.2	66.2	105.89	194.0	328.5	441	970.2	1997.7	2216	3309.7
		kg	30	30	48	88	149	200	440	906	1005	1501

Main Outline Dimensions & Weight Class 600

Valve Size		in	2	2.5	3	4	6	8	10	12	14	16
		mm	50	65	80	100	150	200	250	300	350	400
A1 & A3		in	11.5	13.0	14.0	17.0	22.0	26.0	31.0	33.0	35.0	39.0
		mm	292	330	356	432	559	660	787	818	889	991
A2		in	11.62	13.12	14.12	17.12	22.12	26.12	31.12	33.12	35.12	39.12
		mm	295	333	359	435	562	664	792	841	892	994
H		in	16.0	19.8	19.9	22.4	29.9	51.8	59.5	69.9	70.9	76.0
		mm	407	502	505	165	759	1315	1511	1775	1800	1930
w		in	8.8	9.8	11.0	14.0	17.7	28.0	31.5	35.4	35.4	35.4
		mm	224	250	280	355	450	710	800	900	900	900
weight	RF	lb	94.8	154.4	172.0	300.0	619.6	1301	2099	3528	5953.5	7938.0
		kg	43	70	78	136	281	590	952	1600	2700	3600
	Bw	lb	72.8	121.3	132.3	216.1	454.2	1125	1746	3263.45	5534.6	7386.8
		kg	33	55	60	98	206	510	792	1480	2510	3350



Design

EZ Steel cast steel check valve are designed and manufactured to provide maximum service life and dependability. All gate valves are full ported and meet the design requirements of American Petroleum Institute standard API 608 & API 6D+ Standard BS5351 and generally conform to American society of Mechanical Service .

Engineers standard ASME B16.34. Valves are available in a complete range of body/bonnet materials and trims .

Rang of Materials

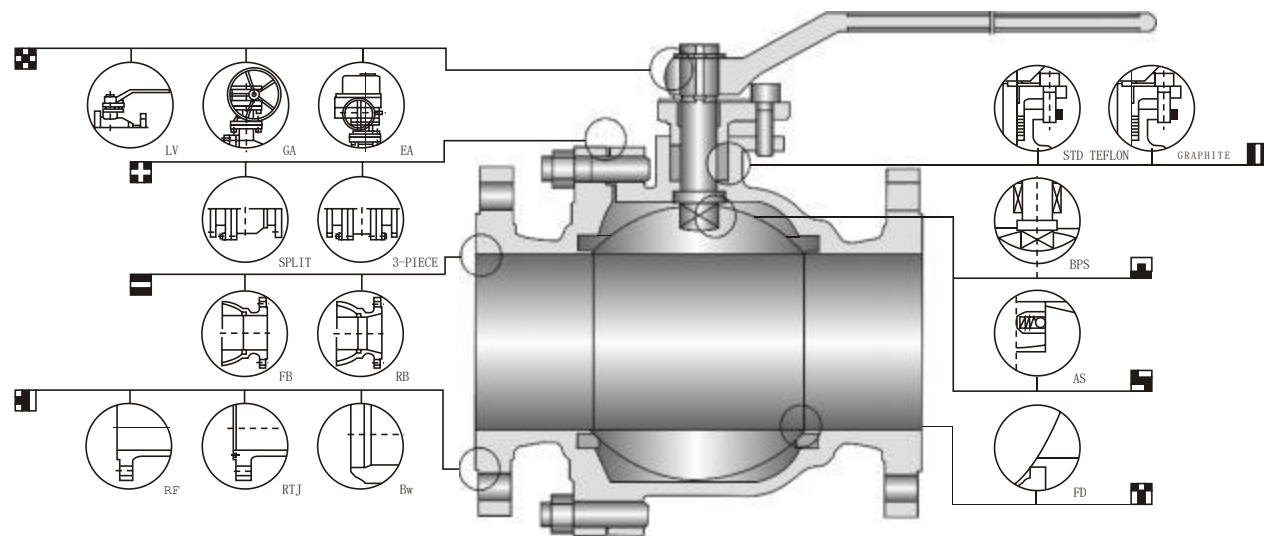
standard body/ bonnet materials include nine grades of carbon+ low alloy and stainless steels+ For special apolications they can be supplied in other grades of alloy and stainless steel .

There's a full ranged of trim materials to match any service . Optional packing and gasket materials are available for a full range of service conditions .

Available Modifications for EZ STEEL Steel Valves

- *Trim Changes
- *End Connection Modifications
- *Pack ing and gasket Changes
- *Operator Mounting
- *Handwheel Extensions

- *Pressure Equalizing
- *By- pass
- *Customer Specified Coatings
- *weld End Bore Changes
- *Oxygen & Chlorine Cleaning & Packaging



Operating

Extended lever for easy operation. Also available with gearing, motor actuators, pneumatic or hydraulic actuators for more difficult services.

BORE

Full Bore or Reduced Bore. Full-bore design provides exceptional flow control.

Packing

STD Packing Multiple V-TEFLON packing, combined with live loading, maintains packing compression under high-cycle and severe service applications. Graphite packing use situation for high-tempearture.

AS

Anti Static. A metallic contact is always granted between ball and stem/body to discharge eventual statics build-up during service.

BODY & BONNET

Split or 3-piece, split body & bonnet for 12" & Small. Disassembles easily for repair or replacement of internal components.

End Connections

A choice of Flanged, RTJ flanged or Butt welding end for piping flexibility.

BPS

Blow-out Proof Stem. A pressure-safe stem shoulder design that protects against failure under excess pressure.

FD

Fire Durable. Designed to API 607 or BS 6755 to grant their operation suitability in case of fire. Secondary metal-to-metal seal acts as backup if primary seal is destroyed by fire. Valves ordered for compliance with API 607 will be provided with graphite packing and gaskets.



Design

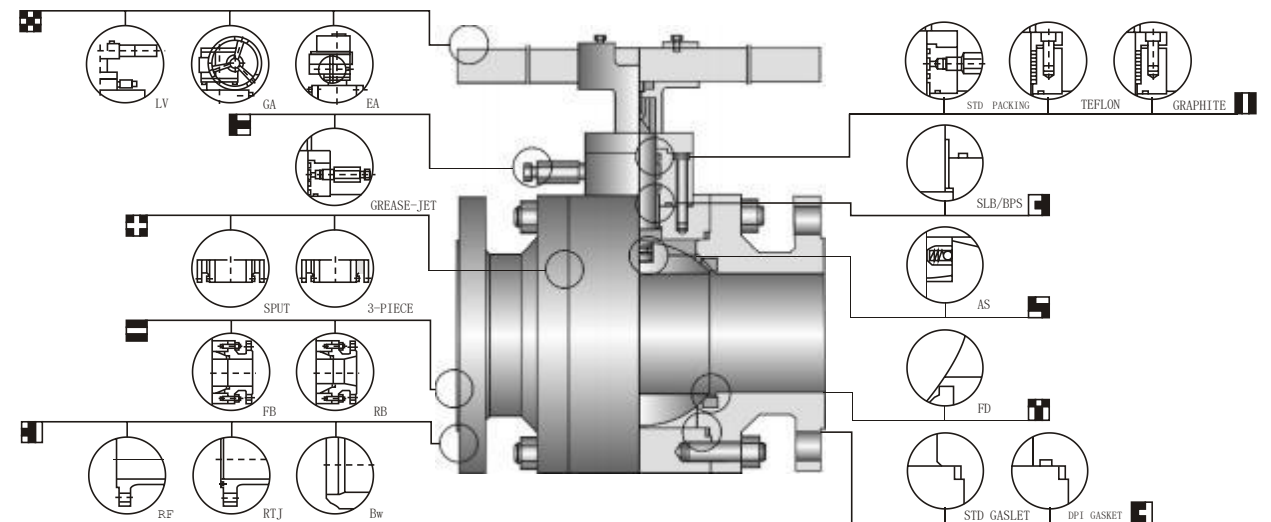
EZ Steel cast steel check valve are designed and manufactured to provide maximum service life and dependability. All gate valves are full ported and meet the design requirements of American Petroleum Institute standard API 608 & API 6D+ Standard BS5351 and generally conform to American society of Mechanical Service .

Engineers standard ASME B16.34. Valves are available in a complete range of body/bonnet materials and trims .

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SLB

Self-Lubrication Bearing. Non-maintenance, easy operation, low torque and longer life.

Grease-Jet Joint

Installed in prescriptive part accord with the apply and satisfied with ecumenical situations and realize seal in spot with maintenance easily.

Bore

Full Bore or Reduced Bore. Full-bore design provides exceptional flow control.

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STD Packing adopt high-performance rubber seal ring, STD Packing and TEFLON user wituatation for smooth pressure. with snap ring apply high-pressure situation. Graphite packing use situation for high-tempearture.

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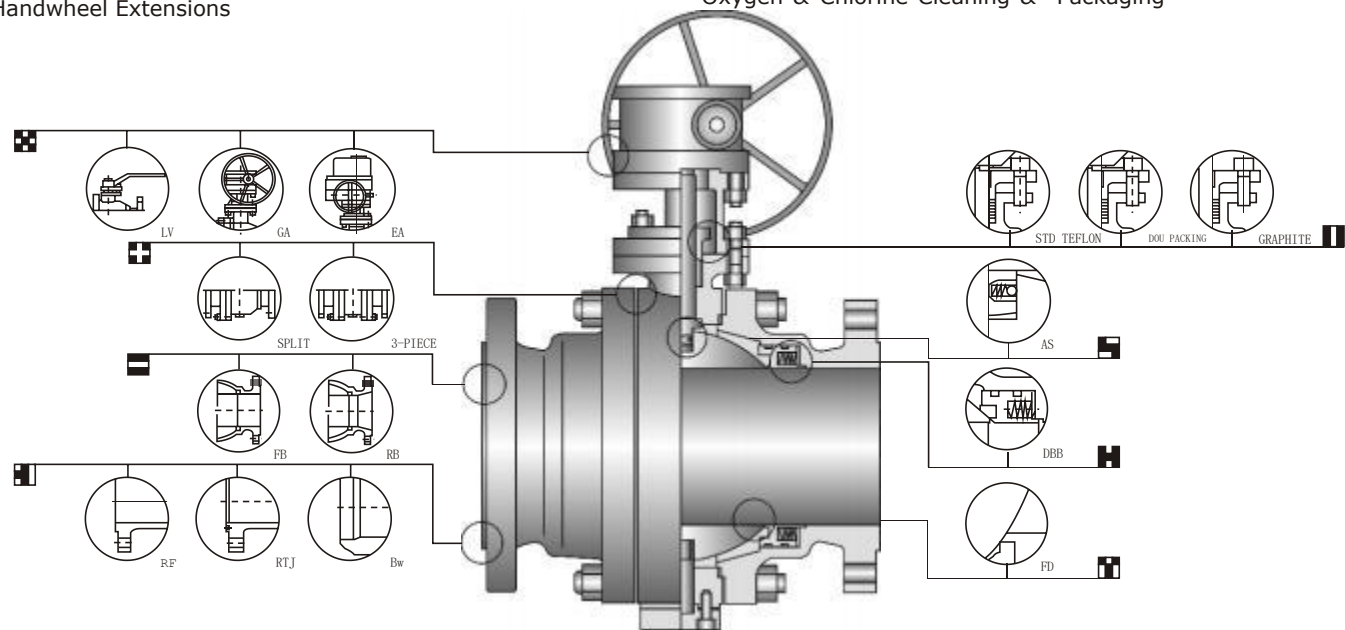
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DBB

Double Block & Bleed. The body cavity is isolated when the ball is in either fully closed or fully opened position, the medium entrapped in it can easily be bled to avoid overpressure.

Body & Bonnet

Split or 3-piece, split body & bonnet for 12" & Small. Disassembles easily for repair or replacement of internal components.

End Connections

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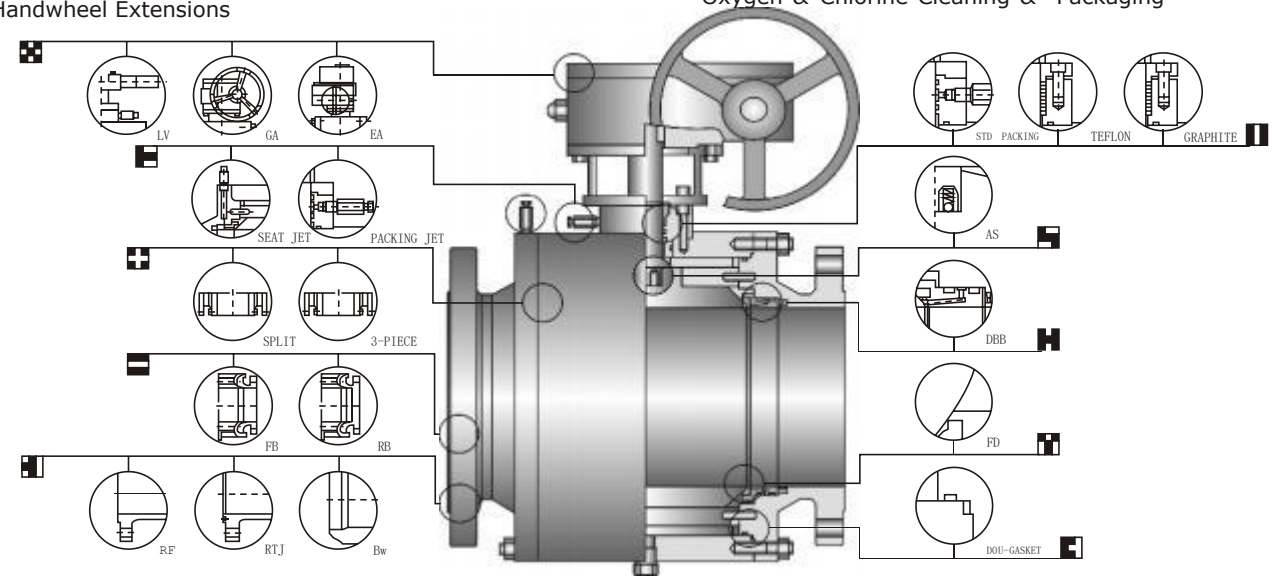
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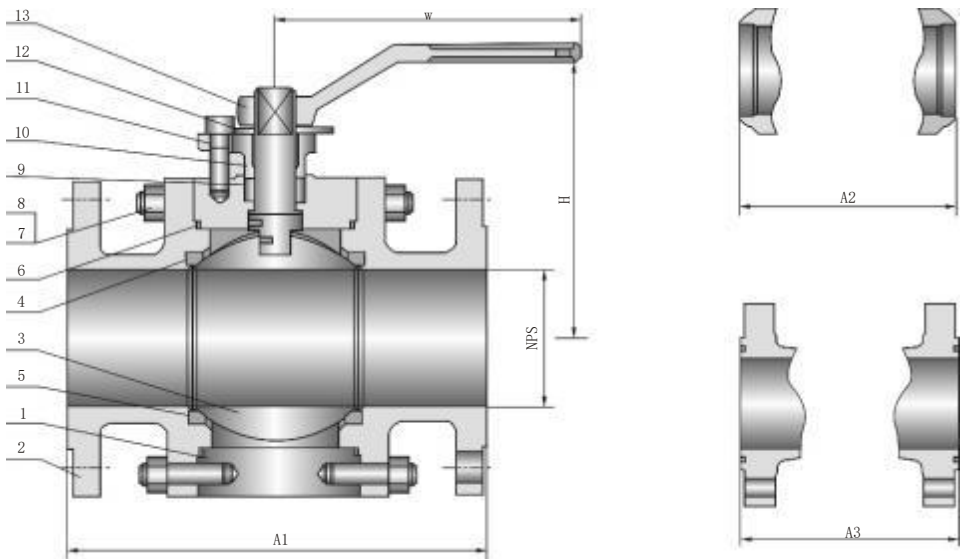


Applicable Standards

- ★Steel Ball Valves, API 608/API 6D
- ★Steel Ball Valves, ISO 14343
- ★Fire Durable, API 607
- ★Anti Static, API 608
- ★Steel Valves, ASME B 16.34
- ★Face To Face, ASME B 16.10
- ★End Flanges, ASME B 16.5
- ★Buttwelding Ends, ASME B 16.25
- ★Inspection And Test, API 598/API 6D

