



Cast Steel Valve

(GATE, GLOBE, CHECK, STRAINER)

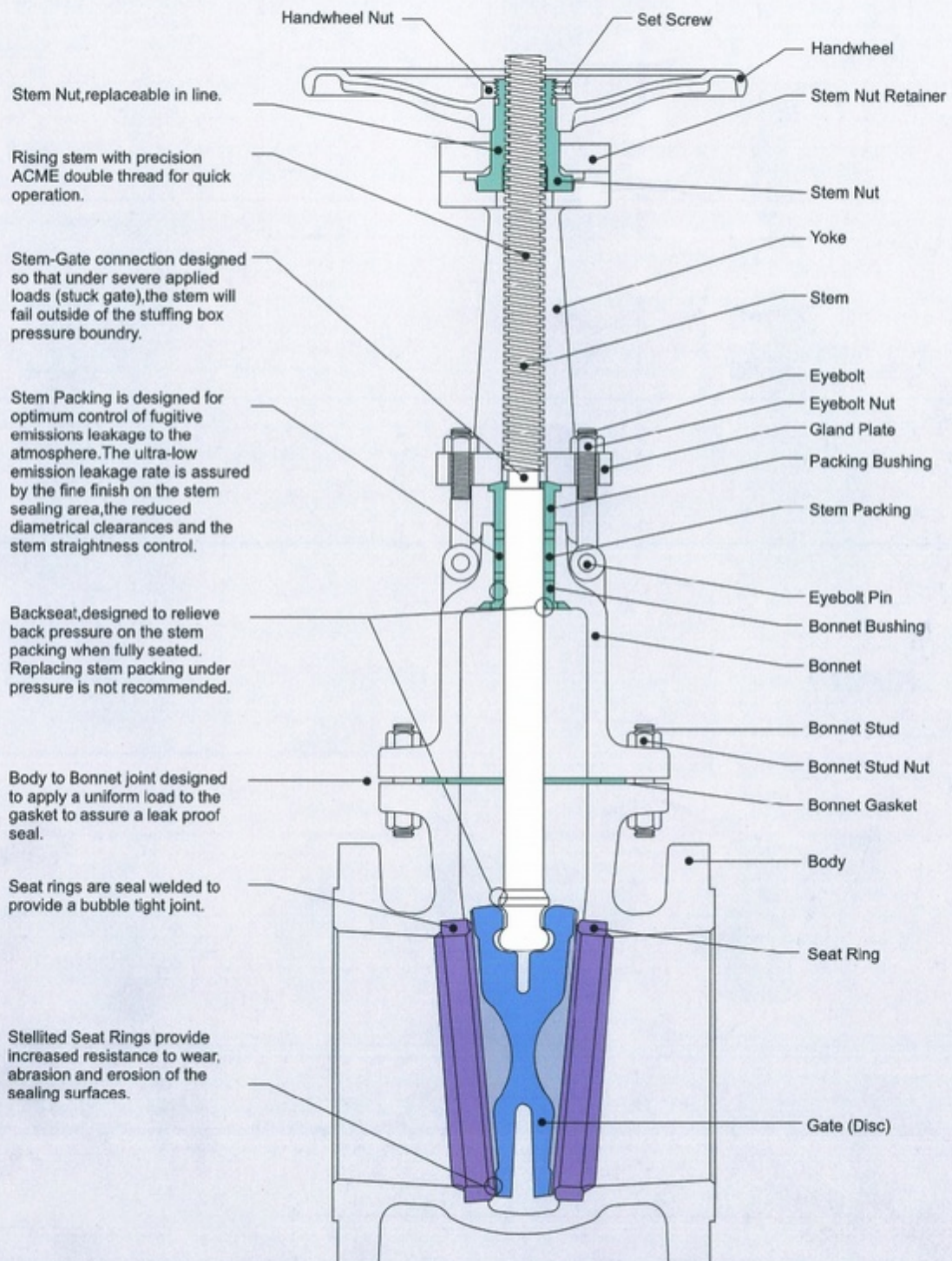
The high-precision technique is employed to ensure the quality and work efficiency on the basis of full performing of computerized aided manufacturing moreover, the processes of drilling, cutting, milling and grinding are performed at key parts for mechanical processing based on direct-dialogue programming which employs digit technology, with which ensures limit precision

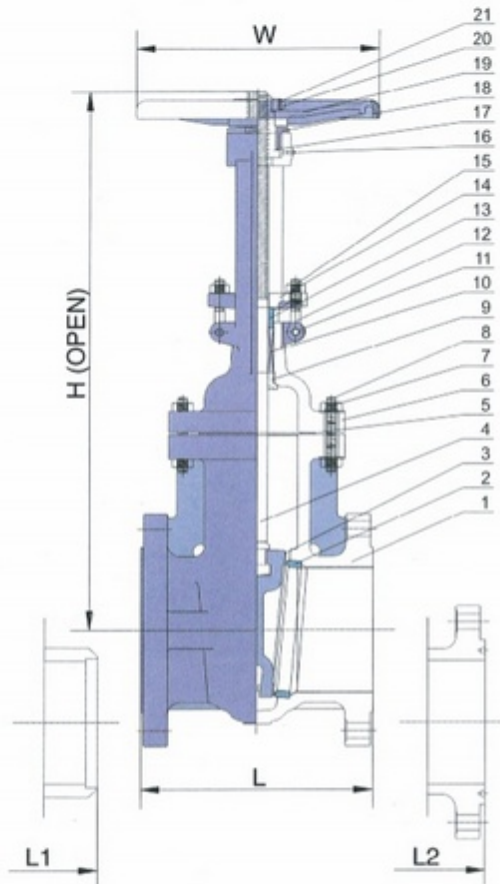
055



Cast Steel Gate Valve

Cast Steel Gate Valves with fixed handwheel and rising stem
(outside screw and yoke) (OS&Y)





FEATURES

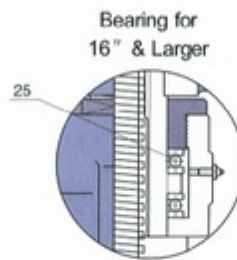
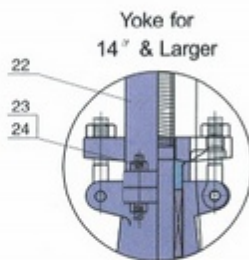
OS & Y,Rising Stem
Bolted Bonnet
Flexible Wedge (2" Solid)
Extended Bonnet for Cryogenic Services
By Pass On Request
Locking Device Optional

SPECIFICATIONS

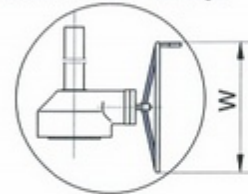
Design	ASME B16.34/API 600
Face to Face	ASME B16.10
End to End	ASME B16.10
End Flange	ASME B16.5
BW End	ASME B16.25
Test	API 598
Special	NACE MR-01-75

STANDARD MATERIALS OF PARTS

ITEM	PART NAME	MATERIAL
1	Body	ASTM A216 GR.WCB
2	Seat Ring	ASTM A105+Stellite Faced
3	Disc	ASTM A216 GR.WCB+13Cr Faced
4	Stem	ASTM A182 GR.F6
5	Gasket	Soft Iron+Graphite
6	Bonnet	ASTM A216 GR.WCB
7	Bonnet Bolt nuts	ASTM A194 GR.2H
8	Bonnet Bolt	ASTM A193 GR.B7
9	Backseat Bushing	ASTM A276 Type 410
10	Stem Packing	Braided Graphite & Die formed Graphite Ring
11	Eye Bolt Pins	Carbon Steel
12	Gland Eye Bolts	ASTM A307 GR.B
13	Gland	ASTM A276 Type 410
14	Gland Flange	ASTM A216 GR.WCB
15	Eye Bolt Nuts	ASTM A194 GR.2H
16	Grease Nipple	Carbon steel
17	Stem Nut	ASTM A439 GR.D-2
18	Retaining Nut	Carbon steel
19	Handwheel	Ductile Iron
20	Handwheel Nut	Carbon steel
21	Screw	Carbon steel
22	Yoke	ASTM A216 GR.WCB
23	Yoke Pan Bolt Nuts	ASTM A194 GR.2H
24	Yoke Pan Bolts	ASTM A193 GR.B7
25	Bearing	Steel



Gear Optional for 24" & Smaller
Standard for 28" & Larger

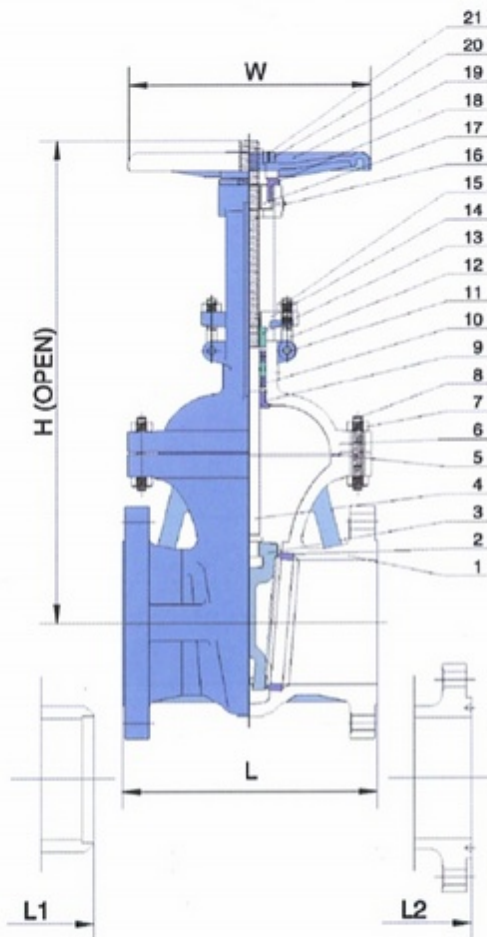


Dimensions and Weights

SIZE	in	2"	2.5"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"	24"	28"	30"	32"	36"
	mm	50	65	80	100	150	200	250	300	350	400	450	500	600	700	750	800	900
L	in	7.00	7.50	8.00	9.00	10.50	11.50	13.00	14.00	15.00	16.00	17.00	18.00	20.00	24.00	24.00	28.00	28.00
	mm	178	191	203	229	267	292	330	356	381	406	432	457	508	610	610	711	711
L1	in	8.50	9.50	11.12	12.00	15.88	16.50	18.00	19.75	22.50	24.00	26.00	28.00	32.00	36.00	36.00	38.00	40.00
	mm	216	241	283	305	403	419	457	502	572	610	660	711	813	914	914	965	1016
L2	in	7.50	8.00	8.50	9.50	11.00	12.00	13.50	14.50	15.50	16.50	17.50	18.50	20.50	-	-	-	-
	mm	191	203	216	241	279	305	343	368	394	419	445	470	521	-	-	-	-
H	in	15.31	17.28	19.69	23.43	30.59	38.39	45.67	54.72	61.22	71.30	82.80	90.55	102.72	130.98	141.97	145.98	154.49
	mm	389	439	500	595	777	975	1160	1390	1555	1811	2103	2300	2609	3327	3606	3708	3924
W	in	8	8	10	10	14	14	16	18	22	24	25	27	30	24	24	24	24
	mm	200	200	250	250	350	350	400	450	560	600	640	680	760	610	610	610	610
Weight RF	kg	17	23	29	47	80	129	192	287	410	571	720	1170	1466	1931	2380	2490	3600

Cast Steel Gate Valve

Class 300



FEATURES

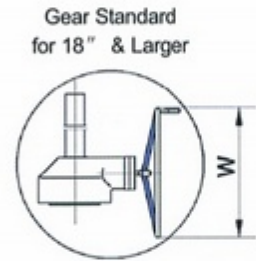
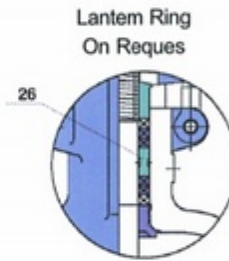
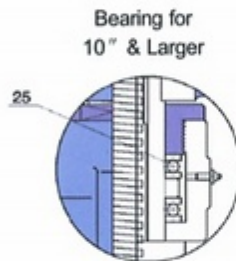
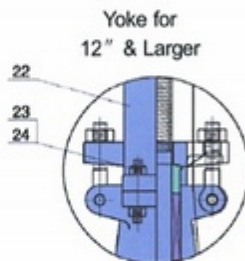
OS & Y, Rising Stem
Boilted Bonnet
Flexible Wedge (2" Solid)
Extended Bonnet for Cryogenic Services
By Pass On Request
Locking Device Optional

SPECIFICATIONS

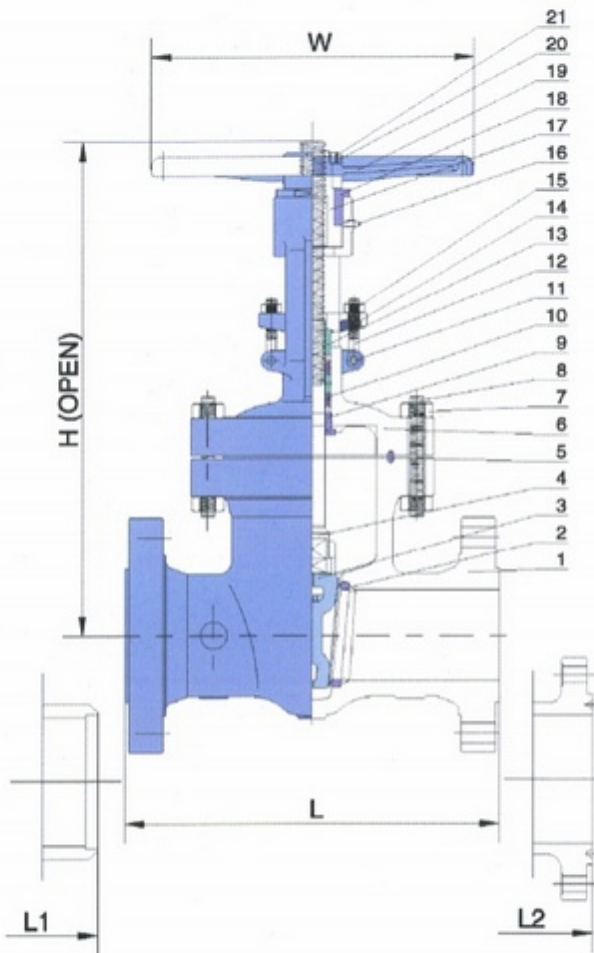
Design	ASME B16.34/API 600
Face to Face	ASME B16.10
End to End	ASME B16.10
End Flange	ASME B16.5
BW End	ASME B16.25
Test	API 598
Special	NACE MR-01-75

STANDARD MATERIALS OF PARTS

ITEM	PART NAME	MATERIAL
1	Body	ASTM A216 GR.WCB
2	Seat Ring	ASTM A105+Stellite Faced
3	Disc	ASTM A216 GR.WCB+13Cr Faced
4	Stem	ASTM A182 GR.F6
5	Gsaket	Soft Iron+Graphite
6	Bonnet	ASTM A216 GR.WCB
7	Bonnet Bolt nuts	ASTM A194 GR.2H
8	Bonnet Bolt	ASTM A193 GR.B7
9	Backseat Bushing	ASTM A276 Type 410
10	Stem Packing	Braided Graphite & Die formed Graphite Ring
11	Eye Bolt Pins	Carbon Steel
12	Gland Eye Bolts	ASTM A307 GR.B
13	Gland	ASTM A276 Type 410
14	Gland Flange	ASTM A216 GR.WCB
15	Eye Bolt Nuts	ASTM A194 GR.2H
16	Grease Nipple	Carbon steel
17	Stem Nut	ASTM A439 GR.D-2
18	Retaining Nut	Carbon steel
19	Handwheel	Ductile Iron
20	Handwheel Nut	Carbon steel
21	Screw	Carbon steel
22	Yoke	ASTM A216 GR.WCB
23	Yoke Pan Bolt Nuts	ASTM A194 GR.2H
24	Yoke Pan Bolts	ASTM A193 GR.B7
25	Bearing	Steel
26	Lantern Ring On Request	ASTM A276 Type 410



