



CASTING VALVES

We Make...

- PLUG VALVE
- CASTING BALL VALVE
- FORGED BALL VALVE
- DOUBLE BLOCK & BLEED VALVE
- DUAL CHECK VALVE
- SAFETY VALVE



Your Best Partner of All Valves

INTRODUCTION

The Technical Leader of Valve



President Jong Dug, Ko.

"As a professional manufacturer and provider of Plug Valve and Ball Valve equipment, We will grow up to a trustable and favorite company."

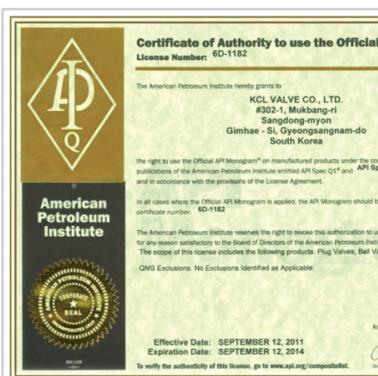
Since 2001, with the motto of "TRUST", We have been growing up to a reliable company with our business partners' deep trusts and our skillful technical abilities, providing our customers with PLUG VALVES and BALL VALVES.

Now we aim high enough to satisfy our customers not only with simple delivery but also with continuous providing of more higher level of good maintenance and technical supports in PLUG Valves and BALL Valves.

In Seong Ju Factory, we continuously make valves at competitive price on the basis of high quality with rich infrastructure in here. And please stay tuned with us. Thanks.



Guaranteed Technics



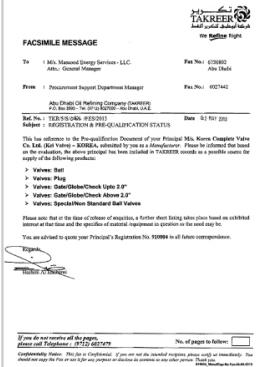
API-6D



ISO9001 by Lloyd

TAKREER
REGISTRATION NO.910004

FACSIMILE MESSAGE



UAE MINISTRY OF ECONOMY
REGISTRATION NO.15831



MAIN PRODUCTS

Company Philosophy

CHALLENGE

Challenge to New Goals always.

To Perfect Quality

To Perfect Producing System.

With These Challenges, we give secure Trust to our Customers.

Challenge Today also to make another new creation for Tomorrow.

CHANGE

Change to wear a New Feature everyday. Our Change make changes from Parts to Perfect Products.

Customers watch our Change, and they will see our New Feature as a perfect Valve company.

We are KCL who are wearing New Feature right now.

INNOVATION

Innovate on the present management.

Innovation will make whole new system. And this system will change us to a real Perfect valve company.

Our Innovation is just started.

Casting Items

GATE VALVES

	150	300	600	900	1500	2500
ASME	BB PB	2"~ 76" -	2"~ 64" -	2"~ 48" -	2½"~ 24" 2½"~ 24"	2½"~ 24" 2½"~ 24"
KS	10K 50-1050A	20K 50-1050A	30K 50-1050A	40K 50-600A	63K 50-400A	



GLOBE VALVES

	150	300	600	900	1500	2500
ASME	BB PB	2"~ 24" -	2"~ 32" -	2"~ 16" -	2"~ 16" 2"~ 14"	2"~ 14" 2"~ 14"
KS	10K 50-600A	20K 50-800A	30K 50-800A	40K 50-350A	63K 50-350A	

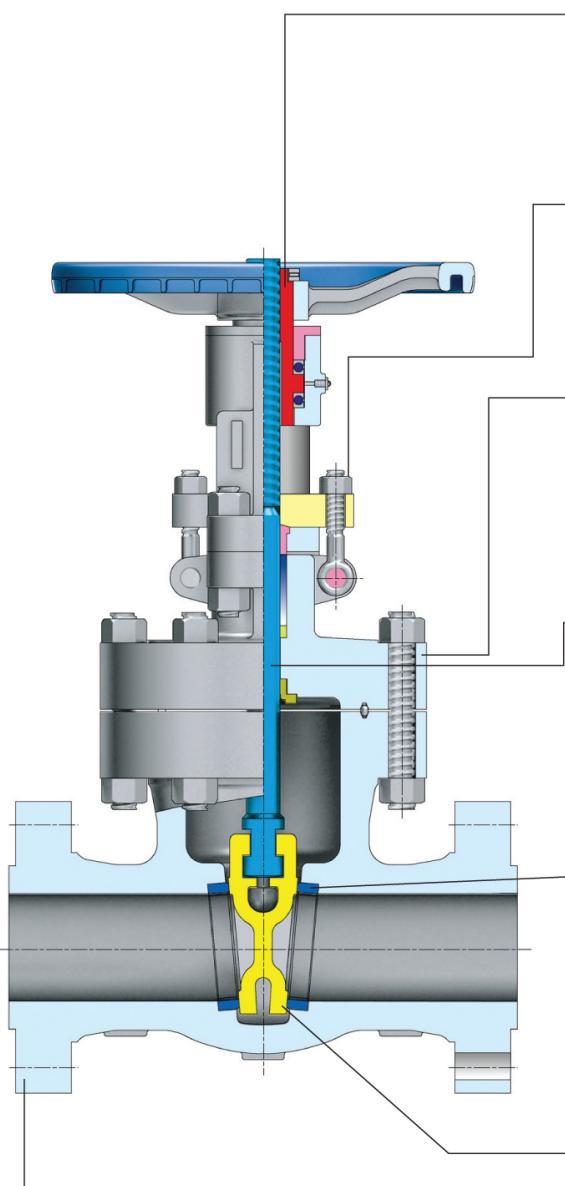


CHECK VALVES

	150	300	600	900	1500	2500
ASME	BB PB	2"~ 36" -	2"~ 28" -	2"~ 24" -	2½"~ 16" 2"~ 24"	2½"~ 14" 2"~ 20"
KS	10K 50-900A	20K 50-700A	30K 50-700A	40K 50-600A	63K 50-600A	

CAST CARBON STEEL / BOLTED BONNET

GATE VALVES



■ STEM NUT

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 API Std. specifications.

■ BOLTING

The body-bonnet bolts are manufactured in accordance with API Std. 600 specifications. The nuts also strictly conform with ANSI 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 ANSI 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 when the valve is fully opened. The stem packing dimensions of the stuffing box are in accordance with API specifications.

■ STEM

The machined forged stem comes with a T-shape head, which connects the slot of the wedge. The Spherically shaped contacting The stem dimensions are in accordance with API Std. 600 Specifications. The heat treated stem delivers adequate mechanical properties as well as excellent surface hardness. Further, opening/shutting friction is minimized by accurate machining and lapping.

■ SEAT RING

Bottom seated type seat rings are welded or screwed into the body. The seating surface is finished by lapping. They are forgings that have been heat treated to deliver the best mechanical properties and required hardness. The difference in hardness between seats and wedge is in accordance with API specifications.

■ FLEXIBLE WEDGE

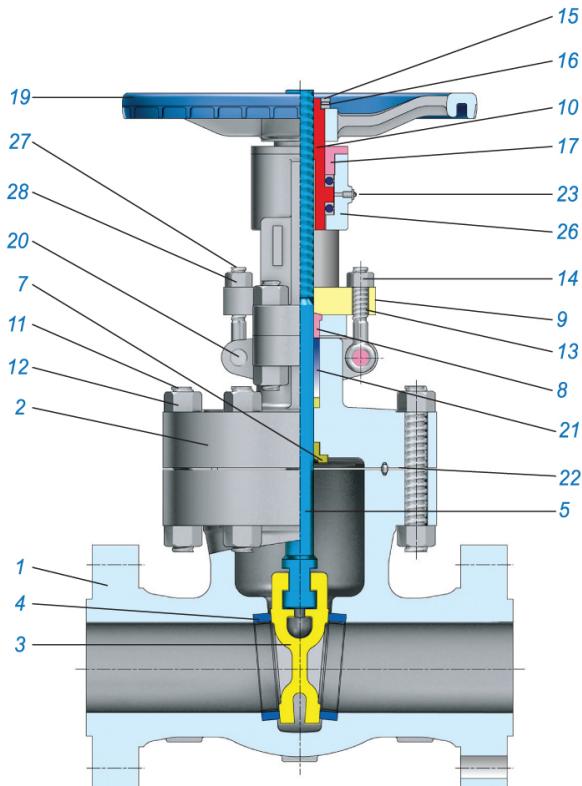
The standard disc of our valves is a one-piece flexible wedge. Slots are machined on both sides of the wedge to allow it to travel correctly in the integrally cast body guides. The wedge seating surfaces have been accurately machined, ground and lapped to a mirror finish to prevent leakage and eliminate galling.

■ BODY

The cast steel body is designed to insure a wall thickness which is greater at any point than the minimum specified by API 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. Inlet and outlet port dimensions conform with ANSI 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 male and female.

CAST CARBON STEEL / BOLTED BONNET

GATE VALVES



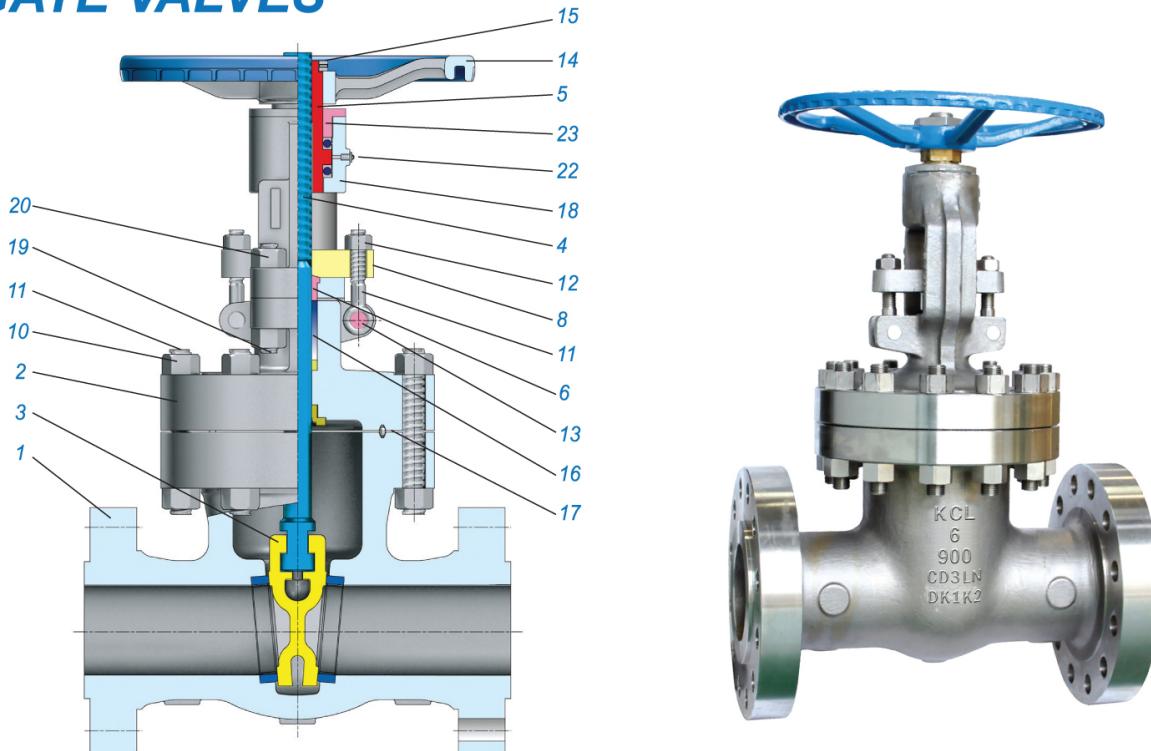
No.	NAME OF PART	ASTM SPECIFICATION
15	HANDLE NUT	A 307.B+ZN PLATED
16	SET SCREW	A 307.B
17	SLEEVE GLAND	STEEL
19	HANDWHEEL	A395
21	PACKING	SEE PAGE 44
22	GASKET	SEE PAGE 44
23	GREASE NIPPLE	B16

No.	NAME OF PART	ASTM SPECIFICATION						KS SPECIFICATION STANDARD
		STANDARD	HIGH TEMPERATURE SERVICE				LOW TEMPERATURE SERVICE	
1	BODY	A216-WCB	A217-WC1	A217-WC6	A217-WC9	A217-C5	A352-LCB	SCPH2
2	BONNET	A216-WCB	A217-WC1	A217-WC6	A217-WC9	A217-C5	A352-LCB	SCPH2
3	*DISC	A217-CA15	A217-WC1	A217-WC6	A217-WC9	A217-C5	A352-LCB	SSC1
4	BODY SEAT RING	C/S1020+HF	A182-F1	A182-F11	A182-F22	A182-F5a	A182-F304	STEEL+HF
5	STEM	A276-410	A276-410	A276-410	A276-410	A276-410	A276-304	STS410
7	BONNET BUSH	A276-410	A276-410	A276-410	A276-410	A276-410	A276-304	STS410
8	PACKING GLAND	A276-410	A276-410	A276-410	A276-410	A276-410	A276-304	STS410
9	GLAND FLANGE	A105/A283-D	A105/A283-D	A105/A283-D	A105/A283-D	A105/A283-D	A105/A283-D	SF45
10	STEM NUT	A439-D2	A439-D2	A439-D2	A439-D2	A439-D2	A439-D2	FCD45
11	BONNET BOLT	A193-B7	A193-B7	A193-B7	A193-B16	A193-B16	A320-L7	SNB7
12	BONNET NUT	A194-2H	A194-2H	A194-2H	A194-4	A194-4	A194-4	SM45C
13	GLAND BOLT	A307B	A307B	A307B	A307B	A307B	A307B	SM45C
14	GLAND NUT	A307B	A307B	A307B	A307B	A307B	A307B	SM45C
20	HINGE PIN	A108-1020	A108-1020	A108-1020	A108-1020	A108-1020	A108-1020	SM45C
26	YOKE	A216-WCB	A216-WCB	A216-WCB	A216-WCB	A216-WCB	A216-WCB	SCPH2
27	YOKE BOLT	A193-B7	A193-B7	A193-B7	A193-B7	A193-B7	A193-B7	SNB7
28	YOKE NUT	A194-2H	A194-2H	A194-2H	A194-2H	A194-2H	A194-2H	SM45C

*DISC : In case of 12" and larger size, we'll use trim material overlayed one on the same or equivalent material of the Body

CAST STAINLESS STEEL / BOLTED BONNET

GATE VALVES

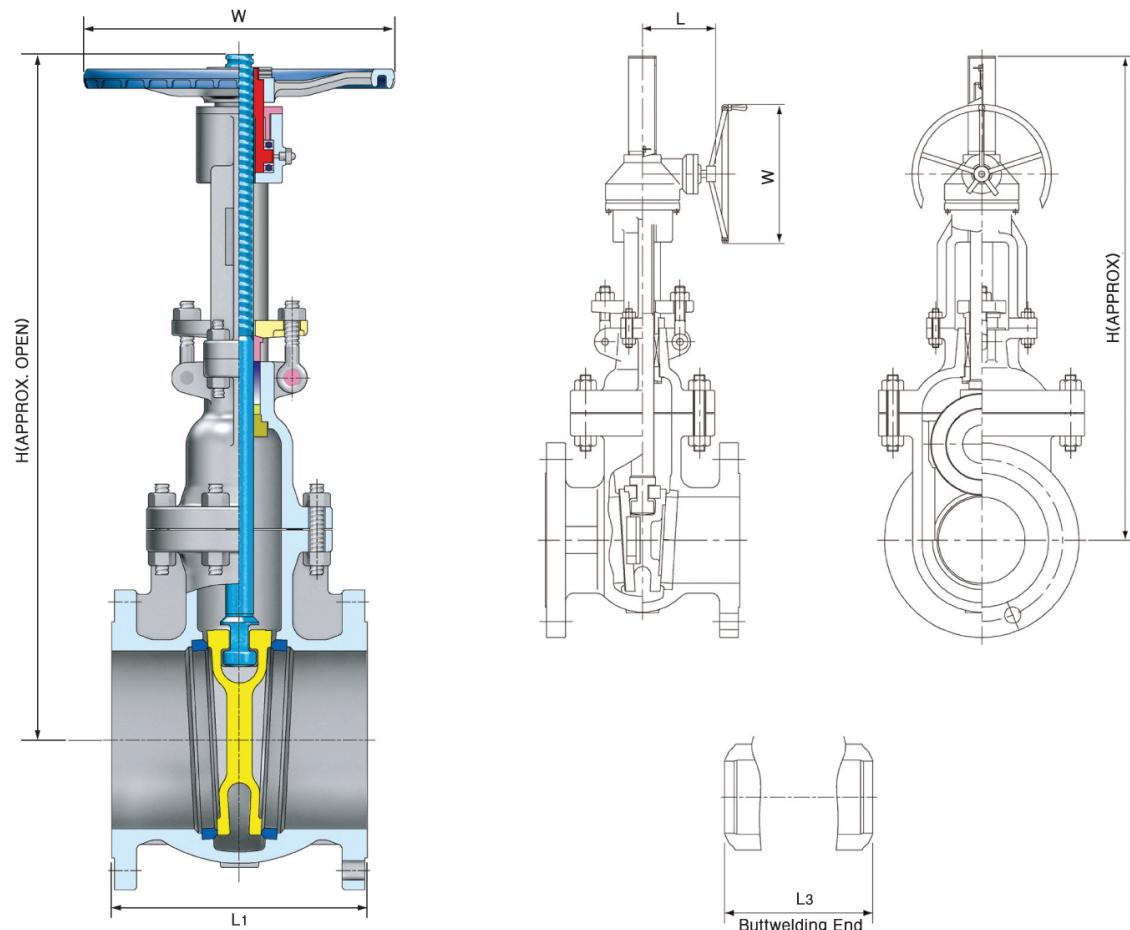


No.	NAME OF PART	ASTM SPECIFICATION				REMARKS
		CORROSION SERVICE				
1	BODY	A351-CF8	A351-CF8M	A351-CF3	A351-CF3M	
2	BONNET	A351-CF8	A351-CF8M	A351-CF3	A351-CF3M	
3	DISC	A351-CF8	A351-CF8M	A351-CF3	A351-CF3M	
4	STEM	A276-304	A276-316	A276-304L	A276-316L	
5	STEM NUT	A439-D2	A439-D2	A439-D2	A439-D2	
6	PACKING GLAND	A276-304	A276-316	A276-304L	A276-316L	
8	GLAND FLANGE	A351-CF8/A240-304	A351-CF8/A240-304	A351-CF8/A240-304	A351-CF8/A240-304	
9	BONNET BOLT	A193-B8	A193-B8	A193-B8	A193-B8	
10	BONNET NUT	A194-8	A194-8	A194-8	A194-8	
11	GLAND BOLT	A193-B8	A193-B8	A193-B8	A193-B8	
12	GLAND NUT	A194-8	A194-8	A194-8	A194-8	
13	HINGE PIN	A276-304	A276-304	A276-304	A276-304	
14	HAND WHEEL	A395	A395	A395	A395	
15	HAND WHEEL NUT	A307-B+ZN PLATED	A307-B+ZN PLATED	A307-B+ZN PLATED	A307-B+ZN PLATED	
16	PACKING	COMMERCIAL	COMMERCIAL	COMMERCIAL	COMMERCIAL	NOTE1
17	GASKET	COMMERCIAL	COMMERCIAL	COMMERCIAL	COMMERCIAL	NOTE1
18	YODE	A351-CF8	A351-CF8/CF8M	A351-CF8/CF3	A351-CF8/CF3M	
19	YODE BOLT	A193-B8	A193-B8	A193-B8	A193-B8	
20	YODE NUT	A194-8	A194-8	A194-8	A194-8	
21	SET SCREW	A307-B	A307-B	A307-B	A307-B	
22	GREASE NIPPLE	B16	B16	B16	B16	
23	SLEEVE GLAND	A351-CF8	A351-CF8M	A351-CF3	A351-CF3M	

*Note1. Packing & gasket material : customer's requirements, see page 44

CAST STEEL / BOLTED BONNET

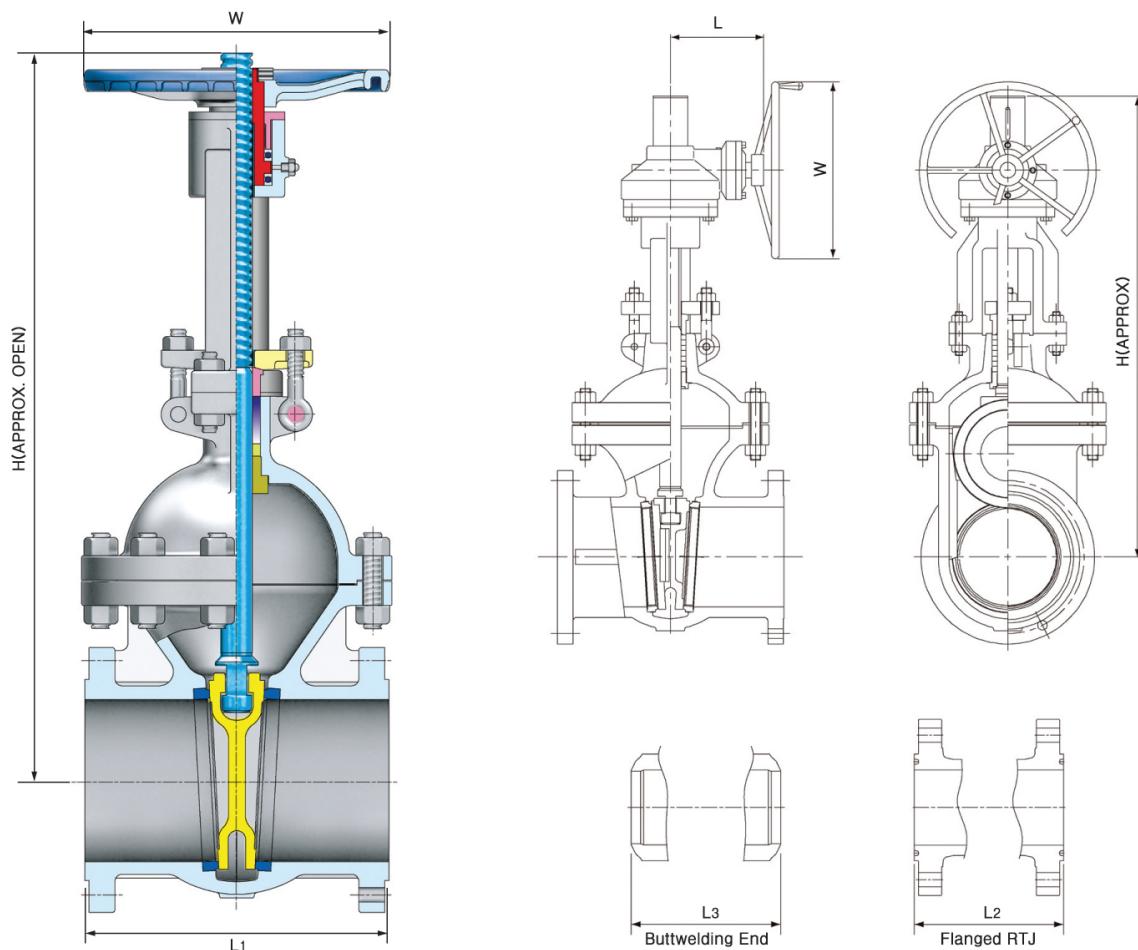
ASME CLASS 150LB



VALVE SIZE	inch	2	2 1/2	3	4	5	6	8	10	12	14	16	18	20	24	28	30	36	40
	mm	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	750	900	1000
L1	inch	7.0	7.5	8.0	9.0	10.0	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
	mm	178	191	203	229	254	267	292	330	356	381	406	432	457	508	610	610	711	762
L3	inch		9.5	11.12	12.0	15.0	15.88	16.5	18.0	19.75	22.5	24.0	26.0	28.0	32.0	36.0	36.0	40.4	42.0
	mm	216	241	283	305	381	403	419	457	502	572	610	660	711	813	914	914	1016	1067
H	inch	14.0	16.3	18.4	22.2	26.5	30.0	41.9	50.6	58.3	60.0	68.7	79.1	91.7	109.6	127.4	134.5	161.8	183.9
	mm	356	415	468	565	674	762	1065	1285	1480	1523	1745	2010	2330	2784	3236	3417	4109	4670
W	inch	7.7	7.7	8.5	9.4	11.0	11.8	14.0	15.7	17.7	13.8	13.8	13.8	17.7	17.7	22.0	22.0	27.9	31.5
	mm	195	195	215	240	280	300	355	400	450	350	350	450	450	560	560	710	800	
L	inch	-	-	-	-	-	-	-	-	13.1	13.1	13.1	14.3	14.3	16.3	16.3	18.4	20.7	
	mm	-	-	-	-	-	-	-	-	332	332	332	362	362	414	414	468	526	
WEIGHT	LB	44.1	55.1	66.2	97.0	132.3	154.4	233.7	368.2	526.9	760.7	1080.5	1274.5	1611.9	2280.0	3572.1	4057.2	7497.0	9481.5
	Kg	20	25	30	44	60	70	106	167	239	345	490	578	731	1043	1620	1840	3400	4300