Desing Description

- ▲Full Port Design
- ▲BB, Bolted Bonnet, Split Body
- ▲Floating Ball Type
- ▲Blow-out Proof Stem
- ▲Fire Durable Construction
- ▲Anti Static Device
- ▲Stopper Device
- ▲ISO 5211 Mounting PAD
- ▲Flanged Or Buttwelding Ends
- ▲Available with we Operator



Standard Material Specifiactions

NO.	Part Name	ASTM Material					
		Carbon steel	304 Type	316 Type	304L Type	316L Type	20 Alloy
1	Body	A105	A182 F304	A182 F316	A182 F304L	A182 F316L	20Alloy
2	Bonnet	A105	A182 F304	A182 F316	A182 F304L	A182 F316L	20Alloy
3	Ball	A105 ENP *1	A182 F304	A182 F316	A182 F304L	A182 F316L	20Alloy
4	Stem	A276 410	A276 304	A276 316	A276 304L	A276 316L	20 Alloy
5	Seat Ring	R,PTFE	R,PTFE	R,PTFE	R,PTFE	R,PTFE	R,PTFE
6	Bonnet Gasket	304+graphite	304 + graphite	304 + graphite	304 + graphite	304 + graphite	20 - Alloy+ graphite
7	Bonnet Bolt	A193 B7	A193 B8	A193 B8	A193 B8	A193 B8	A194 B8
8	Bonnet Nut	A194 2H	A194 B	A194 B	A194 B	A194 B	A194 8
9	Packing	PTFE	PTFE	PTFE	PTFE	PTFE	PTFE
10	Gland Flange	A105	A182 F304	A182 F316	A182 F304L	A182 F316L	20Alloy
11	Gland Bolt	A193 B7	A193 B8	A193 B8	A193 B8	A193 B8	A193 B8
12	Stop Plane	Carbon stell					Carbon steel+Zn
13	Handle	Carbon steel	Carbon steel+Zn				Carbon steel
			Carbon steel				
*1	A182 F304 Optional						

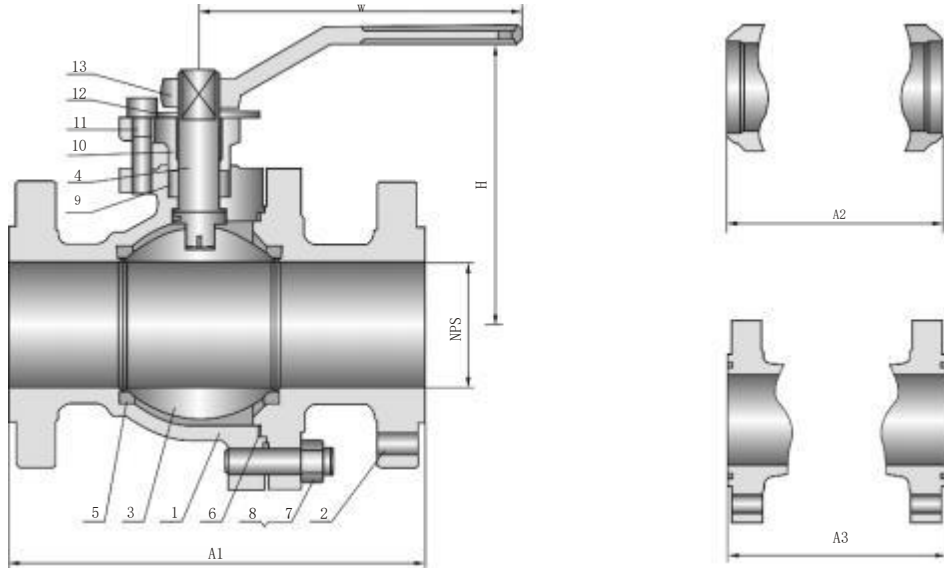


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- ★Anti Static, API 608
- ★Steel Valves, ASME B 16.34
- ★Face To Face, ASME B 16.10
- ★End Flanges, ASME B 16.5
- ★Buttwelding Ends, ASME B 16.25
- ★Inspection And Test, API 598/API 6D

Desing Description

- ▲Full Port Design
- ▲BB, Bolted Bonnet, Split Body
- ▲Floating Ball Type
- ▲Blow-out Proof Stem
- ▲Fire Durable Construction
- ▲Anti Static Device
- ▲Stopper Device
- ▲ISO 5211 Mounting PAD
- ▲Flanged Or Buttwelding Ends
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Standard Material Specifiactions

NO.	Part Name	ASTM Material					
		Carbon steel	304 Type	316 Type	304L Type	316L Type	20 Alloy
1	Body	A105	A182 F304	A182 F316	A182 F304L	A182 F316L	20Alloy
2	Bonnet	A105	A182 F304	A182 F316	A182 F304L	A182 F316L	20Alloy
3	Ball	A105 ENP *1	A182 F304	A182 F316	A182 F304L	A182 F316L	20Alloy
4	Stem	A276 410	A276 304	A276 316	A276 304L	A276 316L	20 Alloy
5	Seat Ring	R,PTFE	R,PTFE	R,PTFE	R,PTFE	R,PTFE	R,PTFE
6	Bonnet Gasket	304+graphite	304 + graphite	304 + graphite	304 + graphite	304 + graphite	20 - Alloy+ graphite
7	Bonnet Bolt	A193 B7	A193 B8	A193 B8	A193 B8	A193 B8	A194 B8
8	Bonnet Nut	A194 2H	A194 B	A194 B	A194 B	A194 B	A194 8
9	Packing	PTFE	PTFE	PTFE	PTFE	PTFE	PTFE
10	Gland Flange	A105	A182 F304	A182 F316	A182 F304L	A182 F316L	20Alloy
11	Gland Bolt	A193 B7	A193 B8	A193 B8	A193 B8	A193 B8	A193 B8
12	Stop Plane	Carbon steel					Carbon steel+Zn
13	Handle	Carbon steel	Carbon steel+Zn				Carbon steel
			Carbon steel				
*1	A182 F304 Optional						

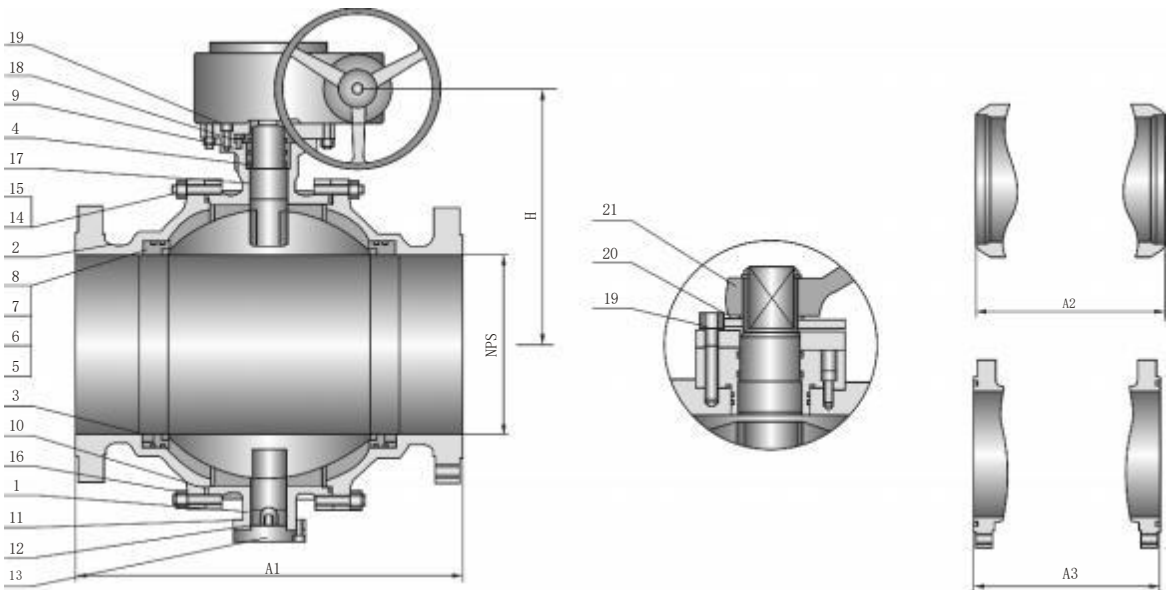


Applicable Standards

- ★Steel Ball Valves, API 608/API 6D
- ★Steel Ball Valves, ISO 14343
- ★Fire Durable, API 607
- ★Anti Static, API 608
- ★Steel Valves, ASME B 16.34
- ★Face To Face, ASME B 16. 10
- ★End Flanges, ASME B 16. 5
- ★Buttwelding Ends, ASME B 16.25
- ★Inspection And Test, API 598/API 6D

Desing Description

- ▲Full Port Design
- ▲BB, Bolted Bonnet, Split Body
- ▲Therr Piece Body For 12" & above
- ▲Trunnion Mounted Ball Type
- ▲Blow-out Proof Stem
- ▲Fire Durable Construction
- ▲Anti Static Device
- ▲Stopper Device
- ▲ISO 5211 Mounting PAD
- ▲Flanged Or Buttwelding Ends
- ▲Available with we Operator



Standard Material Specifiactions

NO.	Part Name	ASTM Material					
		Carbon steel	304 Type	316 Type	304L Type	316L Type	20Alloy
1	Body	A216 WCB	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A351 CN7M
2	Bonnet	A216 WCB	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A351 CN7M
3	Ball	A105 ENP * 1	A182 F304	A182 F316	A182 F304L	A182 F316L	20 Alloy
4	Stem	A276 316	A276 304	A276 316	A276 304L	A276 316L	20Alloy
5	Seat	A182 F6a	A276 304	A276 316	A276 304L	A276 316L	20Alloy
6	Seat Insert	Glass filled+PTFE					Glass filled+PTFE
7	Seat Spring	A313-304	A313-304				Inconel x-750
8	Seat Ring	NBR					Viton
9	Stem O-ring	NBR					Viton
10	Bonnet Gasket	304+graphite	304+graphite	316+graphite	304L+graphite	316L+graphite	20-A1loy+graphite
11	Bonnet O-ring	NBR					Viton
12	Anti static Spring	A313-304	A313-304				Inconel x-750
13	Grounding Plug	A105	A276 304	A276 316	A276 304L	A276 316L	20-Alloy
14	Bonnet Bolt	A193 B7	A193 B8	A193 B8	A193 B8	A193 B8	A193 B8
15	Bonnet Nut	A194 2H	A194 8	A194 8	A194 8	A194 8	A194 8
16	Trunnion	A276 316	A276 304	A276 316	A276 304L	A276 316L	20 Alloy
17	Trunnion Bearing	304+PTFE	316+PTFE	316+PTFE	316+PTFE	316+PTFE	20-A1loy+PTFE
18	Gland	A105	A182 F304	A182 F316	A182 F304L	A182 F316	20 Alloy
19	Gland Bolt	A193 B7	A193 B8	A193 B8	A193 B8	A193 B8	A193 B8
20	Stop plane	Carbon steel					Carbon steel+ Zn
21	Handle	Carbon steel					Carbon steel
			Carbon steel+Zn				
			Carbon steel				
*1	A182 F304 Optional						



Main Outline Dimensions & Weight Class 150

Overall dimensions	NPS	inch	1"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	22"	24"	26"	28"	30"	32"	36"
	DN	mm	25	40	50	65	80	100	125	150	200	250	300	350	400	450	500	550	600	650	700	750	800	900
	A1	inch	5"	6 1/2"	7"	7 1/2"	8"	9"	15"	15 1/2"	18"	21"	24"	27"	30"	34"	36"	39"	42"	45"	49"	51"	54"	60"
		mm	127	165	178	191	203	229	381	394	457	533	610	680	762	864	914	991	1067	1143	1245	1295	1372	1524
	A3	inch	5 3/8"	6 7/8"	7 1/2"	8"	8 1/2"	9 1/2"	15 1/4"	16"	18 1/2"	21 1/2"	24 1/2"	27 1/2"	30 1/2"	34 1/2"	36 1/2"	39 1/2"	42 1/2"					
		mm	137	175	191	203	216	241	387	406	470	546	622	699	776	876	927	1003	1080					
	A2	inch	6 1/2"	7 1/2"	8 1/2"	9 1/2"	11 1/8"	12"	17"	18"	20 1/2"	22"	25"	30"	33"	36"	39"	43"	45"	49"	53"	55"	60"	68"
		mm	165	191	216	241	283	305	432	457	521	559	635	762	838	914	991	1092	1143	1245	1346	1397	1524	1727
	H1	inch	3 1/4"	5 1/2"	6 1/2"	6 7/8"	7 5/8"	9"	9 7/8"	10 5/8"	12 1/4"	14 1/4"	16 1/2"	18 7/8"	19 3/4"	20 5/8"	24 7/8"	25 1/4"	25 3/8"	27"	29 1/2"	32 1/2"	33 1/2"	38 5/8"
		mm	86	140	165	175	194	229	254	270	311	362	419	479	502	524	632	641	645	686	749	826	851	981
	H2	inch	2 3/8"	3 3/4"	4 1/8"	4 5/8"	5 1/4"	6 1/2"	8"	9 5/8"	11 1/4"	13 1/4"	15 1/2"	17 7/8"	18 3/4"	19 5/8"	23 7/8"	24 1/4"	24 5/8"	26"	28 1/2"	31 1/2"	32 1/2"	37 5/8"
		mm	60	95	105	117	133	152	203	244	286	337	394	454	476	498	606	616	625	660	724	800	826	956
W	inch	12"	17 3/4"	17 3/4"	17 3/4"	23 5/8"	23 5/8"	23 5/8"	20"	20"	20"	27 1/2"	27 1/2"	27 1/2"	27 1/2"	27 1/2"	27 1/2"	27 1/2"	27 1/2"	27 1/2"	27 1/2"	31 1/2"	31 1/2"	
	mm	305	451	451	451	600	600	600	508	503	508	698	698	698	698	698	698	698	698	698	698	800	800	
Net weight	RF	inch	40	49	62	88	115	203	293	386	595	893	1290	1775	2359	2800	4079	5401	7011	8311	10218	11839	15344	19731
		mm	18	22	28	40	52	92	133	175	270	405	585	805	1070	1270	1850	2450	3180	3770	4635	5370	6960	8950
Net weight	BW	inch	40	49	62	88	115	203	293	386	595	893	1290	1775	2359	2800	4079	5401	7011	8311	10218	11839	15344	19731
		mm	18	22	28	40	52	92	133	175	270	405	585	805	1070	1270	1850	2450	3180	3770	4635	5370	6960	8950

Main Outline Dimensions & Weight Class 300

Overall dimensions	NPS	inch	1"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	22"	24"	26"	28"	30"	32"	36"
	DN	mm	25	40	50	65	80	100	125	150	200	250	300	350	400	450	500	550	600	650	700	750	800	900
	A1	inch	6 1/2"	7 1/2"	8 1/2"	9 1/2"	11 1/8"	12"	15"	15 7/8"	19 3/4"	22 3/8"	25 1/2"	30"	33"	36"	39"	43"	45"	49"	53"	55"	60"	68"
	A2	mm	165	191	216	241	283	305	381	403	502	568	6478	762	838	914	991	1092	1143	1245	1346	1397	1524	1727
	A3	inch	6 7/8"	7 7/8"	9 1/8"	10 1/8"	11 3/4"	12 5/8"	15 5/8"	16 1/2"	20 3/8"	23"	26 1/8"	30 5/8"	33 5/8"	36 5/8"	39 3/4"	43 7/8"	45 7/8"	50"	54"	56"	61 1/8"	69 1/8"
		mm	175	200	232	257	298	321	397	419	518	584	664	778	854	930	1010	1114	1165	1270	1372	1422	1553	1756
	H1	inch	3 1/2"	5 1/2"	6 1/8"	6 7/8"	7 5/8"	9"	9 7/8"	10 5/8"	12 1/4"	14 1/4"	16 1/2"	18 7/8"	19 3/4"	20 5/8"	24 7/8"	25 1/4"	25 5/8"	27"	29 1/2"	32 1/2"	33 1/2"	38 5/8"
		mm	89	140	156	175	194	229	251	270	311	362	419	479	502	524	632	641	654	686	749	826	851	981
	H2	inch	2 3/4"	3 3/4"	4 1/8"	4 5/8"	5 1/8"	6 1/2"	8"	9 5/8"	11 1/4"	13 1/4"	15 1/2"	17 7/8"	18 3/4"	19 5/8"	23 7/8"	24 1/4"	24 5/8"	26"	28 1/2"	31 1/2"	32 1/2"	37 5/8"
		mm	70	95	105	117	130	165	203	244	286	337	394	454	476	498	606	616	625	660	724	800	826	956
W	inch	12"	17 3/4"	17 3/4"	17 3/4"	23 5/8"	23 5/8"	23 5/8"	20"	27 1/2"	27 1/2"	27 1/2"	27 1/2"	27 1/2"	27 1/2"	27 1/2"	27 1/2"	27 1/2"	27 1/2"	27 1/2"	31 1/2"	31 1/2"	31 1/2"	31 1/2"
	mm	305	451	451	451	600	1000	1000	508	698	698	698	693	698	698	698	698	698	698	698	800	800	800	800
Net weight	RF	inch	40	53	62	93	123	216	335	452	683	1168	1720	2403	3263	3715	5049	6349	7959	10604	13051	14850	17813	22666
		mm	18	24	28	42	56	98	152	205	310	530	780	1090	1480	1685	2290	2880	3610	4810	5920	6740	8080	10280
	BW	inch	40	46	53	82	108	190	302	408	615	1078	1578	2222	3011	3393	4647	6014	7379	10489	12923	14716	17626	22410
		mm	18	21	24	37	49	86	137	185	279	488	715	1008	1366	1539	2108	2728	3347	4758	5862	6675	7995	10165