Dimensions and Weights																
SIZE	in	2"	2.5"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"	24"	28"	30"
L/L1	in	8.50	9.50	11.12	12.00	15.88	16.50	18.00	19.75	30.00	33.00	36.00	39.00	45.00	53.00	55.00
	mm	216	241	283	305	403	419	457	502	762	838	914	991	1143	1346	1397
L2	in	9.12	10.12	11.74	12.62	16.50	17.12	18.62	20.37	30.62	33.62	36.62	39.75	45.88	54.00	56.00
	mm	232	257	298	321	419	435	473	517	778	854	930	1010	1165	1372	1422
H	in	16.93	19.88	20.87	24.80	31.50	39.69	48.82	57.87	64.76	72.48	77.13	86.38	102.28	122.05	130.71
	mm	430	505	530	630	800	1008	1240	1470	1645	1841	1959	2194	2598	3100	3320
W	in	8	10	10	10	14	16	18	20	24	24	24	24	24	24	24
	mm	200	250	250	250	350	400	450	500	600	600	610	610	610	610	610
Weight RF	kg	30	45	57	88	147	219	368	522	694	1080	1235	1655	2320	3893	4930



FEATURES

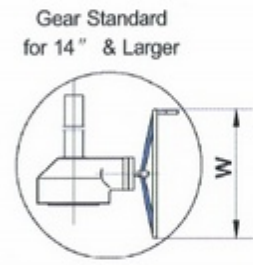
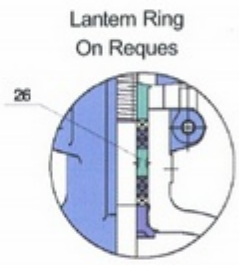
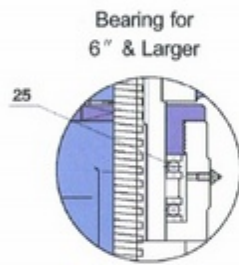
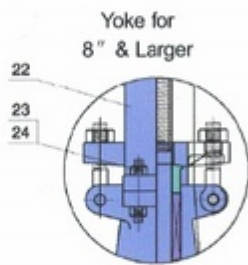
OS & Y, Rising Stem
Bolted Bonnet
Flexible Wedge (2" Solid)
Extended Bonnet for Cryogenic Services
By Pass On Request
Locking Device Optional

SPECIFICATIONS

Design	ASME B16.34/API 600
Face to Face	ASME B16.10
End to End	ASME B16.10
End Flange	ASME B16.5
BW End	ASME B16.25
Test	API 598
Special	NACE MR-01-75

STANDARD MATERIALS OF PARTS

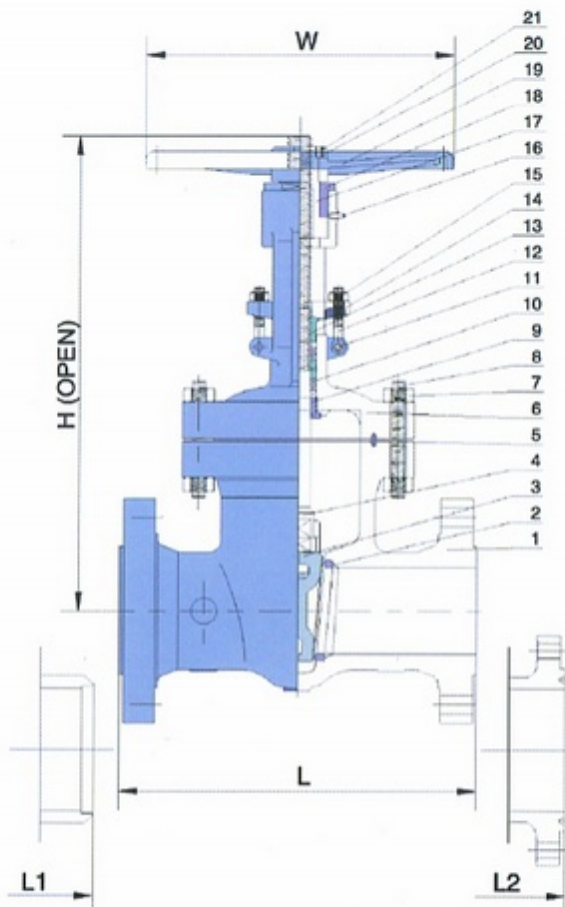
ITEM	PART NAME	MATERIAL
1	Body	ASTM A216 GR.WCB
2	Seat Ring	ASTM A105+Stellite Faced
3	Disc	ASTM A216 GR.WCB+13Cr Faced
4	Stem	ASTM A182 GR.F6
5	Gasket, Ring Joint	Soft Iron
6	Bonnet	ASTM A216 GR.WCB
7	Bonnet Bolt nuts	ASTM A194 GR.2H
8	Bonnet Bolt	ASTM A193 GR.B7
9	Backseat Bushing	ASTM A276 Type 410
10	Stem Packing	Braided Graphite & Die formed Graphite Ring
11	Eye Bolt Pins	Carbon Steel
12	Gland Eye Bolts	ASTM A307 GR.B
13	Gland	ASTM A276 Type 410
14	Gland Flange	ASTM A216 GR.WCB
15	Eye Bolt Nuts	ASTM A194 GR.2H
16	Grease Nipple	Carbon steel
17	Stem Nut	ASTM A439 GR.D-2
18	Retaining Nut	Carbon steel
19	Handwheel	Ductile Iron
20	Handwheel Nut	Carbon steel
21	Screw	Carbon steel
22	Yoke	ASTM A216 GR.WCB
23	Yoke Pan Bolt Nuts	ASTM A194 GR.2H
24	Yoke Pan Bolts	ASTM A193 GR.B7
25	Bearing	Steel
26	Lantern Ring On Request	ASTM A276 Type 410



Dimensions and Weights														
SIZE	in	2"	2.5"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"	24"
L/L1	in	11.50	13.00	14.00	17.00	22.00	26.00	31.00	33.00	35.00	39.00	43.00	47.00	55.00
	mm	292	330	356	432	559	660	787	838	889	991	1092	1194	1397
L2	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	663	790	841	892	994	1095	1200	1407
H	in	17.91	23.14	21.65	27.17	35.83	41.93	49.49	57.80	63.90	71.50	88.98	106.50	110.63
	mm	455	588	550	690	910	1065	1257	1468	1623	1816	2260	2705	2810
W	in	10	10	10	14	18	20	25	27	24	24	24	24	24
	mm	250	250	250	350	450	500	640	680	610	610	610	610	610
Weight RF	kg	45	55	76	127	277	485	754	936	1316	1672	2070	2405	4550

Cast Steel Gate Valve

Class 900-2500



FEATURES

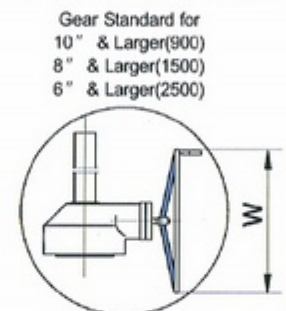
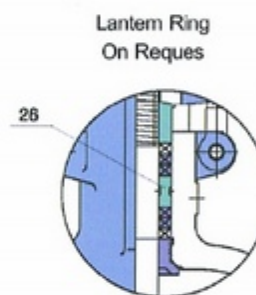
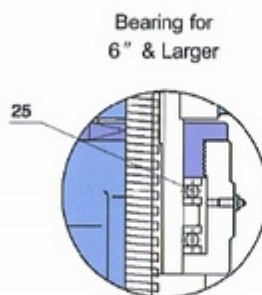
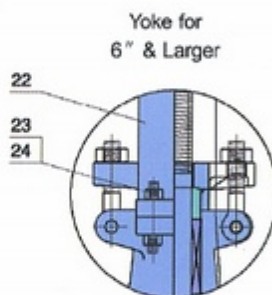
OS & Y,Rising Stem
Bolted Bonnet
Flexible Wedge (2" Solid)
Extended Bonnet for Cryogenic Services
By Pass On Request
Locking Device Optional

SPECIFICATIONS

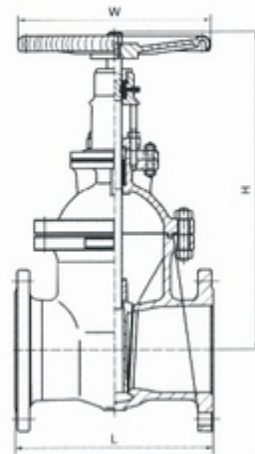
Design	ASME B16.34/API 600
Face to Face	ASME B16.10
End to End	ASME B16.10
End Flange	ASME B16.5
BW End	ASME B16.25
Test	API 598
Special	NACE MR-01-75

STANDARD MATERIALS OF PARTS

ITEM	PART NAME	MATERIAL
1	Body	ASTM A216 GR.WCB
2	Seat Ring	ASTM A105+Stellite Faced
3	Disc	ASTM A216 GR.WCB+13Cr Faced
4	Stem	ASTM A182 GR.F6
5	Gasket, Ring Joint	Soft Iron
6	Bonnet	ASTM A216 GR.WCB
7	Bonnet Bolt nuts	ASTM A194 GR.2H
8	Bonnet Bolt	ASTM A193 GR.B7
9	Backseat Bushing	ASTM A276 Type 410
10	Stem Packing	Braided Graphite & Die formed Graphite Ring
11	Eye Bolt Pins	Carbon Steel
12	Gland Eye Bolts	ASTM A307 GR.B
13	Gland	ASTM A276 Type 410
14	Gland Flange	ASTM A216 GR.WCB
15	Eye Bolt Nuts	ASTM A194 GR.2H
16	Grease Nipple	Carbon steel
17	Stem Nut	ASTM A439 GR.D-2
18	Retaining Nut	Carbon steel
19	Handwheel	Ductile Iron
20	Handwheel Nut	Carbon steel
21	Screw	Carbon steel
22	Yoke	ASTM A216 GR.WCB
23	Yoke Pan Bolt Nuts	ASTM A194 GR.2H
24	Yoke Pan Bolts	ASTM A193 GR.B7
25	Bearing	Steel
26	Lantern Ring On Request	ASTM A276 Type 410



Dimensions and Weights	CALSS 900								CALSS 1500								CALSS 2500										
	2"	2.5"	3"	4"	6"	8"	10"	12"	2"	2.5"	3"	4"	6"	8"	10"	12"	2"	2.5"	3"	4"	6"	8"	10"	12"			
SIZE	in	2"	2.5"	3"	4"	6"	8"	10"	12"	in	2"	2.5"	3"	4"	6"	8"	10"	12"	in	2"	2.5"	3"	4"	6"	8"	10"	12"
	mm	50	65	80	100	150	200	250	300	mm	50	65	80	100	150	200	250	300	mm	50	65	80	100	150	200	250	300
L/L1	in	14.50	16.50	15.00	18.00	24.00	29.00	33.00	38.00	in	14.50	16.50	18.50	21.50	27.75	32.75	39.00	44.50	in	17.75	20.00	22.75	26.50	36.00	40.25	50.00	56.00
	mm	368	419	381	457	610	737	838	965	mm	368	419	470	546	705	832	991	1130	mm	451	508	578	673	914	1022	1270	1422
L2	in	14.62	16.62	15.12	18.12	24.12	29.12	33.12	38.12	in	14.62	16.62	18.62	21.62	28.00	33.13	39.38	45.12	in	17.87	20.25	23.00	26.88	36.50	40.87	50.88	56.88
	mm	371	422	384	460	613	740	841	968	mm	371	422	473	549	711	842	1000	1146	mm	454	514	584	683	927	1038	1292	1445
H	in	24.41	27.76	29.02	32.48	41.93	47.99	52.95	72.44	in	27.36	27.76	30.31	34.33	42.99	55.12	62.95	72.44	in	27.56	29.53	34.82	43.19	57.09	63.39	81.73	89.80
	mm	620	705	737	825	1065	1219	1345	1840	mm	695	705	770	872	1092	1400	1600	1840	mm	700	750	887	1079	1450	1610	2076	2281
W	in	12	14	14	16	20	24	24	24	in	14	16	16	20	24	24	24	24	in	14	18	20	24	24	24	24	24
	mm	300	350	350	400	500	600	610	610	mm	350	400	400	500	600	610	610	610	mm	350	450	450	500	610	610	610	610
Weight RF	kg	95	108	125	194	378	635	900	1550	kg	95	128	181	275	627	1000	2200	3300	kg	135	210	271	506	1600	2450	4570	7150

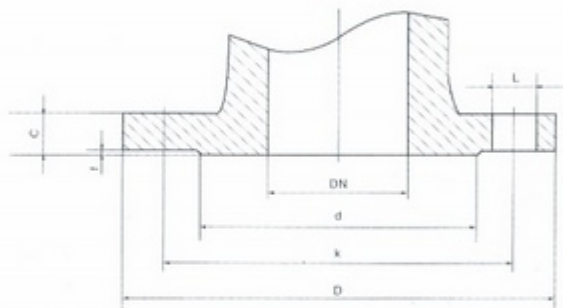


Main external and connection dimension

Unit:mm

Pressure		PN1.6										
Size	mm	50	65	80	100	125	150	200	250	300	350	400
L		250	270	280	330	360	390	460	530	630	690	750
H		305	354	402	437	496	541	699	815	914	1189	1350
W		200	200	750	250	300	350	400	450	500	550	600
Weight(Kg)		20	30	38	56	75	100	182	278	398	500	618
Pressure		PN2.5										
Size	mm	50	65	80	100	125	150	200	250	300	350	400
L		250	270	280	330	360	390	460	530	630	690	750
H		325	363	415	453	505	556	744	864	948	1269	1450
W		200	200	250	300	350	400	450	500	550	600	600
Weight(Kg)		20	30	39	58	80	101	190	290	405	510	650
Pressure		PN4.0										
Size	mm	50	65	80	100	125	150	200	250	300	350	400
L		250	270	280	330	360	390	460	530	630	690	750
H		325	370	430	480	532	589	783	888	965	1285	1512
W		200	200	250	300	350	400	450	500	550	600	600
Weight(Kg)		22	31	41.5	61	83	110	210	318.5	430	520	680

Cast-steel flange acc.to DIN B2543-2545



DINPN1.6MPa RF	DN	D	K	L	n-Th	d	f	C
	15	95	95	14	4-M12	45	2	16
	20	105	105	14	4-M12	58	2	18
	25	115	115	14	4-M12	68	2	18
	32	140	140	18	4-M16	78	2	18
	40	150	150	18	4-M16	88	3	18
	50	165	165	18	4-M16	102	3	20
	65	185	185	18	4-M16	122	3	18
	80	200	200	18	8-M16	138	3	20
	100	220	220	18	8-M16	158	3	20
	125	250	250	18	8-M16	188	3	22
	150	285	285	22	8-M20	212	3	22
	200	340	340	22	12-M20	268	3	24
250	405	405	26	12-M24	320	3	26	
300	460	460	26	12-M24	378	4	28	
350	520	520	26	16-M24	438	4	30	

DIN PN2.5MPa RF	DN	D	K	L	n-Th	d	f	C
	15	95	65	14	4-M12	45	2	16
	20	105	75	14	4-M12	58	2	18
	25	115	85	14	4-M12	68	2	18
	32	140	100	18	4-M16	78	2	18
	40	150	110	18	4-M16	88	3	18
	50	165	125	18	4-M16	102	3	20
	65	185	145	18	8-M16	122	3	22
	80	200	160	18	8-M16	138	3	24
	100	235	190	22	8-M20	162	3	24
	125	270	210	26	8-M24	188	3	26
	150	300	250	26	8-M24	218	3	28
	200	360	310	26	12-M24	278	3	30
250	425	370	30	12-M24	335	3	32	
300	485	430	30	16-M27	395	4	34	
350	555	490	33	16-M30	450	4	38	

DINPN1.4MPa RF	DN	D	K	L	n-Th	d	f	C
	15	95	65	14	4-M12	45	2	16
	20	105	75	14	4-M12	58	2	18
	25	115	85	14	4-M12	68	2	18
	32	140	100	18	4-M16	78	2	18
	40	150	110	18	4-M16	88	3	18
	50	165	125	18	4-M16	102	3	20
	65	185	145	18	8-M16	122	3	22
	80	200	160	18	8-M16	138	3	24
	100	235	190	22	8-M20	162	3	24
	125	270	220	26	8-M24	188	3	26
	150	300	250	26	8-M24	218	3	28
	200	375	320	30	12-M27	285	3	34
250	450	385	33	12-M30	345	3	38	
300	515	450	33	16-M30	410	4	42	
350	580	510	36	16-M33	465	4	46	

Impactor Handwheel, the mechanism is based on transmitting the momentum generated by the mass of the handwheel through the impact/impulse generated during the snap closure action of the handwheel. This type of handwheel is used when a standard handwheel cannot create enough closing force to effect a seal.