CAST STEEL / BOLTED BONNET

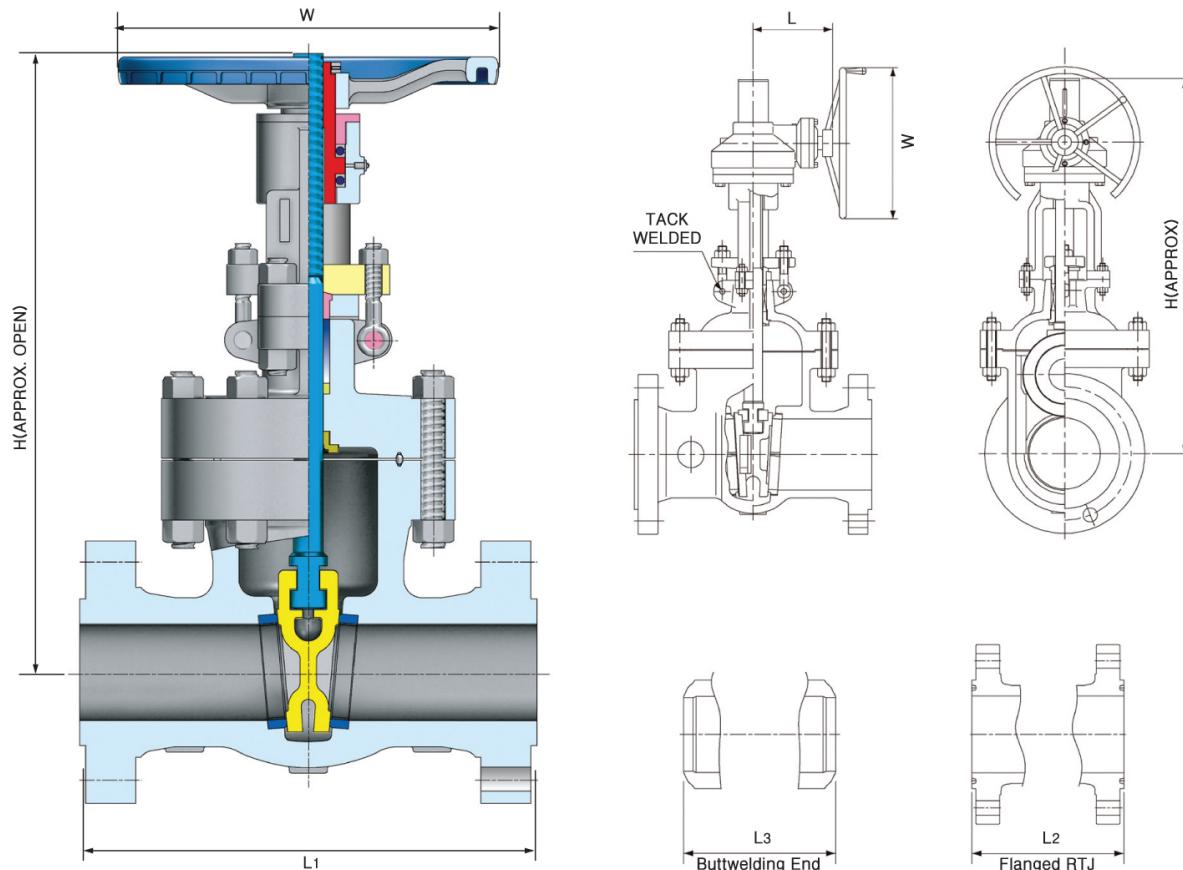
ASME CLASS 300LB



VALVE SIZE	inch	2	2 1/2	3	4	5	6	8	10	12	14	16	18	20	24	28	30	36	40	42
	mm	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	750	900	1000	1050
L1 & L3	inch	8.5	9.5	11.12	12.0	15.0	15.88	16.5	18.0	19.75	30.0	33.0	36.0	39.0	45.0	53.0	55.0	68.0	76.0	78.0
	mm	216	241	283	305	381	403	419	457	502	762	838	914	991	1143	1346	1397	1727	1930	1981
L2	inch	9.12	10.12	11.74	12.62	15.63	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	216	257	298	321	397	419	435	473	518	778	854	930	1010	1165	1372	1422	1756	-	-
H	inch	16.3	17.5	20.5	23.2	28.3	33.3	40.4	48.2	61.4	60.0	68.7	79.1	91.7	109.6	130.0	148.5	169.8	188.6	198.1
	mm	415	445	520	590	720	845	1025	1225	1560	1523	1745	2010	2330	2784	3302	3772	4312	4791	5032
W	inch	7.7	7.7	8.5	9.4	11.0	14.0	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
	mm	195	195	215	240	280	355	400	450	500	450	450	560	560	710	900	900	760	760	760
L	inch	-	-	-	-	-	-	-	-	-	14.3	14.3	16.3	16.3	18.4	21.8	21.8	20.2	20.2	
	mm	-	-	-	-	-	-	-	-	-	362	36	414	414	468	554	554	512	512	
WEIGHT	LB	52.9	75.0	90.4	143.3	209.5	257.9	401.3	368.2	1060.6	1528.1	2094.8	2535.8	3307.5	4961.3	6637.1	8595.6	10579.2	15428.0	18734.0
	Kg	24	34	41	65	95	117	182	355	481	693	950	1150	1500	2250	3010	3900	4800	7000	8500

CAST STEEL / BOLTED BONNET

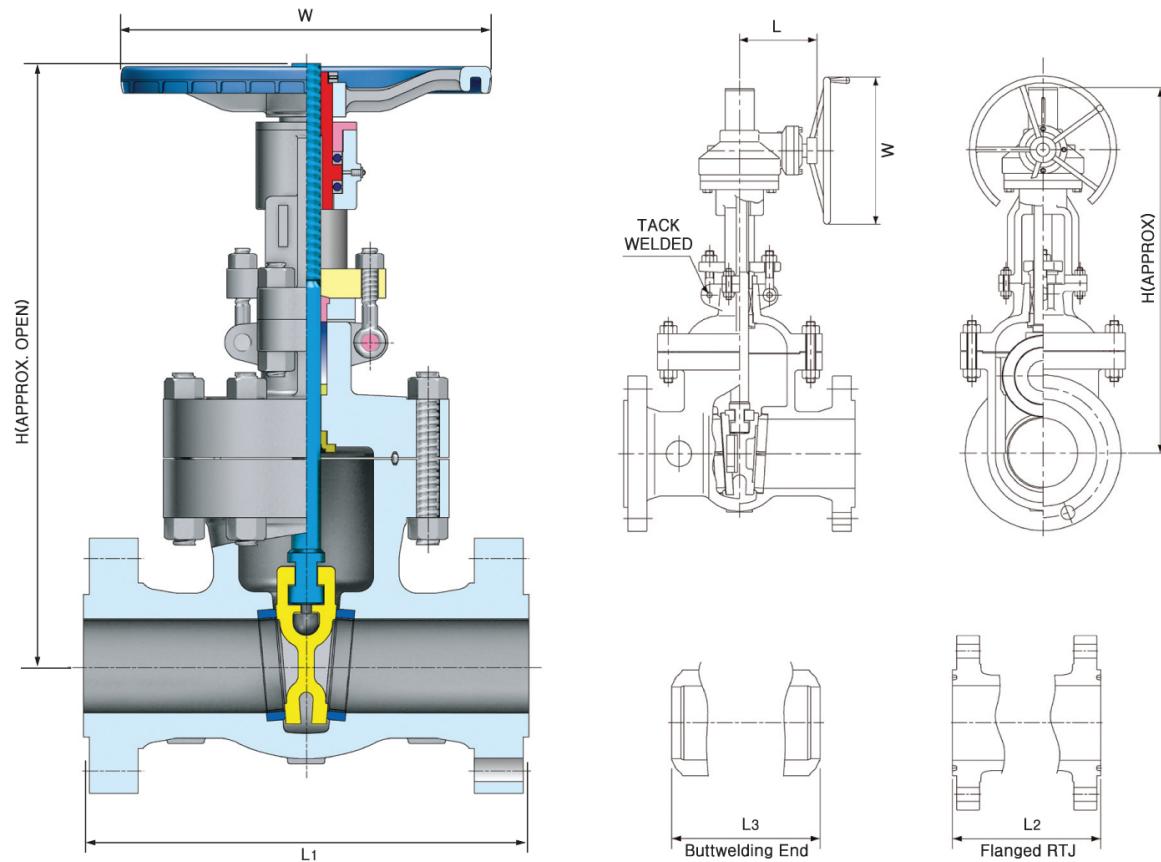
ASME CLASS 600LB



VALVE SIZE	inch	2	2 1/2	3	4	5	6	8	10	12	14	16	18	20	24
	mm	50	65	80	100	125	150	200	250	300	350	400	450	500	600
L1 & L3	inch	11.5	13.0	14.0	17.0	20.0	22.0	26.0	31.0	33.0	35.0	39.0	43.0	47.0	55.00
	mm	292	330	356	432	508	559	660	787	838	889	991	1092	1194	1397
L2	inch	11.62	13.12	14.12	17.12	19.57	22.12	26.12	31.12	33.12	35.12	39.12	43.12	47.25	55.38
	mm	295	333	359	435	511	562	664	791	841	892	994	1095	1200	1406
H	inch	18.7	21.6	23.5	26.8	31.5	36.6	45.7	53.1	61.8	72.1	82.9	98.0	104.8	116.9
	mm	475	550	598	680	800	930	1160	1350	1570	1832	2106	2489	2662	2970
W	inch	7.7	7.7	9.4	11.8	14.0	17.7	17.7	19.7	22.0	22.0	27.9	27.9	31.5	35.4
	mm	195	195	240	300	355	450	450	500	560	560	710	710	800	900
L	inch	-	-	-	-	-	-	-	-	16.3	16.3	18.4	18.4	20.7	26.4
	mm	-	-	-	-	-	-	-	-	414	414	468	468	526	670
WEIGHT	LB	79.4	127.9	154.4	269.0	441	551.2	893.0	1433.2	1896.3	2734.2	3109.1	4890.7	6198.3	8656.8
	Kg	36	58	70	122	200	250	405	650	860	1240	1410	2218	2811	3926

CAST STEEL / BOLTED BONNET

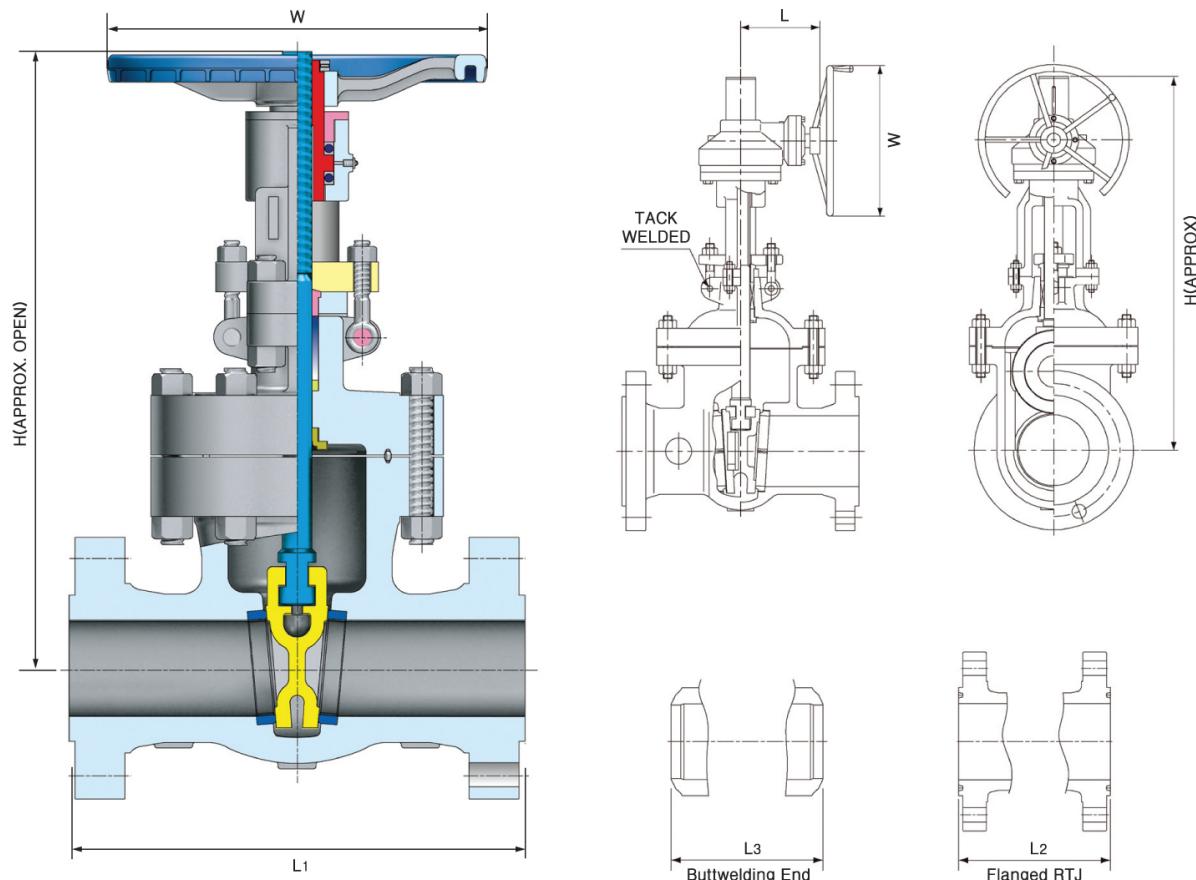
ASME CLASS 900LB



VALVE SIZE	inch	2	2 1/2	3	4	5	6	8	10	12	14	16	18	20	24
	mm	50	65	80	100	125	150	200	250	300	350	400	450	500	600
L1 & L3	inch	14.5	16.5	15.0	18.0	22.0	24.0	29.0	33.0	38.0	40.5	44.5	48.0	52.0	61.0
	mm	368	419	381	457	559	610	737	838	965	1029	1130	1219	1321	1549
L2	inch	14.62	16.62	15.12	18.12	22.13	24.12	29.12	33.12	38.12	40.88	44.88	48.5	52.5	61.75
	mm	371	422	384	460	562	613	740	841	968	1038	1140	1232	1334	1568
H	inch	21.2	26.4	26.4	30.8	37.1	42.4	55.5	67.7	77.4	74.9	80.7	88.8	110.2	124.0
	mm	539	670	672	782	943	1076	1411	1720	1965	1902	2051	2256	2800	3150
W	inch	11.8	11.8	14.0	15.7	19.7	22.0	17.7	22.0	22.0	24.0	24.0	30.0	30.0	24.0
	mm	300	300	355	400	500	560	450	560	560	610	610	760	760	610
L	inch	-	-	-	-	-	-	14.3	16.3	16.3	20.2	20.2	21.8	21.8	20.0
	mm	-	-	-	-	-	-	362	414	414	512	512	554	554	512
WEIGHT	LB	181	341.8	364	384	661.5	999	1720	2752	3400	4895.1	6615	8533.4	10716.3	16096.5
	Kg	82	155	165	174	300	453	780	1248	1542	2220	3000	3870	4860	7300

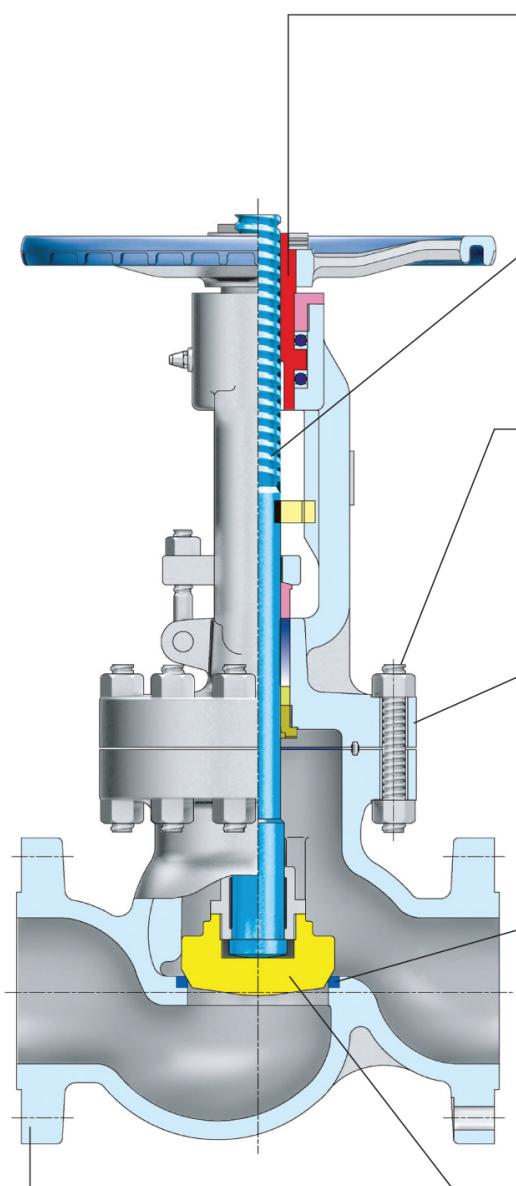
CAST STEEL / BOLTED BONNET

ASME CLASS 1500LB



VALVE SIZE	inch	2	2 1/2	3	4	5	6	8	10	12	14	16
	mm	50	65	80	100	125	150	200	250	300	350	400
L1 & L3	inch	14.5	16.5	18.5	21.5	26.5	27.75	32.75	39.0	44.5	49.5	54.5
	mm	368	419	470	546	673	705	832	991	1130	1257	1384
L2	inch	14.62	16.62	18.62	21.62	26.61	28.0	33.13	39.38	45.12	50.25	55.38
	mm	371	422	473	549	676	711	842	1000	1146	1276	1407
H	inch	21.2	26.4	29.1	30.8	43.62	47.0	60.8	66.5	82.3	85.1	97.9
	mm	539	670	738	783	1108	1196	1546	1688	1090	2167	2486
W	inch	11.8	11.8	15.7	19.7	24.8	13.8	22.0	27.9	27.9	30.0	30.0
	mm	300	300	400	500	630	350	560	710	710	760	760
L	inch	-	-	-	-	-	13.1	16.3	18.4	18.4	21.8	21.8
	mm	-	-	-	-	-	332	414	468	468	554	554
WEIGHT	LB	181	341.8	401	573	926.1	1360	3175	4412	8417	9073.6	15324.8
	Kg	82	155	182	260	420	617	1440	2001	3816	4115	6950

GLOBE VALVES



■ YOKE BUSH

The standard material of the Yoke sleeve is Nodular Ni-resist D2 with over a 1150°C (2100° F) dissolution point in conformity with API 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 plinth contact with the inside of the disc housing to eliminate friction.

■ BOLTING

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

■ BONNET

The bonnet is integral or separate with 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 API specifications.

■ SEAT RING

The shoulder seated type seat ring is welded or screwed into body. The seating surface is finished by lapping. The seat ring is forged and heat-treated to deliver the best mechanical properties and required hardness. The difference in hardness between the seats and disc conforms to API Std. specifications.

■ DISC

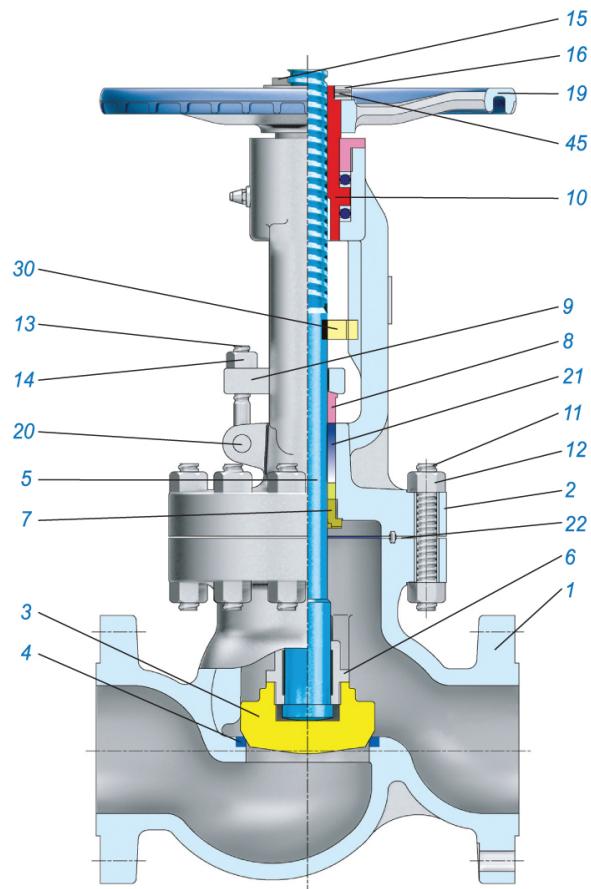
The disc of our globe valve is a loose disc and can freely revolve around the stem. They prevent friction and galling with the seating surface when the valve is shut. The disc is furnished with a conical seating surface that has been ground and lapped to a mirror finish. It is of one-piece construction, 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 API Std. 600. Port and seat passage dimensions conform to ANSI B 16.5 Pipe Fitting. The screw-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. Accurate machining insures perfect coaxiality of the valve ends and seat ring in addition to exact perpendicularity of body-bonnet flanges.