Main Outline Dimensions & Weight Class 600

Overall dimensions	NPS	inch	1"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	22"	24"	26"	28"	30"	32"	36"
	DN	mm	25	40	50	65	80	100	125	150	200	250	300	350	400	450	500	550	600	650	700	750	800	900
	A1	inch	6 1/2"	9 1/2"	11 1/2"	13"	14"	17"	20"	22"	26"	31"	33"	35"	39"	43"	47"	51"	55"	57"	61"	65"	70"	82"
	A2	mm	216	241	292	330	356	432	506	559	660	787	838	889	991	1092	1194	1295	1397	1448	1549	1851	1776	2083
	A3	inch	8 1/2"	9 1/2"	11 5/8"	13 1/8"	14 1/8"	17 1/8"	20 5/8"	22 1/8"	26 1/8"	31 1/8"	33 1/8"	35 1/8"	39 1/8"	43 1/8"	47 1/4"	51 3/8"	55 3/8"	57 1/2"	61 1/2"	65 1/2"	70 5/8"	82 5/8"
		mm	216	241	295	373	353	435	524	562	664	791	841	892	994	1095	1200	1305	1407	1461	1562	1664	1794	2099
	H1	inch	6 1/4"	6 1/2"	6 5/8"	7 3/8"	8 1/8"	9 1/2"	11 5/8"	10 5/8"	12 1/4"	14 1/4"	16 1/2"	18 7/8"	19 3/4"	20 5/8"	24 7/8"	25 1/4"	25 3/8"	27"	29 1/2"	32 1/2"	34 1/2"	38 5/8"
		mm	159	159	163	187	206	241	296	270	311	362	419	470	502	524	632	641	651	686	749	826	876	981
	H2	inch	4 1/4"	4 1/4"	4 5/8"	5 1/8"	5 5/8"	7"	8 1/4"	9 5/8"	11 1/4"	13 1/4"	15 1/2"	17 7/8"	18 3/4"	19 5/8"	25 7/8"	24 1/2"	24 5/8"	26"	28 1/2"	31 1/2"	33 1/2"	37 5/8"
		mm	108	108	117	130	143	178	210	244	280	337	394	454	476	498	606	622	625	669	724	800	851	958
W	inch	12"	17 3/4"	23 5/8"	23 5/8"	39 3/8"	39 3/8"	39 3/8"																
	mm	305	451	600	600	1000	1000	1000																
Net weight	RF	inch	49	57	75	110	146	265	437	606	1124	1764	2447	2491	3483	4806	6129	8664	10758	12853	15300	18871	21914	29828
		mm	22	26	34	50	66	120	198	275	510	800	1110	1130	1580	2180	2780	3930	4880	5830	6940	8560	9940	13530
		inch	44	51	64	93	123	223	370	527	1005	1574	2222	2240	3093	4322	5540	7736	9930	12412	17837	18276	21186	28924
	BW	mm	20	23	29	42	56	101	168	239	456	714	1008	1016	1403	1965	2513	3509	4504	5630	6730	8290	9610	13120



Main Outline Dimensions & Weight Class 900

Overall dimensions	NPS	inch	1"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"
	DN	mm	25	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600
	A1	inch	10"	12"	14 1/2"	16 1/2"	15"	18"	22"	24"	29"	33"	38"	40 1/2"	44 1/2"	48"	52"	61"
	A2	mm	254	305	368	419	381	457	559	610	737	838	965	1029	1130	1219	1321	1549
	A3	inch	10"	12"	14 5/8"	16 5/8"	15 1/8"	18 1/8"	22 1/8"	24 1/8"	29 1/8"	33 1/8"	38 1/8"	40 7/8"	44 7/8"	48 1/2"	52 1/2"	61 3/4"
		mm	254	305	371	422	384	460	582	613	740	841	968	1038	1140	1232	1334	1568
	H1	inch	6 1/4"	6 1/4"	6 5/8"	7 3/8"	8 1/8"	8 3/8"	9 5/8"	10 7/8"	12 1/4"	14 1/2"	16 3/4"	19 3/8"	20 1/4"	21"	25 5/8"	26 3/8"
		mm	159	159	168	187	206	213	244	276	311	368	425	492	514	533	654	670
	H2	inch	4 1/4"	4 1/4"	4 5/8"	5 1/8"	5 5/8"	7"	8 1/2"	9 7/8"	11 1/4"	13 1/2"	15 3/4"	18 3/8"	19 1/4"	20"	24 5/8"	25 3/8"
		mm	108	108	117	130	143	173	246	251	286	343	400	467	489	508	625	644
	w	mm	305	451	600	600	1000	1000	1000	Gear 304p3e9rated 4938 6614 9612 15498								
		inch	57	88	115	146	176	375	617									
Net weight	RF	mm	26	40	52	66	80	170	280	390	640	1070	1510	1560	2240	3000	4360	7030
		inch	49	75	90	110	146	324	531	750	1237	2099	3225	3040	4444	5935	6783	13999
	Bw	mm	22	34	41	50	66	147	241	340	561	952	1463	1379	2016	2692	3984	6350

Main Outline Dimensions & Weight Class 1500

Overall dimensions	NPS	inch	1"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"
	DN	mm	25	40	50	65	80	100	150	150	200	250	300	350	400
	A1	inch	10"	12"	14 1/2"	16 1/2"	18 1/2"	21 1/2"	27 3/4"	27 3/4"	32 3/4"	39"	44 1/2"	49 1/2"	54 1/2"
	A2	mm	254	305	368	419	470	546	705	705	832	991	1130	1257	1384
	A3	inch	10"	12"	14 5/8"	16 5/8"	18 5/8"	21 5/8"	28"	28"	33 1/8"	39 3/8"	45 1/8"	50 1/8"	55 3/8"
		mm	254	305	371	422	473	549	711	711	841	1000	1146	1276	1407
	H1	inch	6 1/4"	6 1/4"	6 5/8"	7 3/8"	8 1/8"	8 3/8"	11 1/2"	11 1/2"	13"	15 3/8"	17 3/4"	20 3/5"	21 1/2"
		mm	159	159	168	187	206	213	292	292	330	390	451	517	546
	H2	inch	4 1/4"	4 1/4"	4 5/8"	5 1/8"	5 5/8"	7"	10 1/2"	10 1/2"	12"	14 3/8"	16 3/4"	19 3/8"	20 1/2"
		mm	108	108	117	130	143	176	267	267	305	365	425	492	521
	w	mm	451	451	600	600	1000	1000	Gear 304p3e9rated 5192 6658 3992						
		inch	57	88	121	176	231	452							
Net weight	RF	mm	26	40	55	80	105	205	525	880	880	1560	2355	3020	4200
		inch	49	75	97	141	185	379	992	1664	1664	2985	4502	5719	8142
	Bw	mm	22	34	44	64	84	172	450	755	755	1354	2042	2594	3693

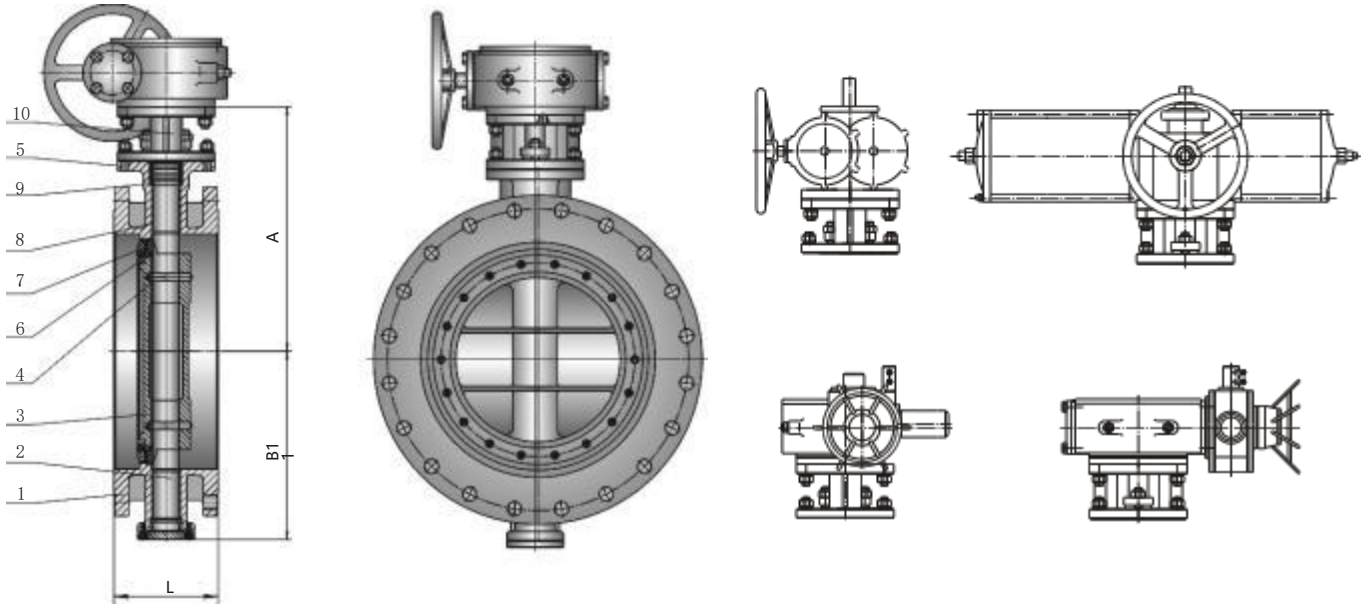


Applicable Standards

- ★ Butterfly Valves, API 609
- ★ Butterfly Valves, MSS SP-67
- ★ Fire Durable, API 607
- ★ Steel Valve, ASME B 16.34
- ★ Face to Face, API 609
- ★ End Flange, ASME B 16.5
- ★ End Flange, ASME B 16.47
- ★ Insect ion And Test, API 598

Desing Description

- ▲ Seal Structure, Soft Seal ing, Mult iplayer-hard Seal, Elast ic R ing Hard Seal, Soft Seal F ireproof
- ▲ Stopper Dr iver
- ▲ ISO 52 1 1 Mount ing PAD
- ▲ Connect ion, Flanged Butt-welded, wafer, wafer Lug- wafer
- ▲ Operat ion Type, Manual, worm Gear, Electr ic, Pneumat ic, Hydraul ic
- ▲ Eccentr ic Structure, Centered, S ingle Eccentr ic, Double Eccentr ic, And Tr iple Eccentr ic.



Standard Material Specifiactions

NO.	Part Name	ASTM Mater ial					
		Carbon steel	304 Type	3 16 Type	304L Type	3 16L Type	Alloy 20
1	Body	A216-wCB	A315-CF8	A315-CF8M	A315-CF3	A315-CF3M	A315-CN7M
2	Stem	A182 F6a	A182 F304	A182 F316	A182 F304L	A182 F316L	Alloy 20
3	Disc	A216-wCB	A315-CF8	A315-CF8M	A315-CF3	A315-CF3M	A315-CN7M
4	Hinge pin	A276-410	A276-304	A276-316	A276-304L	A276-316	Alloy 20
5	Bolt	A193-B7	A193-B8	A193-B8M	A193-B8	A193-B8M	Alloy 20
6	Retaining ring	A105	A182-F304	A182-F316	A182-F304L	A182-F316	Alloy 20
7	Seat ring	Graphite+304	Graphite+304	Graphite+316	Graphite+304L	Graphite+316L	Graphite+ Alloy 20
8	Bushing	Bronze	304+PTFE	316+PTFE	304L+PTFE	316L+PTFE	Alloy 20+PTFE
9	Packing	Graphite	PTFE	PTFE	PTFE	PTFE	PTFE
10	Yoke	A216-wCB	A216-wCB	A216-wCB	A216-wCB	A216-wCB	A216-wCB

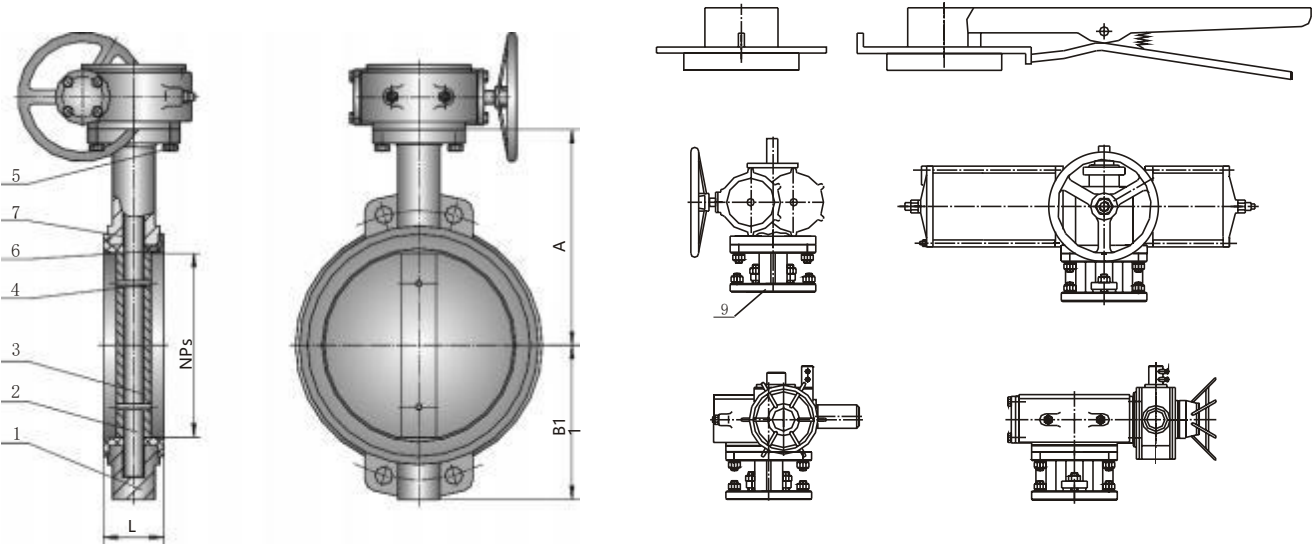


Applicable Standards

- ★ Butterfly Valves, API 609
- ★ Butterfly Valves, MSS SP-67
- ★ Fire Durable, API 607
- ★ Steel Valve, ASME B 16.34
- ★ Face to Face, API 609
- ★ Insect ion And Test, API 598

Desing Description

- ▲ Seal Structure, Soft Seal ing,
- ▲ Stopper Dr iver
- ▲ ISO 52 1 1 Mount ing PAD
- ▲ Connect ion, wafer, wafer Lug-wafer
- ▲ Operat ion Type, Manual, worm Gear, Electr ic, Pneumat ic, Hydraul ic
- ▲ Eccentr ic Structure, Centered