Stem Nut replaceable in the line.

Revolving rising stem with precision ACME thread.

Stem Packing is designed for optimum control of fugitive emissions leakage to the atmosphere. The ultra low emission leakage rate is assured by the fine finish in the stem, the reduced diametrical clearances and the stem straightness control.

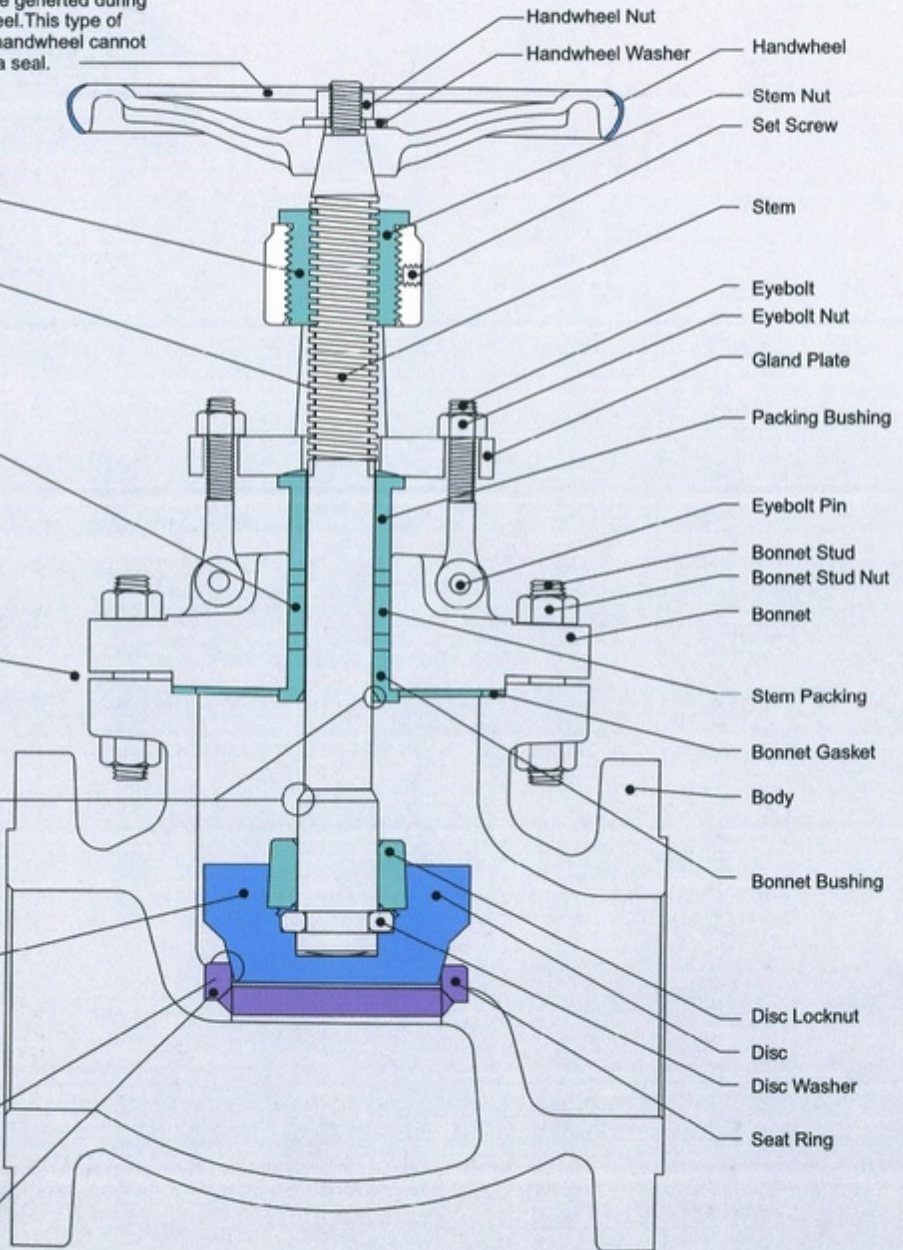
Body to Bonnet Joint designed to apply a uniform load to the gasket to assure a leak proof seal.

Backseat designed to relieve back pressure on the stem packing when fully seated. Replacing stem packing under pressure is not recommended.

Conical Disc, integrally guided to assure true alignment between disc and valve body. The loose disc design allows the disc and seat ring sealing surface to seat correctly without damage.

Stellite Seat Ring, providing increased resistance to wear, abrasion and erosion of the sealing surface.

Seat ring is seal welded to provide a bubble tight joint.



Handwheel Nut

Handwheel Washer

Handwheel

Stem Nut

Set Screw

Stem

Eyebolt

Eyebolt Nut

Gland Plate

Packing Bushing

Eyebolt Pin

Bonnet Stud

Bonnet Stud Nut

Bonnet

Stem Packing

Bonnet Gasket

Body

Bonnet Bushing

Disc Locknut

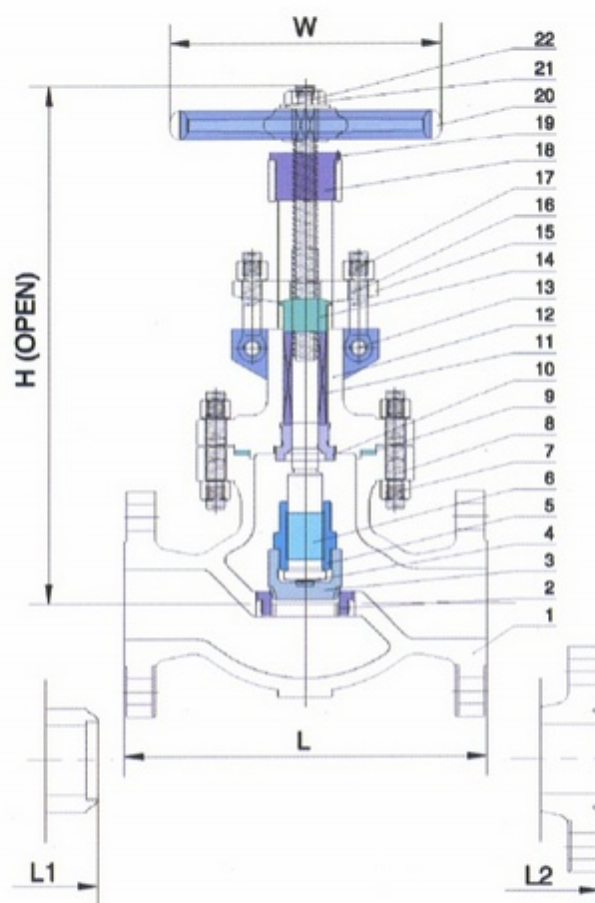
Disc

Disc Washer

Seat Ring

Cast Steel Globe Valve

Class 150



FEATURES

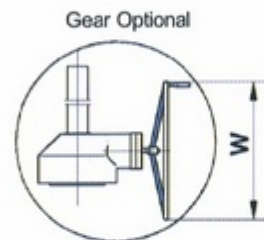
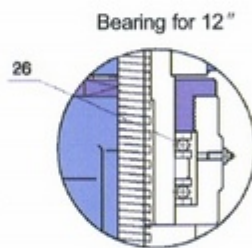
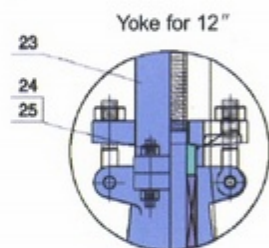
OS & Y, Rising Stem
Bolted Bonnet
Conic Disc
Extended Bonnet for Cryogenic Services
Impact hand wheel Optional
Gear Optional

SPECIFICATIONS

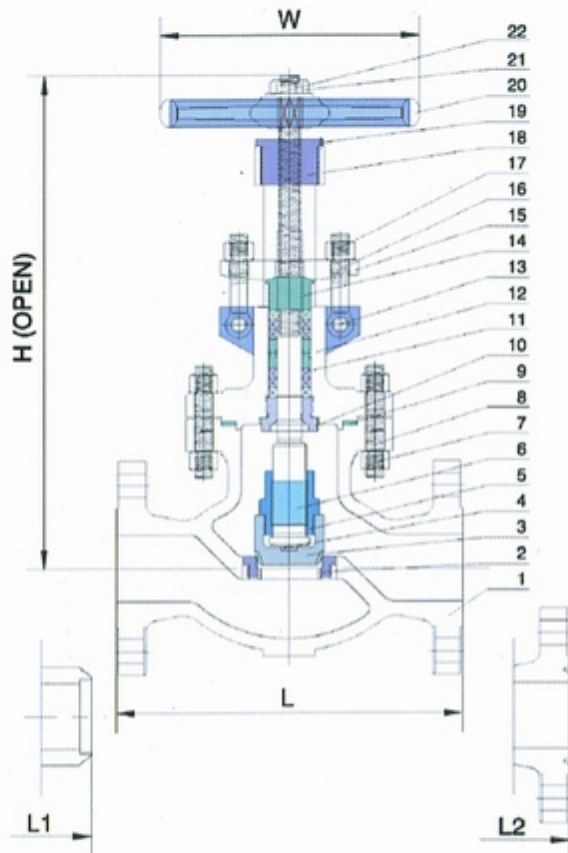
Design	ASME B16.34/BS1873
Face to Face	ASME B16.10
End to End	ASME B16.10
End Flange	ASME B16.5
BW End	ASME B16.25
Test	API 598
Special	NACE MR-01-75

STANDARD MATERIALS OF PARTS

ITEM	PART NAME	MATERIAL
1	Body	ASTM A216 GR.WCB
2	Seat Ring	ASTM A105+Stellite Faced
3	Disc	ASTM A105+13Cr Faced
4	Disc Thrust Plate	ASTM A276 Type 420
5	Disc Nut	ASTM A276 Type 410
6	Stem	ASTM A182 GR.F6
7	Bonnet Bolt nuts	ASTM A194 GR.2H
8	Bonnet Bolt	ASTM A193 GR.B7
9	Gasket	Soft Iron+Graphite
10	Backseat Bushing	ASTM A276 Type 410
11	Stem Packing	Braided Graphite & Die formed Graphite Ring
12	Bonnet	ASTM A216 GR.WCB
13	Eye Bolt Pins	Carbon Steel
14	Gland	ASTM A276 Type 410
15	Gland Flange	ASTM A216 GR.WCB
16	Gland Eye Bolts	ASTM A307 GR.B
17	Eye Bolt Nuts	ASTM A194 GR.2H
18	Yoke Bush	ASTM A439 GR.D-2
19	Screw	Carbon steel
20	Handwheel	Ductile Iron
21	Handwheel Nut	ASTM A194 GR.2H
22	Washer	Carbon steel
23	Yoke	ASTM A216 GR.WCB
24	Yoke Pan Bolt Nuts	ASTM A194 GR.2H
25	Yoke Pan Bolts	ASTM A193 GR.B7
26	Bearing	Steel



Dimensions and Weights									
SIZE	in	2"	2.5"	3"	4"	6"	8"	10"	12"
	mm	50	65	80	100	150	200	250	300
L/L1	in	8.00	8.50	9.50	11.50	16.00	19.50	24.50	27.50
	mm	203	216	241	292	406	495	622	698
L2	in	8.50	9.00	10.00	12.00	16.50	20.00	25.00	28.00
	mm	216	229	254	305	419	508	635	711
H	in	13.58	16.34	15.94	19.09	20.47	23.62	30.00	33.94
	mm	345	415	405	485	520	600	762	862
W	in	8	8	10	12	14	18	20	25
	mm	200	200	250	300	350	450	500	640
Weight RF	kg	22	32	38	62	104	159	308	539



FEATURES

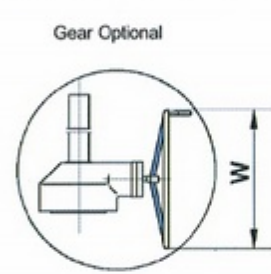
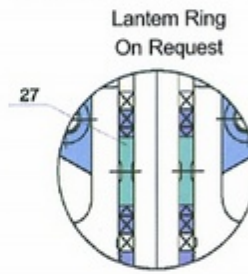
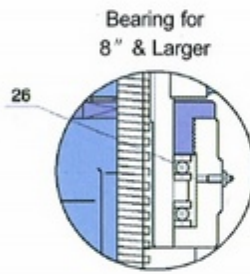
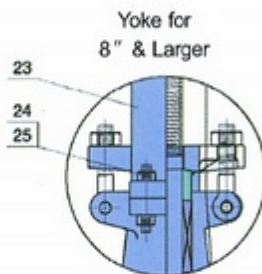
OS & Y.Rising Stem
Bolted Bonnet
Conic Disc
Extended Bonnet for Cryogenic Services
Impact hand wheel Optional
Gear Optional

SPECIFICATIONS

Design	ASME B16.34/BS1873
Face to Face	ASME B16.10
End to End	ASME B16.10
End Flange	ASME B16.5
BW End	ASME B16.25
Test	API 598
Special	NACE MR-01-75

STANDARD MATERIALS OF PARTS

ITEM	PART NAME	MATERIAL
1	Body	ASTM A216 GR.WCB
2	Seat Ring	ASTM A105+Stellite Faced
3	Disc	ASTM A105+13Cr Faced
4	Disc Thrust Plate	ASTM A276 Type 420
5	Disc Nut	ASTM A276 Type 410
6	Stem	ASTM A182 GR.F6
7	Bonnet Bolt nuts	ASTM A194 GR.2H
8	Bonnet Bolt	ASTM A193 GR.B7
9	Gasket	Soft Iron+Graphite
10	Backseat Bushing	ASTM A276 Type 410
11	Stem Packing	Braided Graphite & Die formed Graphite Ring
12	Bonnet	ASTM A216 GR.WCB
13	Eye Bolt Pins	Carbon Steel
14	Gland	ASTM A276 Type 410
15	Gland Flange	ASTM A216 GR.WCB
16	Gland Eye Bolts	ASTM A307 GR.B
17	Eye Bolt Nuts	ASTM A194 GR.2H
18	Yoke Bush	ASTM A439 GR.D-2
19	Screw	Carbon steel
20	Handwheel	Ductile Iron
21	Handwheel Nut	ASTM A194 GR.2H
22	Washer	Carbon steel
23	Yoke	ASTM A216 GR.WCB
24	Yoke Pan Bolt Nuts	ASTM A194 GR.2H
25	Yoke Pan Bolts	ASTM A193 GR.B7
26	Bearing	Steel

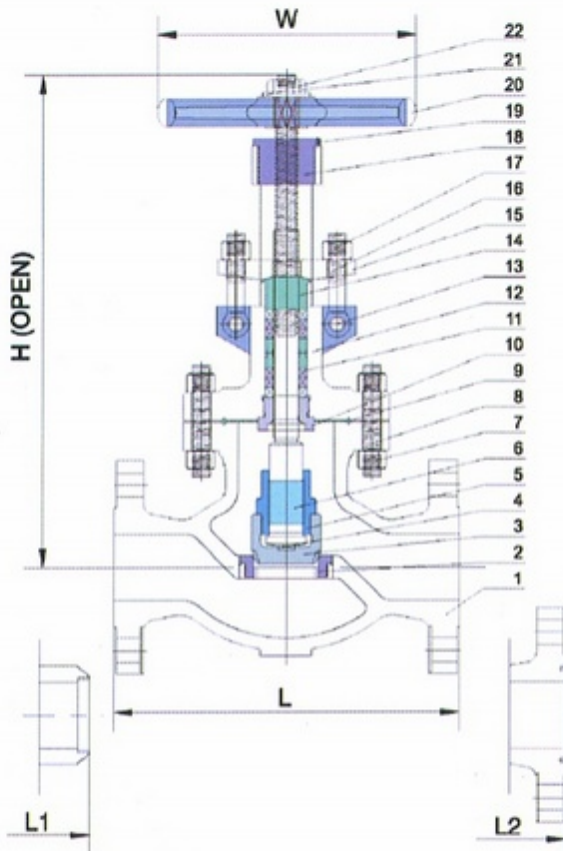


Dimensions and Weights

SIZE	in	2"	2.5"	3"	4"	6"	8"	10"	12"
	mm	50	65	80	100	150	200	250	300
L/L1	in	10.50	11.50	12.50	14.00	17.50	22.00	24.50	28.00
	mm	267	292	318	356	445	559	622	711
L2	in	11.12	12.12	13.12	14.62	18.12	22.62	25.12	28.62
	mm	283	308	333	371	460	575	638	727
H	in	14.57	18.66	17.32	20.67	24.41	35.83	37.36	40.63
	mm	370	474	440	525	620	910	949	1032
W	in	8	10	10	14	18	22	24	26
	mm	200	250	250	350	450	560	600	650
Weight RF	kg	28	48	56	82	154	240	319	632