CAST CARBON STEEL / BOLTED BONNET

GLOBE VALVES



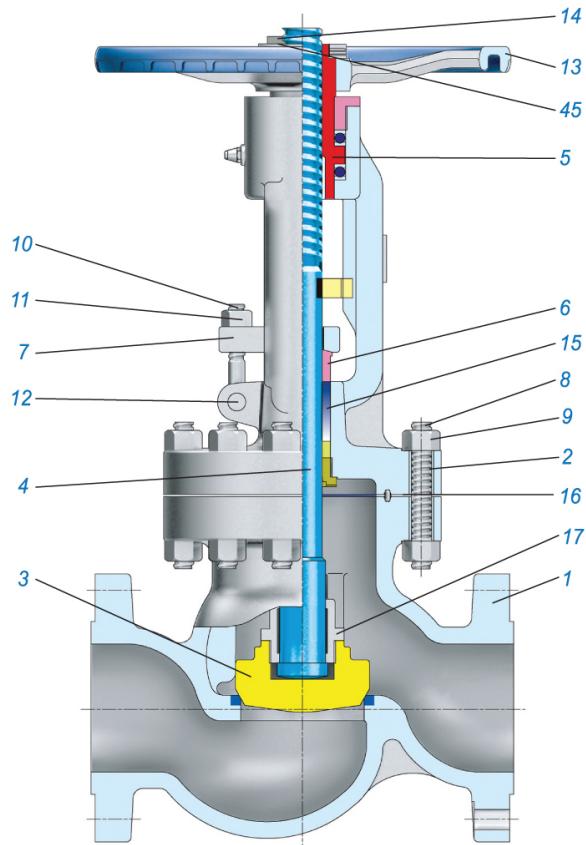
No.	NAME OF PART	ASTM SPECIFICATION
15	HANDLE NUT	A 283-C
16	SET SCREW	A 307.B
19	HANDWHEEL	A 395
21	PACKING	SEE PAGE 44
22	GASKET	SEE PAGE 44
30	STOPPER(for Gear)	A 283-D
45	WASHER	STEEL

No.	NAME OF PART	ASTM SPECIFICATION					KS SPECIFICATION STANDARD
		STANDARD	HIGH TEMPERATURE SERVICE				
1	BODY	A216-WCB	A217-WC1	A217-WC6	A217-WC9	A217-C5	A352-LCB SCPH2
2	BONNET	A216-WCB	A217-WC1	A217-WC6	A217-WC9	A217-C5	A352-LCB SCPH2
3	*DISC	A217-CA15	A217-WC1	A217-WC6	A217-WC9	A217-C5	A352-LCB SSC1
4	BODY SEAT RING	C/S1020+HF	A182-F1	A182-F11	A182-F22	A182-F5a	A182-F304 STEEL+HF
5	STEM	A276-410	A276-410	A276-410	A276-410	A276-410	A276-304 STS410
6	DISC GLAND	A276-410	A276-410	A276-410	A276-410	A276-410	A276-304 STS410
7	BONNET BUSH	A276-410	A276-410	A276-410	A276-410	A276-410	A276-304 STS410
8	PACKING GLAND	A276-410	A276-410	A276-410	A276-410	A276-410	A276-304 STS410
9	GLAND FLANGE	A105/A283-D	A105/A283-D	A105/A283-D	A105/A283-D	A105/A283-D	A105/A283-D SF45
10	YOKE BUSH	A439-D2	A439-D2	A439-D2	A439-D2	A439-D2	FCD45
11	BONNET BOLT	A193-B7	A193-B7	A193-B16	A193-B16	A193-B16	A320-L7 SNB7
12	BONNET NUT	A194-2H	A194-2H	A194-4	A194-4	A194-4	A194-4 SM45C
13	GLAND BOLT	A307.B	A307.B	A307.B	A307.B	A307.B	SM45C
14	GLAND NUT	A307.B	A307.B	A307.B	A307.B	A307.B	SM45C
20	HINGE PIN	A108-1020	A108-1020	A108-1020	A108-1020	A108-1020	STS410

*Note : In case of 12" and larger size, We'll use trim material overlayed one on the same or equivalent material of the Body

CAST STAINLESS STEEL / BOLTED BONNET

GLOBE VALVES



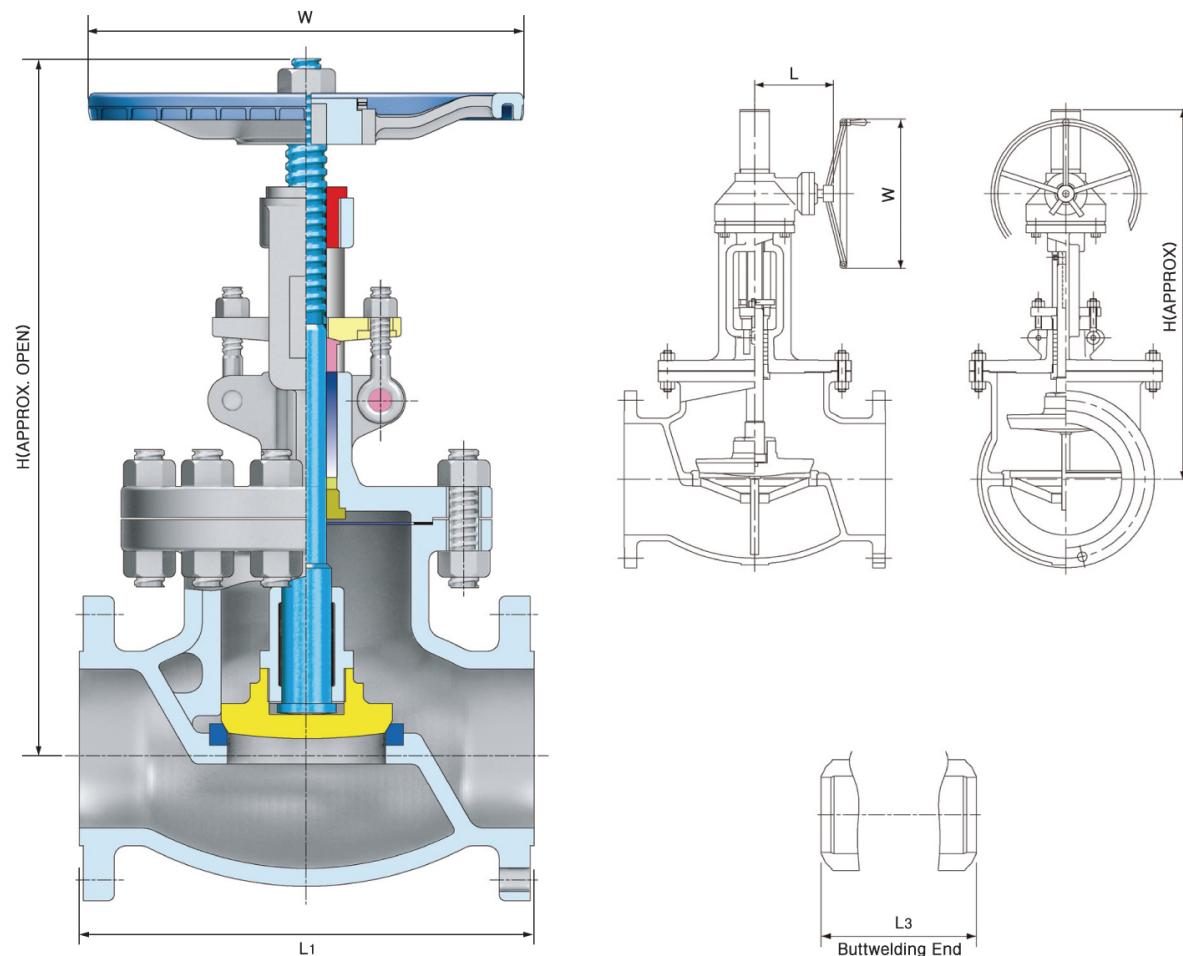
No.	NAME OF PART	ASTM SPECIFICATION CORROSION SERVICE				REMARKS
		A351-CF8	A351-CF8M	A351-CF3	A351-CF3M	
1	BODY	A351-CF8	A351-CF8M	A351-CF3	A351-CF3M	
2	BONNET	A351-CF8	A351-CF8M	A351-CF3	A351-CF3M	
3	DISC	A351-CF8	A351-CF8M	A351-CF3	A351-CF3M	NOTE1
4	STEM	A276-304	A276-316	A276-304L	A276-316L	
5	YOKE BUSH	A439-D2	A439-D2	A439-D2	A439-D2	
6	PACKING GLAND	A276-304	A276-316	A276-304L	A276-316L	
7	GLAND FLANGE	A351-CF8/A240-304	A351-CF8/A240-304	A351-CF8/A240-304	A351-CF8/A240-304	
8	BONNET BOLT	A193-B8	A193-B8	A193-B8	A193-B8	
9	BONNET NUT	A194-8	A194-8	A194-8	A194-8	
10	GLAND BOLT	A193-B8	A193-B8	A193-B8	A193-B8	
11	GLAND NUT	A194-8	A194-8	A194-8	A194-8	
12	HINGE PIN	A276-304	A276-304	A276-304	A276-304	
13	HAND WHEEL	A395	A395	A395	A395	
14	HAND WHEEL NUT	A283-C	A283-C	A283-C	A283-C	
15	PACKING	COMMERCIAL	COMMERCIAL	COMMERCIAL	COMMERCIAL	NOTE2
16	GASKET	COMMERCIAL	COMMERCIAL	COMMERCIAL	COMMERCIAL	NOTE2
17	DISC GLAND	A276-304	A276-316	A276-304L	A276-316L	
45	WASHER	A283-C	A283-C	A283-C	A283-C	

*Note1. Size 8" & larger : bottom guide type

*Note2. Packing & gasket material : customer's requirements, see page 44

CAST STEEL / BOLTED BONNET

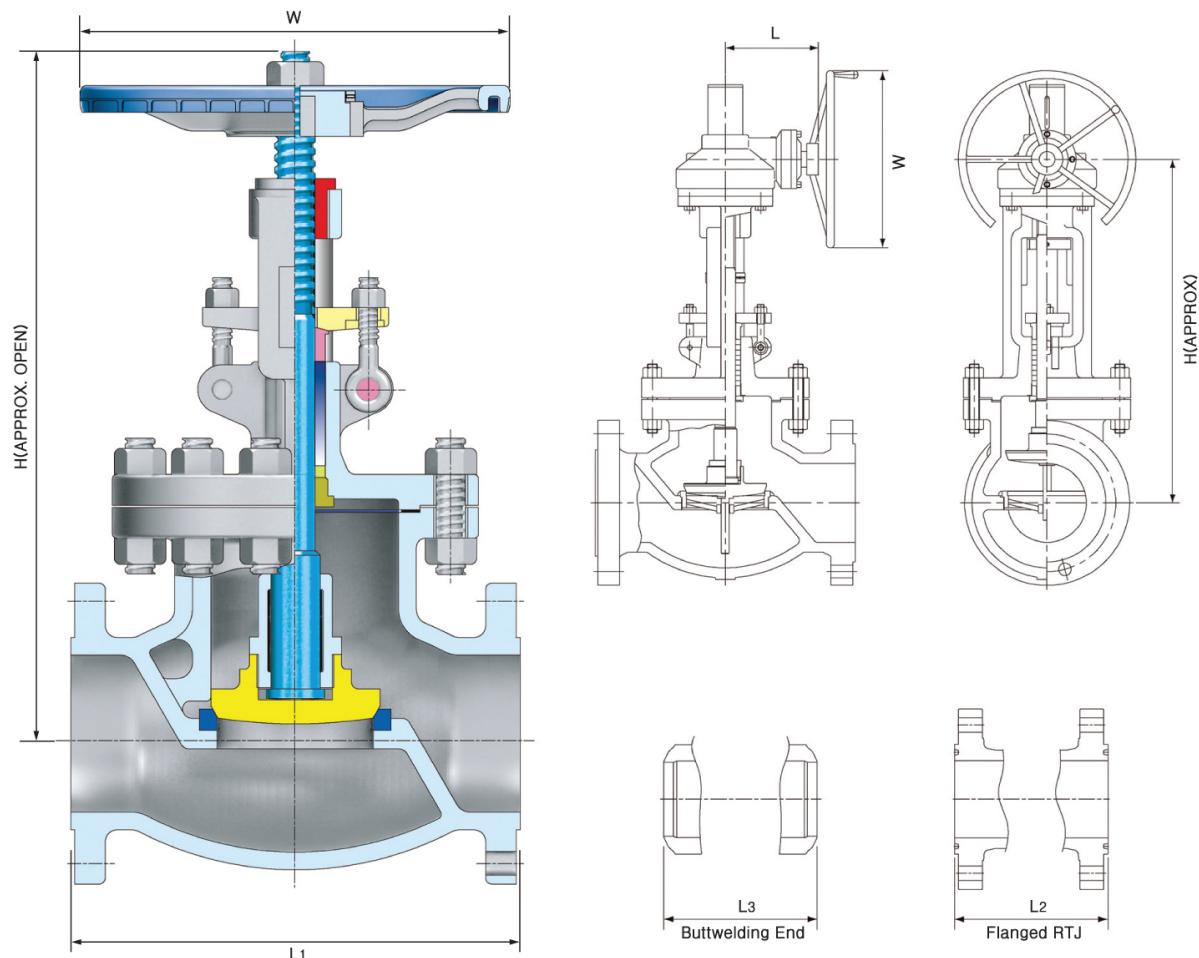
ASME CLASS 150LB



VALVE SIZE	inch	2	2 1/2	3	4	5	6	8	10	12	14	16	18	20	24
	mm	50	65	80	100	125	150	200	250	300	350	400	450	500	600
L1 & L3	inch	8.0	8.5	9.5	11.5	14.0	16.0	19.5	24.5	27.5	31.0	36.0	38.5	38.5	51.0
	mm	203	216	241	292	356	406	495	622	699	787	914	978	978	1295
H	inch	10.8	11.4	12.5	13.7	15.6	17.3	22.0	26.4	29.1	54.7	62.6	71.7	80.7	90.6
	mm	275	290	320	350	400	440	560	670	740	1390	1590	1820	2050	2300
W	inch	7.7	7.7	8.5	9.4	11.0	11.8	14.0	15.7	17.7	22.0	22.0	24.0	27.6	27.6
	mm	195	195	215	240	280	300	355	400	450	560	560	610	700	700
L	inch	-	-	-	-	-	-	-	-	-	16.3	16.3	17.0	17.0	17.0
	mm	-	-	-	-	-	-	-	-	-	414	414	432	432	432
WEIGHT	LB	46.3	59	72.8	116.9	163.2	209.5	410.1	524.8	804.8	1364.9	1808.1	2154.3	2712.2	3472.9
	Kg	21	27	33	53	74	95	186	238	365	619	820	977	1230	1575

CAST STEEL / BOLTED BONNET

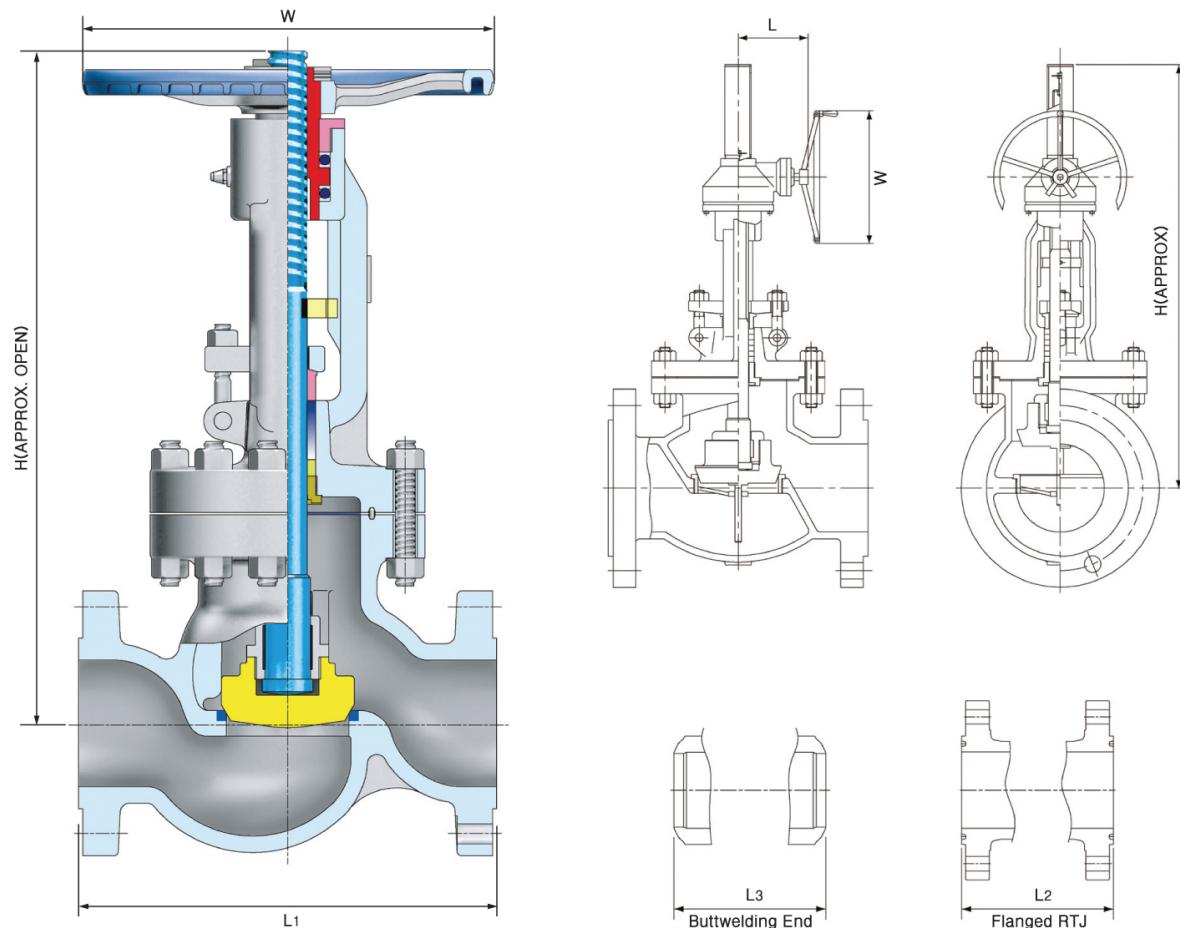
ASME CLASS 300LB



VALVE SIZE	inch	2	2 1/2	3	4	5	6	8	10	12	14	16	18	20	24	32
	mm	50	65	80	100	125	150	200	250	300	350	400	450	500	600	800
L1 & L3	inch	10.5	11.5	12.5	14.0	15.75	17.5	22.0	24.5	28.0	33.0	34	38.5	40	53	62.75
	mm	267	292	318	356	400	445	559	622	711	838	864	978	1016	1346	1594
L2	inch	11.12	12.12	13.12	14.62	16.38	18.12	22.62	25.12	28.62	33.6	34.6	39.12	40.75	53.88	63.4
	mm	283	308	333	371	416	460	575	638	727	854	879	994	1035	1369	1610
H	inch	14.4	15.7	16.1	18.9	26.6	27.6	29.5	31.5	37.6	54.7	62.6	71.7	80.7	90.6	122.0
	mm	365	400	410	480	676	700	750	800	955	1390	1590	1820	2050	2300	3100
W	inch	7.7	8.5	9.4	10.6	12.4	14.0	15.7	17.7	19.7	22.1	27.6	27.6	27.6	31.5	31.5
	mm	195	215	240	270	315	355	400	450	500	560	700	700	700	800	800
L	inch	-	-	-	-	-	-	-	-	-	16.3	18.4	18.4	18.4	20.7	20.7
	mm	-	-	-	-	-	-	-	-	-	414	468	468	468	526	526
WEIGHT	LB	61.7	86.0	99.2	189.6	253.6	330.8	621.8	809.2	1045.2	1907.3	2529.1	3014.2	3572.1	5159.7	7364.7
	Kg	28	39	45	86	115	150	282	367	474	865	1147	1367	1620	2340	3340

CAST STEEL / BOLTED BONNET

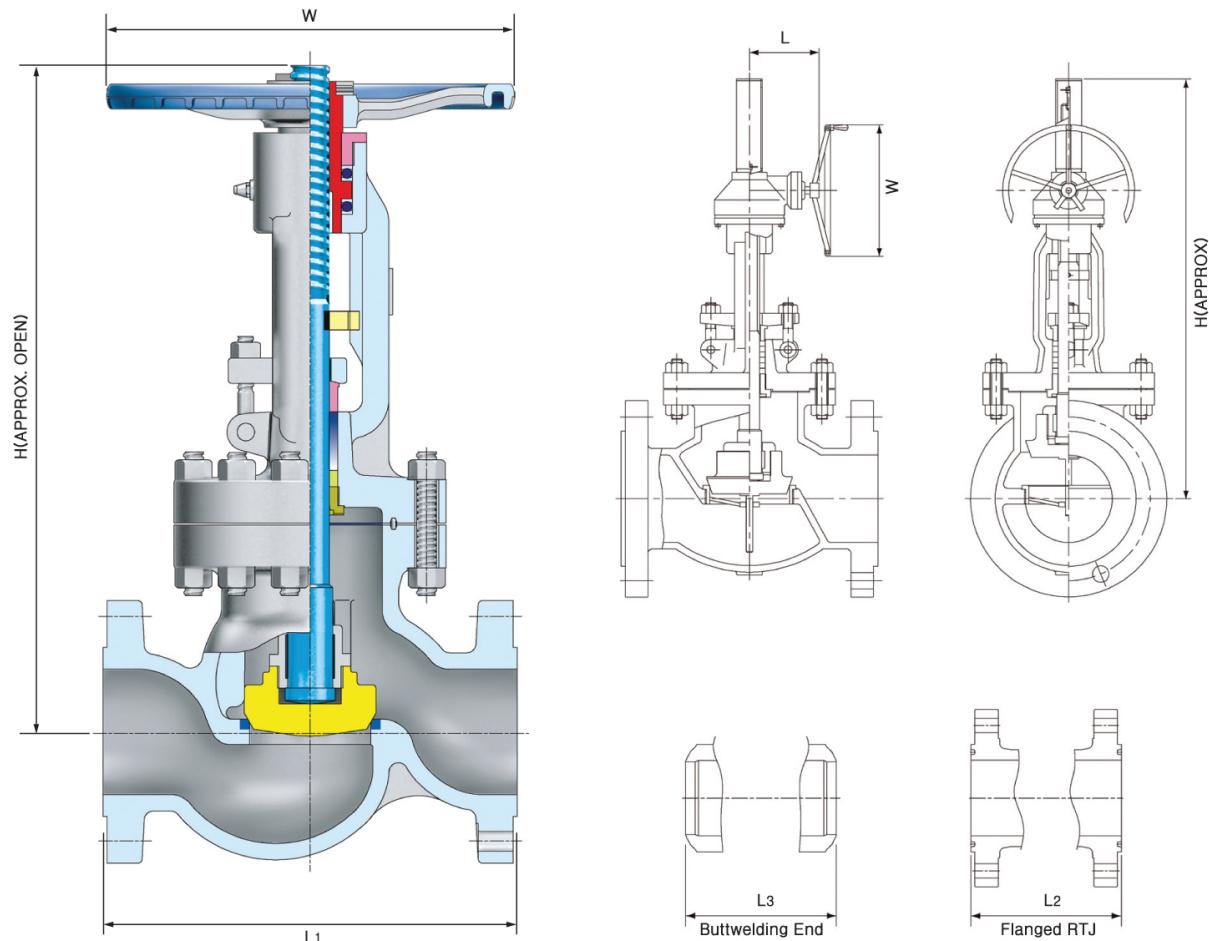
ASME CLASS 600LB



VALVE SIZE	inch	2	2 1/2	3	4	5	6	8	10	12	14	16
	mm	50	65	80	100	125	150	200	250	300	350	400
L1 & L3	inch	11.5	13.0	14.0	17.0	20.0	22.0	26.0	31.0	33.0	35.0	39.0
	mm	292	330	356	432	508	559	660	787	838	889	991
L2	inch	11.62	13.12	14.12	17.12	20.12	22.12	26.12	31.12	33.12	35.12	39.12
	mm	295	333	359	435	511	562	664	791	841	892	994
H	inch	16.0	19.8	19.9	22.4	31.8	37.8	51.8	59.5	96.9	70.9	76.0
	mm	407	502	505	568	807	959	1315	1511	1775	1800	1930
W	inch	7.7	8.5	10.6	11.8	14.0	15.7	28.0	31.5	35.4	35.4	35.4
	mm	195	215	270	300	355	400	710	800	900	900	900
L	inch	-	-	-	-	-	-	18.4	20.7	26.4	26.4	26.4
	mm	-	-	-	-	-	-	468	526	670	670	670
WEIGHT	LB	114.5	141.1	187.4	330.8	551.3	714.4	1234.8	1741.9	2264.5	2932.7	3825.7
	Kg	52	65	85	150	250	324	560	790	1027	1330	1735