Standard Material Specifiactions

NO.	Part Name	Material				
		Carbon steel	A126	304	304L Type	3 16L Type
1	Body	A216-wCB	A315-CF8	A315-CF8M	A315-CF3	A315-CF3M
2	Stem	A182 F6a	A182-F304	A182-F316	A182-F304L	A182-F316L
3	Disc	A216-wCB	A315-CF8	A315-CF8M	A315-CF3	A315-CF3M
4	Hinge pin	A276-410	A276-304	A276-316	A276-304L	A276-316
5	Bolt	A193-B7	A193-B8	A193-B8M	A193-B8	A193-B8M
6	Seat ring	NBR/ EPDM	NBR/ EPDM	PTFE	PTFE	PTFE
7	Bushing	Bronze	304+PTFE	316+PTFE	304L+PTFE	316L+PTFE
8	Packing	Graphite	PTFE	PTFE	PTFE	PTFE
9	Yoke	A216-wCB	A216-wCB	A216-wCB	A216-wCB	A216-wCB

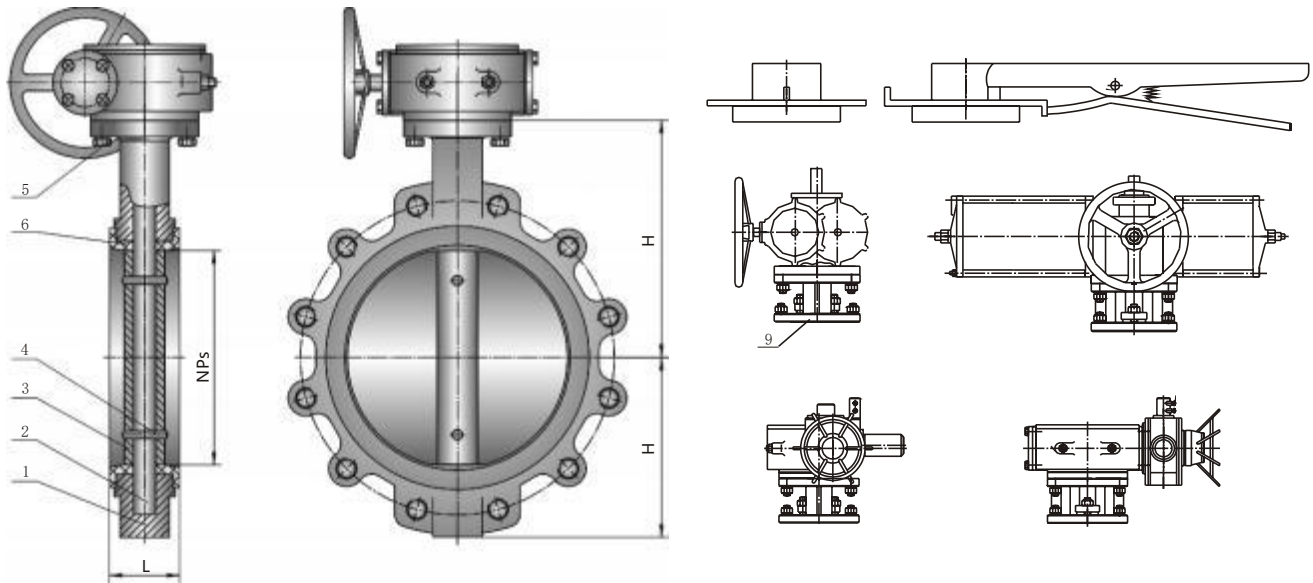


Applicable Standards

- ★ Butterfly Valves, API 609
- ★ Butterfly Valves, MSS SP-67
- ★ Fire Durable, API 607
- ★ Steel Valve, ASME B 16.34
- ★ Face to Face, API 609
- ★ End Flange, ASME B 16.5
- ★ End Flange, ASME B 16.47
- ★ Insect ion And Test, API 598

Desing Description

- ▲ Seal Structure, Soft Seal ing, Mult iplayer-hard Seal, Elast ic R ing Hard Seal, Soft Seal F ireproof
- ▲ Stopper Dr iver
- ▲ ISO 52 1 1 Mount ing PAD
- ▲ Connect ion, Flanged Butt-welded, wafer, wafer Lug- wafer
- ▲ Operat ion Type, Manual, worm Gear, Electr ic, Pneumat ic, Hydraul ic
- ▲ Eccentr ic Structure, Centered, S ingle Eccentr ic, Double Eccentr ic, And Tr iple Eccentr ic.



Standard Material Specifiactions

NO.	Part Name	ASTM Mater ial					
		Carbon steel	304 Type	3 16 Type	304L Type	3 16L Type	Alloy 20
1	Body	A216-wCB	A315-CF8	A315-CF8M	A315-CF3	A315-CF3M	A315-CN7M
2	Stem	A182 F6a	A182-F304	A182-F316	A182-F304L	A182-F316L	Alloy 20
3	Disc	A216-wCB	A315-CF8	A315-CF8M	A315-CF3	A315-CF3M	A315-CN7M
4	Hinge pin	A276-410	A276-304	A276-316	A276-304L	A276-316	Alloy 20
5	Bolt	A193-B7	A193-B8	A193-B8M	A193-B8	A193-B8M	Alloy 20
6	Seat ring	EPDM	PTFE	PTFE	PTFE	PTFE	PTFE
7	Bushing	Bronze	304+PTFE	316+PTFE	304L+PTFE	316L+PTFE	Alloy 20+PTFE
8	Packing	Graphite	PTFE	PTFE	PTFE	PTFE	PTFE
9	Yoke	A216-wCB	A216-wCB	A216-wCB	A216-wCB	A216-wCB	A216-wCB

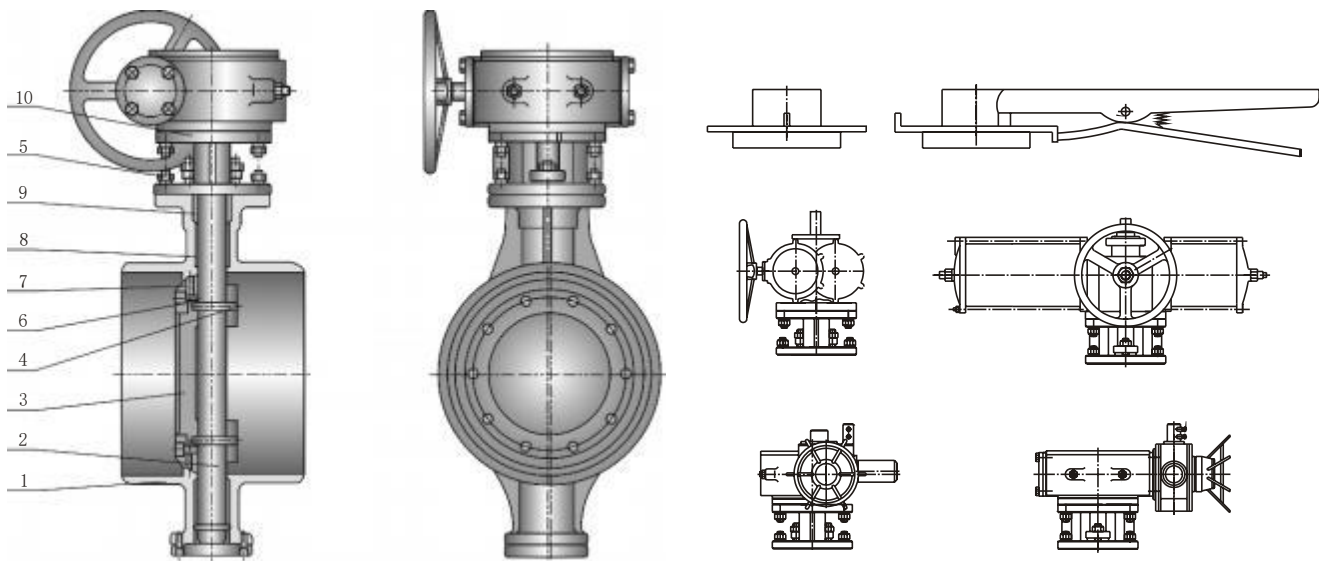


Applicable Standards

- ★ Butterfly Valves, API 609
- ★ Fire Durable, API 607
- ★ Steel Valve, ASME B 16.34
- ★ Face to Face, API 609
- ★ Insect ion And Test, API 598

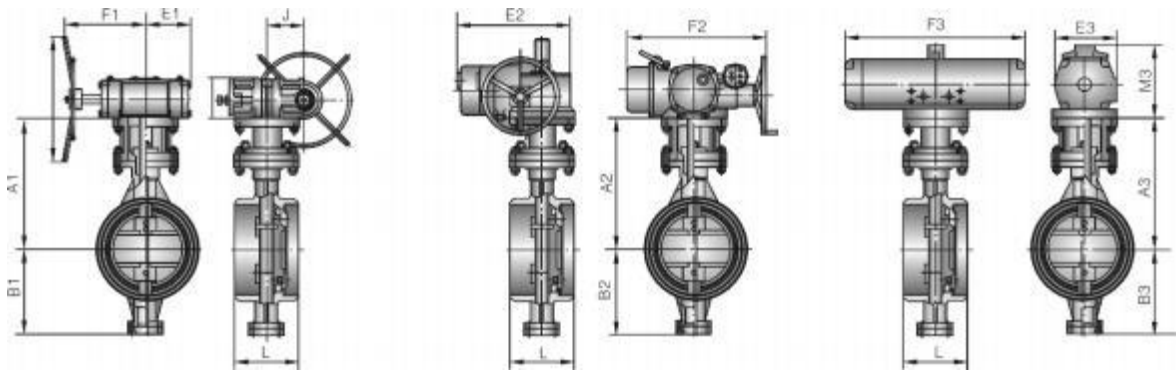
Desing Description

- ▲ Seal Structure, Soft Seal ing, Mult iplayer-hard Seal, Elast ic R ing Hard Seal, Soft Seal F ireproof
- ▲ Stopper Dr iver
- ▲ ISO 52 1 1 Mount ing PAD
- ▲ Connect ion, Flanged Butt-welded,
- ▲ Operat ion Type, Manual, worm Gear, Electr ic, Pneumat ic, Hydraul ic
- ▲ Eccentr ic Structure, Centered, S ingle Eccentr ic, Double Eccentr ic, And Tr iple Eccentr ic.



Standard Material Specifiactions

NO.	Part Name	ASTM Mater ial					
		Carbon steel	304 Type	3 16 Type	304L Type	3 16L Type	Alloy 20
1	Body	A216-wCB	A315-CF8	A315-CF8M	A315-CF3	A315-CF3M	A315-CN7M
2	Stem	A182 F6a	A182-F304	A182-F316	A182-F304L	A182-F316L	Alloy 20
3	Disc	A216-wCB	A315-CF8	A315-CF8M	A315-CF3	A315-CF3M	A315-CN7M
4	Hinge pin	A276-410	A276-304	A276-316	A276-304L	A276-316	Alloy 20
5	Bolt	A193-B7	A193-B8	A193-B8M	A193-B8	A193-B8M	Alloy 20
6	Retaining ring	A105	A182-F304	A182-F316	A182-F304L	A182-F316	Alloy 20
7	Seat ring	Graphite+304	Graphite+304	Graphite+316	Graphite+304L	Graphite+316L	Graphite+ Alloy 20
8	Bushing	Bronze	304+PTFE	316+PTFE	304L+PTFE	316L+PTFE	Alloy 20+PTFE
9	Packing	Graphite	PTFE	PTFE	PTFE	PTFE	PTFE
10	Yoke	A216-wCB	A216-wCB	A216-wCB	A216-wCB	A216-wCB	A216-wCB



worm Gear Driven Butt-welded Butterfly Valve

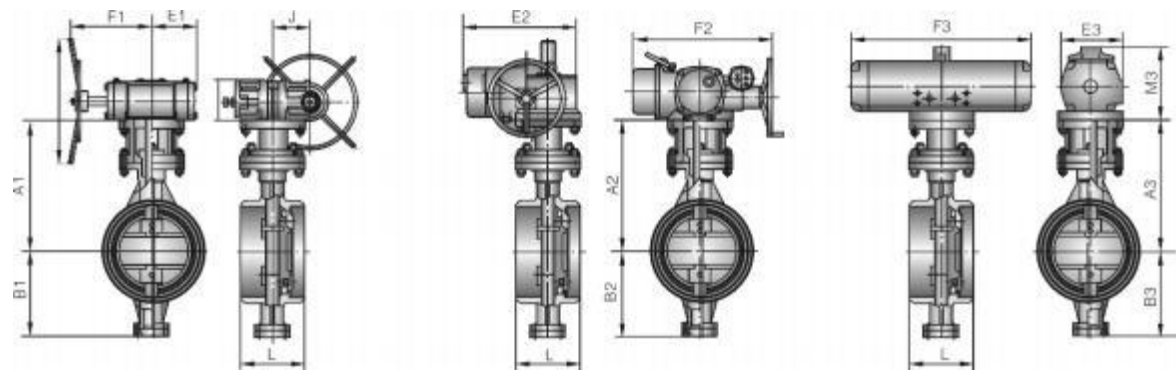
Electric Butt-welded Butterfly Valve

Pneumatic Butt-welded Butterfly Valve

Main Outline Dimensions & Weight Class 150

NPs	L	worm gear actuation							Electric				Pneumatic					weight(kg)		
		A1	B1	M1	E1	F1	J	D01	A2	B2	E2	F2	A3	B3	E3	F3	M3	worm gear	Electric	Pneu-matic
3"	114	295	135	115	84	198	84	200	295	135	513	467	295	135	115	344	140	32	37	-
4"	127	305	155	115	84	198	84	200	305	155	513	467	305	155	115	344	140	35	39	-
5"	140	322	167	115	84	198	84	200	322	167	513	467	322	167	126	4390	175	39	42	-
6"	140	366	170	115	94	211	84	250	366	170	525	475	366	170	150	450	187	43	43	-
8"	152	396	198	134	117	267	145	250	396	198	580	470	396	198	280	762	270	60	57	-
10"	165	429	231	134	175	254	114	315	429	231	635	560	429	231	330	900	305	90	80	-
12"	178	483	269	159	175	254	114	315	483	269	705	560	483	269	405	1182	385	107	104	-
14"	190	498	297	159	239	404	145	315	498	297	765	615	498	297	405	1182	385	153	141	-
16"	216	579	333	163	239	404	145	315	579	333	825	615	579	333	405	1182	385	207	197	-
18"	222	630	366	163	239	404	191	315	630	366	875	820	630	366	445	1292	410	267	247	-
20"	229	655	394	163	300	465	191	400	655	394	930	820	655	394	445	1292	410	327	307	-
24"	267	744	452	185	300	465	191	400	744	452	1040	820	744	452	500	1442	465	473	427	-
28"	292	790	511	185	300	465	191	400	790	511	1155	945	790	511	630	1865	500	653	667	-
30"	308	815	536	220	300	559	269	400	815	536	1225	945	815	536	630	1865	500	760	773	-
32"	318	874	577	220	300	559	269	400	874	577	1275	945	874	577	630	1865	500	1033	1047	-
36"	330	899	602	255	300	559	269	400	899	602	1375	1145	899	602	-	-	-	1200	1213	-
40"	410	1064	696	255	300	559	269	400	1064	696	1490	1145	1064	696	-	-	-	1487	1500	-
42"	430	1092	721	255	300	559	335	400	1092	721	1550	1335	1092	721	-	-	-	1640	1637	-
44"	450	1148	731	255	300	572	335	400	1148	731	1600	1335	1148	731	-	-	-	1800	1813	-
48"	470	1270	800	320	300	572	335	400	1270	800	1715	1370	1270	800	-	-	-	2007	2020	-
52"	490	1314	850	320	425	635	365	500	1314	850	1835	1370	1314	850	-	-	-	2720	2733	-
56"	530	1384	895	320	425	635	365	500	1384	895	2005	1425	1384	895	-	-	-	2980	2993	-
60"	570	1504	1025	355	425	635	365	500	1504	1025	2115	1425	1504	1025	-	-	-	3387	3420	-
64"	600	2730	1630	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
66"	600	2830	1670	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
73"	670	3000	1765	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
80"	760	3280	1885	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
84"	760	3395	1945	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
96"	760	3740	2140	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
112"	760	4290	2390	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
120"	760	4515	2505	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
140"	800	4810	2650	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
160"	900	5145	2800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: 1. The structural length of valve to 1sO5752 14 series.
2. welding Ends acc. to ASTM B16.25 specifications.