Cast Steel Globe Valve

Class 600



FEATURES

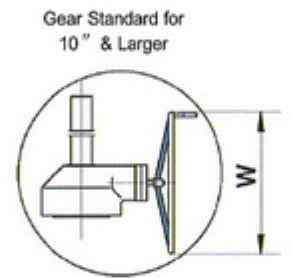
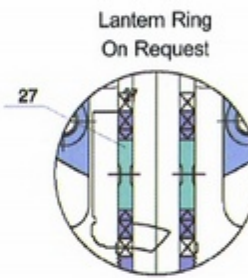
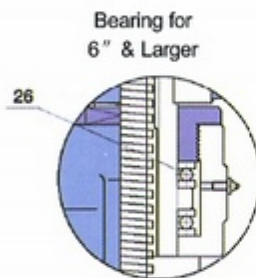
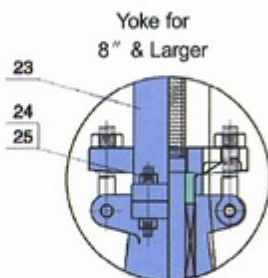
OS & Y-Rising Stem
Bolted Bonnet
Conic Disc
Extended Bonnet for Cryogenic Services
Impact hand wheel Optional
Gear Optional

SPECIFICATIONS

Design	ASME B16.34/BS1873
Face to Face	ASME B16.10
End to End	ASME B16.10
End Flange	ASME B16.5
BW End	ASME B16.25
Test	API 598
Special	NACE MR-01-75

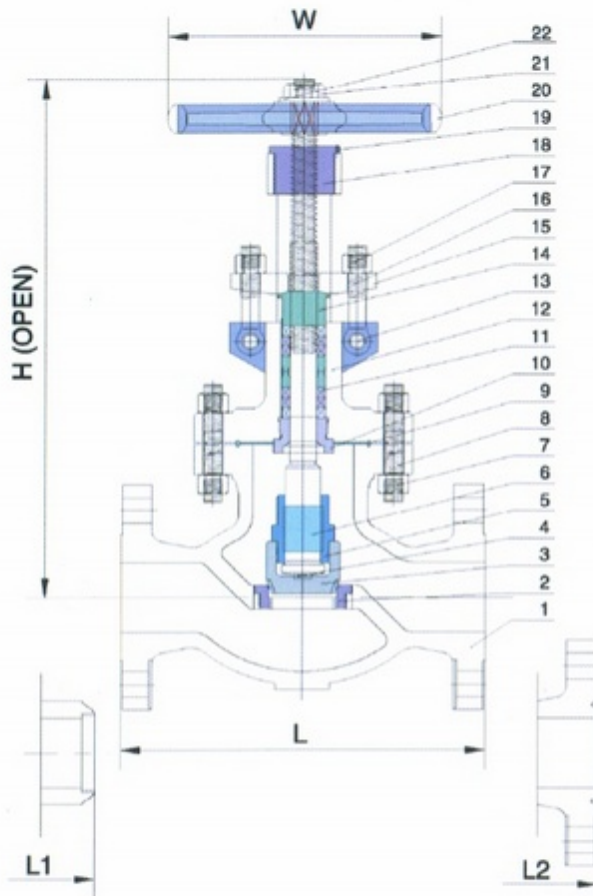
STANDARD MATERIALS OF PARTS

ITEM	PART NAME	MATERIAL
1	Body	ASTM A216 GR.WCB
2	Seat Ring	ASTM A105+Stellite Faced
3	Disc	ASTM A105+13Cr Faced
4	Disc Thrust Plate	ASTMA276 Type 420
5	Disc Nut	ASTM A276 Type 410
6	Stem	ASTM A182 GR.F6
7	Bonnet Bolt nuts	ASTM A194 GR.2H
8	Bonnet Bolt	ASTM A193 GR.B7
9	Gasket	Soft Iron
10	Backseat Bushing	ASTM A276 Type 410
11	Stem Packing	Braided Graphite & Die formed Graphite Ring
12	Bonnet	ASTM A216 GR.WCB
13	Eye Bolt Pins	Carbon Steel
14	Gland	ASTM A276 Type 410
15	Gland Flange	ASTM A216 GR.WCB
16	Gland Eye Bolts	ASTM A307 GR.B
17	Eye Bolt Nuts	ASTM A194 GR.2H
18	Yoke Bush	ASTM A439 GR.D-2
19	Screw	Carbon steel
20	Handwheel	Ductile Iron
21	Handwheel Nut	ASTM A194 GR.2H
22	Washer	Carbon steel
23	Yoke	ASTM A216 GR.WCB
24	Yoke Pan Bolt Nuts	ASTM A194 GR.2H
25	Yoke Pan Bolts	ASTM A193 GR.B7
26	Bearing	Steel
27	Lantern Ring ON Request	ASTM A276 Type 410



Dimensions and Weights

SIZE	in	2"	2.5"	3"	4"	6"	8"	10"	12"
	mm	50	65	80	100	150	200	250	300
L/L1	in	11.50	13.00	14.00	17.00	22.00	26.00	31.00	33.00
	mm	292	330	356	432	559	660	787	838
L2	in	11.62	13.12	14.12	17.12	22.12	26.12	31.12	33.12
	mm	295	333	359	435	562	663	790	841
H	in	18.19	21.26	23.03	26.38	34.88	36.69	40.94	50.39
	mm	462	540	585	670	886	932	1040	1280
W	in	10	10	12	18	20	25	24	24
	mm	250	250	350	450	500	630	610	610
Weight RF	kg	36	70	85	123	404	450	700	900



FEATURES

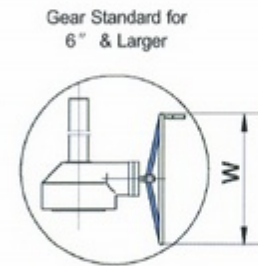
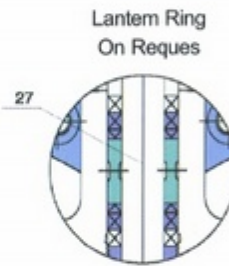
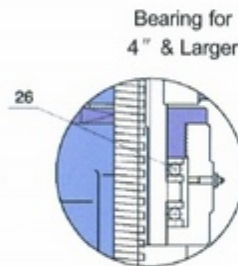
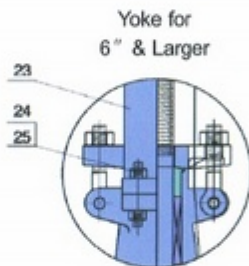
OS & Y, Rising Stem
Bolted Bonnet
Conic Disc
Extended Bonnet for Cryogenic Services
Impact hand wheel Optional
Gear Optional

SPECIFICATIONS

Design	ASME B16.34/BS1873
Face to Face	ASME B16.10
End to End	ASME B16.10
End Flange	ASME B16.5
BW End	ASME B16.25
Test	API 598
Special	NACE MR-01-75

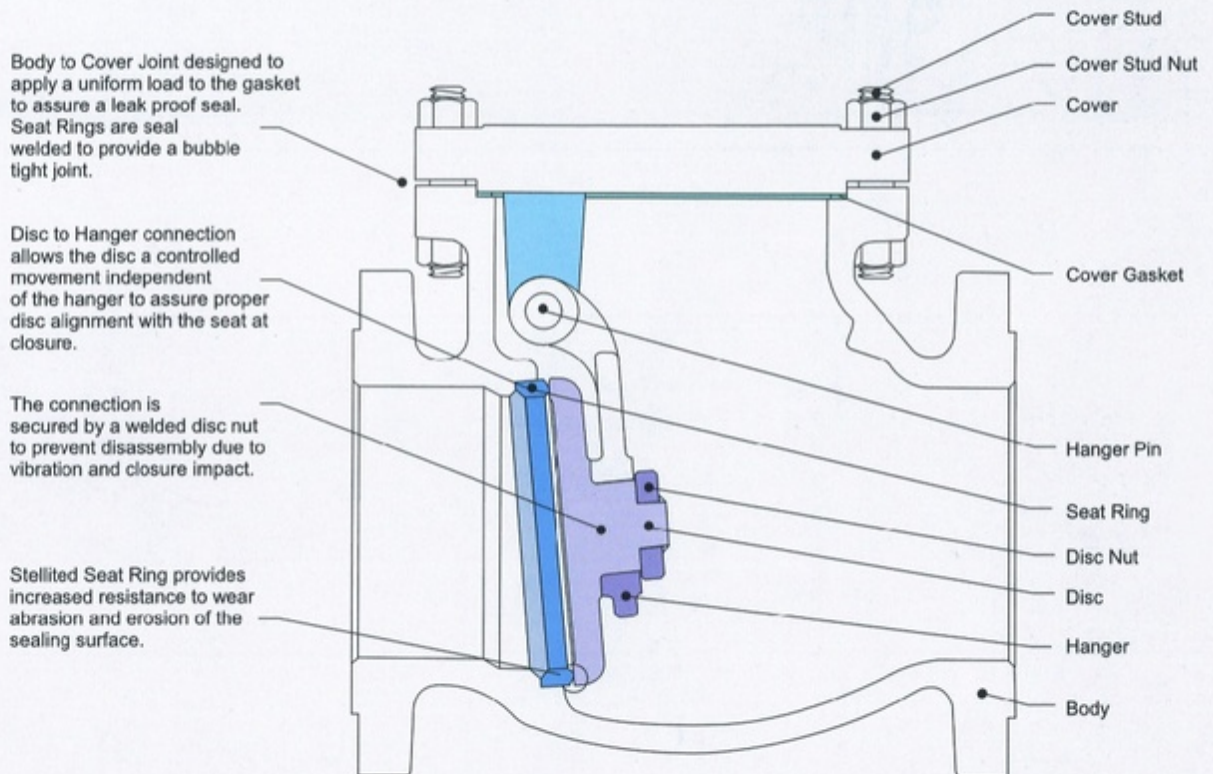
STANDARD MATERIALS OF PARTS

ITEM	PART NAME	MATERIAL
1	Body	ASTM A216 GR.WCB
2	Seat Ring	ASTM A105+Stellite Faced
3	Disc	ASTM A105+Stellite Faced
4	Disc Thrust Plate	ASTM A276 Type 420
5	Disc Nut	ASTM A276 Type 410
6	Stem	ASTM A182 GR.F6
7	Bonnet Bolt nuts	ASTM A194 GR.2H
8	Bonnet Bolt	ASTM A193 GR.B7
9	Gasket	Soft Iron
10	Backseat Bushing	ASTM A276 Type 410
11	Stem Packing	Braided Graphite & Die formed Graphite Ring
12	Bonnet	ASTM A216 GR.WCB
13	Eye Bolt Pins	Carbon Steel
14	Gland	ASTM A276 Type 410
15	Gland Flange	ASTM A216 GR.WCB
16	Gland Eye Bolts	ASTM A307 GR.B
17	Eye Bolt Nuts	ASTM A194 GR.2H
18	Yoke Bush	ASTM A439 GR.D-2
19	Screw	Carbon steel
20	Handwheel	Ductile Iron
21	Handwheel Nut	ASTM A194 GR.2H
22	Washer	Carbon steel
23	Yoke	ASTM A216 GR.WCB
24	Yoke Pan Bolt Nuts	ASTM A194 GR.2H
25	Yoke Pan Bolts	ASTM A193 GR.B7
26	Bearing	Steel
27	Lantern Ring ON Request	ASTM A276 Type 410



Dimensions and Weights	CALSS 900								CALSS 1500								CALSS 2500							
	SIZE	in	2"	2.5"	3"	4"	6"	8"	2"	2.5"	3"	4"	6"	8"	2"	2.5"	3"	4"	6"	8"				
SIZE	mm	50	65	80	100	150	200	50	65	80	100	150	200	50	65	80	100	150	200					
L/L1	in	14.50	16.50	15.00	18.00	24.00	29.00	14.50	16.50	18.50	21.50	27.75	32.75	17.75	20.00	22.75	26.50	36.00	40.25					
	mm	368	419	381	457	610	737	368	419	470	546	705	832	451	508	578	673	914	1022					
L2	in	14.62	16.62	15.12	18.12	24.12	29.12	14.62	16.62	18.62	21.62	28.00	33.13	17.87	20.25	23.00	26.88	36.50	40.87					
	mm	371	422	384	460	613	740	371	422	473	549	711	841	454	514	584	683	927	1038					
H	in	23.62	25.98	26.18	31.50	43.62	46.61	25.98	25.98	30.31	33.46	45.08	52.95	28.35	31.50	34.84	49.61	75.00	97.05					
	mm	600	660	665	800	1108	1184	660	660	770	850	1145	1345	720	800	885	1260	1905	2465					
W	in	14	14	18	20	24	24	14	14	20	22	24	24	16	20	22	24	24	24					
	mm	350	350	450	500	610	610	350	350	500	560	610	610	400	500	560	600	610	610					
Weight RF	kg	95	138	122	195	435	730	95	138	250	435	540	970	176	264	308	759	1990	4390					

Cast Steel Swing Check Valve



FEATURES

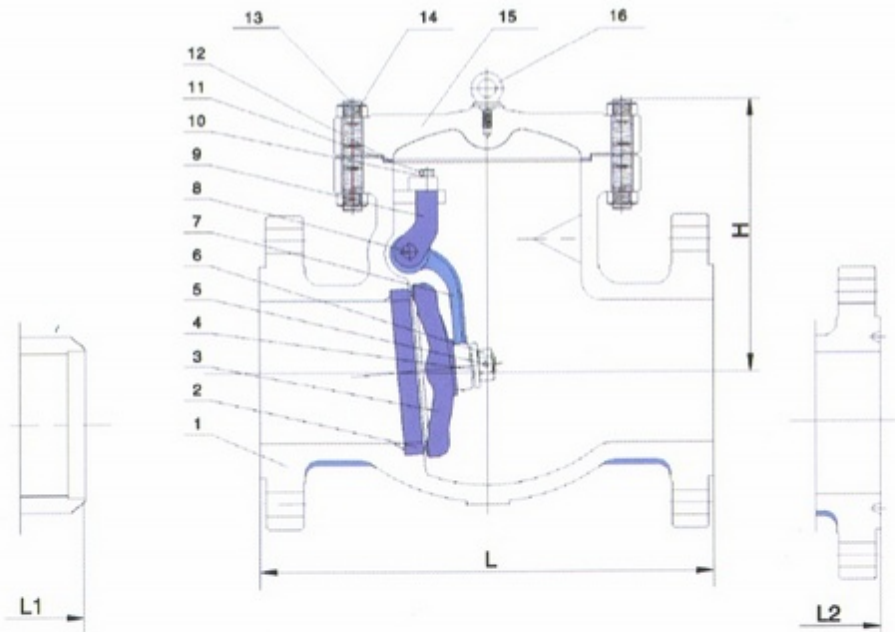
Bolted Cover
Swing Type Disc
6" & Larger With Eye Bolt
By Pass On Request
Lever & Wight Optional

SPECIFICATIONS

Design	ASME B16.34/BS 1868
Face to Face	ASME B16.10
End Flange	ASME B16.5
BW End	ASME B16.25
Test	API 598
Special	NACE MR-01-75