CAST STEEL / BOLTED BONNET

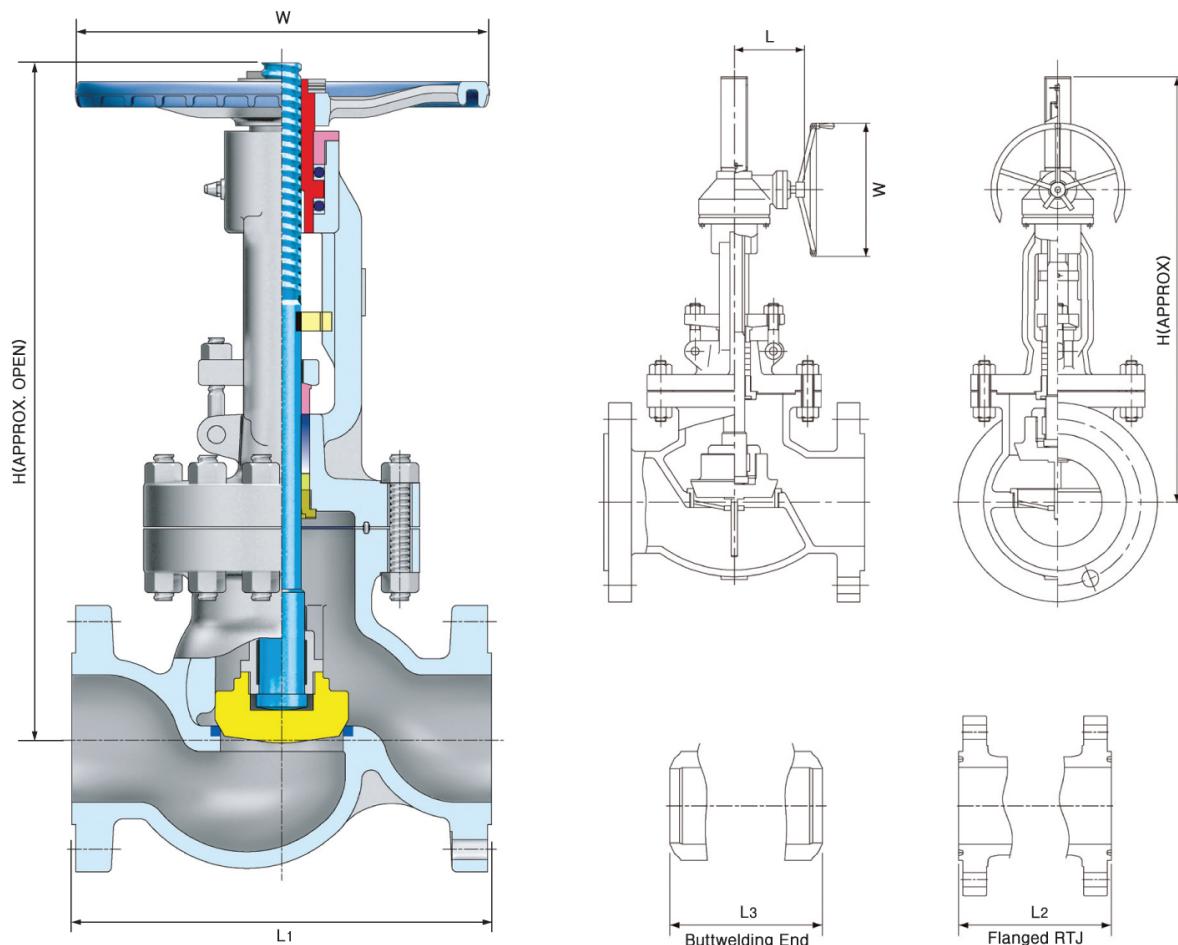
ASME CLASS 900LB



VALVE SIZE	inch	2	2 1/2	3	4	5	6	8	10	12	14
	mm	50	65	80	100	125	150	200	250	300	350
L1 & L3	inch	14.5	16.5	15.0	18.0	22.0	24.0	29.0	33.0	38.0	40.5
	mm	368	419	381	457	559	610	737	838	965	1029
L2	inch	14.62	16.62	15.12	18.12	22.13	24.12	29.12	33.12	38.12	40.88
	mm	371	422	384	460	562	613	740	841	968	1038
H	inch	27.4	27.4	30.5	33.7	53.1	58.6	65.69	63.0	67.1	87.0
	mm	695	695	775	855	1350	1488	1665	1600	1705	2210
W	inch	15.7	15.7	15.7	15.7	19.7	22.0	31.5	31.5	35.4	35.4
	mm	400	400	400	400	500	560	800	800	900	900
L	inch	-	-	-	-	-	16.3	20.7	20.7	26.4	26.4
	mm	-	-	-	-	-	414	526	526	670	670
WEIGHT	LB	176.4	271.2	154	441	815.9	1101.5	2756.3	4520.3	5843.3	8048.3
	Kg	80	123	161	200	370	500	1250	2050	2650	3650

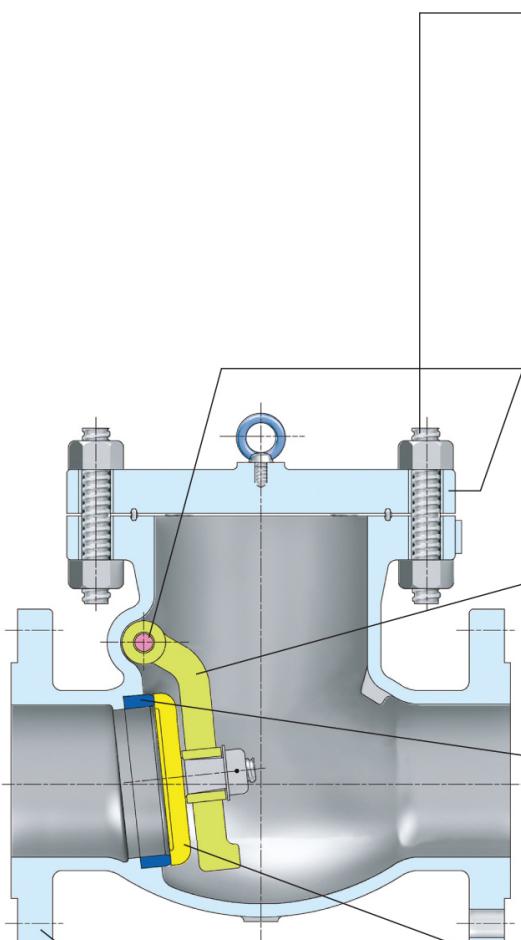
CAST STEEL / BOLTED BONNET

ASME CLASS 1500LB



VALVE SIZE	inch	2	2 1/2	3	4	5	6	8	10	12	14
	mm	50	65	80	100	125	150	200	250	300	350
L1 & L3	inch	14.5	16.5	18.5	21.5	26.5	27.75	32.75	39.0	44.5	49.5
	mm	368	419	470	546	673	705	832	991	1130	1257
L2	inch	14.62	16.62	18.62	21.62	26.61	28.0	33.13	39.38	45.12	50.25
	mm	371	422	473	549	676	711	842	1000	1146	1276
H	inch	27.4	27.4	31.5	40.0	57.1	64.8	77.2	91.0	105.1	126.0
	mm	695	695	799	1015	1450	1645	1960	2310	2670	3200
W	inch	15.7	15.7	19.7	19.7	24.8	28.0	28.0	30.0	30.0	30.0
	mm	400	400	500	500	630	710	710	760	760	760
L	inch	-	-	-	-	-	18.4	18.4	20.2	20.2	22.3
	mm	-	-	-	-	-	468	468	512	512	567
WEIGHT	LB	271.2	341.8	396.9	749.7	1124.6	1482	4630.5	7055.0	9702.0	11907.0
	Kg	123	155	180	340	510	627	2100	3200	4400	5400

SWING CHECK VALVES



■ BOLTING

The body-cover bolting conforms with ANSI B 1.1
The nuts are manufactured to conform ANSI B 18.2.2

■ 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 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

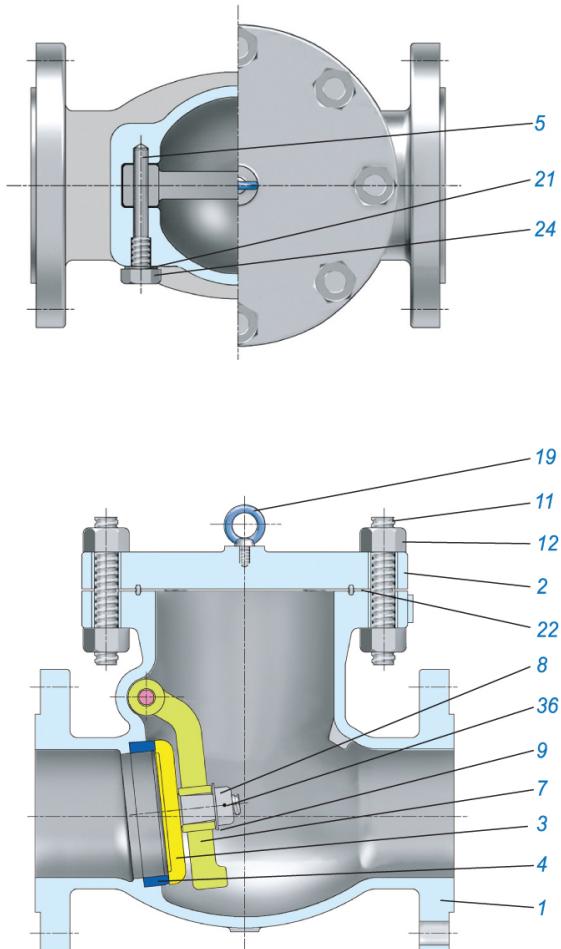
The disc has a sufficient seating surface area which is ground and lapped to a mirror finish. It is of one-piece construction and is heat treated to deliver the required mechanical properties and hardness.

■ BODY

The cast steel body is designed with a wall thickness which is greater at any point than the minimum requirement provided by API Std. 600 or API6D. Port and seat passage dimensions conform to ANSI B 16.5 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.

CAST CARBON STEEL / BOLTED COVER

SWING CHECK VALVES



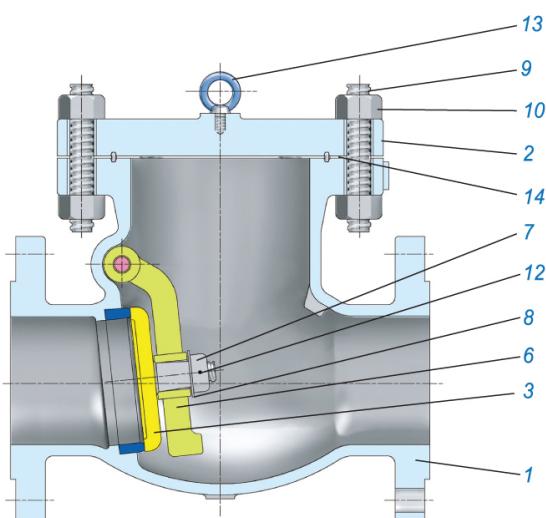
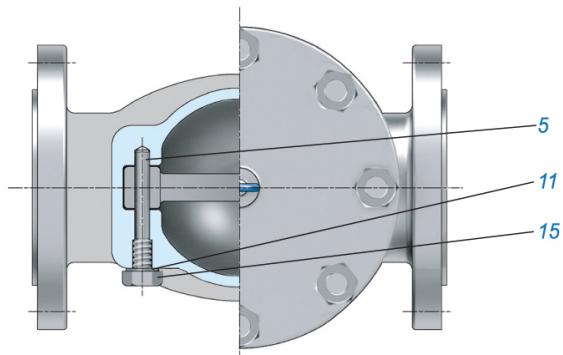
No.	NAME OF PART	ASTM SPECIFICATION
8	DISC NUT	AISI 304
9	DISC WASHER	AISI 304
19	EYE BOLT(6"&OVER)	A307.B
21	PLUG GASKET	A307.B
22	GASKET	SEE PAGE 44
24	PLUG	A307.B
36	SPLIT PIN	AISI 304

No.	NAME OF PART	ASTM SPECIFICATION					KS SPECIFICATION
		STANDARD	HIGH TEMPERATURE SERVICE			LOW TEMPERATURE SERVICE	
1	BODY	A216-WCB	A217-WC1	A217-WC6	A217-WC9	A217-C5	A352-LCB
2	COVER	A216-WCB	A217-WC1	A217-WC6	A217-WC9	A217-C5	A352-LCB
3	*DISC	A217-CA15	A217-WC1	A217-WC6	A217-WC9	A217-C5	A352-LCB
4	BODY SEAT RING	C/S1020+HF	A182-F1	A182-F11	A182-F22	A182-F5a	A182-F304
5	HINGE PIN	A276-410	A276-410	A276-410	A276-410	A276-410	STEEL+HF
7	ARM	A216-WCB	A216-WC1	A216-WC6	A216-WC9	A217-C5	STS410
11	COVER BOLT	A193-B7	A193-B7	A193-B16	A193-B16	A193-B16	SM45C
12	COVER NUT	A194-2H	A194-2H	A194-4	A194-4	A194-4	SNB7

*DISC : In case of 12" and larger size, we'll use trim material overlayed one on the same or equivalent material of the Body

CAST STAINLESS STEEL / BOLTED COVER

SWING CHECK VALVES

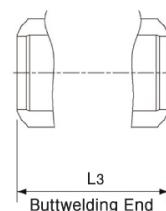
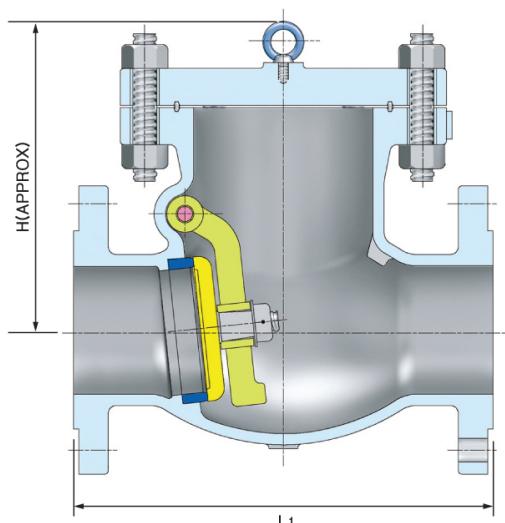
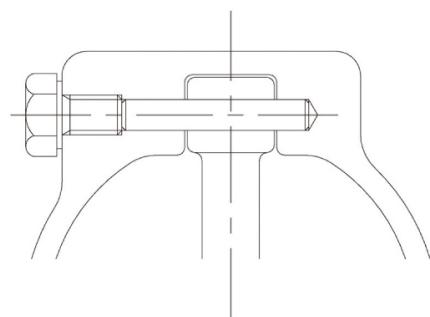
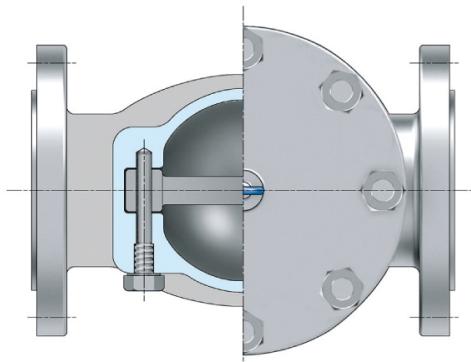


No.	NAME OF PART	ASTM SPECIFICATION CORROSION SERVICE				REMARKS
		A351-CF8	A351-CF8M	A351-CF3	A351-CF3M	
1	BODY	A351-CF8	A351-CF8M	A351-CF3	A351-CF3M	
2	COVER	A351-CF8	A351-CF8M	A351-CF3	A351-CF3M	
3	DISC	A351-CF8	A351-CF8M	A351-CF3	A351-CF3M	
5	HINGE PIN	A276-304	A276-316	A276-304L	A276-316L	
6	ARM	A351-CF8	A351-CF8M	A351-CF3	A351-CF3M	
7	DISC NUT	A194-8	A194-8M	A194-8M	A194-8M	
8	WASHER	A240-304	A240-316	A240-304L	A240-316L	
9	COVER BOLT	A193-B8	A193-B8	A193-B8	A193-B8	
10	COVER NUT	A194-8	A194-8	A194-8	A194-8	
11	PLUG GASKET	COMMERCIAL	COMMERCIAL	COMMERCIAL	COMMERCIAL	
12	SPLIT PIN	A580-304	A580-304	A580-304	A580-304	
13	EYE BOLT(6"&OVER)	A307-B	A307-B	A307-B	A307-B	
14	GASKET	COMMERCIAL	COMMERCIAL	COMMERCIAL	COMMERCIAL	NOTE1
15	PLUG	A276-304	A276-316	A276-304L	A276-316L	

*Note1. Gasket material : customer's requirements, see page 44

CAST STEEL / BOLTED COVER

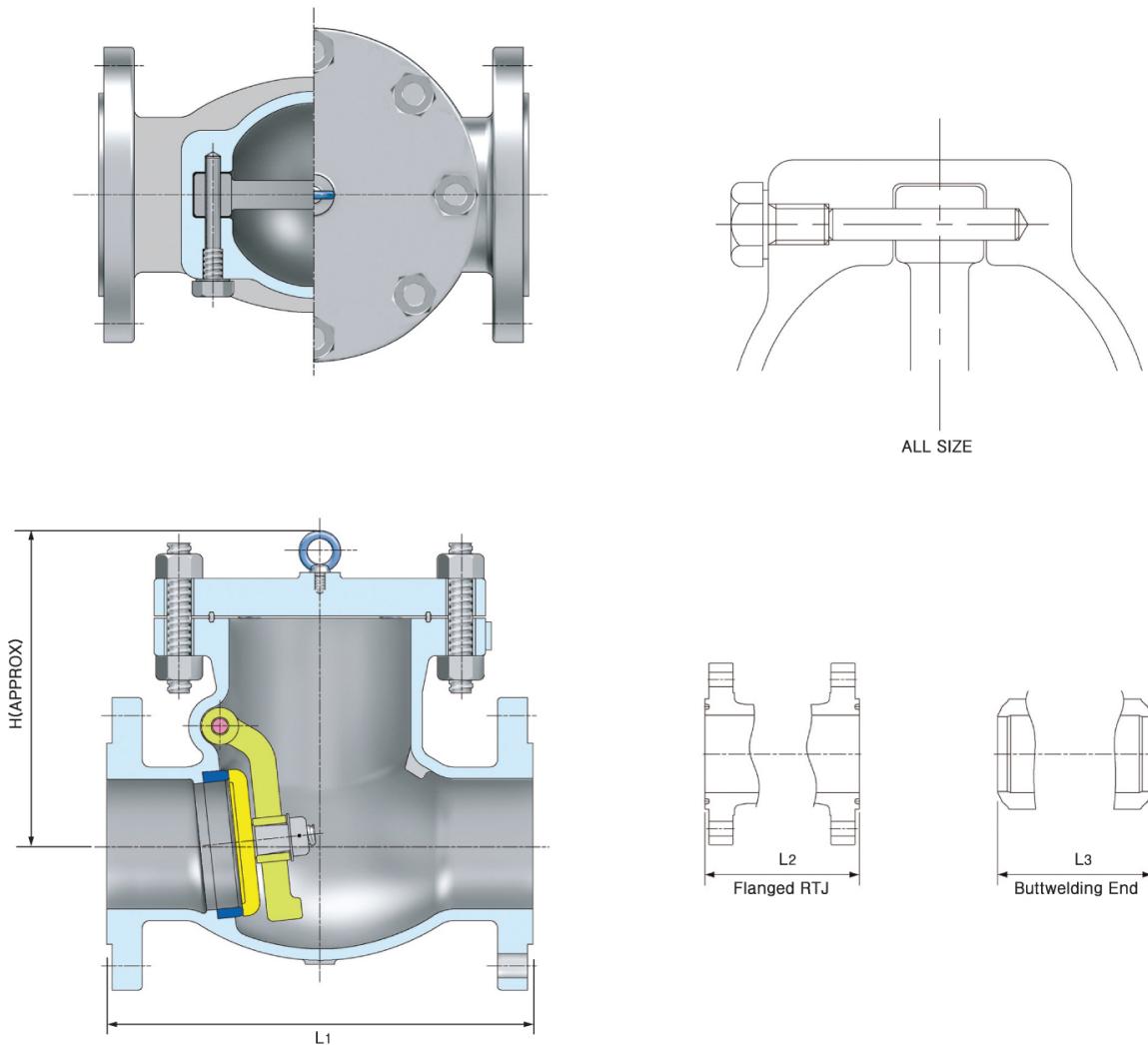
ASME CLASS 150LB



VALVE SIZE	inch	2	2 1/2	3	4	5	6	8	10	12	14	16	18	20	24	28	30
L1 & L3	inch	8.0	8.5	9.5	11.5	13.0	14.0	19.5	24.5	27.5	31.0	34.0	38.5	38.5	51.0	57.0	60.0
H	inch	6.1	6.7	7.3	7.9	9.3	10.0	12.0	13.6	15.0	18.1	21.5	25.6	26.4	35.4	40.0	45.2
WEIGHT	LB	33.1	48.5	59.5	90.4	143.3	176.4	313.1	390.3	639.5	862.2	1016.5	1411.2	1719.9	3285.5	4520.3	6392.3
	Kg	15	22	27	41	65	80	142	177	290	391	461	640	780	1490	2050	2899

CAST STEEL / BOLTED COVER

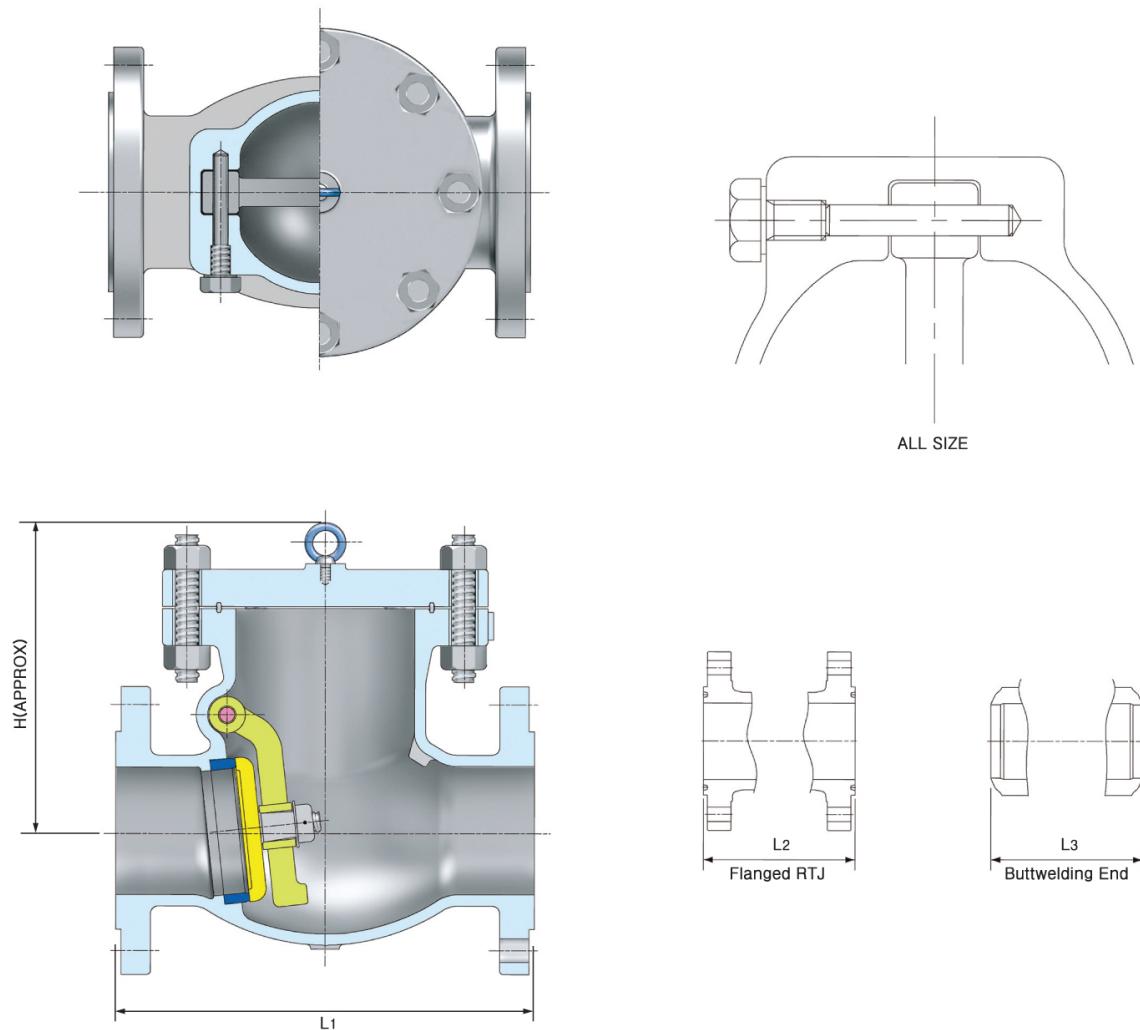
ASME CLASS 300LB



VALVE SIZE	inch	2	2 1/2	3	4	5	6	8	10	12	14	16	18	20	24	28
	mm	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700
L1 & L3	inch	10.5	11.5	12.5	14.0	15.75	17.5	21.0	24.5	28.0	33.0	34.0	38.5	40.0	53.0	59.0
	mm	267	292	318	356	400	444	533	622	711	838	864	978	1016	1346	1499
L2	inch	11.12	12.12	13.12	14.62	16.38	18.12	21.62	25.12	28.62	33.62	34.62	39.12	40.75	53.88	60.0
	mm	283	308	333	371	416	460	549	638	727	854	880	994	1035	1369	1524
H	inch	6.9	7.5	8.1	8.7	11.6	12.8	14.5	18.6	20.9	22.8	27.4	31.4	30.6	39.6	45.2
	mm	175	190	205	220	295	326	368	473	530	580	695	797	776	1007	1149
WEIGHT	LB	41.9	66.2	77.2	119.1	198.5	282.4	463.1	590.9	915	1503.8	1647.1	2756.3	3307.5	4917.2	6504.8
	Kg	19	30	35	54	90	128	210	268	415	682	747	1250	1500	2230	2950