worm Gear Driven Butt-welded Butterfly Valve

Electric Butt-welded Butterfly Valve

Pneumatic Butt-welded Butterfly Valve

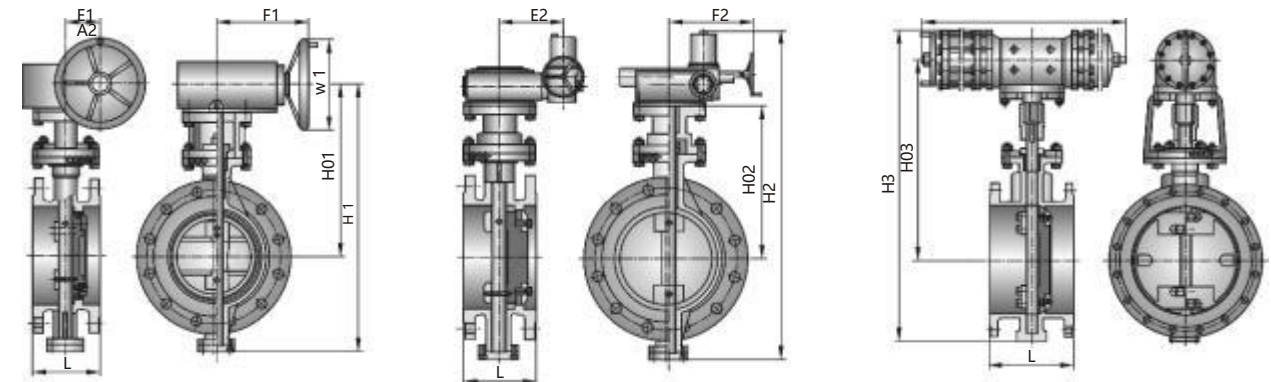
Main Outline Dimensions & Weight Class 300

NPs	L	worm gear actuation							Electric				Pneumatic					weight(kg)		
		A1	B1	M1	E1	F1	J	D01	A2	B2	E2	F2	A3	B3	E3	F3	M3	worm gear	Electric	Pneu-matic
3"	114	295	132	114	84	198	84	200	295	132	467	513	295	132	126	390	175	34	-	-
4"	127	358	150	114	84	198	84	200	358	150	467	513	358	150	150	450	187	44	-	-
5"	140	365	167	168	117	267	145	250	365	167	467	513	365	167	280	762	270	58	-	-
6"	140	389	188	163	175	254	114	315	389	188	564	523	389	188	330	900	305	73	-	-
8"	152	417	221	163	175	254	114	315	417	221	615	544	417	221	405	1182	385	132	-	-
10"	165	465	252	185	239	404	145	315	465	252	615	544	465	252	405	1182	385	151	-	-
12"	178	546	290	185	239	404	145	315	546	290	823	513	546	290	405	1182	385	257	-	-
14"	190	579	318	221	300	465	191	400	579	318	823	513	579	318	445	1292	410	286	-	-
16"	216	642	368	221	300	465	191	400	642	368	945	513	642	368	445	1292	410	416	-	-
18"	222	673	396	221	300	465	191	400	673	396	945	544	673	396	500	1442	465	497	-	-
20"	229	701	422	254	300	559	269	400	701	422	945	544	701	422	500	1442	465	571	-	-
24"	267	775	495	254	399	559	269	400	775	495	945	544	775	495	630	1865	500	881	-	-
28"	292	904	559	305	510	648	351	400	904	559	1158	826	904	559	630	1865	500	1320	-	-
30"	308	963	594	305	510	648	351	400	963	594	1158	826	963	594	-	-	-	1478	-	-
32"	318	1054	617	305	510	648	351	400	1054	617	1158	826	1054	617	-	-	-	1699	-	-
36"	330	1161	676	368	615	805	429	630	1161	676	1420	1039	1161	676	-	-	-	2379	-	-
40"	410	1242	719	368	615	805	429	630	1242	719	1420	1039	1242	719	-	-	-	2427	-	-
42"	430	1285	739	368	615	805	429	630	1285	739	1420	1039	1285	739	-	-	-	2685	-	-
44"	450	1310	764	368	615	805	429	630	1310	764	1420	1039	1310	764	-	-	-	2932	-	-
48"	470	1374	833	434	765	965	399	630	1374	833	1730	1069	1374	833	-	-	-	3545	-	-

Main Outline Dimensions & Weight Class 600

3"	180	343	127	135	94	211	81	250	343	127	564	523	343	127	330	900	305	75	-	-
4"	190	371	160	170	152	267	145	250	371	160	615	544	371	160	405	1182	385	117	-	-
5"	200	388	178	163	175	254	114	315	388	178	615	544	388	178	405	1182	385	154	-	-
6"	210	401	196	163	175	254	114	315	401	196	823	513	401	196	405	1182	385	186	-	-
8"	230	447	221	163	175	254	114	315	447	221	823	513	447	221	445	1292	410	235	-	-
10"	250	544	290	185	239	404	145	315	544	290	945	513	544	290	445	1292	410	398	-	-
12"	270	610	307	220	300	465	191	400	610	307	945	544	610	307	500	1442	465	554	-	-
14"	290	640	330	220	300	465	191	400	640	330	945	544	640	330	500	1442	465	654	-	-
16"	310	701	391	254	400	559	269	400	701	391	945	544	701	391	630	1865	500	935	-	-
18"	330	716	406	254	400	559	269	400	716	406	945	544	716	406	630	1865	500	1085	-	-
20"	350	828	452	305	510	645	351	400	828	452	1158	826	828	452	630	1865	500	1610	-	-
24"	390	920	513	305	510	645	351	400	920	513	1158	826	920	513	-	-	-	1998	-	-

Note: 1. The structural length of valve to 1sO5752 14 series.
2. welding Ends acc. to ASTM B16.25 specifications.



worm Gear Driven Flanged Butterfly Valve

Electric Flanged Butterfly Valve

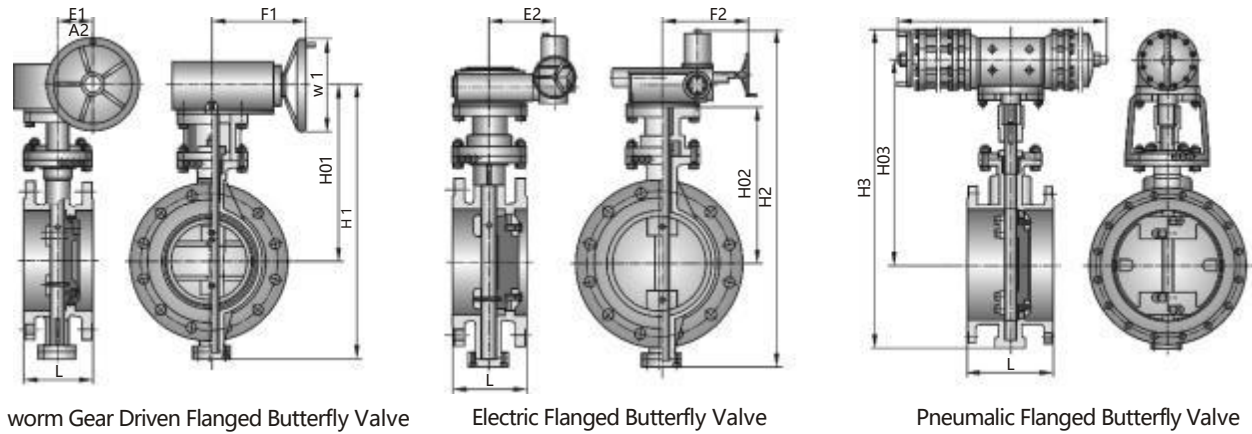
Pneumatic Flanged Butterfly Valve

Main Outline Dimensions & Weight Class 150

NPs	L	worm gear actuation					Electric				Pneumatic			weight (kg)
		H1	H01	E1	F1	W1	H2	H02	E2	F2	H3	H03	A3	
3"	114	472	350	50	203	203	513	263	180	178	-	-	-	15.4
4"	127	520	386	60	191	203	535	282	180	178	-	-	-	23
5"	140	580	395	60	215	250	563	293	180	178	-	-	-	29
6"	140	653	475	67	289	305	602	322	180	178	-	-	-	33
8"	152	773	565	67	308	460	745	296	370	235	690	323	275	50
10"	165	880	640	86	346	460	805	325	370	235	750	355	275	73
12"	178	989	711	111	403	610	883	365	370	235	955	475	378	108
14"	190	1044	760	60	601	356	965	408	370	235	1032	513	378	143
16"	216	1142	826	60	605	457	1033	443	370	235	1182	598	530	186
18"	222	1228	887	60	652	610	1120	485	370	235	1265	635	530	234
20"	229	1337	959	60	805	762	1186	518	370	235	1335	667	530	277
24"	267	1554	1109	103	763	762	1380	625	370	235	1642	830	680	408
28"	292	1456	956	245	400	315	1587	745	515	245	1711	859	680	653
30"	318	1541	991	310	460	400	1650	777	515	245	1782	910	680	816
32"	318	1611	1036	310	460	400	1717	810	515	245	1856	942	680	914
36"	330	1743	1103	410	480	400	1870	875	540	360	1920	975	680	1157
40"	410	1868	1173	410	480	400	2030	965	540	360	-	-	-	1610
44"	410	1968	1223	410	480	400	2078	1022	540	360	-	-	-	2160
48"	470	2145	1320	520	640	400	2188	1100	540	360	-	-	-	2359
52"	470	2300	1405	520	640	400	2214	1150	565	385	-	-	-	2720
56"	530	2440	1475	520	640	400	2328	1325	565	385	-	-	-	3353
60"	530	2594	1559	450	785	630	2530	1515	565	385	-	-	-	3629
64"	600	2730	1630	-	-	-	-	-	-	-	-	-	-	-
66"	600	2830	1670	-	-	-	-	-	-	-	-	-	-	-
73"	670	3000	1765	-	-	-	-	-	-	-	-	-	-	-
80"	760	3280	1885	-	-	-	-	-	-	-	-	-	-	-
84"	760	3395	1945	-	-	-	-	-	-	-	-	-	-	-
96"	760	3740	2140	-	-	-	-	-	-	-	-	-	-	-
112"	760	4290	2390	-	-	-	-	-	-	-	-	-	-	-
120"	760	4515	2505	-	-	-	-	-	-	-	-	-	-	-
140"	800	4810	2650	-	-	-	-	-	-	-	-	-	-	-
160"	900	5145	2800	-	-	-	-	-	-	-	-	-	-	-

Note: structural length of valves in the table: 300Lb+ to 1sO5752 13 series; 600Lb+ to 1sO5752 14 series.





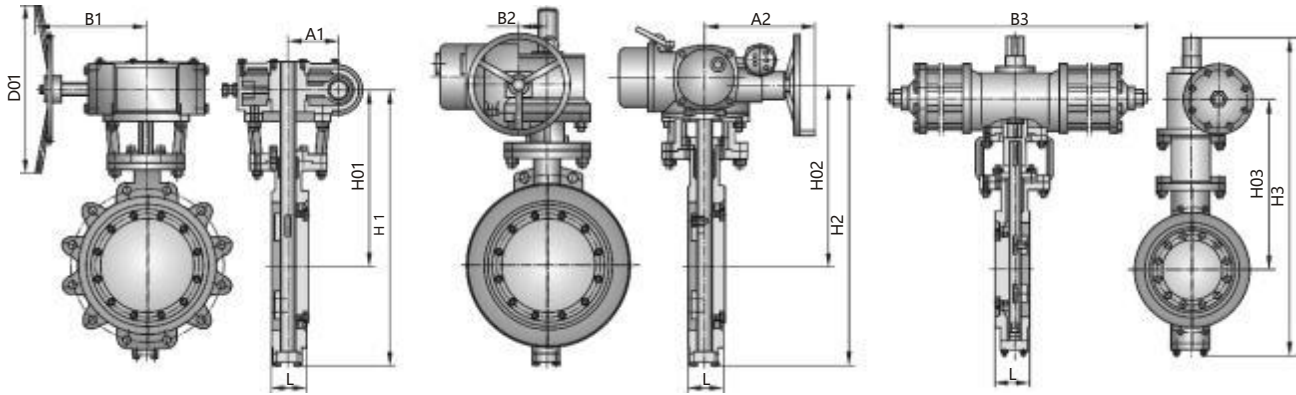
Main Outline Dimensions & Weight Class 300

NPs	L	worm gear actuation					Electric				Pneumatic			weight(kg)		
		H1	H01	E1	F1	w1	H2	H02	E2	F2	H3	H03	A3	worm gear	Electric	Pneumatic
2"	108	365	237	35	169	152	407	237	180	178	-	-	-	19	27	-
3"	114	378	253	73	229	152	530	253	180	178	-	-	-	29	43	-
4"	127	421	274	73	229	305	552	274	180	178	-	-	-	39	51	-
5"	140	482	312	73	229	305	580	312	180	178	-	-	-	48	58	-
6"	140	543	351	108	254	305	610	351	180	178	-	-	-	54	67	-
8"	152	628	392	108	254	305	755	392	370	235	750	368	275	84	107	-
10"	165	855	480	133	305	610	816	480	370	235	909	442	378	118	150	-
12"	178	812	515	133	305	610	912	515	370	235	1075	535	530	170	225	-
14"	191	885	555	194	356	610	980	555	370	235	1158	572	530	231	266	-
16"	216	951	590	194	356	356	1057	590	370	235	1230	610	530	299	369	-
18"	225	1106	636	194	356	356	1140	636	370	235	1462	736	680	390	429	-
20"	229	1308	685	194	356	356	1243	685	515	245	1328	765	680	499	590	-
24"	267	1445	934	165	686	686	1420	934	817	351	-	-	-	726	766	-
28"	292	1495	1039	165	686	686	1812	1039	817	351	-	-	-	1360	-	-
30"	292	1535	1060	165	686	686	1906	1060	817	351	-	-	-	1429	-	-
32"	318	1575	1120	165	686	686	2021	1120	817	351	-	-	-	1757	-	-
36"	330	1605	1190	165	686	686	2327	1190	973	440	-	-	-	2223	-	-
40"	410	1755	1234	165	686	686	2451	1234	973	440	-	-	-	2531	-	-
42"	430	2100	1385	429	805	903	2515	1385	973	440	-	-	-	2781	-	-
44"	450	2175	1436	429	805	903	2565	1436	973	440	-	-	-	2979	-	-
48"	470	2303	1570	399	965	903	2697	1570	973	440	-	-	-	3602	-	-

Main Outline Dimensions & Weight Class 600

3"	180	541	414	63	140	250	606	295	180	178	-	-	-	82	79	-
4"	190	607	447	63	140	250	650	358	180	178	-	-	-	125	96	-
5"	200	680	395	108	200	250	695	371	180	178	-	-	-	165	154	-
6"	210	686	490	152	240	315	743	387	180	178	-	-	-	191	172	-
8"	230	757	536	168	300	315	1055	417	370	235	-	-	-	247	248	-
10"	250	867	641	192	320	315	1172	465	370	235	-	-	-	413	308	-
12"	270	1034	727	237	368	400	1392	546	515	245	-	-	-	576	467	-
14"	290	1087	757	237	368	400	1475	579	515	245	-	-	-	664	585	-
16"	310	1216	825	237	368	400	1557	643	540	360	-	-	-	971	807	-
18"	330	1240	840	269	559	400	1625	673	540	360	-	-	-	1117	1003	-
20"	350	1330	978	350	645	400	1679	701	540	360	-	-	-	1639	1139	-
24"	390	1583	1070	350	645	400	1834	775	540	360	-	-	-	2082	1767	-

Note: structural length of valves in the table: 300Lb+ to 1s05752 13 series; 600Lb+ to 1s05752 14 series.