STANDARD MATERIALS OF PARTS

ITEM	PART NAME	MATERIAL
1	Body	ASTM A216 GR.WCB
2	Seat Ring	ASTM A105+Stellite Faced
3	Disc	ASTM A216 GR.WCB+13Cr Faced
4	Disc Thrust Plate	ASTM A276 Type 410
5	Disc Nut Pin	Stainless Steel
6	Disc Nut	Stainless Steel
7	Higne	ASTM A216 GR.WCB
8	Hinge Pin	ASTM A182 GR.F6
9	Bearing Bracket	ASTM A216 GR.WCB
10	Spring Washer	Carbon Steel
11	Hex, Bolt	Carbon Steel
12	Gasket	Soft Iron+Graphite
13	Cover Bolt	ASTM A193 GR.B7
14	Cover Bolt Nut	ASTM A194 GR.2H
15	Cover	ASTM A216 GR.WCB
16	Eye Bolt	Carbon Steel



Dimensions and Weights		2"	2.5"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"	24"
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
L/L1	in	8.00	8.50	9.50	11.50	14.00	19.50	24.50	27.50	31.00	34.00	38.50	38.50	51.00
	mm	203	216	241	292	356	495	622	699	787	864	978	978	1295
L2	in	8.5	9.00	10.00	12.00	14.50	20.00	25.00	28.00	31.50	34.50	39.00	39.00	51.50
	mm	216	229	2254	305	368	508	635	711	800	876	991	991	1308
H	in	6.10	6.70	7.09	8.66	10.55	12.20	14.57	16.73	18.70	20.67	22.83	24.72	34.72
	mm	155	170	180	220	268	310	370	425	475	525	580	628	882
Weight RF	kg	19	26	29	46	77	163	220	366	428	555	775	835	1180

Cast Steel Swing Check Valve

Class 300

FEATURES

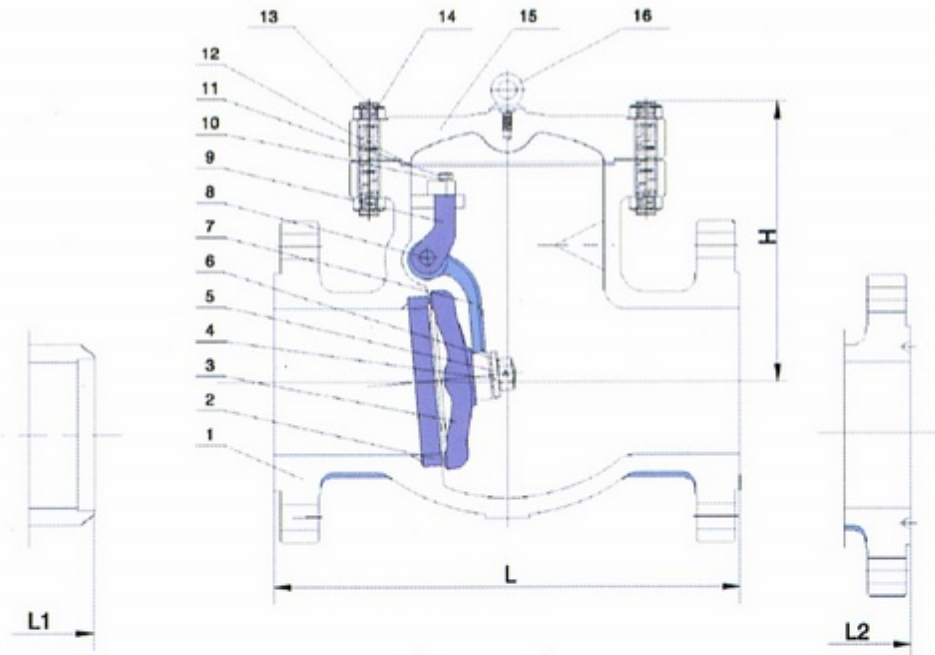
Bolted Cover
Swing Type Disc
4" & Larger With Eye Bolt
By Pass On Request
Lever & Wight Optional

STANDARD MATERIALS OF PARTS

ITEM	PART NAME	MATERIAL
1	Body	ASTM A216 GR.WCB
2	Seat Ring	ASTM A105+Stellite Faced
3	Disc	ASTM A216 GR.WCB+13Cr Faced
4	Disc Washer	ASTM A276 Type 410
5	Disc Nut Pin	Stainless Steel
6	Disc Nut	Stainless Steel
7	Higne	ASTM A216 GR.WCB
8	Hinge Pin	ASTM A182 GR.F6
9	Bearing Bracket	ASTM A216 GR.WCB
10	Spring Washer	Carbon Steel
11	Hex, Bolt	Carbon Steel
12	Gasket	Soft Iron+Graphite
13	Cover Bolt	ASTM A193 GR.B7
14	Cover Bolt Nut	ASTM A194 GR.2H
15	Cover	ASTM A216 GR.WCB
16	Eye Bolt	Carbon Steel

SPECIFICATIONS

Design	ASME B16.34/BS 1868
Face to Face	ASME B16.10
End Flange	ASME B16.5
BW End	ASME B16.25
Test	API 598
Special	NACE MR-01-75



Dimensions and Weights		2"	2.5"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"	24"
SIZE	in	50	65	80	100	150	200	250	300	350	400	450	500	600
	mm	267	292	318	356	445	533	622	711	83/8	864	978	1016	1346
L/L1	in	10.50	11.50	12.50	14.00	17.50	21.00	24.50	28.00	33.00	34.00	38.50	40.00	53.00
	mm	283	308	333	371	460	549	638	727	854	879	994	1035	1368
L2	in	11.12	12.12	13.12	14.62	18.12	21.62	25.12	28.62	33.62	34.62	39.12	40.75	53.88
	mm	283	308	333	371	460	549	638	727	854	879	994	1035	1368
H	in	6.89	7.28	7.80	9.25	11.10	13.19	15.15	18.11	20.47	21.81	23.62	26.38	29.53
	mm	175	185	198	235	282	335	385	460	520	554	600	670	750
Weight RF	kg	21	30	39	69	125	210	307	450	680	640	1025	1320	1960

FEATURES

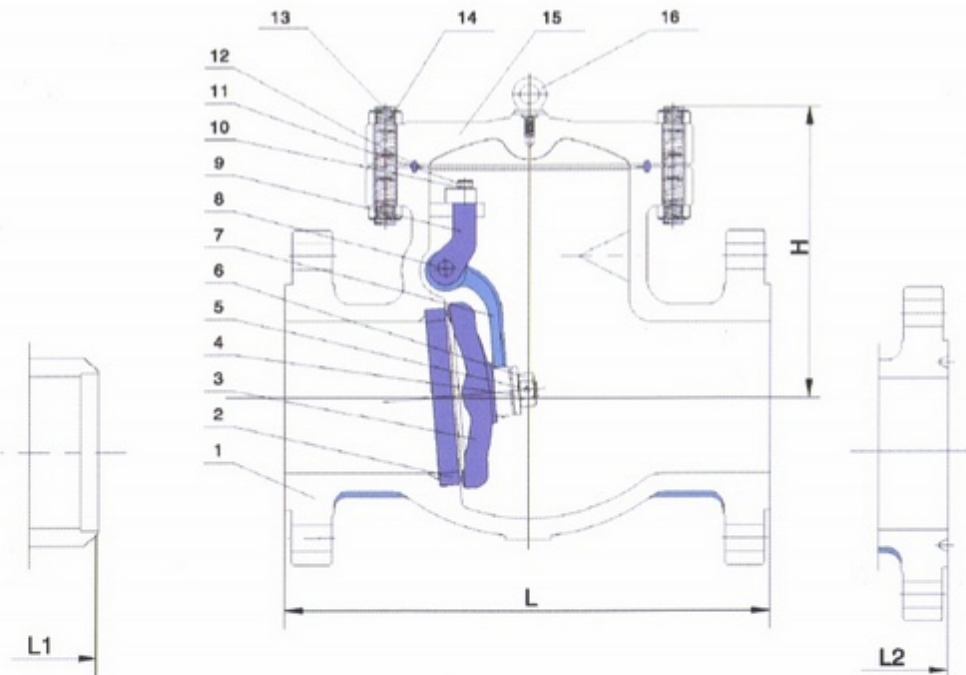
Bolted Cover
Swing Type Disc
With Eye Bolt
By Pass On Request
Lever & Wight Optional

SPECIFICATIONS

Design	ASME B16.34/BS 1868
Face to Face	ASME B16.10
End Flange	ASME B16.5
BW End	ASME B16.25
Test	API 598
Special	NACE MR-01-75

STANDARD MATERIALS OF PARTS

ITEM	PART NAME	MATERIAL
1	Body	ASTM A216 GR.WCB
2	Seat Ring	ASTM A105+Stellite Faced
3	Disc	ASTM A216 GR.WCB+13Cr Faced
4	Disc Washer	ASTM A276 Type 410
5	Disc Nut Pin	Stainless Steel
6	Disc Nut	Stainless Steel
7	Higne	ASTM A216 GR.WCB
8	Hinge Pin	ASTM A182 GR.F6
9	Bearing Bracket	ASTM A216 GR.WCB
10	Spring Washer	Carbon Steel
11	Hex, Bolt	Carbon Steel
12	Gasket, Ring Joint	Soft Iron+Graphite
13	Cover Bolt	ASTM A193 GR.B7
14	Cover Bolt Nut	ASTM A194 GR.2H
15	Cover	ASTM A216 GR.WCB
16	Eye Bolt	Carbon steel



Dimensions and Weights														
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
L/L1	in	11.50	13.00	14.00	17.00	22.00	26.00	31.00	33.00	35.00	39.00	43.00	47.00	55.00
	mm	292	330	356	432	559	660	757	828	889	991	1092	1194	1397
L2	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	663	790	841	892	994	1095	1200	1407
H	in	7.166	7.87	8.94	10.24	12.80	15.35	19.29	20.79	22.56	25.98	28.35	29.37	37.80
	mm	182	200	227	260	325	390	490	528	572	660	720	746	960
Weight RF	kg	36	49	70	122	269	465	673	875	994	1220	1620	2120	3100

Cast Steel Swing Check Valve

Class 900-2500

FEATURES

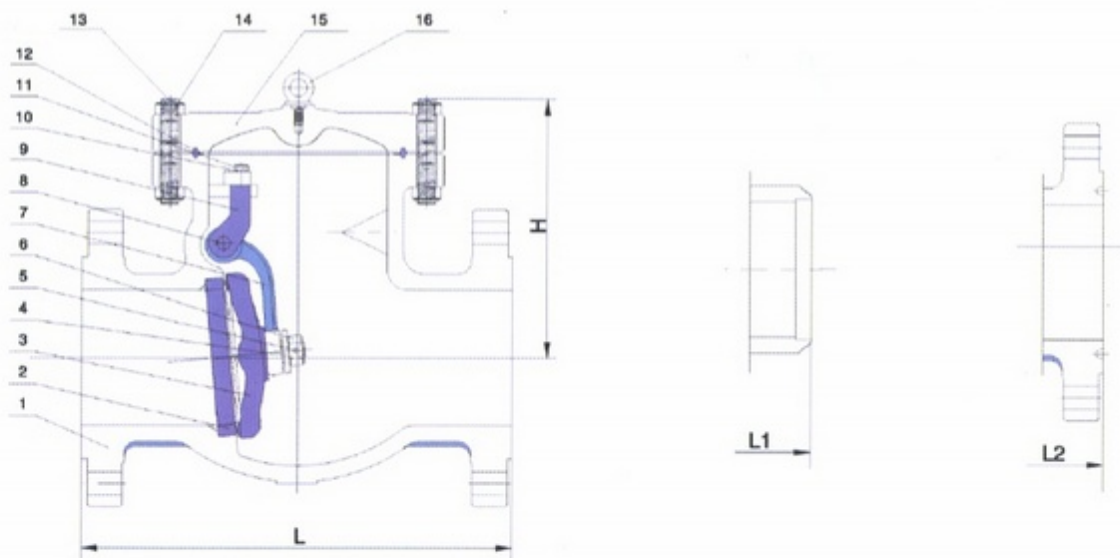
Bolted Cover
Swing Type Disc
With Eye Bolt
By Pass On Request
Lever & Wight Optional

SPECIFICATIONS

Design	ASME B16.34/BS 1868
Face to Face	ASME B16.10
End Flange	ASME B16.5
BW End	ASME B16.25
Test	API 598
Special	NACE MR-01-75

STANDARD MATERIALS OF PARTS

ITEM	PART NAME	MATERIAL
1	Body	ASTM A216 GR. WCB
2	Seat Ring	ASTM A105+Stellite Faced
3	Disc	ASTM A216 GR.WCB+13Cr Faced
4	Disc Washer	ASTM A276 Type 410
5	Disc Nut Pin	Stainless Steel
6	Disc Nut	Stainless Steel
7	Higne	ASTM A216 GR.WCB
8	Hinge Pin	ASTM A182 GR.F6
9	Bearing Bracket	ASTM A216 GR.WCB
10	Spring Washer	Carbon Steel
11	Hex. Bolt	Carbon Steel
12	Gasket, Ring Joint	Soft Iron+Graphite
13	Cover Bolt	ASTM A193 GR.B7
14	Cover Bolt Nut	ASTM A194 GR.2H
15	Cover	ASTM A216 GR.WCB
16	Eye Bolt	Carbon steel



Dimensions and Weights		CALSS 900										CALSS 1500										CALSS 2500									
SIZE	in	2"	2.5"	3"	4"	6"	8"	10"	12"	2"	2.5"	3"	4"	6"	8"	10"	12"	2"	2.5"	3"	4"	6"	8"	10"	12"						
	mm	50	65	80	100	150	200	250	300	50	65	80	100	150	200	250	300	50	65	80	100	150	200	250	300						
L/L1	in	14.50	16.50	15.00	18.00	24.00	29.00	33.00	38.00	14.50	16.50	18.50	21.50	27.75	32.75	39.00	44.50	17.75	20.00	22.75	26.50	36.00	40.25	50.00	56.00						
	mm	368	419	381	457	610	737	838	965	368	419	470	546	705	832	991	1130	451	508	578	673	914	1022	1270	1422						
L2	in	14.62	14.62	15.12	18.12	24.12	29.12	33.12	38.12	14.62	16.62	18.62	21.62	28.00	33.13	39.38	38.12	17.87	20.25	23.00	26.88	36.50	40.87	50.88	56.88						
	mm	371	422	384	460	613	740	841	968	371	422	473	549	711	841	1000	1146	454	514	584	683	927	1038	1292	1445						
H	in	11.65	11.81	11.81	12.87	17.36	19.76	26.14	30.51	11.65	11.81	13.43	16.22	20.12	26.77	29.76	33.74	16.38	16.50	17.36	18.86	20.12	27.99	33.50	39.37						
	mm	296	300	300	327	441	502	664	775	296	300	341	412	511	680	756	857	416	419	441	479	511	711	851	1000						
Weight RF	kg	70	100	91	150	305	510	810	1120	70	100	150	245	550	1010	1550	2280	145	240	330	650	1400	2420	3750	5500						

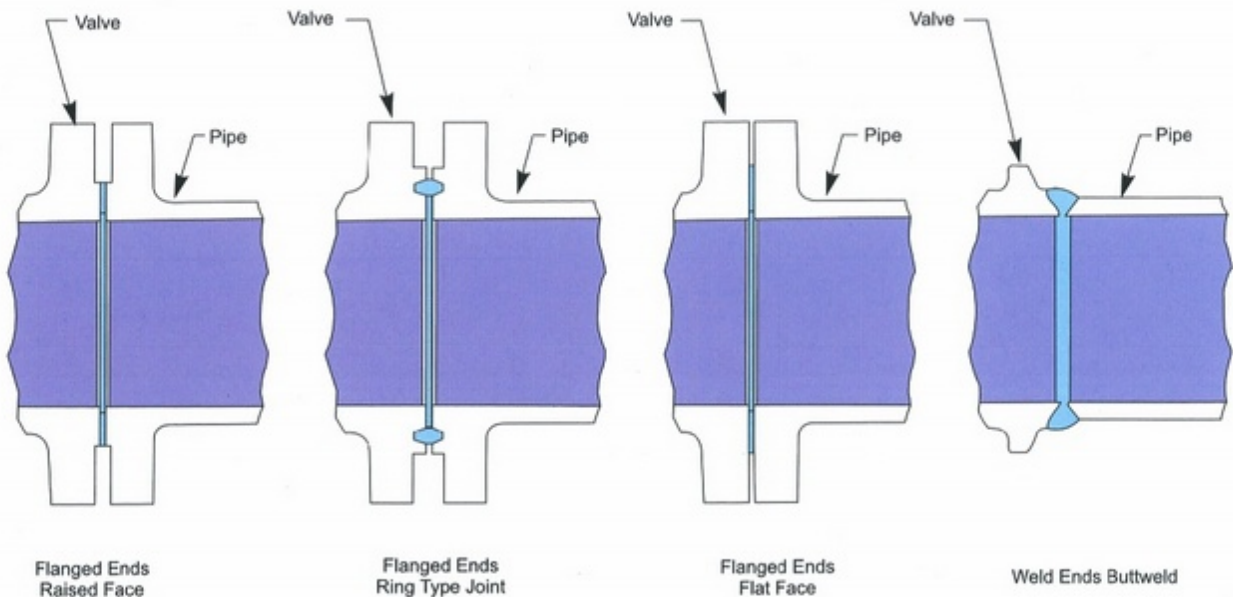
SZNAJDER STAHLWAREN Cast steel valves can be supplied with flanged ends in raised face, flat faces or ring joint type as well as in welding ends (buttweld). They can also

Be supplied with combined ends, such as flanged by weld, in accordance to customer requirements.