CAST STEEL / BOLTED COVER

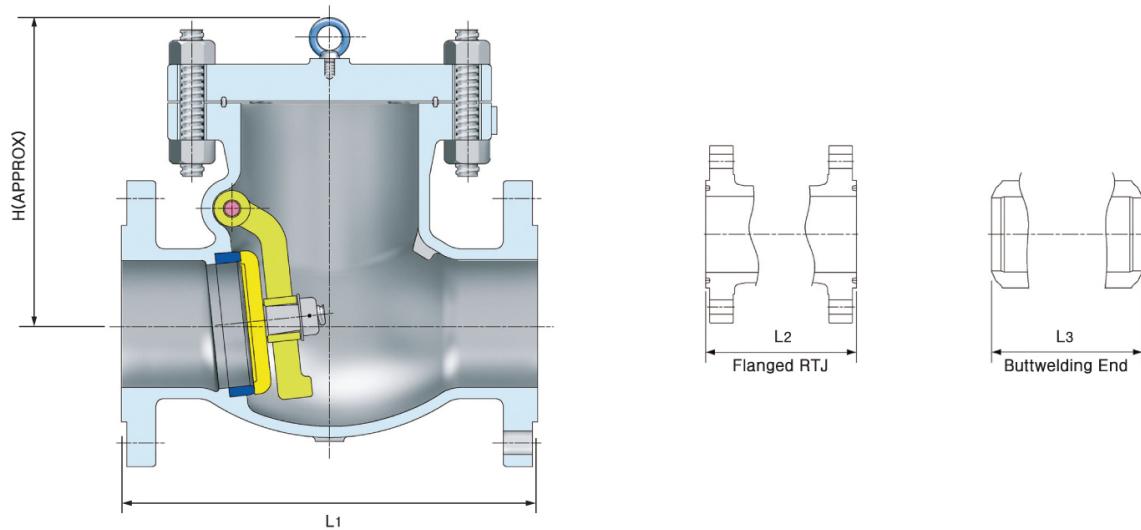
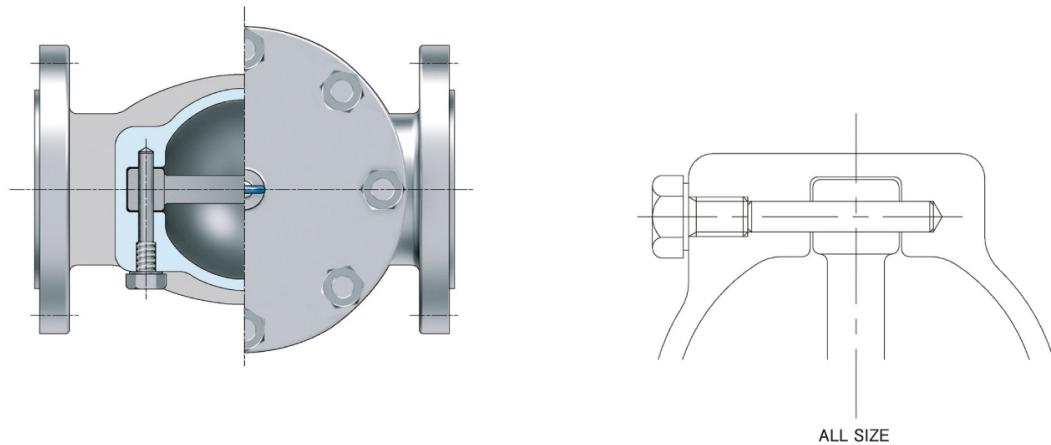
ASME CLASS 600LB



VALVE SIZE	inch	2	2 1/2	3	4	5	6	8	10	12	14	16	18	20	24
	mm	50	65	80	100	125	150	200	250	300	350	400	450	500	600
L1 & L3	inch	11.5	13.0	14.0	17.0	20.0	22.0	26.0	31.0	33.0	35.0	39.0	43.0	47.0	55.0
	mm	292	330	356	432	508	559	660	787	838	889	991	1092	1194	1397
L2	inch	11.62	13.12	14.12	17.12	20.12	22.12	26.12	31.12	33.12	35.12	39.12	43.12	47.25	55.38
	mm	295	333	359	435	511	562	664	791	841	892	994	1095	1200	1407
H	inch	7.5	8.3	9.6	11.8	13.3	15.7	16.9	20.7	24.2	27.6	32.0	37.8	40.5	457.3
	mm	190	210	235	300	337	400	430	525	615	700	812	960	1029	1202
WEIGHT	LB	77.2	119.1	141.1	229.3	330.8	449.8	793.8	1367.1	1775.0	2306.4	2976.8	4454.1	5269.9	7717.5
	Kg	35	54	64	104	150	204	360	620	805	1046	1350	2020	2390	3500

CAST STEEL / BOLTED COVER

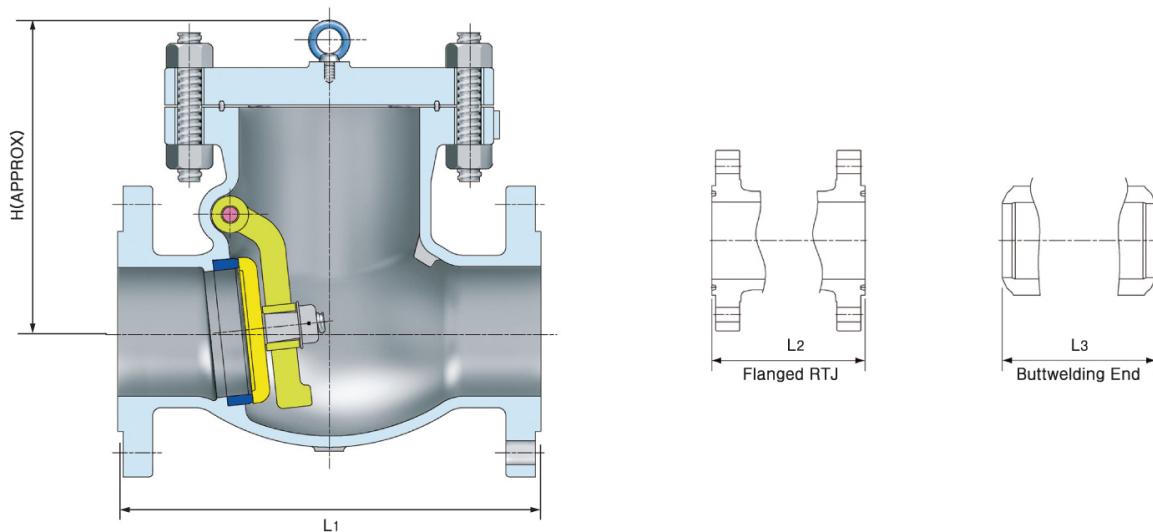
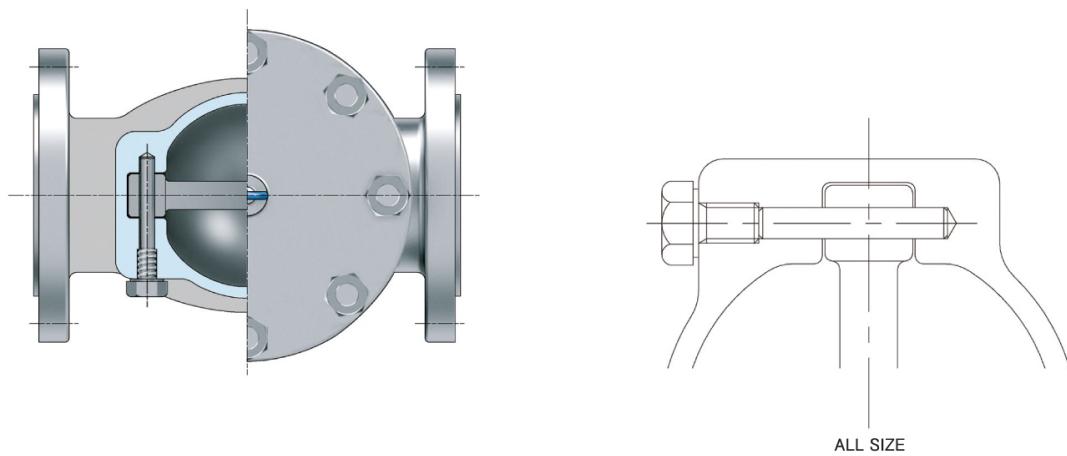
ASME CLASS 900LB



VALVE SIZE	inch	2	2 1/2	3	4	5	6	8	10	12	14	16
	mm	50	65	80	100	125	150	200	250	300	350	400
L1 & L3	inch	14.5	16.5	15.0	18.0	22.0	24.0	29.0	33.0	38.0	40.5	44.5
	mm	368	419	381	457	559	610	737	838	965	1029	1130
L2	inch	14.62	16.62	15.12	18.12	22.13	24.12	29.12	33.12	38.12	40.88	44.88
	mm	371	422	384	460	562	613	740	841	968	1038	1140
H	inch	13.1	13.7	12.6	16.7	17.4	18.9	22.2	28.3	30.7	31.8	33.0
	mm	333	349	321	423	441	479	565	721	781	807	838
WEIGHT	LB	154.4	242.6	242.6	471.4	735.6	837.9	1375.9	2535.8	3197.3	3858.8	5336.1
	Kg	70	110	110	214	320	380	624	1150	1450	1750	2420

CAST STEEL / BOLTED COVER

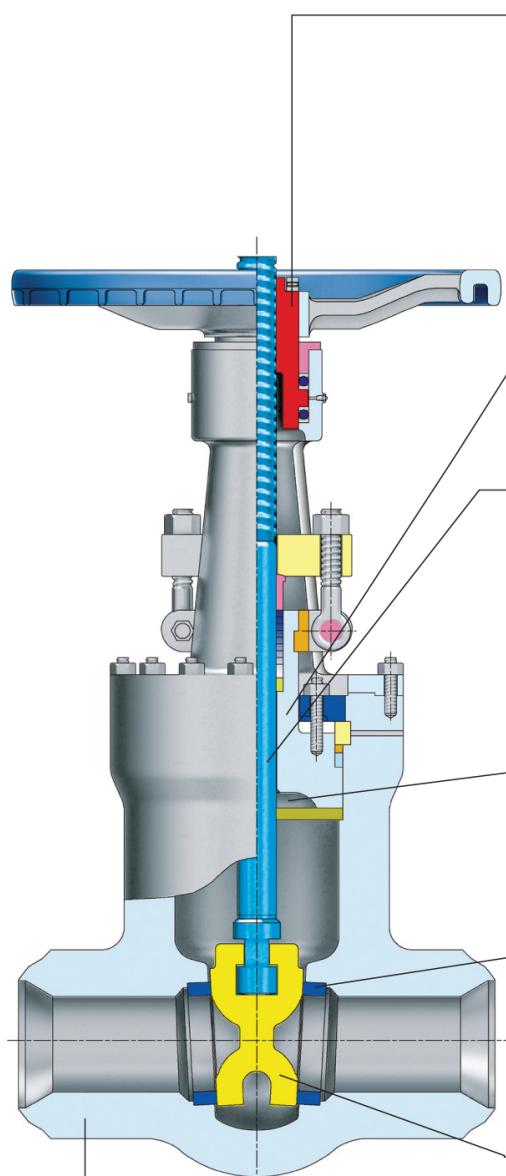
ASME CLASS 1500LB



VALVE SIZE	inch	2	2 1/2	3	4	5	6	8	10	12	14
	mm	50	65	80	100	125	150	200	250	300	350
L1 & L3	inch	14.5	16.5	18.5	21.5	26.5	27.75	32.75	39.0	44.5	49.5
	mm	368	419	470	546	673	705	832	991	1130	1257
L2	inch	14.62	16.62	18.62	21.62	26.61	28.0	33.13	39.38	45.12	50.25
	mm	371	422	473	549	676	711	842	1000	1146	1276
H	inch	13.1	13.7	15.3	16.5	18.9	23.1	26.8	29.8	39.7	40.8
	mm	333	349	389	419	479	587	680	756	1008	1035
WEIGHT	LB	154.4	242.6	374.9	661.5	1036.4	1532.5	2624.0	4079.3	7342.7	7938
	Kg	70	110	170	300	470	695	1190	1850	3330	3600

CAST STEEL / PRESSURE SEAL BONNET

GATE VALVES



■ STEM NUT

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 a 1150°C (2100° F) dissolution point in accordance with API Std. Specifications.

■ BONNET

The bonnet is of a steel forging identical to the body to insure high reliability. The bonnet has a perfect body-bonnet seal and both ease of dismantling and reassembly are endured. The bodies and bonnets of the valve are machined by special purpose machines to achieve perfect coaxiality and eliminate any misalignment which may damage the stems.

■ STEM

The machined forged stem comes with a T-shape head, which connects the slot of the wedge. The contacting surface of the head is spherically shaped, thereby giving it greater strength and durability. It is heat treated to give it adequate mechanical properties and surface hardness. Accurate machining and lapping insure minimized friction during opening and shutting.

■ BACK SEAT

All of our valves are provided with positive back seat, and packing replacement can be done with the valve fully open. The conical seat and the guide are integrally stellite faced.

■ SEAT RING

The Stellite 6 surface of the seat ring is integrally applied to the body by means of welding in all valve sizes. Lapping applied to the seating surface ensures perfect mating with the wedge surfaces.

■ FLEXIBLE WEDGE

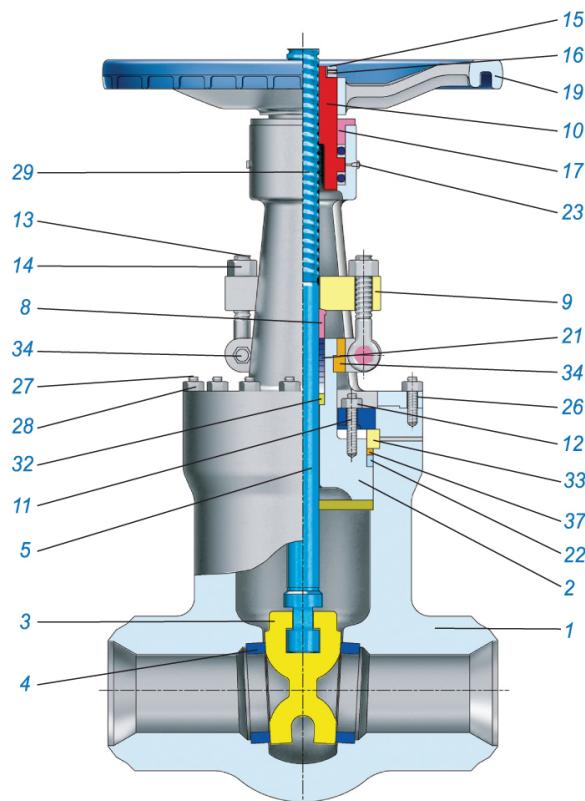
The flexible wedge designed to absorb thermally-induced body distortion, thereby making it ideal for high temperature steam or water supply piping. A Stellite 6 layer is applied to the seating surface, and this deposit is subjected to a special heat treatment to secure required hardness and soundness. The lapped finish then insures perfect mating with the seats.

■ BODY

The valve body is cylindrically shaped to prevent distortion or undue stress during extreme working conditions. In addition, adequate padding helps to achieve a sound cast structure in critical area. The wall thickness is greater than, or in accordance with API, ANSI and ASME requirements. The contact surfaces ensure that a minimum specific pressure is achieved. The area contacting the pressure seal gasket has a stainless steel 18/8 inlay to eliminate corrosion or wire drawing and to insure easy dismantling at all times. The close tolerances of the inside diameter of this area are attained by accurate machining and honing finish.

CAST STEEL / PRESSURE SEAL BONNET

GATE VALVES

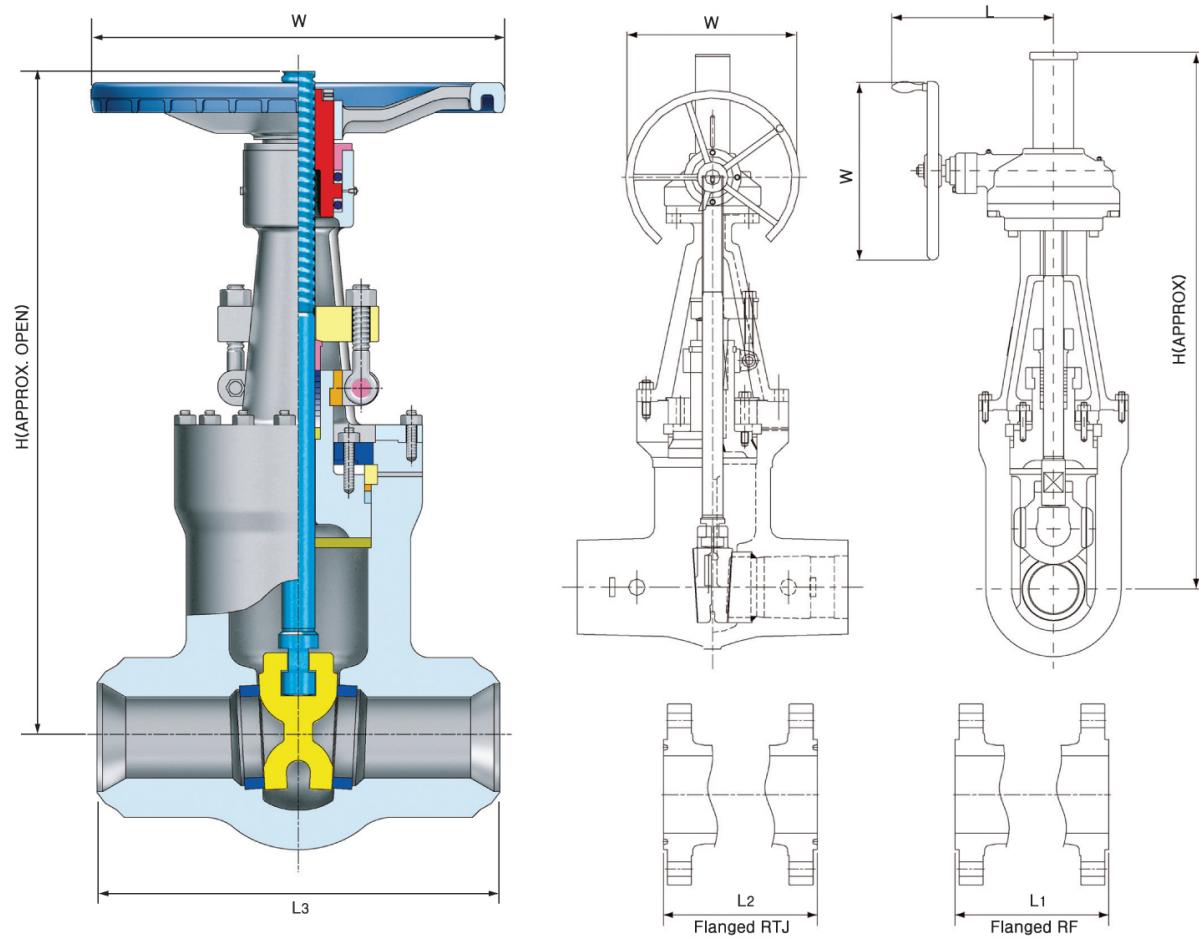


No.	NAME OF PART	ASTM SPECIFICATION
15	HANDLE NUT	STEEL
16	SET SCREW	STEEL
17	SLEEVE GLAND	STEEL
19	HANDWHEEL	A395
21	PACKING	SEE PAGE 44
22	GASKET	SEE PAGE 44
23	GREASE NIPPLE	STEEL
29	BEARING	COMMERCIAL

No.	NAME OF PART	ASTM SPECIFICATION					KS SPECIFICATION STANDARD
		STANDARD		HIGH TEMPERATURE SERVICE			
1	BODY	A216-WCB	A217-WC1	A217-WC6	A216-WC9	A217-C5	A352-LCB A352-LC1/LC2/LC3
2	BONNET	A216-WCB	A217-WC1	A217-WC6	A216-WC9	A217-C5	A352-LCB A352-LC1/LC2/LC3
3	DISC	A216-WCB+HF	A217-WC1+HF	A217-WC6+HF	A216-WC9+HF	A217-C5+HF	A352-LCB+304 A352-LC1/LC2/LC3
4	BODY SEAT RING	A105+HF	A182-F1	A182-F11	A182-F22	A182-F5a	A182-F304 A182-F304
5	STEM	A276-410	A276-410	A276-410	A276-410	A276-410	A276-304 A276-304
8	PACKING GLAND	A276-410	A276-410	A276-410	A276-410	A276-410	A276-304 A276-304
9	GLAND FLANGE	A105/A283-D	A105/A283-D	A105/A283-D	A105/A283-D	A105/A283-D	A105/A283-D A105/A283-D
10	YOKE SLEEVE	A439-D2	A439-D2	A439-D2	A439-D2	A439-D2	A439-D2 A439-D2
11	BONNET BOLT	A193-B7	A193-B7	A193-B16	A193-B16	A193-B16	A320-L7 A320-L7
12	BONNET NUT	A194-2H	A194-2H	A194-4	A194-4	A194-4	A194-4 A194-4
13	GLAND BOLT	A307-B	A307-B	A307-B	A307-B	A307-B	A307-B A307-B
14	GLAND NUT	A307-B	A307-B	A307-B	A307-B	A307-B	A307-B A307-B
26	YOKE	A216-WCB	A216-WCB	A216-WCB	A216-WCB	A216-WCB	A216-WCB A216-WCB
27	YOKE BOLT	A193-B7	A193-B7	A193-B7	A193-B7	A193-B7	A193-B7 A193-B7
28	YOKE NUT	A194-2H	A194-2H	A194-2H	A194-2H	A194-2H	A194-2H A194-2H
32	PACKING WASHER	A276-410	A276-410	A276-410	A276-410	A276-410	A276-304 A276-304
33	RETAINER	A240-304	A240-304	A240-304	A240-304	A240-304	A240-304 A240-304
34	HINGE CLAMP	A216-WCB	A216-WCB	A216-WCB	A216-WCB	A216-WCB	A216-WCB A216-WCB
35	BONNET CLAMP	A108-1045	A108-1045	A108-1045	A108-1045	A108-1045	A108-1045 A108-1045
37	GASKET SPACER	A276-410	A276-410	A276-410	A276-410	A276-410	A276-410 A276-410