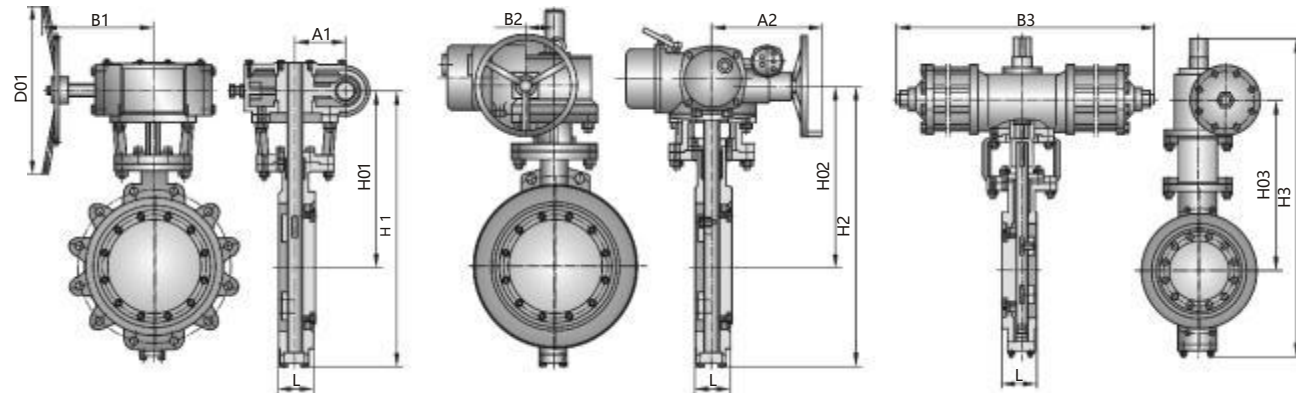


worm Gear Driven Lug wafer Butterfly Valve Electric wafer Butterfly Valve Pneumatic wafer Butterfly Valve

Main Outline Dimensions & Weight Class 150

NPS	L		Pneumatic			worm gear actuation					Electric				weight (kg)	
			H3	H03	B3	H1	H01	B1	A1	D01	H2	H02	B2	A2	wE	wL
3"	49	46	-	-	-	320	185	140	63	160	513	263	178	180	9	9
4"	54	52	-	-	-	342	195	140	63	160	535	282	178	180	11	14
5"	57	56	-	-	-	365	209	140	63	300	563	293	178	180	15	18
6"	58	56	-	-	-	415	243	140	63	300	602	322	178	180	17	20
8"	64	60	690	323	275	510	263	150	84	400	745	296	235	370	25	31
10"	71	68	750	355	275	567	295	150	84	400	805	325	235	370	40	49
12"	81	78	955	475	378	665	342	200	108	600	883	365	235	370	61	79
14"	92	78	1032	513	378	739	385	200	108	600	965	408	235	370	82	107
16"	102	102	1182	598	530	825	430	240	152	600	1033	443	235	370	123	150
18"	114	114	1265	635	530	910	469	240	152	800	1120	485	235	370	150	182
20"	127	127	1335	667	530	990	500	300	168	800	1186	518	235	370	204	253
24"	154	154	1642	830	680	1210	618	320	192	800	1380	625	235	370	300	398
30"	167	165	1823	1245	680	1453	875	512	279	400	1583	1005	245	515	454	490
36"	184	200	2145	1329	860	1775	939	512	279	400	1905	1089	245	515	762	771
40"	217	217	2235	1488	860	1857	1005	512	279	400	2010	1110	360	540	975	1179
42"	222	251	2360	1456	860	1980	1086	512	279	400	2120	1216	360	540	1234	1338
46"	254	254	2445	1505	1080	2070	1110	570	368	600	2175	1260	360	540	1451	1724
48"	254	276	2535	1564	1080	2165	1194	570	368	600	2235	1324	360	540	1678	1928
54"	305	305	-	-	-	2382	1477	630	425	800	2412	1503	445	628	2223	2631
60"	333	333	-	-	-	2684	1617	630	425	800	2699	1687	445	628	2903	3447
64"	600	2730	1630	-	-	-	-	-	-	-	-	-	-	-	-	-
66"	600	2830	1670	-	-	-	-	-	-	-	-	-	-	-	-	-
73"	670	3000	1765	-	-	-	-	-	-	-	-	-	-	-	-	-
80"	760	3280	1885	-	-	-	-	-	-	-	-	-	-	-	-	-
84"	760	3305	1945	-	-	-	-	-	-	-	-	-	-	-	-	-
96"	760	3740	2140	-	-	-	-	-	-	-	-	-	-	-	-	-
112"	760	4290	2390	-	-	-	-	-	-	-	-	-	-	-	-	-
120"	760	4515	2505	-	-	-	-	-	-	-	-	-	-	-	-	-
140"	800	4810	2650	-	-	-	-	-	-	-	-	-	-	-	-	-
160"	900	5145	2800	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: The weight in the table is that without drive unit. wF is wafer butterfly valve, and wL is lug wafer butterfly valve.



worm Gear Driven Lug wafer Butterfly Valve

Electric wafer Butterfly Valve

Pneumatic wafer Butterfly Valve

Main Outline Dimensions & Weight Class 300

NPs	L	Pneumatic			worm gear actuation					Electric				weight (kg)	
		H ₃	H ₀₃	B ₃	H ₁	H ₀₁	B ₁	A ₁	D ₀₁	H ₂	H ₀₂	B ₂	A ₂	wF	wL
3"	49	-	-	-	320	185	140	63	160	513	263	178	180	13.5	15.5
4"	54	-	-	-	342	195	140	63	160	535	282	178	180	18	21
5"	57	-	-	-	365	209	140	63	300	563	293	178	180	24	28
6"	59	-	-	-	415	243	140	63	300	602	322	178	180	28	34
8"	73	750	368	275	510	263	150	84	400	745	296	235	370	49	60
10"	83	909	442	378	567	295	150	84	400	805	325	235	370	68	88
12"	92	1075	535	530	665	342	200	108	600	883	365	235	370	109	117
14"	117	1158	572	530	739	385	200	108	600	965	408	235	370	186	207
16"	133	1230	610	530	825	430	240	152	600	1033	443	235	370	264	308
18"	149	1462	736	680	910	469	240	152	800	1120	485	235	370	297	408
20"	159	1328	765	680	990	500	300	168	800	1186	518	235	370	363	468
24"	181	-	-	-	1210	618	320	192	800	1380	625	235	370	454	748
30"	254	-	-	-	1937	1180	512	279	600	1516	716	360	540	816	1338
36"	305	-	-	-	2198	1298	570	368	600	1669	794	360	540	1429	2154
42"	324	-	-	-	2318	1358	570	368	600	1914	914	360	540	2155	2427

Main Outline Dimensions & Weight Class 600

6"	78	-	-	-	415	243	140	63	300	602	322	178	180	45	56
8"	102	750	368	275	510	263	150	84	400	745	296	235	370	70	94
10"	117	909	442	378	567	295	150	84	400	805	325	235	370	103	141
12"	140	1075	535	530	665	342	200	108	600	883	365	235	370	149	201
14"	155	1158	572	530	739	385	200	108	600	965	408	235	370	243	333
16"	178	1230	610	530	825	430	240	152	600	1033	443	235	370	318	401
18"	200	-	-	-	910	469	240	152	800	1120	485	235	370	431	575
20"	216	-	-	-	990	500	300	168	800	1186	518	235	370	472	708
24"	232	-	-	-	1210	618	320	192	800	1380	625	235	370	826	1061

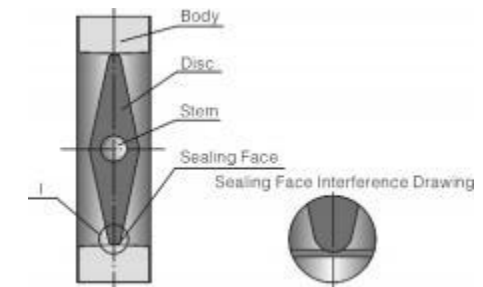
Note: The weight in the table is that without drive unit. wF is wafer butterfly valve+ and wL is lug wafer butterfly valve.



Our butterfly valves are structured to centered seal+ single eccentric seal+ double eccentric seal+ triple eccentric seal and variable eccentric seal. The sealing principles of these structures are stated as following.

1. Sealing Principle of Centered Seal Butterfly Valve

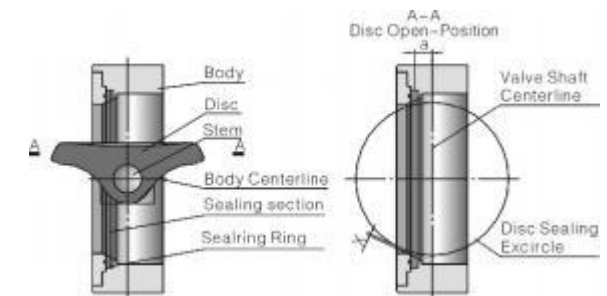
with the disc seal center of butterfly valve and rotation center of stem overlapped+ sealing load will be produced between the sealing faces of seat and disc under certain magnitude of interference+ thus to ensure effective seal of valve. Lined with rubber on body+ this structure is applicable for medium and small-bore butterfly valves. Due to the deformation under extrusion+ during the process of opening and closing+ disc is always under extrusion. so+ the upper and lower valve shafts are seriously extruded+ which can be bad to the service life of valve. And+ the open-close moment of valve is relatively high. The defect is that disc and seat are always under extrusion+ scratch+ high resistance and serious abrasion. To overcome extrusion and scratch and to ensure good seal+ seat basically uses rubber or PTFE+ or other elastic materials. However+ temperature can be a problem. This is why butterfly valves are+ conventionally+ not resistant to high temperature.



Sealing Structure of Centered Seal Butterfly Valve

2. Sealing Principle of Single Eccentric Seal Butterfly Valve

The rotation center of disc (namely center of valve shaft) and the sealing section of disc form up an 'a' eccentric+ making disc sealing face gradually disengaged from seat sealing face during the process of open and close. Once the disc turns to 15, ≤25, + the disc sealing face will be completely disengaged from the seat sealing face. Once fully opened+ a gap 'X' will be formed up between the two sealing faces+ making the relative mechanical wear and extrusion between the two sealing faces greatly lowered during the process of open and close+ thus to ensure the seal of butterfly valve. However+ as the scratch between disc and seat doesn't disappear during the whole process of open and close+ they are almost similar to concentric butterfly valves in the area of application+ this is why they have not been popularly used.

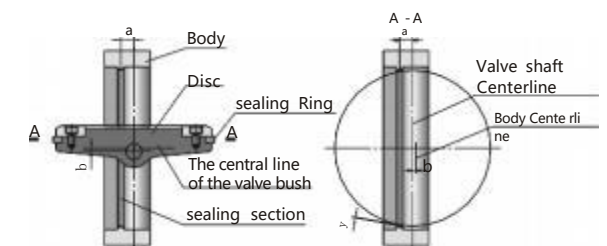


sealing structure of single Eccentric seal Butterfly Valve

3. Sealing Principle of Double Eccentric Seal Butterfly Valve

The rotation center of disc (namely the center of valve shaft) and the centerline of body form up a 'b' eccentric on the base of single eccentric butterfly valve+ making the sealing face of disc disengaged from seat sealing face more quickly than single eccentric seal butterfly valves during the process of open and close. Once disc turns to 8, ≤12, + the disc sealing face will be completely disengaged from the seat sealing face. Once fully opened+ a gap 'Y' will be formed up between the two sealing faces. This type of butterfly valves are designed to have greatly lowered the mechanical wear and extrusion deformation between the two sealing faces+ making the sealing performance of butterfly valve much better.

The characteristic of this structure is to make stem axis not only deviated from the center of disc+ but also the center of the body. The effect of double eccentric is that+ when valve has been opened+ disc can be quickly disengaged from seat+ thus to greatly eliminate the unnecessary excessive extrusion and scratch between the disc and seat+ reduce opening resistance+ lower the abrasion and improve the service life of seat. As scratch has been greatly lowered+ metal seat can be used for double eccentric butterfly valve+ so that butterfly valves are able to be used in high temperature fields. However+ as its seal is positioned sealing construction+ i.e. the sealing faces disc and seat is lineal contact+ disc extruding seat to produce elastic deformation+ thus to effect the sealing performance. This has high requirement on close position+ especially for those with metal seat+ and is given poor pressure endurance. This is why butterfly valves are+ conventionally+ not resistant to high temperature and leakage.



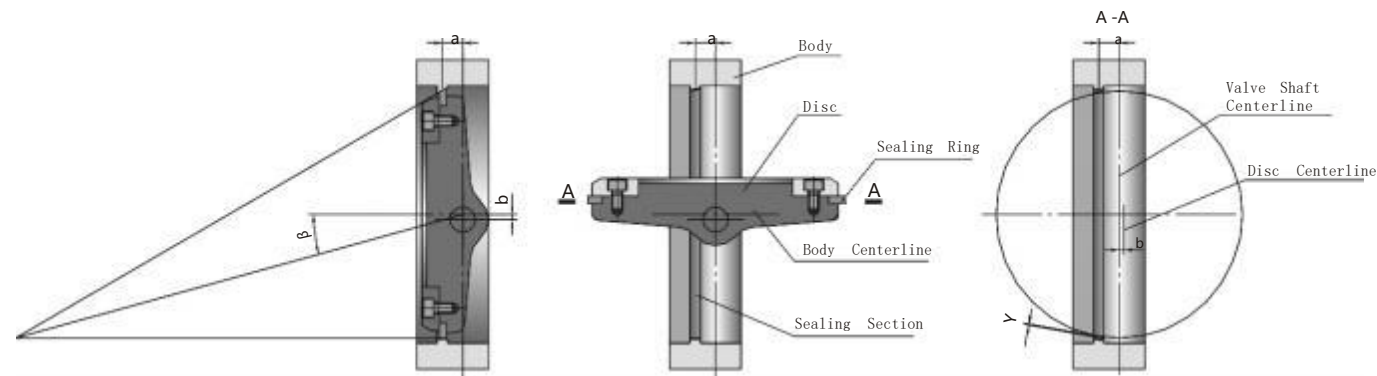
sealing structure of Double Eccentric seal Butterfly Valve



4. Sealing Principle of Triple Eccentric Seal Butterfly Valve

A β eccentric is formed up between the centerline of seat and the centerline of body on the base of double eccentric butterfly valve+ making disc sealing face immediately disengaged from seat sealing face upon the opening of butterfly valve+ and in close contact with the seat sealing face upon closing. when fully opened+ a gap 'Y' + which is the same as that in double eccentric seal butterfly valve+ is formed up between the two sealing faces. The design of this type of valves has thoroughly eliminated the mechanical wear and scratch between the two sealing faces+ making the sealing performance and service life of butterfly valves greatly improved. when valve is closed+ with sealing ring under the extrusion of body sealing face and disc+ two upward elastic deformations are produced. The sealing face is fallen under outward tension at long shaft and inward compressive stress at short shaft. The long and short shafts produce elastic deformation of different directions+ thus to maximizing the sealing force between the sealing faces of valve.

This distinctive eccentric combination not only uses cam effect+ but also eliminates friction completely+ thus to ensure no friction between seat and sealing ring on disc during the 90. stroke of valve+ a perfect solution to clear away the possibilities of abrasion and leakage.



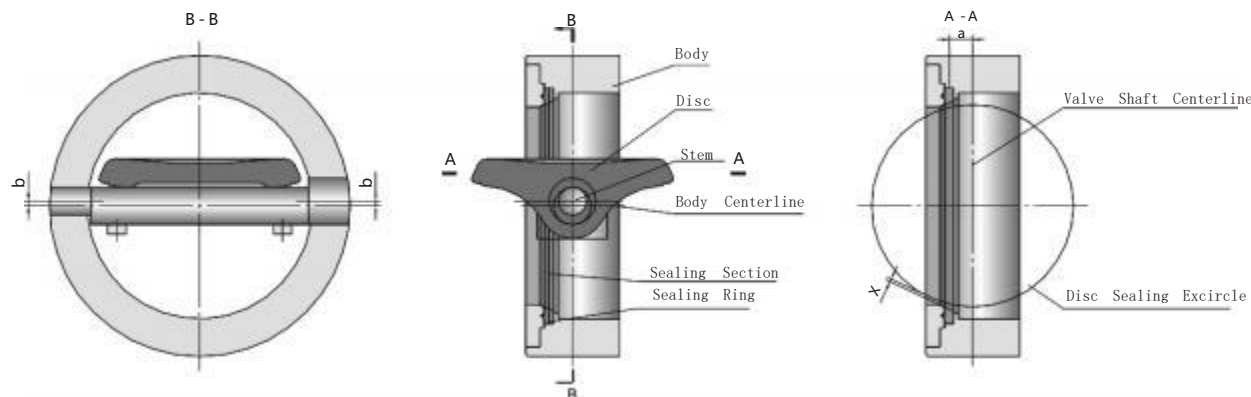
Close State Diagram of Triple Eccentric Seal Butterfly Valve

Open State Diagram of Triple Eccentric Seal Butterfly Valve

Sealing Principle of Triple Eccentric Seal Butterfly Valve

5. Sealing Principle of Variable Eccentric Seal Butterfly Valve

The distinctive feature of variable eccentric butterfly valve is that+ the stem shaft where disc is mounted is a three-segment eccentric shaft. The two ends of the three-segment stem shaft are concentric+ while the centerline of the middle segment is deviated from the axial lines of the two ends by a center-to-center distance. Disc is just mounted on the middle segment. This eccentric structure forms up a double eccentric shape when disc is completely opened+ and a single eccentric shape when disc is turned to be closed. Under the force of eccentric shaft+ when tending to be closed+ disc will move somewhat toward the sealing conical surface of the seat+ and then engaged to perform dependable sealing. when seat sealing face is abraded after a period of service+ adjust the driving mechanism to make the close position of disc forward for some degrees+ in this way to set up a new sealing state.