The buttweld ends in standard valves are machined in accordance with ASME B 16.25 and are supplied to meet the following pipe schedules:

Valve Pressure Class	Weld End Pipe Schedule
150/300	Schedule 40-2" to 10"
	Standard Wall-12" to 24"
600	Schedule 80
900	Schedule 160-2" to 3"
	Schedule 120-4" and Larger
1500	Schedule 160

The customer must clearly specify the pipe wall thickness and type of pipe to be welded to the valves for schedules different than the above.



Body And Bonnet Joint Seal Gaskets

SZNAJDER STAHLWAREN Cast steel standard valves are supplied with the types of body/bonnet gaskets shown in the table.

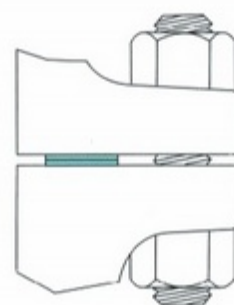
For special service conditions, the **SZNAJDER STAHLWAREN** valves can also be supplied with special shapes on joins and special materials, to comply with specific requirements of the customer.

VALVE	CLASS				
	150	300	600	900	1500
GATE	1	2	3	3	3
GLOBE	1	2	3	3	3
CHECK	1	2	3	3	3

Flat Gasket



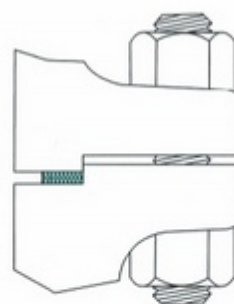
1. Flat Gasket: Graphite with 316 Stainless Steel Core



Spirotalic Gasket



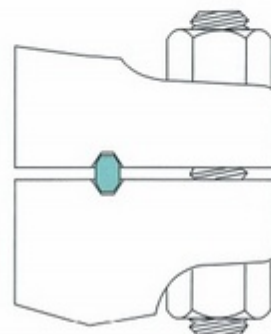
2. Spirotalic Gasket: Stainless Steel/Graphite Filled.



Ring Gasket



3. Ring Gasket: Oval or Octagonal shape, Soft or Stainless Steel



Standard Compression and Live Loading

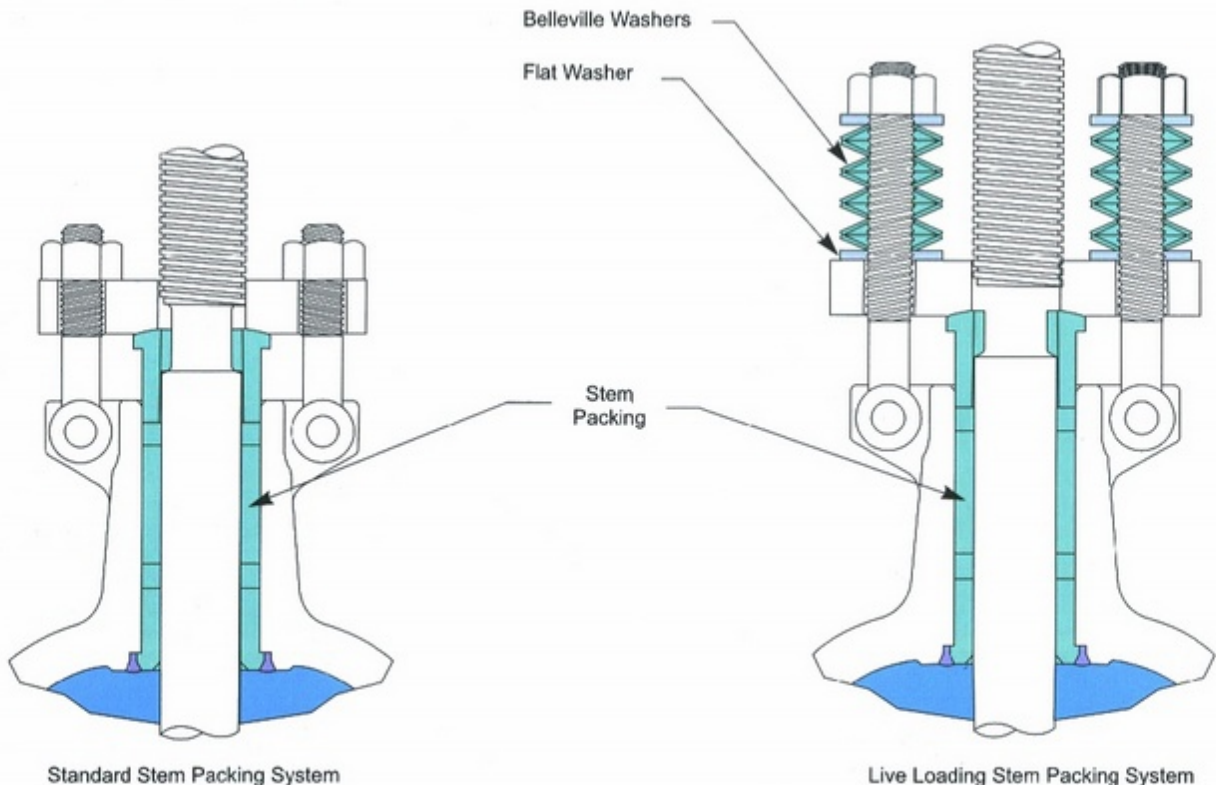
SZNAJDER STAHLWAREN Valves are designed, manufactured and tested to meet 50 PPMVOC fugitive emission leak rate as a standard off the shelf valve. This applies to all gate and globe valves, both Cast Steel and Forge Steel, without a requirement for a "special order".

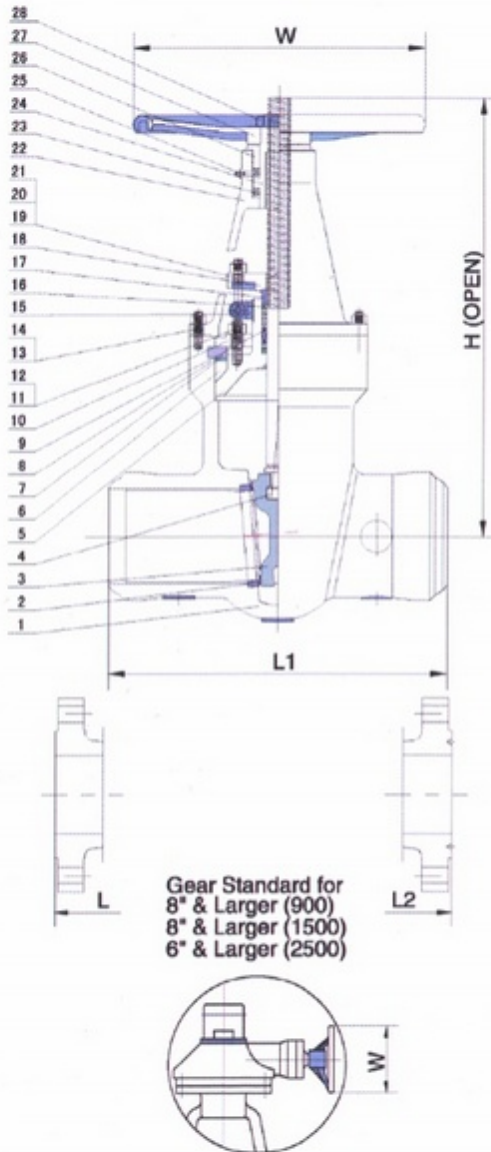
SZNAJDER STAHLWAREN Uses a stem packing of flexible graphite incorporating a passive corrosion inhibitor in a combination of high and low density sealing rings with anti-extrusion end rings reinforced with Inconel wire.

The long term low emission stem sealing ability of **SZNAJDER STAHLWAREN** packing is enhanced by reduced diametral clearances and close control of stem straightness and packing sealing surface finish.

SZNAJDER STAHLWAREN Can also provide gate and globe valves with a stem packing live loading system for installations requiring frequent valve operation and/or having large variations in temperature/pressure or where it is desirable to eliminate the need for occasional adjustment of the packing to compensate for the variations in operation. Live loading will provide a constant compression against the packing to maintain the optimum seal over a long period of time and variations in the operating conditions.

SZNAJDER STAHLWAREN Can also supply valves with stem packing of different types and materials to meet the customer requirements.





FEATURES

OS & Y-Rising Stem
Pressure Seal
Flexible Wedge
Backseat Weld-Deposited
By Pass On Request
Locking Device Optional
Gear Optional

SPECIFICATIONS

Design	ASME B16.34
Face to Face	ASME B16.10
End to End	ASME B16.10
End Flange	ASME B16.5
BW End	ASME B16.25
Test	API 598
Special	NACE MR-01-75

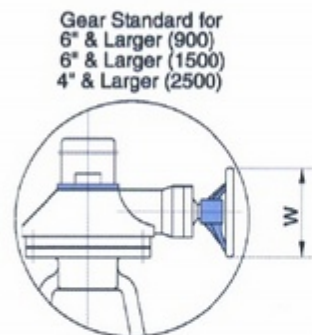
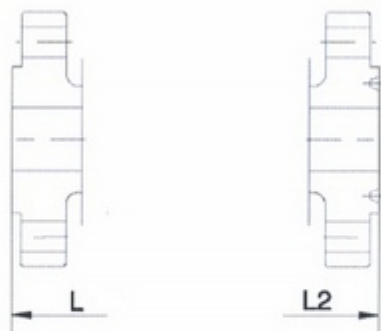
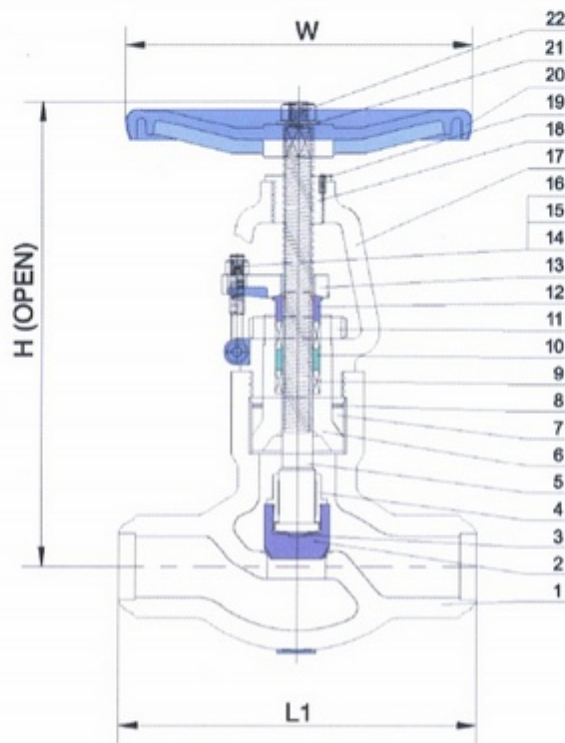
STANDARD MATERIALS OF PARTS

ITEM	PART NAME	MATERIAL
1	Body	ASTM A216 GR.WCB
2	Seat Ring	ASTM A105+Stellite Faced
3	Disc	ASTM A216 GR. WCB+Stellite Faced
4	Stem	ASTM A182 GR.F6
5	Bonnet	ASTM A216 GR. WCB+Stellite Faced
6	Gasket	ASTM A182 GR. F304
7	Thrust Ring	ASTM A276 Type 410
8	Separate Ring	Carbon Steel
9	Lantern Ring On Request	ASTM A276 Type 410
10	Bonnet Retainer	Carbon Steel
11	Bonnet Bolts	ASTM A193 GR.B7
12	Bonnet Bolt nuts	ASTM A194 GR.2H
13	Yoke Bolts	ASTM A194 GR.B7
14	Yoke Bolt Nuts	ASTM A193 GR.2H
15	Gland Eye	ASTM A216 GR.WCB
16	Stem Packing	Braided Graphite & Die formed Graphite Ring
17	Gland	ASTM A276 Type 410
18	Gland Flange	ASTM A216 GR.WCB
19	Eye Bolt Pins	Carbon steel
20	Gland Eye Bolts	ASTM A193 GR.B7
21	Eye Bolt Nuts	ASTM A194 GR.2H
22	Yoke	ASTM A216 GR.WCB
23	Bearing	Steel
24	Stem Nut	ASTM A439 GR. D-2
25	Grease Nipple	Carbon Steel
26	Retaining Nut	Carbon Steel
27	Handwheel	Ductile Iron
28	Handwheel Nut	Carbon Steel

Dimensions and Weights	CALSS 900										CALSS 1500										CALSS 2500									
	in	2"	2.5"	3"	4"	6"	8"	10"	12"	in	2"	2.5"	3"	4"	6"	8"	10"	12"	in	2"	2.5"	3"	4"	6"	8"	10"	12"			
SIZE	mm	50	65	80	100	150	200	250	300	50	65	80	100	150	200	250	300	50	65	80	100	150	200	250	300					
L	in	14.50	16.50	15.00	18.00	24.00	29.00	33.00	38.00	17.50	20.00	22.75	26.50	36.00	40.25	50.00	56.00	14.50	16.50	18.50	21.50	27.75	32.75	39.00	44.50					
	mm	368	419	381	457	610	737	838	965	450	508	578	673	914	1022	1270	1422	368	419	470	546	705	832	991	1130					
L1	in	8.50	10.00	12.00	14.00	20.00	26.00	31.00	36.00	11.00	13.00	14.50	18.00	24.00	30.00	36.00	41.00	8.50	10.00	12.00	16.00	22.00	28.00	34.00	39.00					
	mm	216	254	305	356	508	660	787	914	279	330	368	457	610	762	914	1041	216	254	305	406	559	711	864	991					
L2	in	14.62	16.62	15.12	18.12	24.12	29.12	33.12	38.12	17.87	20.25	23.00	26.88	36.50	40.87	50.88	56.88	14.62	16.62	18.62	21.62	28.00	33.13	39.38	45.12					
	mm	371	422	384	460	613	740	841	968	454	514	584	683	927	1038	1292	1445	371	422	473	549	711	842	100	146					
H	in	24.41	30.00	30.71	33.86	40.35	50.63	60.63	70.28	24.00	30.55	30.90	34.40	44.02	53.46	66.14	74.50	24.00	30.55	30.90	34.40	40.35	53.46	61.74	74.50					
	mm	620	762	780	860	1025	1286	1540	1785	610	776	785	874	1118	1358	1680	1892	610	776	785	874	1025	1353	1588	1892					
W	in	12	14	14	16	20	24	24	24	14	18	18	20	24	24	24	24	12	16	16	20	24	24	24	24					
	mm	300	350	350	400	500	610	610	610	350	450	450	500	610	610	610	610	300	400	400	500	600	610	610	610					
Weight RF	kg	50	72	86	110	202	530	782	1135	60	112	122	192	480	830	1678	2320	50	92	92	145	230	540	1060	1184					