CAST STEEL / PRESSURE SEAL BONNET

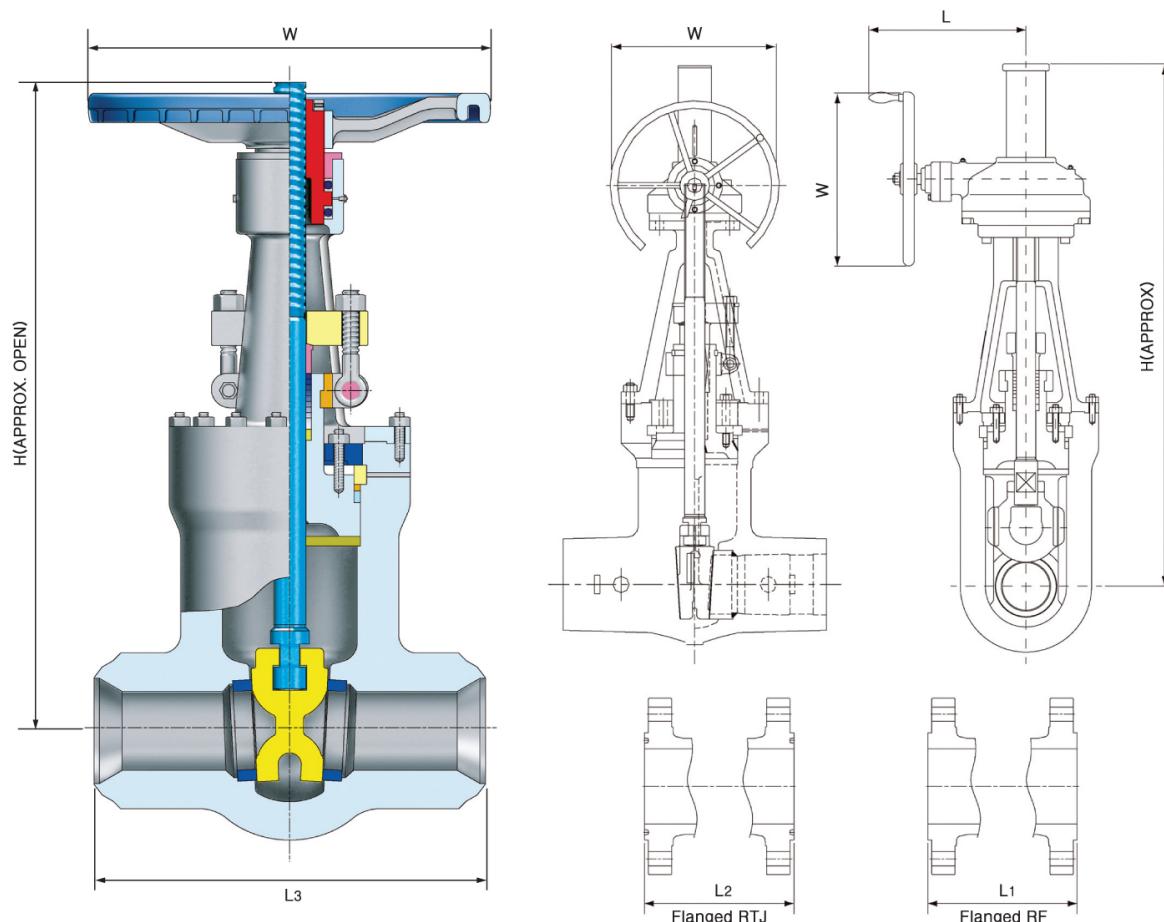
ASME CLASS 600LB



VALVE SIZE	inch	2	2 1/2	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
L3	inch	7.0	8.5	10.0	12.0	18.0	23.1	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
L2	inch	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	1407
L1	inch	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	559	660	787	838	889	991	1092	1194	1397
H	inch	23.2	24.8	26.3	36.0	42.5	49.9	59.5	70.5	73.1	85.4	88.6	97.2	118.1
	mm	590	629	667	914	1080	1267	1511	1791	1857	2162	2251	2470	3000
W	inch	7.9	93.8	9.8	11.8	19.7	22.0	272.2	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
L	inch	-	-	-	-	-	-	17.0	17.0	20.2	20.2	20.2	21.8	
	mm	-	-	-	-	-	-	432	432	512	512	512	554	
WEIGHT	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	95	100	148	245	320	430	515	670	905	1150	1445	2080

CAST STEEL / PRESSURE SEAL BONNET

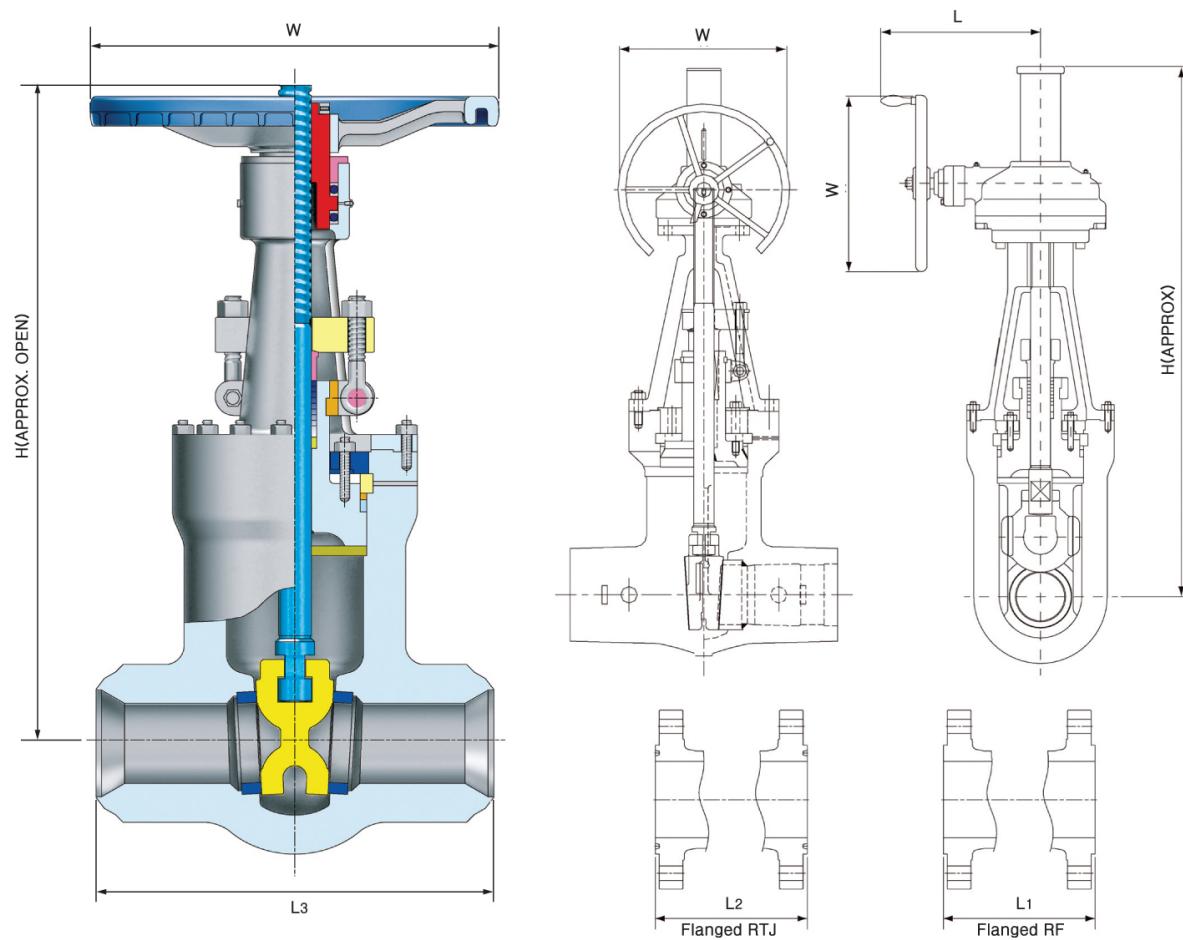
ASME CLASS 900LB



VALVE SIZE	inch	2	2 1/2	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
L3	inch	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
L2	inch	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	1334	1568
L1	inch	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
H	inch	23.4	29.6	29.8	34.0	39.9	50.2	60.7	70.1	79.8	89.0	97.2	108.3	1276.6
	mm	594	753	756	864	1013	1276	1543	1781	2026	2261	2470	2750	3242
W	inch	11.8	17.7	17.7	19.7	220	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
L	inch	-	-	-	-	-	16.8	17.0	20.0	20.2	20.2	21.8	21.8	20.1
	mm	-	-	-	-	-	427	432	512	512	512	554	554	512
WEIGHT	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

CAST STEEL / PRESSURE SEAL BONNET

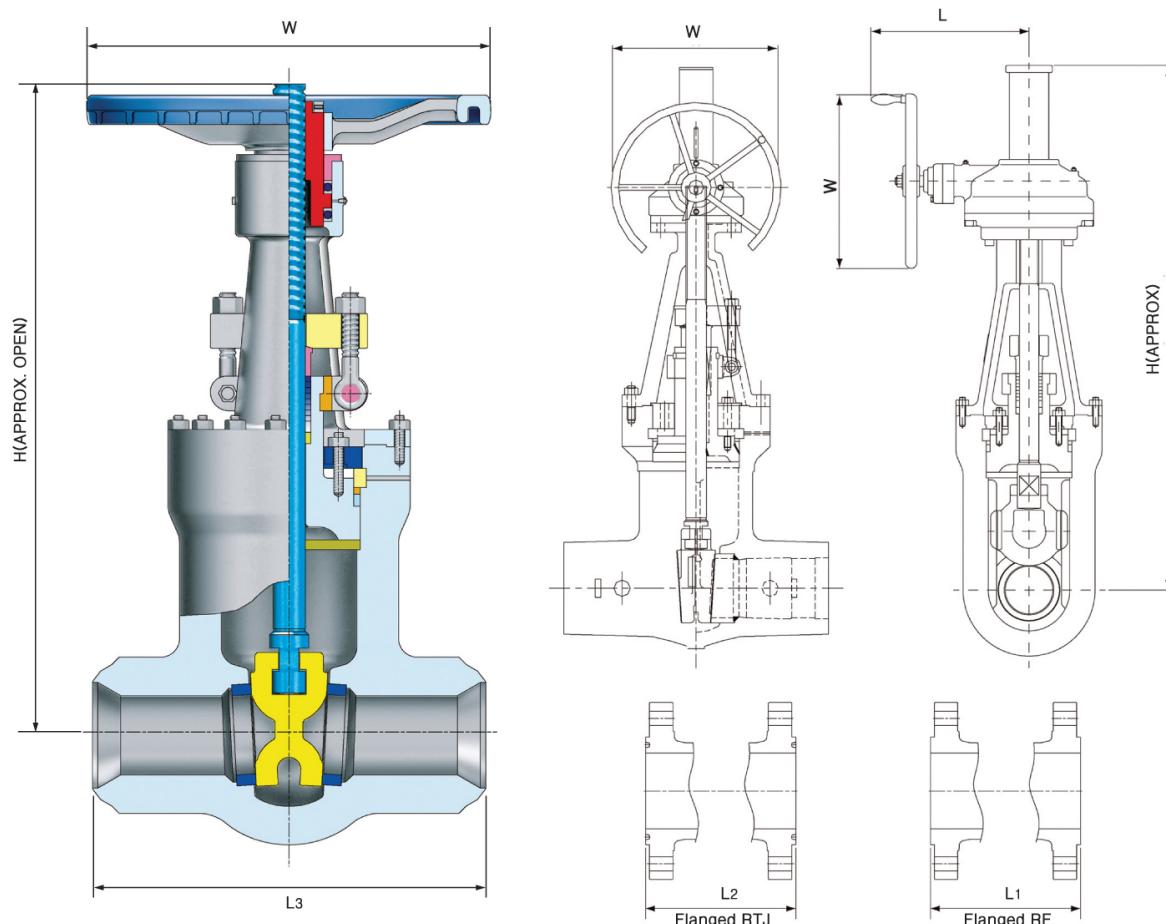
ASME CLASS 1500LB



VALVE SIZE	inch	2	2 1/2	3	4	6	8	10	12	14	16
	mm	50	65	80	100	150	200	250	300	350	400
L3	inch	8.5	10.0	12.0	16.0	22.0	28.0	34.0	39.0	42.0	47.0
	mm	216	254	305	406	559	711	864	991	1067	1194
L2	inch	14.62	16.62	18.62	21.62	28.0	33.13	39.38	45.12	5025	55.38
	mm	371	422	473	549	711	842	1000	1146	1276	1407
L1	inch	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
H	inch	23.4	29.6	29.6	34.0	48.0	51.6	64.8	77.8	87.2	91.8
	mm	594	753	753	864	1219	1311	1645	1975	2216	2331
W	inch	11.8	17.7	17.7	19.7	24.0	24.0	24.0	24.0	29.9	29.9
	mm	300	450	450	500	610	610	610	610	760	760
L	inch	-	-	-	-	17.0	17.0	20.2	20.0	21.8	21.8
	mm	-	-	-	-	432	432	512	512	554	554
WEIGHT	LB	132.3	207.3	264.6	458.6	1058.4	2006.6	3109.1	4586.4	5379.5	7933
	Kg	60	94	120	208	480	910	1410	2080	2650	3600

CAST STEEL / PRESSURE SEAL BONNET

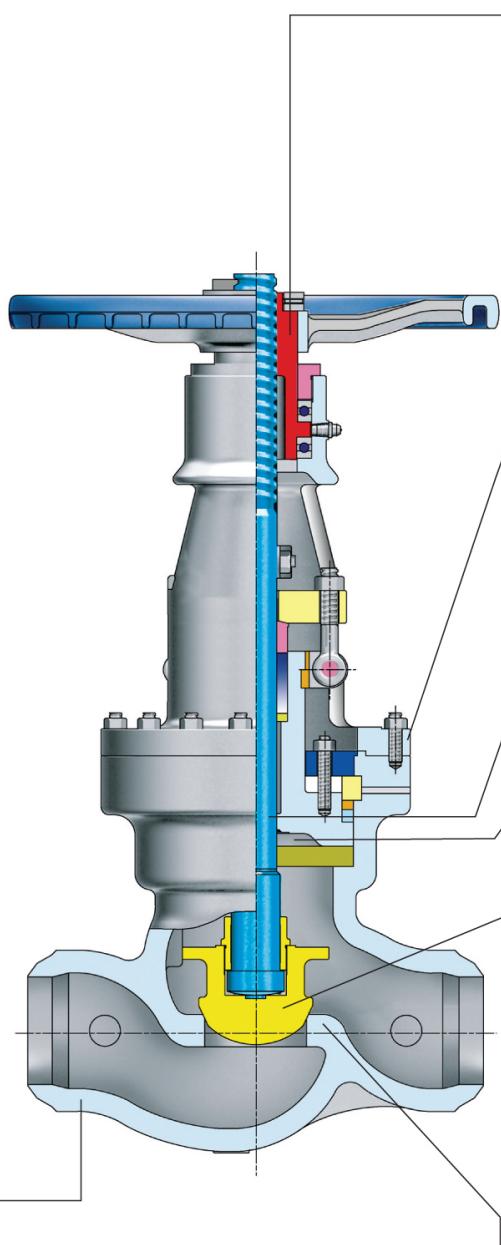
ASME CLASS 2500LB



VALVE SIZE	inch	2	2 1/2	3	4	6	8	10	12	14	16	18
	mm	50	65	80	100	150	200	250	300	350	400	450
L3	inch	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
L2	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	-	-	-
L1	inch	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	-	-	-
H	inch	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	inch	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
L	inch	-	-	-	-	17.0	20.2	20.2	21.8	21.8	20.2	20.2
	mm	-	-	-	-	432	512	512	554	554	512	512
WEIGHT	LB	172.1	273.4	334.1	568.4	954.1	1806.7	2943.5	4466.0	6902.0	10353.0	11774.0
	Kg	85	135	165	280	470	890	1450	2200	3400	5100	5800

CAST STEEL / PRESSURE SEAL BONNET

GLOBE VALVES



■ YOKE SLEEVE

The standard material of the Yoke Sleeve is Nodular Ni-resist D2 with over 1150 °C (2100° F) dissolution point in conformity with API Std. Speacifications.

■ BONNET

The bonnet is of a steel forging identical to the body to insure high reliability. The bonnet has a perfect body-bonnet seal and both ease of dismantling and reassembly are ensured. The body and bonnet of our valves are carefully machined to achieve perfect coaxiality and eliminate any misalignment which may cause damage to stems.

■ STEM

The stem, of one-piece construction, is heat treated to secure the adequate mechanical properties and surface, hardness. Accurate machining and grinding insure that there is minimized friction during valve opening/shutting. The round head of the stem gives a point contact with the inside of the disc housing and thus prevents galling.

■ BACK SEAT

All of our valves are equipped with a backseat to allow packing replacement with the valve fully opened. The conical shape contact seat in the bonnet assembly is integrally stellite faced.

■ DISC

The disc of our globes is a loose disc which freely revolves around the stem, thereby preventing friction and galling with the seating surface when the valve is shut.

The outside diameter of the disc is accurately finished and cylindrical on shape to travel along the body guides.

A stellite 6 layer is applied to the conical seating surface of the disc. The deposit Undergoes a special heat treatment to secure the required hardness and soundness. In addition, the lapped finish insures a perfect mating with the seats.

■ SEAT

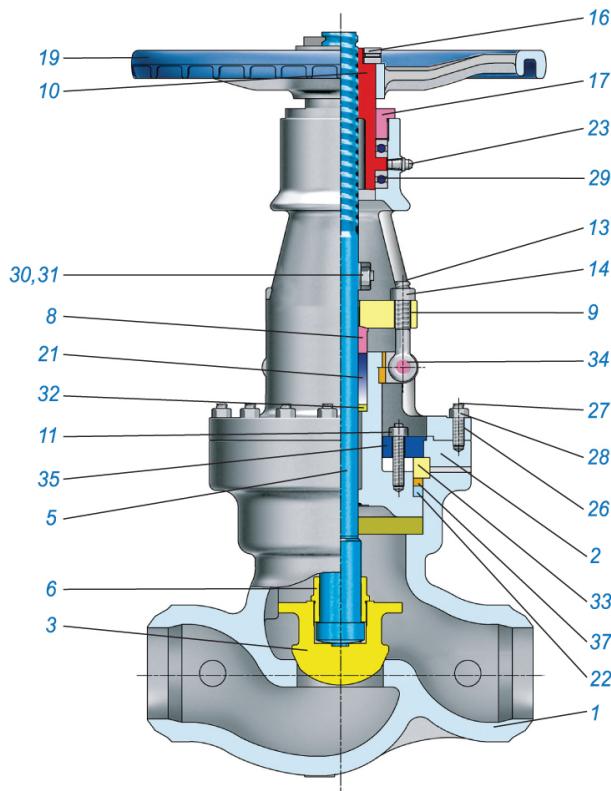
The stellite 6 seating surface is integrally applied to the body by means of welding in all valve sizes. Perfect mating the disc surfaces is achieved by lapping applied to the seating surface.

■ BODY

The cylindrically shaped valve body prevents distortion or undue stress under extreme working conditions. In addition, adequate padding ensures a sound cast structure in the critical areas. The wall thickness is greater than, or in accordance with API, ANSI and ASME requirements. The area contacting the pressure seal gasket has a stainless steel 18/8 inlay to eliminate corrosion or wire drawing. The close tolerances of the inside diameter of this area are attained by accurate machining and honing finish.

CAST STEEL / PRESSURE SEAL BONNET

GLOBE VALVES

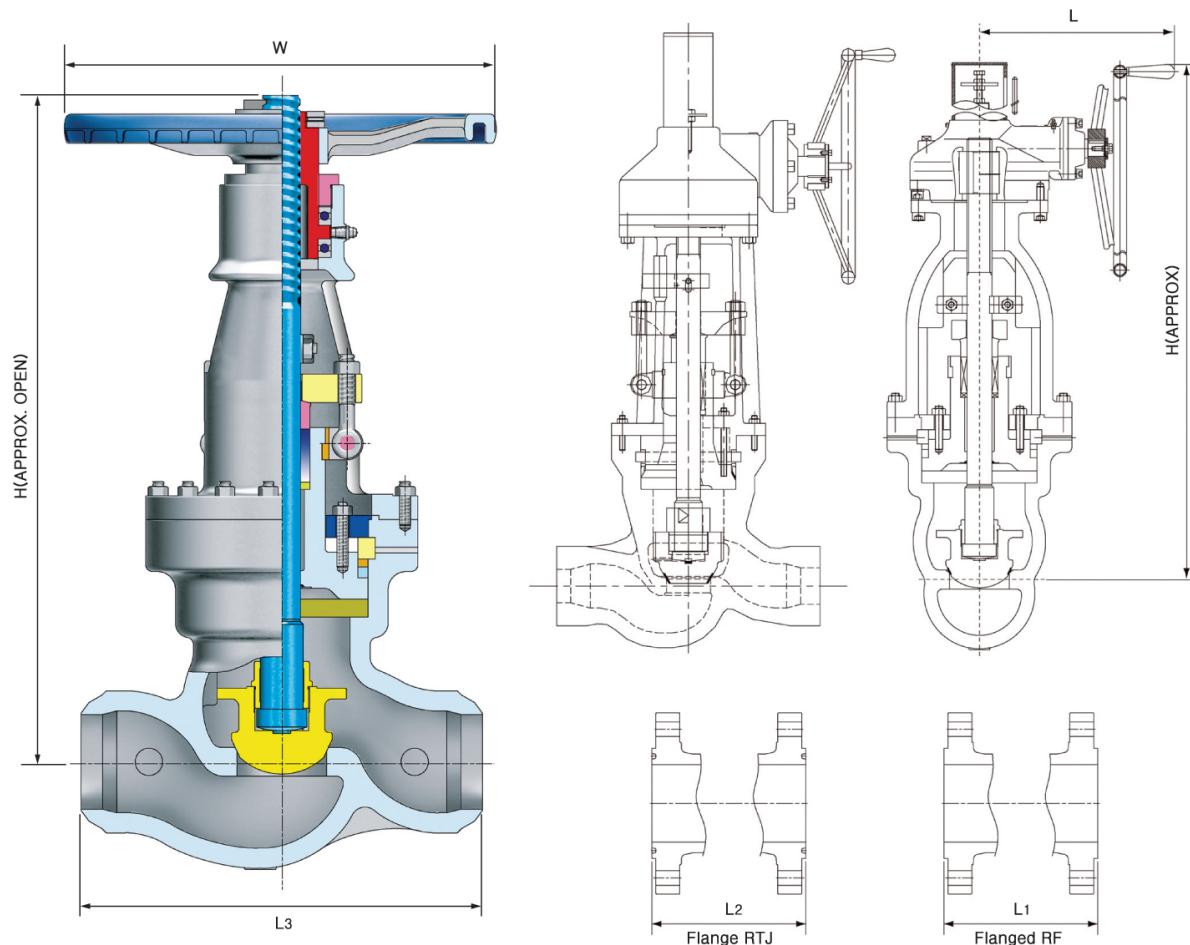


No.	NAME OF PART	ASTM SPECIFICATION
15	HANDLE NUT	STEEL
16	SET SCREW	STEEL
19	HANDWHEEL	A395
21	PACKING	SEE PAGE 44
22	GASKET	SEE PAGE 44
30	STOPPER	A283-D