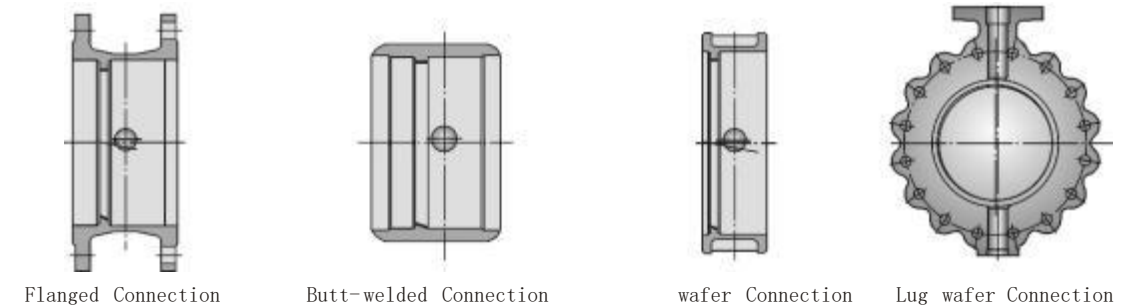


Sealing Structure of Variable Eccentric Seal Butterfly Valve



Butterfly valves are used to open and close (seal type) or adjust the medium flow in pipes in the fields of foodstuff+ drinks+ chemical+ industrial water treatment+ high-rise constructions+ water supply and drainage etc . . They are mainly structured as following .

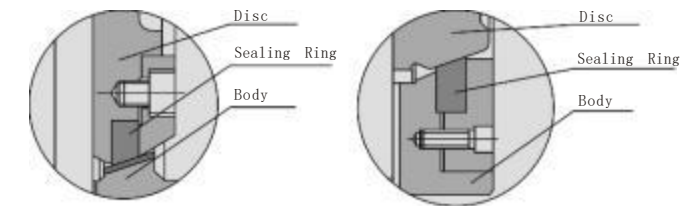
1 . simple structure+ small sizes+ light weight and low installation dimensions . According to the types of body connection+ they are basically classified to wafer type (including lug wafer type) + flanged and welded.



2. sealing materials may be soft hard+ placed on body or disc+ to meet different working conditions+ and to effect good seal and long life.

1) soft sealing structure (see fig . right) + is applicable for single and double eccentric butterfly valves+ pressure rating CCLAss 600 . Centered sealing structure is applicable for pressure rating C CLAss 250 . sealing ring (PTFE) is placed on the valve body to feature the following.

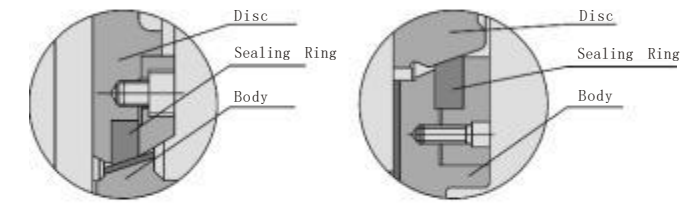
- a) To effect dependable seal with no need of accessorial sealing ring or metal bracing ring.
- b) Bidirectional leakproof seal.
- c) Little maintenance and long service life.



Soft Sealing Structure

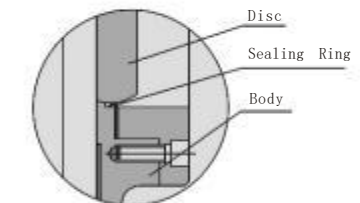
2) Multilayer Hard seal structure (see fig. right)

Multilayer hard seal structure is applicable for single+ double and triple eccentric butterfly valves+ pressure rating C CLAss 600. And+ triple eccentric butterfly valve can maintain two-way leak-tightness. Multilayer sealing ring is composite of stainless steel and nonmetal material. The nonmetal material can be flexible graphite+ PTFE or nonasbestos material etc. according to the actual working conditions.



Multilayer Hard Seal Structure

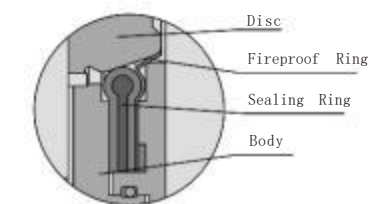
3) Elastic ring hard seal structure (see fig. right) is of the structure of J-type metal sealing ring. It is applicable for single and double eccentric butterfly valves+ pressure rating C CLAss 300+ Provided with fireproof structure to adapt to conditions with great temperature changes+ it is featured by outstanding seal . long service life and easy workmanship.



Elastic Ring Hard Seal Structure

3. Fireproof butterfly valves (see fig. Right) can stop the expansion of fire. Once the sealing seat of butterfly valve is on fire+ the stainless steel sealing ring will act to make butterfly valve immediately sealed.

4. when butterfly valve is fully opened+ flow resistance is low. when partially opened+ it may carry out sensitive flow control.



Soft Seal Fireproof Structure

5. Low driving moment+ easy and quick operation.



Design Characteristics Of Resilient Seated Butterfly

Connecting Flange of Drive :
Applicable for manual, worm gear, electric and pneumatic connection devices (2"~24" to ISO5211).

Bushing: used as valve stem support, positive shaft correction and brake support. There are bushings of low friction coefficient at the two ends of stem to reduce the frictional force of stem and open-close torque of valve.

Disc : streamlined design of disc, the upper and lower stem ends in close contact with the seat to avoid medium leaking from the stem surface. Accurate disc excircle in precise match with the seat to ensure low open-close moment of valve and long service life of seat under the state of sealed. The shape of disc differs from the type of connection to the stem, and the flow coefficient of valve is closely associated with the structural type of disc.

Valve body, classified to the following according to structural types :
1. wS-four-lug shaftless body, applicable for DN50~DN600.
2. wL-lugless body, applicable for DN50~DN300
3. wF-single reinforcement body, applicable for DN550~DN1200.
4. wU-Unthreaded body, applicable for DN700~DN1200.
5. LL-lug wafer body, applicable for DN500~DN600.
6. LU-U screw body, applicable for DN700~DN1200.
7. TH-threaded body, applicable for DN50~DN150.
8. GR-clamped body, applicable for DN650~DN300.

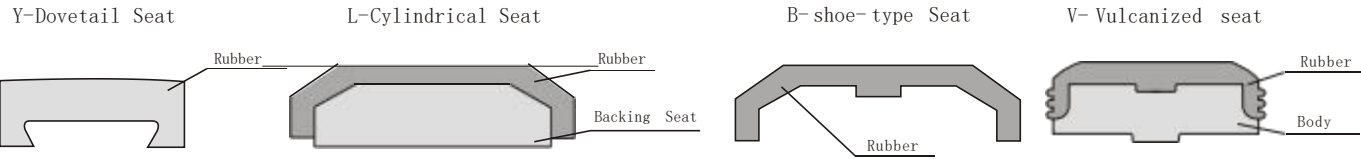
Connection Structure of Stem Head :
According to the difference in driving mechanism, there may be key connected, opposite flat or square (flat or square applicable for 2"~24")

Stem seal : sealing material may be soft graphite, PTFE or rubber (O-ring) according to working conditions and medium.

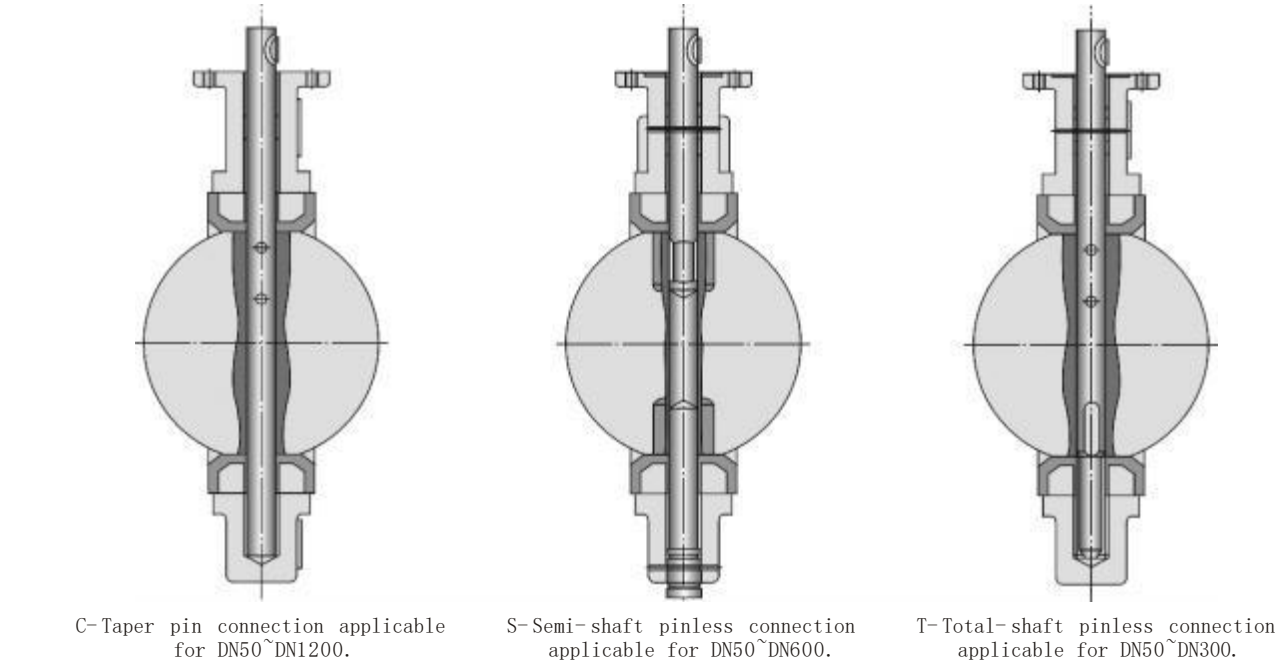
Stem : for DN≤24", stem is one-shaft structure ; for DN>24", stem is segmental (upper and lower shafts) structure. Stem and disc are connected by pin to guarantee the accurate position of disc switch.

Pin: to guarantee vibration protection, and the connection between shaft and disc, there are three types of connection between stem and disc.
1. Taper pin connection, applicable for DN50~DN1200.
2. Semi-shaft pinless connection, applicable for DN50~DN600.
3. Total-shaft pinless connection, applicable for DN50~DN300.

Seat : nonexpansion , resistance against expansion and breakage. Pressure mould soft sea ling mater ia l. The dovetail groove on the seat in contact with the body to ensure the seal between the seat and body, and that the just replace the seat directly, thus to improve the service lift of valve.
The structural types of our butterfly valve seat ;
1. Dovetail Seat
2. Cylindrical Seat
3. Shoe-type Seat



Connection Structure between Disc and valve shaft

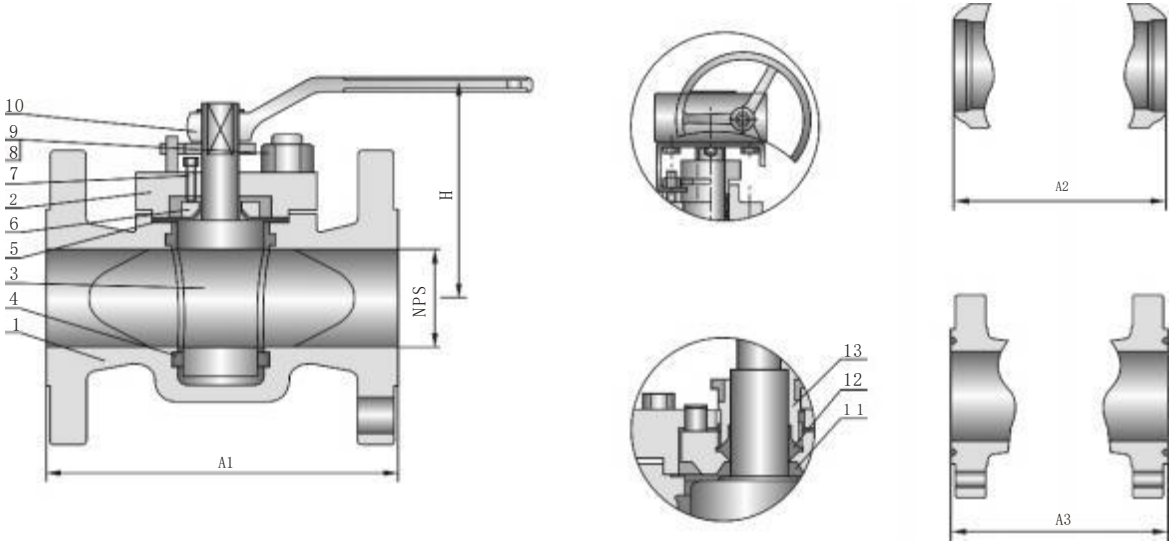


Applicable Standards

- ★Steel Plug Valves, API 599/API 6D
- ★Steel Plug Valves, ISO 14313
- ★Fire Durable, API607
- ★Anti Static, API 599
- ★Steel Valves, ASME B16.34
- ★Face To Face, ASME B16.10
- ★End Flanges, ASME B16.5
- ★Buttwelding Ends, ASME B16.25
- ★Inspection And Test, API 598/API 6D

Design Description

- ▲Rugged, Heavy-duty Body
- ▲Bolted Bonnet Cap
- ▲PTFE Sleeved Tapered Plug
- ▲Large Port Openings
- ▲Non-lubricated
- ▲Stem Integral with Plug
- ▲In-line Adjustment
- ▲Fire Durable Construction
- ▲Anti Static Device
- ▲Stopper Device
- ▲Renewable Seat Ring
- ▲Flanged Our Buttwelding Ends
- ▲Avail Able with wg Operator



Standard Material Specifiactions

NO.	Part Name	ASTM Mater ial					
		Carbon steel	304 Type	3 16 Type	304L Type	3 16L Type	20 Alloy
1	Body	A2 16 wCB	A35 1 CF8	A35 1 CF8M	A35 1 CF3	A35 1 CF3M	A35 1 CN7M
2	Bonnet	A2 16 wCB	A35 1 CF8	A35 1 CF8M	A35 1 CF3	A35 1 CF3M	A35 1 CN7M
3	Plug	A 182 F304	A 182 F304	A 182 F3 16	A 182 F304L	A 182 F3 16L	20 Alloy
4	Sleeve	Class F illed PTFE					
5	Bonnet Gasket	304+graph ite	304+graph ite	3 16+graph ite	304L+graph ite	3 16L+graph ite	3 16+graph ite
6	Adjust ing Gasket	A 182 F6a	A 182 F304	A 182 F3 16	A 182 F304L	A 182 F3 16L	2 0 -Alloy
7	Adjust ing Bolt	A 193 B7	A276 304	A276 3 16	A276 304L	A276 3 16L	2 0 -Alloy
8	Bonnet Bolt	A 193 B7	A 193 B8	A 193 B8M	A 193 B8	A 193 B8M	A 193 B8
9	Bonnet Nut	A 194 2H	A 194 8	A 194 8M	A 194 8	A 194 8M	A 194 8
10	Handle	Carbon steel	Carbon steel+ Zn				