Pressure Seal Globe Valve

Class 900-2500



FEATURES

OS & Y,Rising Stem
Pressure Seal
Conic Disc
Backseat Weld-Deposited
By Pass On Request
Locking Device Optional
Gear Optional

SPECIFICATIONS

Design	ASME B16.34
Face to Face	ASME B16.10
End to End	ASME B16.10
End Flange	ASME B16.5
BW End	ASME B16.25
Test	API 598
Special	NACE MR-01-75

STANDARD MATERIALS OF PARTS

ITEM	PART NAME	MATERIAL
1	Body	ASTM A216GR.WCB+Stellite Faced
2	Disc	ASTM A105+13Cr Faced
3	Disc Thrust Plate	ASTM A276 Type 420
4	Disc Nut	ASTM A276 Type 410
5	Stem	ASTM A182 GR.F6
6	Bonnet	ASTM A216GR.WCB+Stellite Faced
7	Gasket	ASTM A182 GR.F304
8	Thrust Ring	ASTM A276 Type 410
9	Stem Packing	Braided Graphite & Die formed Graphite Ring
10	Lantern Ring	ASTM A276 Type 410
11	Bonnet Retainer	Carbon Steel
12	Gland	ASTM A276 Type 410
13	Gland Flange	ASTM A216 GR.WCB
14	Eye Bolt Pins	Carbon Steel
15	Gland Eye Bolts	ASTM A193 GR.B7
16	Eye Bolt Nuts	ASTM A194 GR.2H
17	Yoke	ASTM A216 GR.WCB
18	Yoke Bush	ASTM A439 GR.D-2
19	Screw	Carbon steel
20	Handwheel	Ductile Iron
21	Washer	Carbon steel
22	Handwheel Nut	ASTM A194 GR.2H

Dimensions and Weights	CALSS 900							CALSS 1500							CALSS 2500						
	SIZE	2"	2.5"	3"	4"	6"	8"	2"	2.5"	3"	4"	6"	8"	2"	2.5"	3"	4"	6"	8"		
L/L1	in	14.50	16.50	15.00	18.00	24.00	29.00	14.50	16.50	18.50	21.50	27.75	32.75	17.75	20.00	22.75	26.50	36.00	40.25		
	mm	368	419	381	457	610	737	368	419	470	546	705	832	451	508	578	673	914	1022		
L2	in	14.62	16.62	15.12	18.12	24.12	29.12	14.62	16.62	18.62	21.62	28.00	33.13	17.87	20.25	23.00	26.88	36.50	40.87		
	mm	371	422	384	460	613	740	371	422	473	549	711	841	454	514	584	683	927	1038		
H	in	24.41	25.40	28.50	33.40	48.23	53.15	24.41	25.40	32.68	33.86	48.50	70.24	24.41	30.63	34.84	51.10	53.74	83.46		
	mm	620	645	724	848	1225	1350	620	645	830	860	1232	1784	620	778	885	1298	1365	2120		
W	in	14	14	18	20	24	24	14	14	20	22	24	24	16	20	22	24	24	24		
	mm	350	350	450	500	610	610	350	350	500	560	610	610	400	500	560	610	610	610		
Weight RF	kg	62	86	86	140	380	948	62	86	112	158	765	1494	80	115	152	358	965	2095		

FEATURES

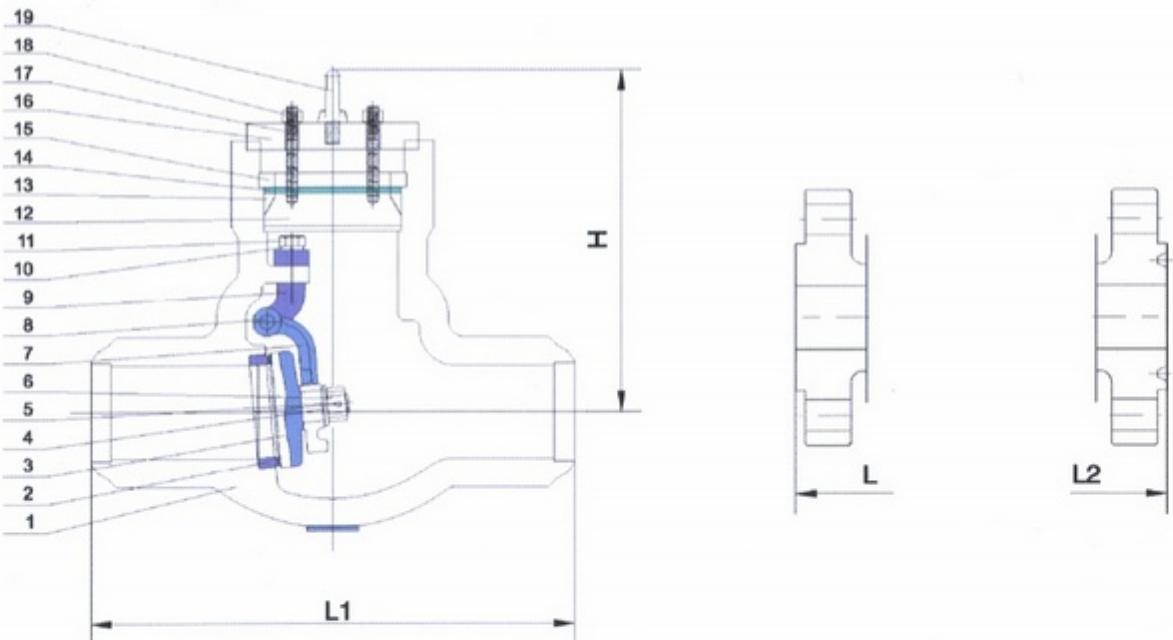
Pressure Seal
Swing Type Disc
Type 1 Standard
Type 2 Optional
With Eye Bolt
By Pass On Request
Lever & Wight Optional

SPECIFICATIONS

Design	ASME B16.34
Face to Face	ASME B16.10
End to End	ASME B16.10
End Flange	ASME B16.5
BW End	ASME B16.25
Test	API 598
Special	NACE MR-01-75

STANDARD MATERIALS OF PARTS

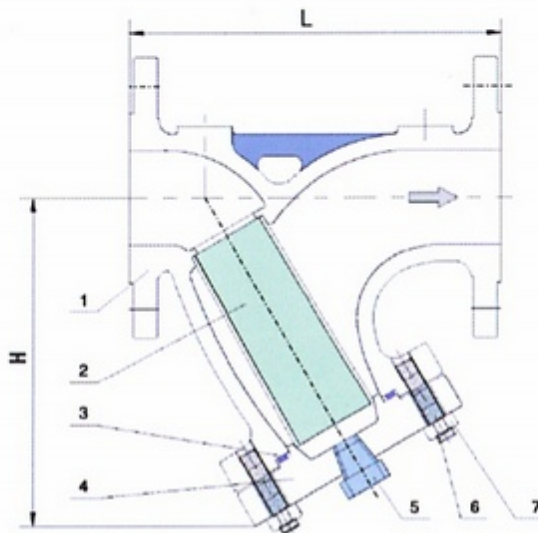
ITEM	PART NAME	MATERIAL
1	Body	ASTM A216 GR. WCB
2	Seat Ring	ASTM A105+Stellite Faced
3	Disc	ASTM A216 GR.WCB+13Cr Faced
4	Disc Washer	ASTM A276 Type 410
5	Disc Nut Pin	Stainless Steel
6	Disc Nut	Stainless Steel
7	Higne	ASTM A216 GR.WCB
8	Hinge Pin	ASTM A182 GR.F6
9	Bearing Bracket	ASTM A216 GR.WCB
10	Spring Washer	Carbon Steel
11	Hex, Bolt	Carbon Steel
12	Bonnet	ASTM A216 GR.WCB
13	Gasket	ASTM A182 GR.F304
14	Thrust Ring	ASTM A 276 Type 410
15	Separate Ring	ASTM A 276 Type410
16	Cover	ASTM A216 GR.WCB
17	Cover Bolt	ASTM A193 GR.B7
18	Cover Bolt Nut	ASTM A194 GR.2H
19	Eye Bolt	Carbon steel



Dimensions and Weights		CALSS 900								CALSS 1500								CALSS 2500							
SIZE	in	2"	2.5"	3"	4"	6"	8"	10"	12"	2"	2.5"	3"	4"	6"	8"	10"	12"	2"	2.5"	3"	4"	6"	8"	10"	12"
	mm	50	65	80	100	150	200	250	300	50	65	80	100	150	200	250	300	50	65	80	100	150	200	250	300
L/L1	in	14.50	16.50	15.00	18.00	24.00	29.00	33.00	38.00	14.50	16.50	18.50	21.50	27.75	32.75	39.00	44.50	17.75	20.00	22.75	26.50	36.00	40.25	50.00	56.00
	mm	368	419	381	457	610	737	838	965	368	419	470	546	705	832	991	1130	451	508	578	673	914	1022	1270	1422
L2	in	14.62	14.62	15.12	18.12	24.12	29.12	33.12	38.12	14.62	16.62	18.62	21.62	28.00	33.13	39.38	45.12	17.87	20.25	23.00	26.88	36.50	40.87	50.88	56.88
	mm	371	422	384	460	613	740	841	968	371	422	473	549	711	841	1000	1146	454	514	584	683	927	1038	1292	1445
H	in	11.65	11.81	11.81	12.87	17.36	19.76	26.14	30.51	11.65	11.81	13.43	16.22	20.12	26.77	29.76	33.74	16.38	16.50	17.36	18.86	20.12	27.99	33.50	39.37
	mm	296	300	300	327	441	502	664	775	296	300	341	412	511	680	756	857	416	419	441	479	511	711	851	1000
Weight BW	kg	50	77	68	115	230	367	632	910	50	77	115	190	452	845	1280	1780	110	190	260	535	1110	1980	2980	4350

Cast steel Y-strainer

Class 150-600



SPECIFICATIONS

Design	ASME B16.34
Face to Face	ASME B16.10
End to End	ASME B16.10
End Flange	ASME B16.5
Test	API 598

STANDARD MATERIALS OF PARTS

ITEM	PART NAME	MATERIAL
1	Body	ASTM A216 GR. WCB
2	Screen	ASTM A276 Type 304
3	Gasket	304+Graphite
4	Cover	ASTM A216 GR.WCB
5	Plug	ASTM A105
6	Cover Bolt	ASTM A193 GR.B7
7	Cover Bolt Nut	ASTM A194 GR.2H

Dimensions and Weights		CALSS 150							
SIZE		2"	2.5"	3"	4"	6"	8"	10"	12"
L	in	8.00	8.50	9.50	11.50	16.00	19.50	24.50	27.50
	mm	203	216	241	292	406	495	622	699
H	in	5.71	7.20	8.11	8.98	12.95	17.32	19.96	23.39
	mm	145	183	206	228	329	440	507	594
Weight	kg	12	18	21	32	48	105	169	215

Dimensions and Weights		CALSS 300							
SIZE		2"	2.5"	3"	4"	6"	8"	10"	12"
L	in	10.50	11.50	12.50	14.00	17.50	22.00	24.50	28.00
	mm	267	292	318	356	445	559	622	711
H	in	6.70	7.28	9.25	11.42	14.76	17.72	22.64	26.18
	mm	170	185	235	290	375	450	575	665
Weight	kg	15	18	35	51	92	182	285	307

Dimensions and Weights		CALSS 600							
SIZE		2"	2.5"	3"	4"	6"	8"	10"	12"
L	in	11.50	13.00	14.00	17.00	22.00	26.00	31.00	33.00
	mm	292	330	356	432	559	660	787	838
H	in	7.28	7.87	9.84	11.81	16.34	19.29	23.43	26.77
	mm	185	200	250	300	415	490	595	680
Weight	kg	35	40	48	90	220	360	500	781

Gate Valve

CLASS	ITEM	VALVE SIZE																
		2"	2.5"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"	24"	28"	30"	32"	32"
150	Stem Thread O.D.	3/4"	3/4"	7/8"	1"	1 1/8"	1 1/4"	1 3/8"	1 1/2"	1 5/8"	1 3/4"	1 7/8"	2"	2 1/4"	2 1/2"	2 3/4"	2 3/4"	3"
	Thread Per Inch	5	5	5	5	5	4	4	4	3	3	3	3	3	3	3	3	2
	Pitch(in)	0.2	0.2	0.5	0.2	0.2	0.25	0.25	0.25	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.5
	Turns to Open	13	16	18	24	34	36	44	52	44	53	58	64	75	88	94	99	74
	Torque(N.m)	16	18	24	38	76	111	182	269	325	435	565	748	1256	1587	1935	2127	3239
300	Stem Thread O.D.	3/4"	3/4"	7/8"	1"	1 1/4"	1 3/8"	1 1/2"	1 5/8"	1 3/4"	1 7/8"	2"	2 1/8"	2 1/8"	2 3/4"	2 7/8"		
	Thread Per Inch	5	5	5	5	4	4	4	3	3	3	3	3	3	3	2		
	Pitch(in)	0.2	0.2	0.2	0.2	0.25	0.25	0.25	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.5	
	Turns to Open	14	16	18	24	26	36	44	40	45	53	58	64	76	88	94		
	Torque(N.m)	23	26	35	55	159	291	458	661	810	1088	1430	1778	2823	4115	5653		
600	Stem Thread O.D.	3/4"	7/8"	1"	1 1/8"	1 1/2"	1 5/8"	1 7/8"	2"	2 1/4"	2 3/8"	2 1/2"	2 3/4"	3"				
	Thread Per Inch	5	5	5	5	4	3	3	3	3	3	3	2					
	Pitch(in)	0.2	0.2	0.2	0.2	0.25	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.5				
	Turns to Open	14	16	18	24	27	27	33	40	45	53	58	64	51				
	Torque(N.m)	35	47	70	122	406	641	1023	1508	2098	2816	3038	3981	6896				
900	Stem Thread O.D.	3/4"	1 1/8"	1 1/8"	1 1/4"	1 5/8"	1 7/8"	2 1/8"	2 1/4"									
	Thread Per Inch	5	5	5	4	3	3	3	3									
	Pitch(in)	0.2	0.2	0.2	0.25	0.333	0.333	0.333	0.333									
	Turns to Open	14	16	18	21	22	28	34	40									
	Torque(N.m)	80	90	95	159	569	978	1728	2601									
1500	Stem Thread O.D.	3/4"	1 1/8"	1 1/4"	1 3/8"	1 3/4"	2 1/8"	2 1/2"	2 3/4"									
	Thread Per Inch	5	5	4	4	3	3	3	3									
	Pitch(in)	0.2	0.2	0.2	0.25	0.333	0.333	0.333	0.333									
	Turns to Open	14	16	16	22	22	28	34	40									
	Torque(N.m)	117	172	224	349	1009	2025	3259	4437									
2500	Stem Thread O.D.	3/4"	1 1/8"	1 1/4"	1 3/8"	1 7/8"	2 3/8"	2 7/8"	3 1/4"									
	Thread Per Inch	5	5	4	4	3	3	2	2									
	Pitch(in)	0.2	0.2	0.2	0.25	0.333	0.333	0.333	0.333									
	Turns to Open	15	17	17	22	28	28	34	40									
	Torque(N.m)	165	224	281	559	1407	2913	5748	8332									