No.	NAME OF PART	ASTM SPECIFICATION					KS SPECIFICATION STANDARD
		STANDARD	HIGH TEMPERATURE SERVICE			LOW TEMPERATURE SERVICE	
1	BODY	A216-WCB	A217-WC1	A217-WC6	A217-WC9	A217-C5	A352-LCB A352-LC1/LC2/LC3
2	BONNET	A216-WCB	A217-WC1	A217-WC6	A217-WC9	A217-C5	A352-LCB A352-LC1/LC2/LC3
3	DISC	A216-WCB+HF	A217-WC1+HF	A217-WC6+HF	A217-WC9+HF	A217-C5+HF	A352-LCB+304 A352-LC1/LC2/LC3
5	STEM	A276-410	A276-410	A276-410	A276-410	A276-410	A276-304 A276-304
6	DISC GLAND	A276-410	A276-410	A276-410	A276-410	A276-410	A276-304 A276-304
8	PACKING GLAND	A276-410	A276-410	A276-410	A276-410	A276-410	A276-304 A276-304
9	GLAND FLANGE	A283-D	A283-D	A283-D	A283-D	A283-D	A283-D A283-D
10	YOKE SLEEVE	A439-D2	A439-D2	A439-D2	A439-D2	A439-D2	A439-D2 A439-D2
11	BONNET FLANGE BOLT	A193-B7	A193-B7	A193-B16	A193-B16	A193-B16	A320-L7 A320-L7
13	GLAND BOLT	A307-B	A307-B	A307-B	A307-B	A307-B	A307-B A307-B
14	GLAND NUT	A307-B	A307-B	A307-B	A307-B	A307-B	A307-B A307-B
26	YOKE	A216-WCB	A216-WCB	A216-WCB	A216-WCB	A216-WCB	A216-WCB A216-WCB
27	YOKE BOLT	A193-B7	A193-B7	A193-B7	A193-B7	A193-B7	A193-B7 A193-B7
28	YOKE NUT	A194-2H	A194-2H	A194-2H	A194-2H	A194-2H	A194-2H A194-2H
31	STOPPER PIN	A307-B	A307-B	A307-B	A307-B	A307-B	A307-B A307-B
32	PACKING WASHER	A276-410	A276-410	A276-410	A276-410	A276-410	A276-304 A276-304
33	RETAINER	A276-410	A276-410	A276-410	A276-410	A276-410	A276-304 A276-304
34	HINGE CLAMP	A216-WCB	A216-WCB	A216-WCB	A216-WCB	A216-WCB	A216-WCB A216-WCB
35	BONNET CLAMP	A108-1045	A108-1045	A108-1045	A108-1045	A108-1045	A108-1045 A108-1045
37	GASKET SPACER	A276-410	A276-410	A276-410	A276-410	A276-410	A276-304 A276-304

CAST STEEL / PRESSURE SEAL BONNET

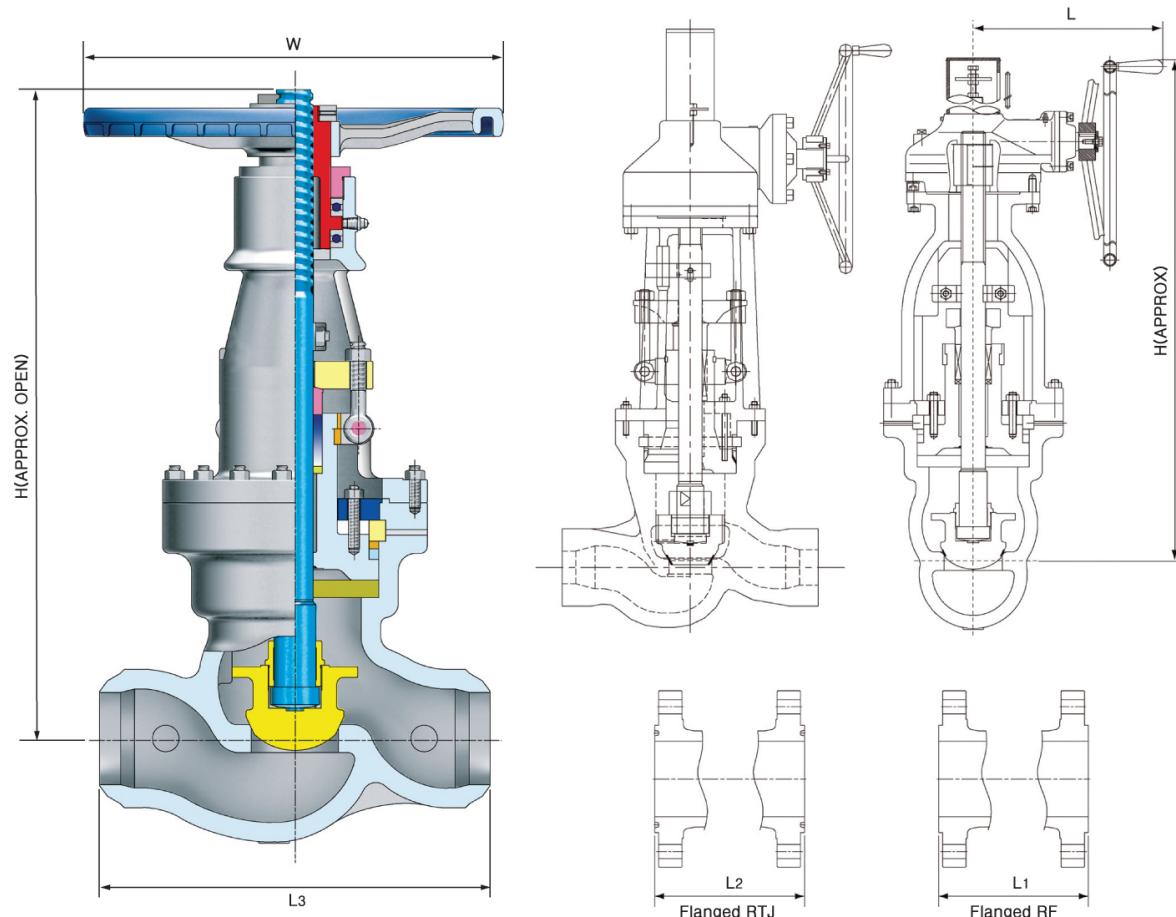
ASME CLASS 600LB



VALVE SIZE	inch	2	2 1/2	3	4	6	8	10	12	14	16
	mm	50	65	80	100	150	200	250	300	350	400
L3	inch	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
L2	inch	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	791	841	892	994
L1	inch	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	838	889	991
H	inch	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	inch	9.8	11.8	11.8	17.7	18.1	23.6	24.0	24.0	24.0	29.9
	mm	250	330	300	450	460	600	610	610	610	760
L	inch	-	-	-	-	-	20.2	17.0	20.2	20.2	22.3
	mm	-	-	-	-	-	512	432	512	512	567
WEIGHT	LB	992	121.2	187.4	297.7	672.5	1367.1	2883.6	4189.5	5997.6	6945.8
	Kg	45	55	85	135	305	620	1310	1900	2720	3150

CAST STEEL / PRESSURE SEAL BONNET

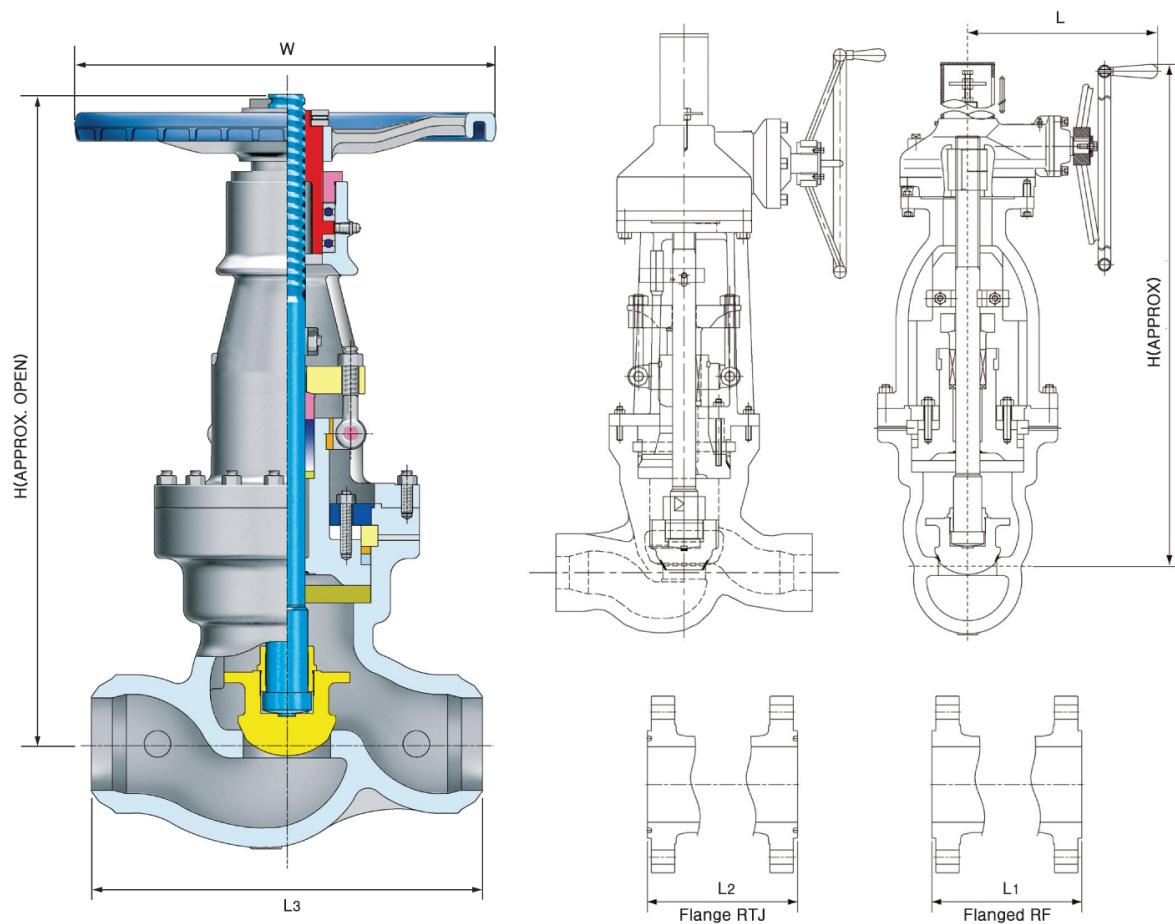
ASME CLASS 900LB



VALVE SIZE	inch	2	2 1/2	3	4	6	8	10	12	14	16
	mm	50	65	80	100	150	200	250	300	350	400
L3	inch	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
L2	inch	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
L1	inch	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
H	inch	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	inch	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
L	inch	-	-	-	-	20.2	17.0	20.2	20.2	22.3	22.3
	mm	-	-	-	-	512	432	512	512	567	567
WEIGHT	LB	176.4	242.6	231.5	374.9	926.1	2205.0	3792.6	5071.5	7386.8	8820.0
	Kg	80	110	105	170	420	1000	1720	2300	3350	4000

CAST STEEL / PRESSURE SEAL BONNET

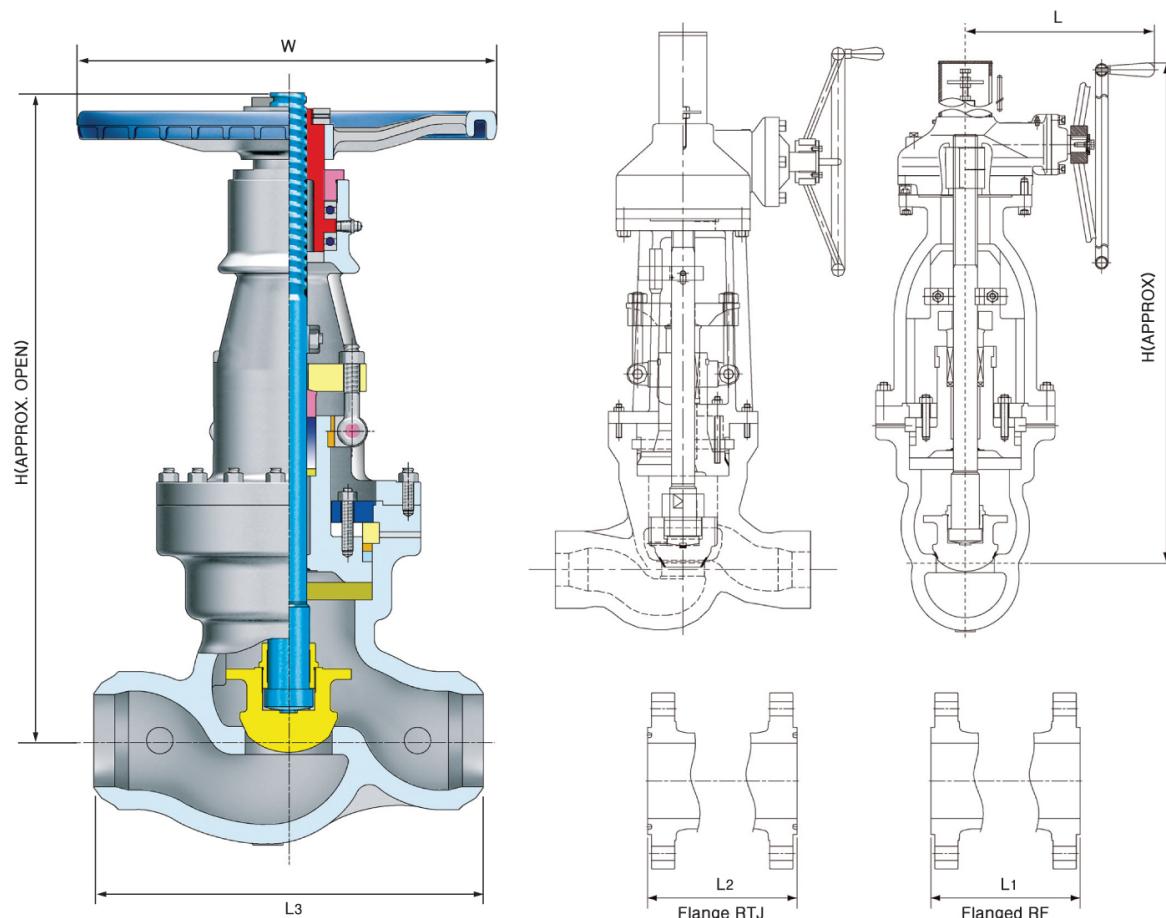
ASME CLASS 1500LB



VALVE SIZE	inch	2	2 1/2	3	4	6	8	10	12	14
	mm	50	65	80	100	150	200	250	300	350
L3	inch	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
L2	inch	14.62	16.62	18.62	21.62	28.0	33.13	39.38	45.12	50.25
	mm	371	422	473	549	711	842	1000	1146	1276
L1	inch	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
H	inch	24.4	25.3	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	inch	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
L	inch	-	-	-	-	20.2	20.2	20.2	20.2	22.3
	mm	-	-	-	-	512	512	512	512	567
WEIGHT	LB	176.4	242.6	299.9	496.1	1433.3	3704.4	5909.4	7497	9481.5
	Kg	80	110	136	225	650	1680	2680	3400	4300

CAST STEEL / PRESSURE SEAL BONNET

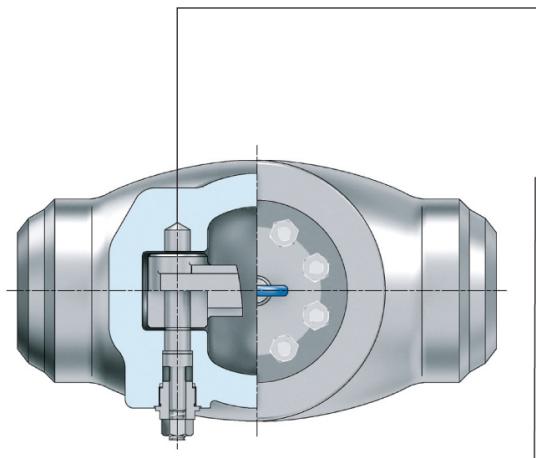
ASME CLASS 2500LB



VALVE SIZE	inch	2	2 1/2	3	4	6	8	10	12
	mm	50	65	80	100	150	200	250	300
L3	inch	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
L2	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
L1	inch	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
H	inch	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	inch	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
L	inch	-	-	-	20.2	17.0	22.3	22.3	22.3
	mm	-	-	-	512	432	567	567	567
WEIGHT	LB	220.5	341.8	463.1	1102.5	2756.3	5292.0	7276.5	9261.0
	Kg	100	155	210	500	1250	2400	3300	4200

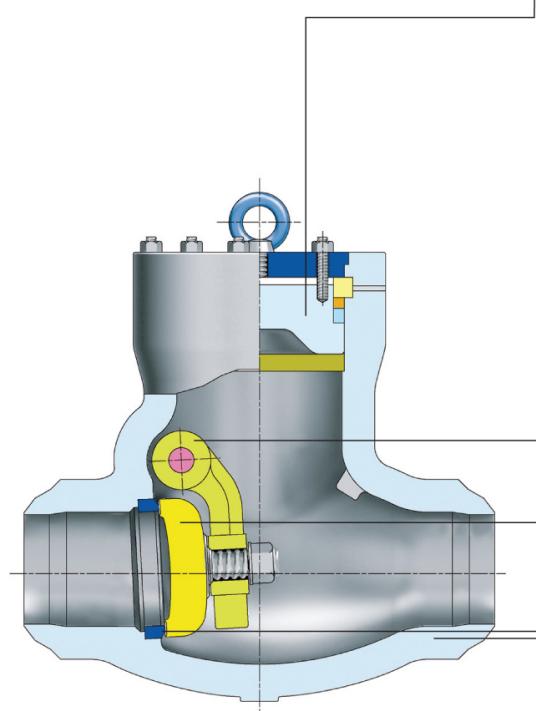
CAST STEEL / PRESSURE SEAL COVER

SWING CHECK VALVES



■ HINGE PIN

The hinge pin is inserted into the valve body to achieve pressure seal construction.



■ COVER

The cover material is a steel forging identical to the body to insure high dependability.

The cover construction has a perfect body-cover tightness and ease of dismantling and reassembly are ensured.

■ ARM

The arm is of a steel material identical to the body.

Larger sizes valves are provided with a hinge bushing to reduce friction and to prevent galling.

■ 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.

■ SEAT RING

The Stellite 6 surface of the seat ring is integrally applied to the body by means of welding in all valve sizes.

Perfect mating with the DISC surfaces attained by a lapping finish applied to the seating.

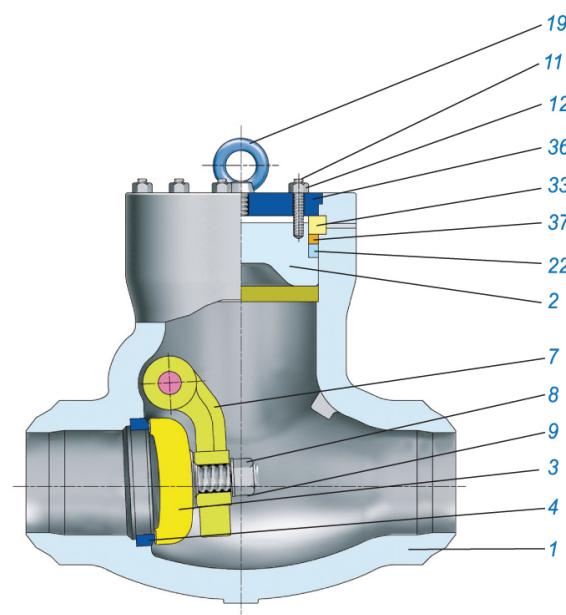
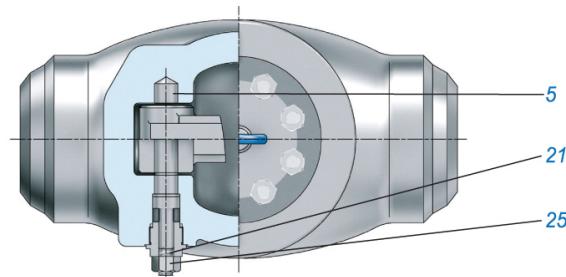
■ BODY

The cylindrically shaped valve body prevents distortion or undue stress under extreme working conditions. Padding is also provided to achieve a sound cast structure in the critical areas.

The wall thickness is greater than, or in accordance with, API, ANSI and ASME requirements. The area contacting the pressure seal gasket has a stainless steel 18/8 inlay to eliminate corrosion or wire drawing. The close tolerances of the inside diameter of this area attained by accurate machining and honing finish.

CAST STEEL / PRESSURE SEAL COVER

SWING CHECK VALVES

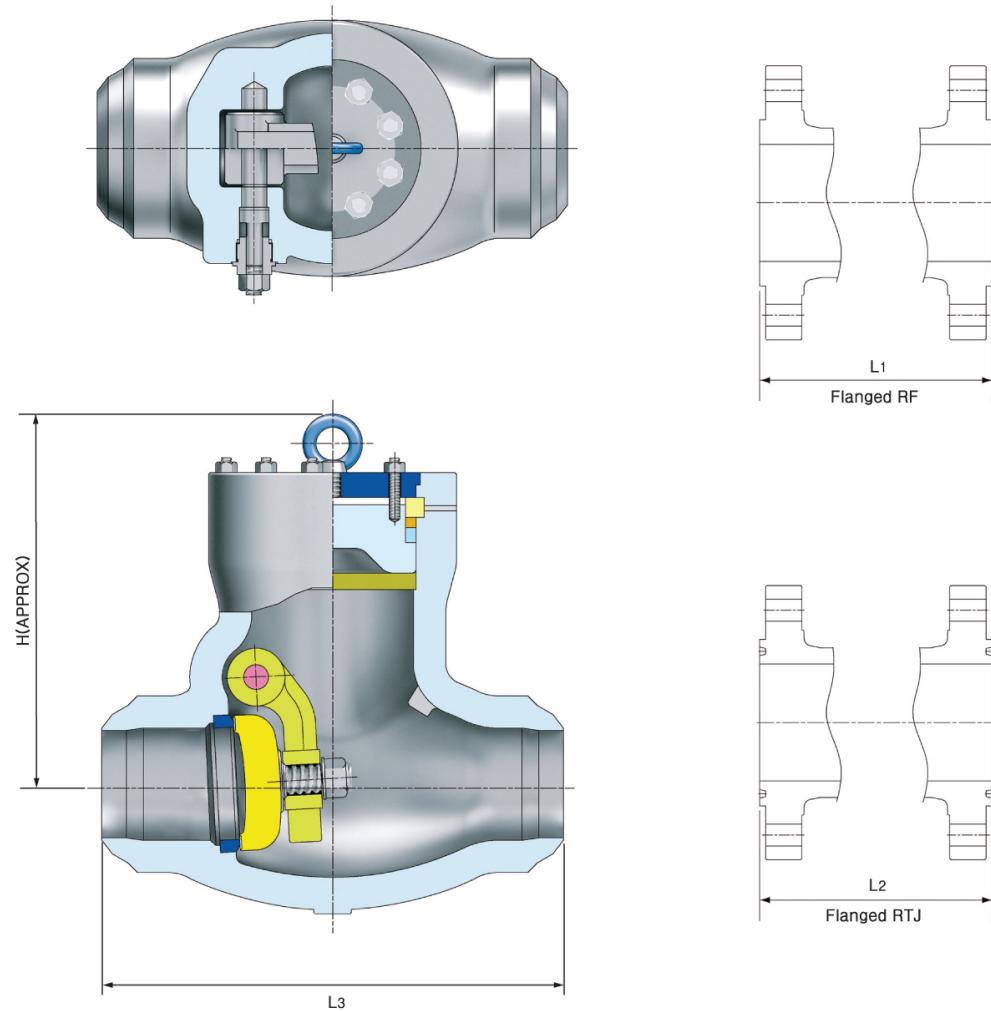


No.	NAME OF PART	ASTM SPECIFICATION
8	DISC NUT	A194-8
9	WASHER	A240-304
19	EYE BOLT	A307-B
21	PLUG GASKET	SEE PAGE 44
22	GASKET	SEE PAGE 44