Main Outline Dimensions & Weight Class 150

S ize	in	1/2	3/4	1	1¼	1½	2	1½	3	4	5	6	8	10	12	14
	mm	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350
A1		108	117	127	140	165	178	190	203	229	245	267	292	330	356	381
A2		152	178	203	216	229	267	305	330	356	381	394	457	533	610	686
H		110	115	225	135	140	150	165	180	380	460	520	580	260	680	760
w		175	175	175	220	280	305	350	405	300	300	320	320	350	380	450
we ight (Kg)		8.5	9.5	10	12	14	22	22	26	40	60	70	130	219	381	570

4" or above w ith worm gear

Main Outline Dimensions & Weight Class 300

S ize	in	1/2	3/4	1	1¼	1½	2	2½	3	4	5	6	8	10	12	14
	mm	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350
A1		140	152	165	178	190	216	241	283	305	381	403	419	457	502	762
A2		152	178	203	216	229	267	305	330	356	381	457	521	559	635	762
H		110	115	115	135	140	150	165	180	380	460	520	580	620	680	760
w		175	175	175	220	280	305	350	405	300	300	320	320	350	380	450
we ight (Kg)		9.5	10.5	12	14	16	20	24	29	53	75	85	185	230	390	550

4" or above w ith worm gear

Main Outline Dimensions & Weight Class 600

S ize	in	1/2	3/4	1	1¼	1½	2	2½	3	4	5	6	8	10	12	14
	mm	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350
A1/A2		165	190	216	229	214	292	330	356	432	508	559	660	787	838	889
H		110	115	115	135	140	150	165	180	380	460	520	580	620	680	760
w		175	175	175	220	280	305	350	405	300	300	320	320	350	380	450
we ight (Kg)		11	13	17	20	23	27	31	36	72	98	141	245	330	515	710

4" or above w ith worm gear

Main Outline Dimensions & Weight Class 900

S ize	in	1/2	3/4	1	1¼	1½	2	2½	3	4	5	6	8	10	12	14
	mm	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350
A1/A2		229	229	254	279	305	368	419	381	457	559	610	737	838	965	1029
H		110	115	115	135	140	150	165	180	380	460	520	580	620	680	760
w		175	175	175	220	280	305	350	405	300	300	320	320	350	380	450
we ight (Kg)		131	16	21	24	28	325	40	47	91	117	165	285	420	610	860

4" or above w ith worm gear

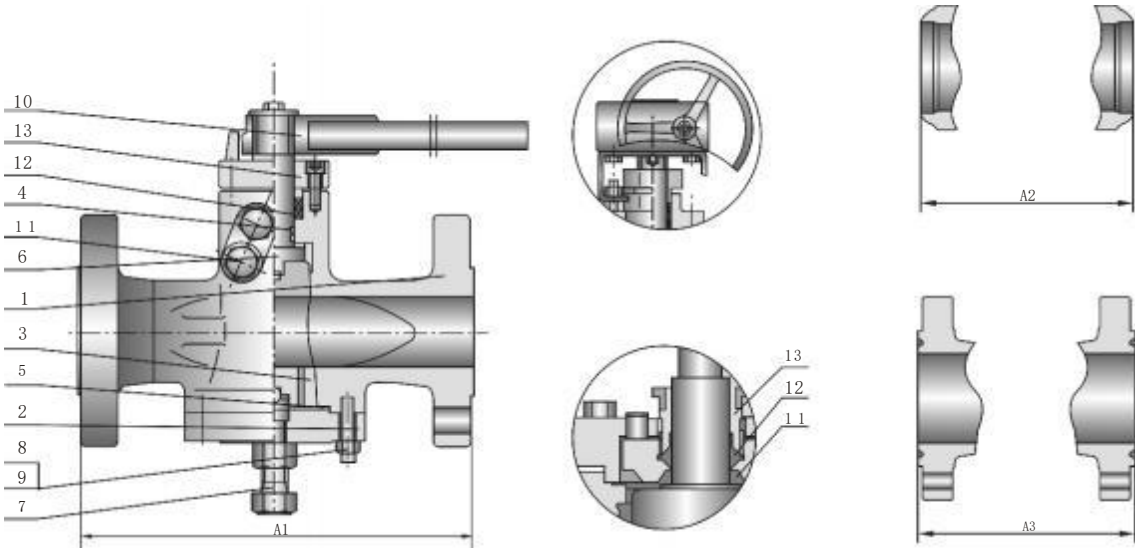


Applicable Standards

- ★Steel Plug Valves, API 599/API 6D
- ★Steel Plug Valves, ISO 14313
- ★Fire Durable, API607
- ★Anti Static, API 599
- ★Steel Valves, ASME B16.34
- ★Face To Face, ASME B16.10
- ★End Flanges, ASME B16.5
- ★Buttwelding Ends, ASME B16.25
- ★Inspection And Test, API 598/API 6D

Design Description

- ▲Rugged, Heavy-duty Body
- ▲Bolted Bonnet Cap
- ▲PTFE Sleeved Tapered Plug
- ▲Large Port Openings
- ▲Non-lubricated
- ▲Stem Integral with Plug
- ▲In-line Adjustment
- ▲Fire Durable Construction
- ▲Anti Static Device
- ▲Stopper Device
- ▲Renewable Seat Ring
- ▲Flanged Our Buttwelding Ends
- ▲Avail Able with wG Operator



Standard Material Specifiactions

NO.	Part Name	ASTM Mater ial					
		Carbon steel	304 Type	3 16 Type	304L Type	3 16L Type	20 Alloy
1	Body	A2 16 wCB	A35 1 CF8	A35 1 CF8M	A35 1 CF3	A35 1 CF3M	A35 1 CN7M
2	Bonnet	A2 16 wCB	A35 1 CF8	A35 1 CF8M	A35 1 CF3	A35 1 CF3M	A35 1 CN7M
3	Plug	A 182 F304	A 182 F304	A 182 F3 16	A 182 F304L	A 182 F3 16L	20 Alloy
4	0 - ring	V iton					
5	Bonnet Gasket	3 04+graphite	3 04+graphite	3 16+graphite	3 04L+graphite	3 16L+graphite	3 16+graphite
6	Adjusting Gasket	A 182 F6a	A 182 F304	A 182 F3 16	A 182 F304L	A 182 F3 16L	20 Alloy
7	Adjusting Bolt	A 193 B7	A276 304	A276 3 16	A276 304L	A276 3 16L	20-Alloy
8	Bonnet Bolt	A 193 B7	A 193 B8	A 193 B8M	A 193 B8	A 193 B8M	A 193 B8
9	Bonnet Nut	A 194 2H	A 194 8	A 194 8M	A 194 8	A 194 8M	A 194 8
10	Handle	Carbon steel					
11	Nipple	Carbon steel+ Zn					
12	Packing	Graph ite	Graph ite * 1	Graph ite * 1	Graph ite * 1	Graph ite * 1	Graph ite * 1
13	G land F lange	A2 16 wCB	A35 1 CF8	A35 1 CF8	A35 1 CF8	A35 1 CF8	A35 1 CF8
* 1							
		PTFE Opt ional					





Main Outline Dimensions & Weight Class 150

S ize	in	1/2	3/4	1	1 1/4	1 1/2	2	1 1/2	3	4	5	6	8	10	12	14
	mm	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350
A1		108	117	127	140	165	178	190	203	229	245	267	292	330	356	381
A2		152	178	203	216	229	267	305	330	356	381	394	457	533	610	686
H		110	115	225	135	140	150	165	180	380	460	520	580	260	680	760
w		175	175	175	220	280	305	350	405	300	300	320	320	350	380	450
we ight (Kg)		8.5	9.5	10	12	14	22	22	26	40	60	70	130	219	381	570

4" or above w ith worm gear

Main Outline Dimensions & Weight Class 300

S ize	in	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8	10	12	14
	mm	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350
A1		140	152	165	178	190	216	241	283	305	381	403	419	457	502	762
A2		152	178	203	216	229	267	305	330	356	381	457	521	559	635	762
H		110	115	115	135	140	150	165	180	380	460	520	580	620	680	760
w		175	175	175	220	280	305	350	405	300	300	320	320	350	380	450
we ight (Kg)		9.5	10.5	12	14	16	20	24	29	53	75	85	185	230	390	550

4" or above w ith worm gear

Main Outline Dimensions & Weight Class 600

S ize	in	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8	10	12	14
	mm	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350
A1/A2		165	190	216	229	214	292	330	356	432	508	559	660	787	838	889
H		110	115	115	135	140	150	165	180	380	460	520	580	620	680	760
w		175	175	175	220	280	305	350	405	300	300	320	320	350	380	450
we ight (Kg)		11	13	17	20	23	27	31	36	72	98	141	245	330	515	710

4" or above w ith worm gear

Main Outline Dimensions & Weight Class 900

S ize	in	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8	10	12	14
	mm	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350
A1/A2		229	229	254	279	305	368	419	381	457	559	610	737	838	965	1029
H		110	115	115	135	140	150	165	180	380	460	520	580	620	680	760
w		175	175	175	220	280	305	350	405	300	300	320	320	350	380	450
we ight (Kg)		131	16	21	24	28	325	40	47	91	117	165	285	420	610	860

4" or above w ith worm gear

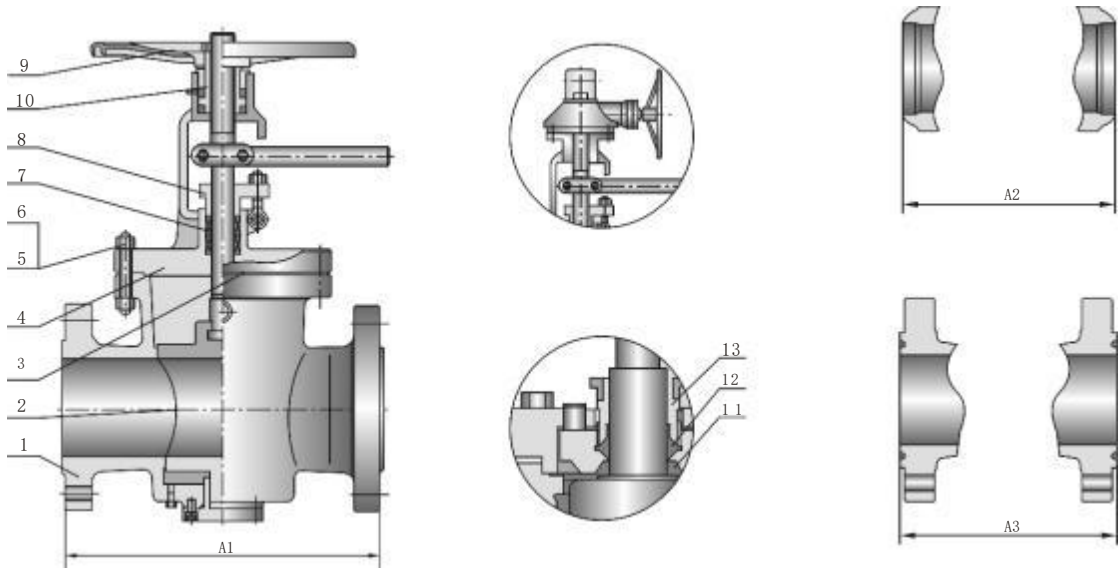


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- ★Steel Plug Valves, ISO 14313
- ★Fire Durable, API607
- ★Anti Static, API 599
- ★Steel Valves, ASME B16.34
- ★Face To Face, ASME B16.10
- ★End Flanges, ASME B16.5
- ★Buttwelding Ends, ASME B16.25
- ★Inspection And Test, API 598/API 6D

Design Description

- ▲Rugged, Heavy-duty Body
- ▲Bolted Bonnet Cap
- ▲PTFE Sleeved Tapered Plug
- ▲Large Port Openings
- ▲Non-lubricated
- ▲Stem Integral with Plug
- ▲In-line Adjustment
- ▲Fire Durable Construction
- ▲Anti Static Device
- ▲Stopper Device
- ▲Renewable Seat Ring
- ▲Flanged Our Buttwelding Ends
- ▲Available with wg Operator



Standard Material Specifiactions

NO.	Part Name	ASTM Material					
		Carbon steel	304 Type	3 16 Type	304L Type	3 16L Type	20 Alloy
1	Body	A2 16 wCB	A35 1 CF8	A35 1 CF8M	A35 1 CF3	A35 1 CF3M	A35 1 CN7M
2	Plug	A 182 F304	A 182 F304	A 182 F3 16	A 182 F304L	A 182 F3 16L	20 Alloy
3	Bonnet Gasket	304+graph ite	304+graph ite	3 16+graph ite	304L+graph ite	3 16L+graph ite	3 16+graph ite
4	Bonnet	A2 16 wCB	A35 1 CF8	A35 1 CF8M	A35 1 CF3	A35 1 CF3M	A35 1 CN7M
5	Bonnet Bolt	A 193 B7	A 193 B8	A 193 B8M	A 193 B8	A 193 B8M	A 193 B8
6	Bonnet Nut	A 194 2H	A 194 8	A 194 8M	A 194 8	A 194 8M	A 194 8
7	Packing	Graph ite	Graph ite * 1	Graph ite * 1	Graph ite * 1	Graph ite * 1	Graph ite * 1
8	Gland Flange	A2 16 wCB	A35 1 CF8	A35 1 CF8	A35 1 CF8	A35 1 CF8	A35 1 CF8
9	Hand wheel	Carbon steel	Carbon steel+ Zn				
10	Sleeve	Class F illed PTFE					
1*	PTFE Opt ional						



Main Outline Dimensions & Weight Class 150

S ize	in	1/2	3/4	1	1 1/4	1 1/2	2	1 1/2	3	4	5	6	8	10	12	14
	mm	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350
A1		108	117	127	140	165	178	190	203	229	245	267	292	330	356	381
A2		152	178	203	216	229	267	305	330	356	381	394	457	533	610	686
H		190	195	225	160	280	310	340	395	435	470	535	590	630	680	720
w		120	140	140	180	200	220	260	280	300	340	400	450	450	500	500
we ight (Kg)		9	10	11	17	19	23	25	30	55	82	98	130	178	250	380

Main Outline Dimensions & Weight Class 300

S ize	in	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8	10	12	14
	mm	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350
A1		108	152	165	178	190	216	241	283	305	381	403	419	457	502	762
A2		152	178	203	216	229	267	305	330	356	381	457	521	559	635	762
H		190	195	225	260	280	310	340	395	435	470	535	590	630	680	720
w		120	140	140	180	200	220	260	280	300	340	400	450	450	500	500
we ight (Kg)		9	12	14	19	21	28	34	39	75	95	135	200	255	415	650

Main Outline Dimensions & Weight Class600

S ize	in	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8	10	12	14
	mm	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350
A1/A2		165	190	216	229	229	241	330	356	432	508	559	660	787	838	889
H		190	195	225	260	260	280	340	395	435	470	535	590	630	680	720
w		120	140	140	180	180	200	260	280	300	340	400	450	450	500	500
we ight (Kg)		13	14	19	23	23	25	40	55	105	139	300	440	730	1150	1570

Main Outline Dimensions & Weight Class900

S ize	in	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8	10	12	14
	mm	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350
A1/A2		229	229	254	279	305	368	419	381	457	559	610	737	838	965	1029
H		190	195	225	260	280	310	340	395	435	470	535	590	630	680	720
w		120	140	140	180	200	220	260	280	300	340	400	450	450	500	500
we ight (Kg)		16	17	26	30	33	39	50	70	137	181	397	590	860	1470	1880

EZ STEEL- Advantage

1. Full projects reference all of the world and vendor references from the most main oil and Gas in stitute, companies, investors
2. The inspection program is full supported to the docs requirements
3. The list of producing equipment and inspection equipment will be provided
4. The relative shipping docs, third party inspection report, Mill test certification, custom appreciate letters
5. The mill certification such as API monogram , ISO ect....
6. The financial yearly reports in latest 3 years
7. ITP, MPS & ISO manual
8. Full system of after sales records(tracking purpose)
9. Prices competitively level
10. Full presentation experiences and guidance
11. Engineering design & construction capacities
12. Financial supports, various of payment term could be acceptable such as L/C, T/T, OA, DP
13. Logistical and shipping chains, we have signed the yearly agreement with the main NVOCC in China can make helps the saves from shipping
14. Free custom inspection corporation & checked corporation in CCPIT
15. Full bank supported company with a perfect line of Credit "AAAAA"

EZ STEEL- Corporate Culture

We devote all our efforts to customer's cost-efficiency,
We pride customer's success as our sucess.

Thank You