No.	NAME OF PART	ASTM SPECIFICATION						KS SPECIFICATION STANDARD
		STANDARD	HIGH TEMPERATURE SERVICE				LOW TEMPERATURE SERVICE	
1	BODY	A216-WCB	A217-WC1	A217-WC6	A217-WC9	A217-C5	A352-LCB	A352-LC1/LC2/LC3
2	COVER	A216-WCB	A217-WC1	A217-WC6	A217-WC9	A217-C5	A352-LCB	A352-LC1/LC2/LC3
3	DISC	A216-WCB+HF	A217-WC1+HF	A217-WC6+HF	A217-WC9+HF	A217-C5	A352-LCB	A352-LC1/LC2/LC3
4	BODY SEAT TING	C/S1020+HF	A182-F1	A182-F11	A182-F22	A182-F5a	A182-F304	A182-F304
5	HINGE PIN	A276-410	A276-410	A276-410	A276-410	A276-410	A276-304	A276-304
7	ARM	A216-WCB	A217-WC1	A216-WC6	A217-WC9	A216-C5	A352-LCB	A352-LC1/LC2/LC3
11	BONNET BOLT	A193-B7	A193-B7	A193-B16	A193-B16	A193-B16	A320-L7	A320-L7
12	BONNET NUT	A194-2H	A194-2H	A194-4	A194-4	A194-4	A194-4	A194-4
25	PLUG	A276-410	A276-410	A276-410	A276-410	A276-410	A276-410	A276-410
33	RETAINER	A276-410	A276-410	A276-410	A276-410	A276-410	A276-304	A276-304
36	BONNET CLAMP	C/S1045	C/S1045	C/S1045	C/S1045	C/S1045	C/S1045	C/S1045
37	CASKET SPACER	A240-304	A240-304	A240-304	A240-304	A240-304	A240-304	A240-304

CAST STEEL / PRESSURE SEAL COVER

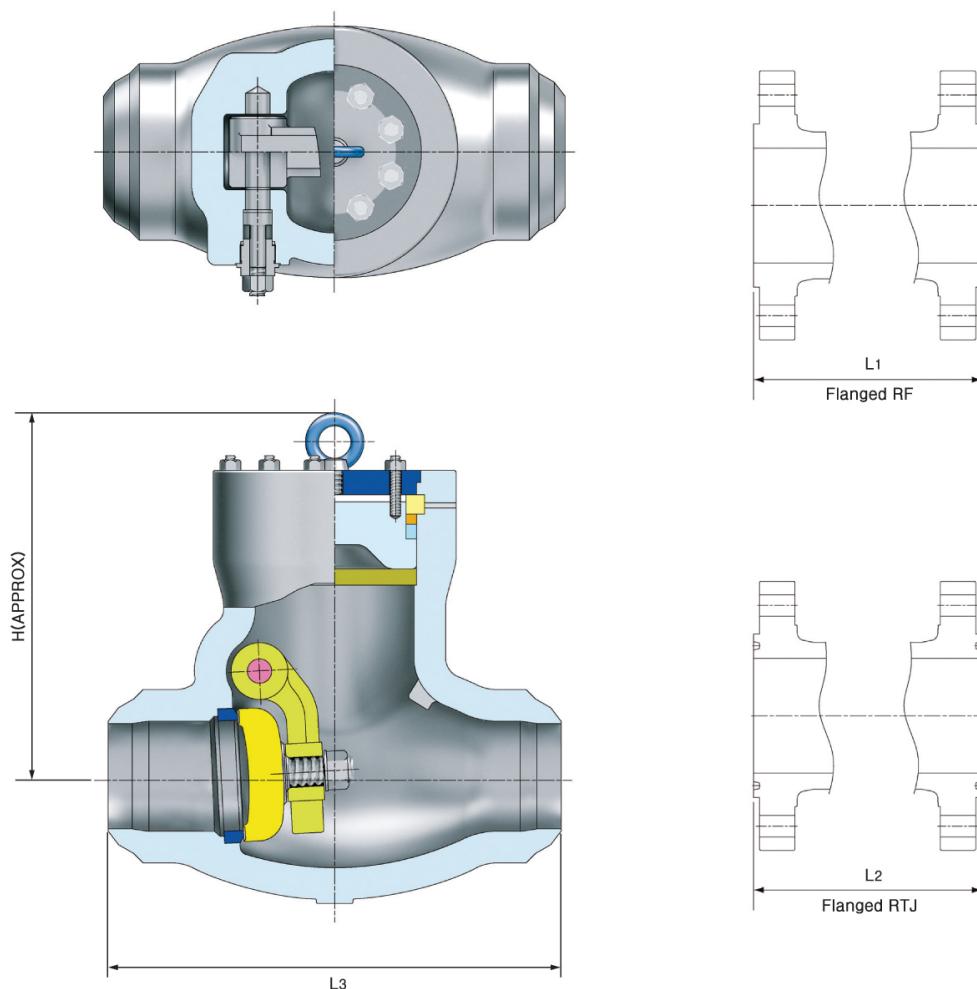
ASME CLASS 600LB



VALVE SIZE	inch	2	2 1/2	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
L3	inch	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
L2	inch	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	1407
L1	inch	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	559	660	787	838	889	991	1092	1194	1397
H	inch	9.5	10.4	10.6	12.5	15.7	23.1	23.9	27.4	29.5	28.7	28.7	32.2	37.4
	mm	241	264	270	318	400	587	606	695	749	730	730	819	949
WEIGHT	LB	59.5	77.2	99.2	187.4	419.0	771.8	1102.5	1477.4	1940.4	2535.8	3263.4	4145.4	5733
	Kg	27	35	45	85	190	350	500	670	880	1150	1480	1880	2600

CAST STEEL / PRESSURE SEAL COVER

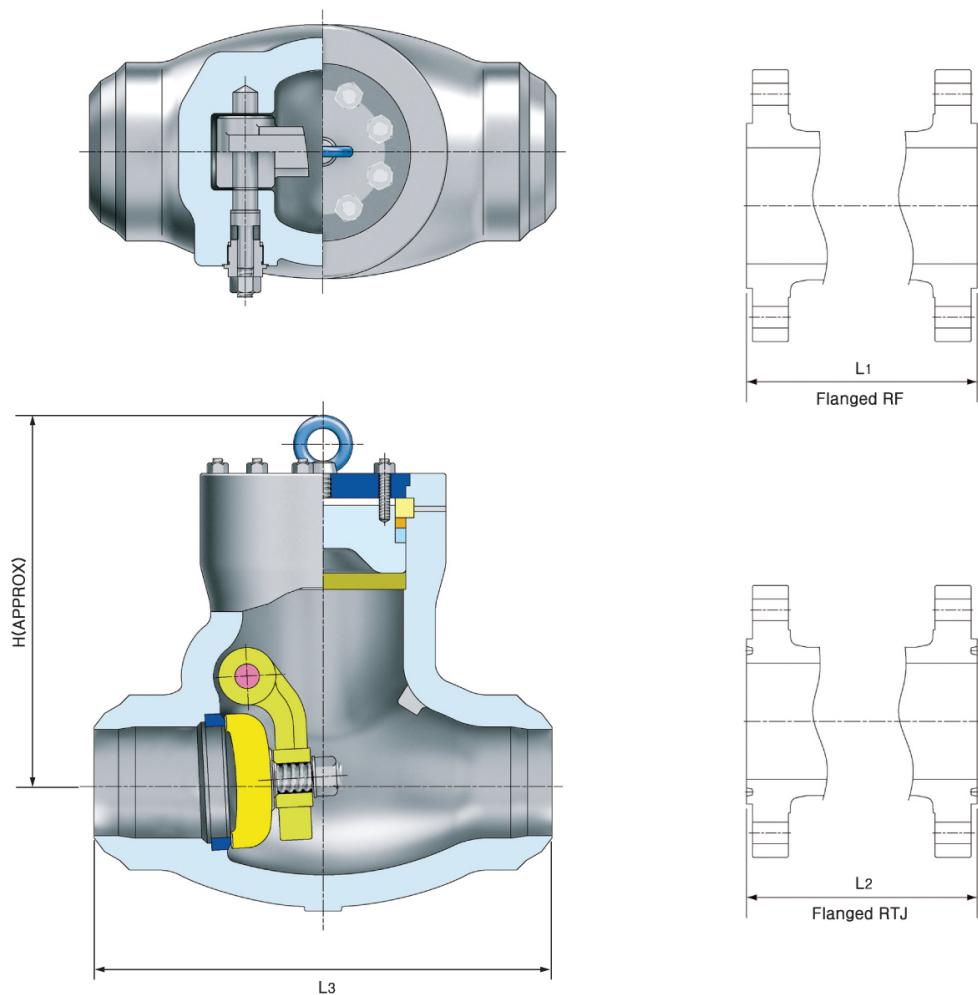
ASME CLASS 900LB



VALVE SIZE	inch	2	2 1/2	3	4	6	8	10	12	14	16
	mm	50	65	80	100	150	200	250	300	350	400
L3	inch	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
L2	inch	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
L1	inch	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
H	inch	9.5	10.4	10.6	12.5	15.7	23.1	23.9	27.4	29.5	28.7
	mm	241	264	270	318	400	587	606	695	749	730
WEIGHT	LB	88.2	121.3	114.7	231.5	507.2	1256.9	1874.3	2866.5	3417.8	3638.3
	Kg	40	55	52	105	230	570	880	1300	1550	1650

CAST STEEL / PRESSURE SEAL COVER

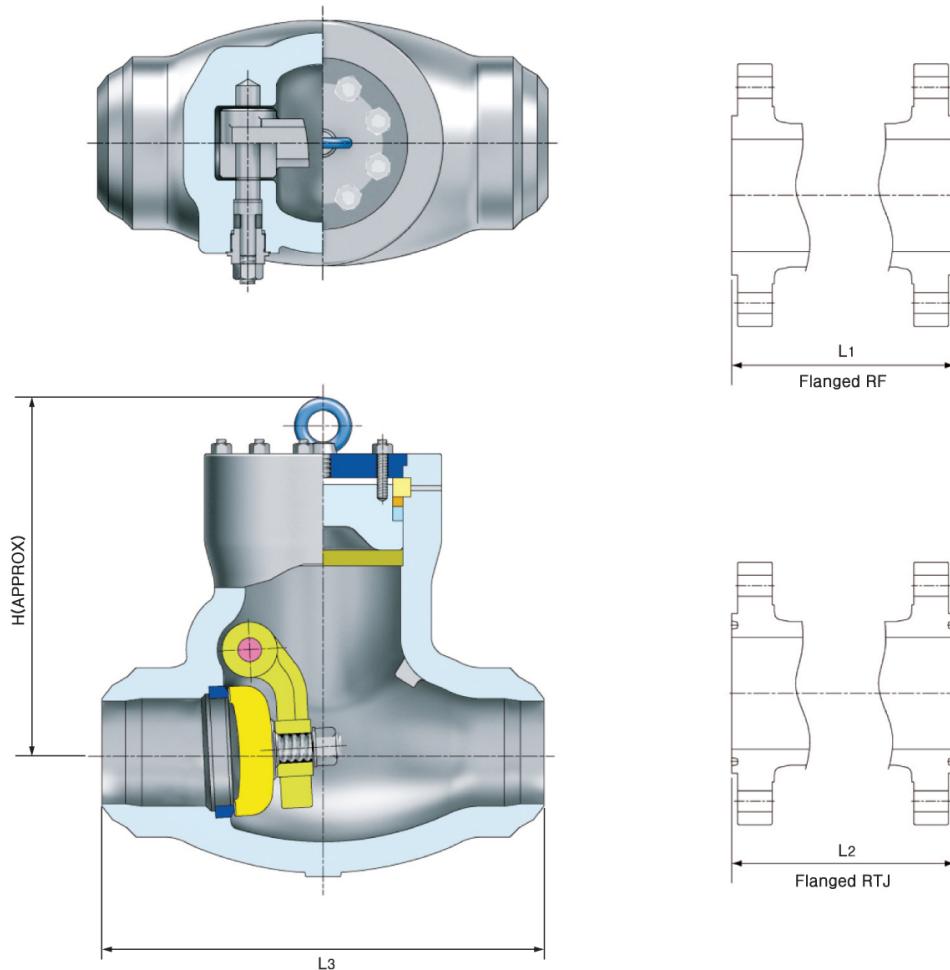
ASME CLASS 1500LB



VALVE SIZE	inch	2	2 1/2	3	4	6	8	10	12	14
	mm	50	65	80	100	150	200	250	300	350
L3	inch	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
L2	inch	14.62	16.62	18.62	21.62	28.0	33.13	39.38	45.12	50.25
	mm	371	422	473	549	711	842	1000	1146	49.5
L1	inch	14.5	16.5	18.5	21.5	27.75	32.75	39.0	44.5	1257
	mm	368	419	470	546	705	832	991	1130	1276
H	inch	9.5	10.4	10.6	12.5	15.7	18.9	23.3	25.4	28.0
	mm	241	264	270	318	400	479	591	645	711
WEIGHT	LB	88.2	121.3	220.5	308.7	882.0	1345.1	2315.3	3417.8	4630.5
	Kg	40	55	100	140	400	610	1050	1550	2100

CAST STEEL / PRESSURE SEAL COVER

ASME CLASS 2500LB



VALVE SIZE	inch	2	2 1/2	3	4	6	8	10	12	14	16	18
	mm	50	65	80	100	150	200	250	300	350	400	450
L3	inch	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
L2	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	-	-	-
L1	inch	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	-
H	inch	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	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

MISCELLANEOUS SPECIFICATIONS

GASKET & PACKING MATERIALS

Following gasket & packing materials are standard.

Optional materials depending on service conditions, available upon request.

TYPE	GRAPHITE MATERIAL		P.T.F.E. MATERIAL	
	TYPE	PERFORMANCE	TYPE	PERFORMANCE
GASKET	CLASS 150 : CORRUGATED GRAPHITE	TEMP LIMITATION -20 TO 1086°F	CLASS 150 : P.T.F.E. SOLID GASKET	TEMP LIMITATION -148 TO 302°F
	CLASS 300~1500 : SPIRAL WOUND GRAPHITE WITH SS INNER RING	TEMP LIMITATION -454 TO 1598°F	CLASS 300~1500 : SPIRAL WOUND P.T.F.E. SOLID WITH SS INNER RING	TEMP LIMITATION -328 TO 500°F
PACKING	TOP AND BOTTOM WIPER RINGS OF CARBON FIBER INNER RINGS OF PURE GRAPHITE	TEMP LIMITATION -418 TO 932°F	BRAIDED P.T.F.E. FIBER	TEMP LIMITATION -58 TO 500°F

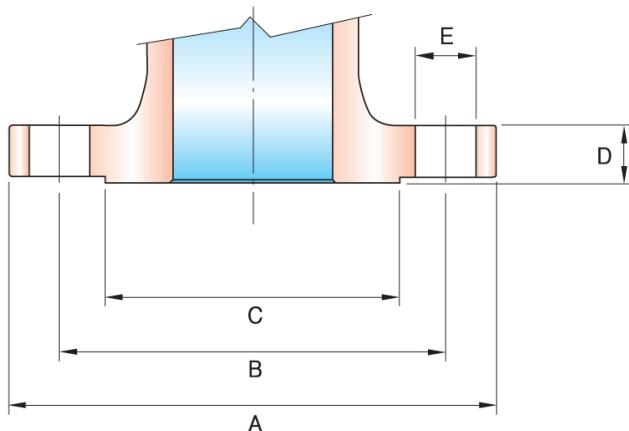
BONNET GASKET MATERIALS

Depending on class ratings and servicing conditions, following gasket materials are available for body/bonnet flange gaskets of KCL cast steel valves. Specify your gasket material in purchase order.

Gasket Material	Class					
	150	300	600	900	1500	2500
Corrugated metal	●	●				
Ring joint metal			●	●	●	●
Spiral wound metal, PTFE filled		●				
Flexible graphite	●					
Spiral wound metal, flexible graphite filled		●				
Stainless steel inserted flexible graphite	●					
Ceramics filled PTFE	●					
Compressed asbestos	●	●				
Spiral wound metal, asbestos filled		●				

Contact KCL Valve or your regional KCL Agencies for optional Requirements of
Gasket or Gland Packing materials not listed above.

ENGINEERING DATA



Steel Pipe Flange ASME B16.5 CLASS 150

Nominal size (in inches)	A	B	C	D	E	Bolt NUMBER	Bolt DIAM
1/2	88.9	60.5	35.1	11.2	15.8	4	1/2
3/4	98.6	69.9	42.9	12.7(11.2)	15.8	4	1/2
1	108.0	79.2	50.8	14.3(11.2)	15.8	4	1/2
1 1/2	127.0	98.9	73.2	17.6(14.3)	15.8	4	1/2
2	152.4	120.7	91.9	19.1(15.8)	19.1	4	5/8
2 1/2	177.8	139.7	104.6	22.4(17.6)	19.1	4	5/8
3	190.5	152.4	127.0	23.9(19.1)	19.1	4	5/8
4	228.6	190.5	157.2	23.9	19.1	8	5/8
5	254.0	215.9	185.7	23.9	22.4	8	3/4
6	279.4	241.3	215.9	25.4	22.4	8	3/4
8	342.9	298.5	269.7	28.5	22.4	8	3/4
10	406.4	362.0	323.9	30.3	25.4	12	7/8
12	482.6	431.8	381.0	31.8	25.4	12	7/8
14	553.4	476.3	412.8	35.1	28.4	12	1
16	596.9	539.8	469.9	36.6	28.4	16	1
18	635.0	577.9	533.4	39.7	31.8	16	1 1/8
20	698.5	635.0	584.2	43.0	31.8	20	1 1/8
24	812.8	749.3	692.2	47.8	35.1	20	1 1/4

Includes 1.6 raised face
Dimensions () are for valve flanges

ASME B16.5 CLASS 300

Nominal size (in inches)	A	B	C	D	E	Bolt NUMBER	Bolt DIAM
1/2	95.3	66.5	35.1	14.3	15.8	4	1/2
3/4	117.3	82.6	42.9	15.8	19.1	4	5/8
1	124.0	88.9	50.8	17.6	19.1	4	5/8
1 1/2	155.4	114.3	73.0	20.6	22.4	4	3/4
2	165.1	127.0	91.9	22.4	19.1	8	5/8
2 1/2	190.5	149.4	104.6	25.4	22.4	8	3/4
3	209.6	168.1	127.0	28.5	22.4	8	3/4
4	254.0	200.2	157.2	31.8	22.4	8	3/4
5	279.4	235.0	185.7	35.1	22.4	8	3/4
6	317.5	269.7	215.9	36.6	22.4	12	3/4
8	381.0	330.2	269.7	41.2	25.4	12	7/8
10	444.5	387.4	323.9	47.8	28.4	16	1
12	520.7	450.9	381.0	50.8	31.8	16	1 1/8
14	584.2	514.4	412.8	53.9	31.8	20	1 1/8
16	647.7	571.5	469.9	57.2	35.1	20	1 1/4
18	711.2	628.7	533.4	60.5	35.1	24	1 1/4
20	774.7	685.8	584.2	63.5	35.1	24	1 5/8
24	914.4	812.8	692.2	69.9	41.2	24	1 1/2

includes 1.6 raised face

ASME B16.5 CLASS 600

Nominal size (in inches)	A	B	C	D	E	Bolt NUMBER	Bolt DIAM
1/2	95.3	66.5	44.5	14.3	15.8	4	1/2
3/4	117.3	82.6	52.3	15.8	19.1	4	5/8
1	124.0	88.9	57.2	17.6	19.1	4	5/8
1 1/2	155.4	114.3	73.0	22.4	22.4	4	3/4
2	165.1	127.0	91.9	25.4	19.1	8	5/8
2 1/2	190.5	149.4	104.6	28.5	22.4	8	3/4
3	209.6	168.1	127.0	31.8	22.4	8	3/4
4	273.1	215.9	157.2	38.1	25.1	8	7/8
5	330.2	266.7	185.7	44.5	28.4	8	1
6	355.6	292.1	215.9	47.8	28.4	12	1
8	419.1	349.3	269.7	55.7	31.8	12	1 1/8
10	508.0	431.8	323.9	63.5	35.1	16	1 1/4
12	558.8	489.0	381.0	66.6	35.1	20	1 1/4
14	603.3	527.1	412.8	69.9	38.1	20	1 3/8
16	685.8	603.3	469.9	76.2	41.2	20	1 1/2
18	743.0	654.1	533.4	82.6	44.5	20	1 5/8
20	812.8	723.9	584.2	88.9	44.5	24	1 5/8
24	939.8	838.2	692.2	101.6	50.8	24	1 7/8

6.4 raised face not included

ASME B16.5 CLASS 900

Nominal size (in inches)	A	B	C	D	E	Bolt NUMBER	Bolt DIAM
1/2	120.7	82.6	44.5	22.4	22.4	4	3/4
3/4	130.0	88.9	52.3	25.4	22.4	4	3/4
1	149.4	101.6	57.2	28.5	25.4	4	7/8
1 1/2	177.8	124.0	73.2	31.8	28.4	4	1
2	215.9	165.1	91.9	38.1	25.4	8	7/8
2 1/2	244.3	190.5	104.6	41.2	28.4	8	1
3	241.3	190.5	127.0	38.1	25.4	8	7/8
4	292.1	235.0	157.2	44.5	31.8	8	1 1/8
5	349.0	279.4	185.7	50.8	35.1	8	1 1/8
6	381.0	317.5	215.9	55.7	31.8	12	1 1/4
8	469.9	393.7	269.7	63.5	38.1	12	1 1/8
10	546.1	469.9	323.9	69.9	38.1	16	1 3/8
12	609.6	533.4	381.0	79.3	38.1	20	1 3/8
14	641.4	558.8	412.8	85.9	41.2	20	1 1/2
16	704.9	616.0	469.9	89.9	44.5	20	1 5/8
18	787.4	685.8	533.4	101.6	50.8	20	1 7/8
20	857.3	749.3	584.2	108.0	53.9	20	2
24	1041.4	901.7	692.2	139.7	66.6	20	2 1/2

6.4 raised face not included

ASME B16.5 CLASS 1500

Nominal size (in inches)	A	B	C	D	E	Bolt NUMBER	Bolt DIAM
1/2	120.7	82.6	44.5	22.4	22.4	4	3/4
3/4	130.3	88.9	52.3	25.4	22.4	4	3/4
1	149.4	101.6	57.2	28.5	25.4	4	7/8
1 1/2	177.8	124.0	73.2	31.8	28.4	4	1
2	215.9	165.1	91.9	38.1	25.4	8	7/8
2 1/2	244.3	190.5	104.6	41.2	28.4	8	1
3	266.7	203.2	127.0	47.8	31.8	8	1 1/8
4	311.2	241.3	157.2	53.8	34.9	8	1 1/4
5	374.7	292.1	185.7	73.2	41.3	8	1 1/2
6	393.7	317.5	215.9	82.6	38.1	12	1 3/8
8	482.6	393.7	269.7	91.9	44.5	12	1 5/8
10	584.2	482.6	323.9	108.0	50.8	12	1 7/8
12	673.1	571.5	381.0	124.0	54.0	16	2
14	749.3	635.0	412.8	133.4	60.3	16	2 1/4
16	825.5	704.9	469.9	146.1	66.7	16	2 1/2
18	914.4	774.7	533.4	162.1	73.0	16	2 3/4
20	984.3	831.9	584.2	177.8	79.4	16	3
24	1168.4	990.5	692.0	203.2	92.1	16	3 1/2

6.4 raised face not included

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Local Agency

HEAD OFFICE : #711, ACE TOWER, 529-1 GOJANDONG, DANWONGU, ANSAN, GYEONGGIDO, KOREA
TEL : +82 31 405 7327 / FAX : +82 31 405 7328

FACTORY : 53, SEONGJUSANEOPDANJIRO 1GIL, SEONGJUEUP, SEONGJUGUN, GYEONGSANGBUKDO, KOREA
TEL : +82 54 931 7327 / FAX : +82 54 931 7328

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