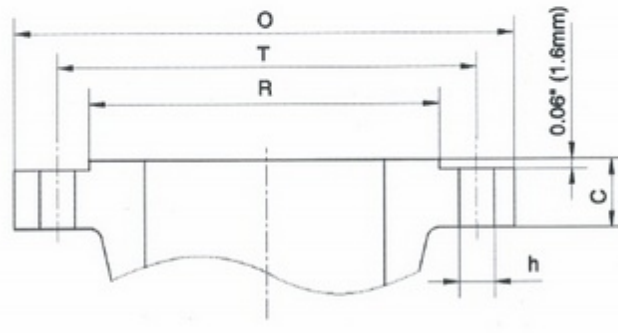
Globe Valve

CLASS	ITEM	VALVE SIZE							
		2"	2.5"	3"	4"	6"	8"	10"	12"
150	Stem Thread O.D.	3/4"	7/8"	1"	1 1/8"	1 1/4"	1 3/8"	1 1/2"	1 5/8"
	Thread Per Inch	5	5	5	5	4	4	4	3
	Pitch(in)	0.2	0.2	0.2	0.2	0.25	0.25	0.25	0.333
	Turns to Open	4	7	5	8	7	9	10	7
	Torque(N.m)	47	66	84	157	239	326	620	1198
300	Stem Thread O.D.	3/4"	7/8"	1"	1 1/8"	1 3/8"	1 1/2"	1 1/2"	1 3/4"
	Thread Per Inch	5	5	5	5	4	4	4	3
	Pitch(in)	0.2	0.2	0.2	0.2	0.25	0.25	0.333	0.333
	Turns to Open	4	8	7	8	7	9	9	9
	Torque(N.m)	62	85	118	218	727	1309	2160	3100
600	Stem Thread O.D.	7/8"	1"	1 1/8"	1 1/4"	1 5/8"	1 3/4"	2"	2 1/8"
	Thread Per Inch	5	5	5	4	3	3	3	3
	Pitch(in)	0.2	0.2	0.2	0.25	0.333	0.333	0.333	0.333
	Turns to Open	8	8	8	8	9	9	9	9
	Torque(N.m)	142	244	316	602	1590	2782	4579	6216
900	Stem Thread O.D.	1 1/8"	1 1/4"	1 1/4"	1 3/8"	1 3/4"	2"		
	Thread Per Inch	5	4	4	4	3	3		
	Pitch(in)	0.2	0.25	0.25	0.25	0.333	0.333		
	Turns to Open	8	7	7	8	9	9		
	Torque(N.m)	285	412	528	1063	1792	3439		
1500	Stem Thread O.D.	1 1/8"	1 1/4"	1 3/8"	1 1/2"	2"	2 1/4"		
	Thread Per Inch	5	4	4	4	3	3		
	Pitch(in)	0.2	0.25	0.2	0.25	0.333	0.333		
	Turns to Open	8	7	7	8	9	9		
	Torque(N.m)	352	772	876	1816	3868	5011		
2500	Stem Thread O.D.	1 1/4"	1 1/2"	1 5/8"	1 3/4"	2"	2 1/2"		
	Thread Per Inch	4	4	3	3	3	3		
	Pitch(in)	0.25	0.25	0.333	0.333	0.333	0.333		
	Turns to Open	7	7	6	6	9	9		
	Torque(N.m)	502	824	959	2062	6530	9682		

Steel End Flange Dimensions

Class 150-300 ASME B16.5/B16.47

CLASS 150 300 RF



CLASS	SIZE		O		R		C		T		h		Bolt	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	QTY.	Diameter
150	2	50	6.00	152	3.62	92	0.62	16	4.75	120.5	0.75	19	4	5/8
	2.5	65	7.00	178	4.12	105	0.69	18	5.50	139.5	0.75	19	4	5/8
	3	80	7.50	190	5.00	127	0.75	19	6.00	152.5	0.75	19	4	5/8
	4	100	9.00	229	6.19	157	0.94	24	7.50	190.5	0.75	19	8	5/8
	6	150	11.00	279	8.50	216	1.00	26	9.50	241.5	0.88	22	8	3/4
	8	200	13.50	343	10.62	270	1.12	29	11.75	298.5	0.88	22	8	3/4
	10	250	16.00	406	12.75	324	1.19	31	14.25	362	1.00	25	12	7/8
	12	300	19.00	483	15.00	381	1.25	32	17.00	432	1.00	25	12	7/8
	14	350	21.00	533	16.25	413	1.38	35	18.75	476	1.12	29	12	1
	16	400	23.50	597	18.50	470	1.44	37	21.25	540	1.12	29	16	1
	18	450	25.00	635	21.00	533	1.56	40	22.75	578	1.25	32	16	1 1/8
	20	500	27.50	699	23.00	584	1.69	43	25.00	635	1.25	32	20	1 1/8
	24	600	32.00	813	27.25	692	1.88	48	29.50	749.5	1.38	35	20	1 1/4
	28	700	36.50	927	31.50	800	2.81	72	34.00	963.5	1.38	35	28	1 1/4
	30	750	38.75	984	33.75	857	2.94	75	36.00	914.5	1.38	35	28	1 1/4
	32	800	41.75	1060	36.00	914	3.19	81	38.50	978	1.62	41	28	1 1/2
36	900	46.00	1168	40.25	1022	3.56	91	42.75	1086	1.62	41	32	1 1/2	
300	2	50	6.50	165	3.62	92	0.88	23	5.00	127	0.75	19	8	5/8
	2.5	65	7.50	190	4.12	105	1.00	26	5.88	179	0.88	22	8	3/4
	3	80	8.25	210	5.00	127	1.12	29	6.62	168.5	0.88	22	8	3/4
	4	100	10.00	254	6.19	157	1.25	32	7.88	200	0.88	22	8	3/4
	6	150	12.50	318	8.50	216	1.44	37	10.62	270	0.88	22	12	3/4
	8	200	15.00	381	10.62	270	1.62	42	13.00	330	1.00	25	12	7/8
	10	250	17.50	445	12.75	324	1.88	48	15.25	387.5	1.12	29	16	1
	12	300	20.50	521	15.00	381	2.00	51	17.75	451	1.25	32	16	1 1/8
	14	350	23.00	584	16.25	413	2.12	54	20.25	514.5	1.25	32	20	1 1/8
	16	400	25.50	648	18.50	470	2.25	58	22.50	571.5	1.38	35	20	1 1/4
	18	450	28.00	711	21.00	533	2.38	61	24.75	628.5	1.38	35	24	1 1/4
	20	500	30.50	775	23.00	584	2.50	64	27.00	686	1.38	35	24	1 1/4
	24	600	36.00	914	27.25	692	2.75	70	32.00	813	1.62	41	24	1 1/2
	28	700	40.75	1035	31.50	800	3.38	86	37.00	940	1.75	45	28	1 5/8
30	750	43.00	1092	33.75	857	3.62	92	39.25	997	1.88	48	28	1 3/4	

End Flange Dimensions: Size 2" -24" to ASME B16.5, Size 28" -36" to ASME B16.47 A.

Tolerances: Unit inch

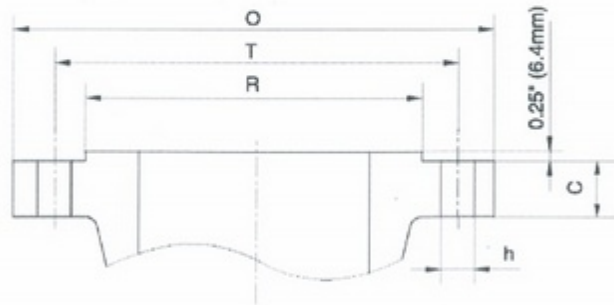
Thickness C: NPS ≤ 18" +0.12, -0
NPS ≥ 20" +0.19, -0

Drilling and Facing: Bolt Circle Diameter h: ±0.06
Center to Center of Adjacent Bolt Holes: ±0.03

Eccentricity Between Bolt Circle Diameter and Machined Facing Diameters:
NPS ≤ 2 1/2" ±0.03
NPS ≤ 2 1/2" ±0.06

Outside Diameter R: 0.06 Raised Face: ±0.03
0.25 Raised Face: ±0.02

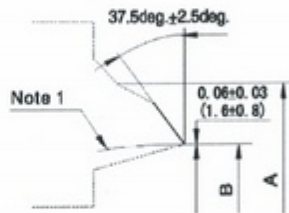
CLASS 600-2500 RF



CLASS	SIZE		O		R		C		T		h		Bolt	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	QTY.	Diameter
600	2	50	6.50	165	3.62	92	1.00	26	5.00	127	0.75	19	8	5/8
	2.5	65	7.50	190	4.12	105	1.12	29	5.88	149	0.88	22	8	3/4
	3	80	8.25	210	5.00	127	1.25	32	6.62	168	0.88	22	8	3/4
	4	100	10.75	273	6.19	157	1.50	38	8.50	216	1.00	25	12	7/8
	6	150	14.00	356	8.50	216	1.88	48	11.50	292	1.12	29	12	1
	8	200	16.50	419	10.62	270	2.19	56	13.75	349	1.25	32	12	1 1/8
	10	250	20.00	508	12.75	324	2.50	64	17.00	432	1.38	35	16	1 1/4
	12	300	22.00	559	15.00	381	2.62	67	19.25	489	1.38	35	20	1 1/4
	14	350	23.75	603	16.25	413	2.75	70	20.75	527	1.50	38	20	1 3/8
	16	400	27.00	686	18.50	470	3.00	77	23.75	603	1.62	41	20	1 1/2
	18	450	29.25	743	21.00	533	3.25	83	25.75	654	1.75	44	20	1 5/8
	20	500	32.00	813	23.00	584	3.50	89	28.50	724	1.75	44	24	1 5/8
24	600	37.00	940	27.25	692	4.00	102	33.00	838	2.00	51	24	1 7/8	
900	2	50	8.50	216	3.62	92	1.50	38.5	6.50	165.1	1.00	26	8	7/8
	2.5	65	9.62	244	4.12	105	1.62	41.5	7.50	190.5	1.12	29	8	1
	3	80	9.50	241	5.00	127	1.50	38.5	7.50	190.5	1.00	26	8	7/8
	4	100	11.50	292	6.19	157	1.75	44.5	9.25	234.9	1.25	32	8	1 1/8
	6	150	15.00	381	8.50	216	2.19	56.0	12.50	317.5	1.25	32	12	1 1/8
	8	200	18.50	470	10.62	270	2.50	63.5	15.50	393.7	1.50	39	12	1 3/8
	10	250	21.50	545	12.75	324	2.75	70.0	18.50	469.9	1.50	39	16	1 3/8
	12	300	24.00	610	15.00	381	3.12	79.5	21.00	533.4	1.50	39	20	1 3/8
	14	350	25.25	640	16.25	413	3.38	86.0	22.00	558.8	1.62	42	20	1 1/2
	16	400	27.75	705	18.50	470	3.50	89.0	24.25	615.9	1.75	45	20	1 5/8
	18	450	31.00	785	21.00	533	4.00	102.0	27.00	685.8	2.00	51	20	1 7/8
	20	500	33.75	855	23.00	584	4.25	108.0	29.50	749.3	2.12	54	20	2
24	600	41.00	1040	27.25	692	5.50	140.0	35.50	901.7	2.62	67	20	2 1/2	
1500	2	50	8.50	216	3.62	92	1.50	38.5	6.50	165.1	1.00	26	8	1
	2.5	65	9.62	244	4.12	105	1.62	41.5	7.50	190.5	1.12	29	8	1 1/8
	3	80	10.50	267	5.00	127	1.88	48.5	8.00	8.00	1.25	32	8	1 1/4
	4	100	12.25	311	6.19	157	2.12	54.0	9.50	9.50	1.38	35	8	1 3/8
	6	150	15.50	394	8.50	216	3.25	83.0	12.50	12.50	1.50	39	12	1 1/2
	8	200	19.00	483	10.62	270	3.62	92.9	15.50	15.50	1.75	45	12	1 3/4
	10	250	23.00	585	12.75	324	4.25	108.0	19.00	19.00	2.00	51	12	2
	12	300	26.50	675	15.00	381	4.88	124.0	22.50	22.50	2.12	54	16	2 1/8
	14	350	29.50	750	16.25	413	5.25	133.5	25.00	25.00	2.38	61	16	2 3/8
	16	400	32.50	825	18.50	470	5.75	146.5	27.75	27.75	2.62	67	16	2 5/8
	18	450	36.00	915	21.00	533	6.38	162.0	30.50	30.50	2.88	74	16	2 7/8
	20	500	38.75	985	23.00	584	7.00	178.0	32.75	32.75	3.12	80	16	3 1/8
24	600	46.00	1170	27.25	692	8.00	203.5	39.00	39.00	3.62	93	16	3 5/8	
2500	2	50	9.25	235	3.62	92	2.00	51.0	6.75	6.75	1.12	29	8	1
	2.5	65	10.50	267	4.12	105	2.25	57.5	7.75	7.75	1.25	32	8	1 1/8
	3	80	12.00	305	5.00	127	2.62	67.0	9.00	9.00	1.38	35	8	1 1/4
	4	100	14.00	356	6.19	157	3.00	76.5	10.75	10.75	1.62	42	8	1 1/2
	6	150	19.00	483	8.50	216	4.25	108.0	14.50	14.50	2.12	54	8	2
	8	200	21.75	550	10.62	270	5.00	127.0	17.25	17.25	2.12	54	12	2
	10	250	26.50	675	12.75	324	6.50	165.5	21.50	21.25	2.62	67	12	2 1/2
	12	300	30.00	760	15.00	381	7.25	184.5	24.38	24.38	2.88	74	12	2 3/4

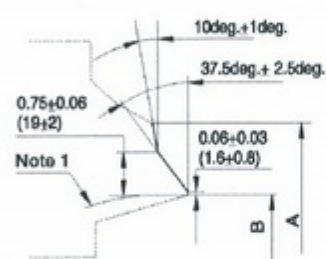
End Flange Dimensions: ASME B16.5

Tolerances: the Same as Class 150 300



Note 1

Note 1 Internal surface may be as formed or machined for dimension B at root face. Comtour within the envelope shall be in accordance with section



Note 1

Wall Thicknesses Not Over 0.88in(22mm)
Welding End Detail for joint Without Backing Ring

Wall Thicknesses Over 0.88in(22mm)
Welding End Detail for joint Without Backing Ring

Nominal Pipe Size		Schedule No. [Note(1)]	O.D.at Welding Ends				B		C[Note(3)]		T	
			Wrought or Fabricated Components, A[Note(1)]		Cast Steel Valves, A[Note(2)]							
DN	NPS		mm	in	mm	in	mm	in	mm	mm	mm	mm
65	2.5	40	43.0	2.88	75	2.96	62.5	2.469	62.93	2.479	5.16	0.203
		80					59	2.323	59.69	2.341	7.01	0.276
		160					54	2.125	55.28	2.178	9.53	0.375
		XXS					45	1.771	47.43	1.868	14.02	0.552
80	3	40	88.9	3.50	91	3.95	78	3.068	78.25	3.081	5.49	0.126
		80					73.5	2.900	74.53	2.934	7.62	0.300
		160					66.5	2.625	68.38	2.692	11.13	0.438
		XXS					58.5	2.300	61.19	2.409	15.24	0.600
90	3.5	40	101.6	4.00	105	4.12	90	3.548	90.52	3.564	5.74	0.226
		80					85.5	3.364	86.42	3.402	8.08	0.318
100	4	40	114.3	4.50	117	4.62	102	4.026	102.73	4.044	6.02	0.237
		80					97	3.826	98.28	3.869	8.56	0.337
		120					92	3.624	93.78	3.692	11.13	0.438
		160					87.5	3.428	89.65	3.530	13.49	0.531
125	5	40	141.3	5.56	144	5.69	80	3.152	83.30	3.279	17.12	0.674
		80					128	5.047	128.80	5.070	6.55	0.258
		120					122	1.813	123.58	4.866	9.53	0.375
		160					116	4.563	118.04	4.647	12.70	0.500
150	6	40	168.3	6.62	172	6.78	109.5	4.313	112.47	4.428	15.88	0.625
		80					103	4.063	106.92	4.209	19.05	0.750
		120					154	6.065	154.82	6.094	7.11	0.280
		160					145.5	5.761	148.06	5.828	10.97	0.432
200	8	40	219.1	8.62	223	8.78	140	5.501	142.29	5.600	14.27	0.562
		60					132	5.187	135.31	5.326	18.26	0.719
		80					124.5	4.897	128.85	5.072	21.95	0.864
		100					120.5	4.743	123.75	4.866	25.40	1.000
250	10	40	273.0	10.75	278	10.94	189	7.437	191.65	7.544	15.09	0.594
		60					182.5	7.187	186.11	7.326	18.26	0.719
		80					178	7.001	181.98	7.163	20.62	0.812
		100					174.5	6.875	179.16	7.053	22.23	0.875
300	12	40	323.8	12.75	329	12.97	173	6.813	177.79	6.998	23.01	0.906
		60					254.5	10.020	255.74	10.070	9.27	0.365
		80					247.5	9.75	249.74	9.834	12.70	0.500
		100					243	9.652	245.55	9.670	15.09	0.594
350	14	40	355.6	14.00	362	14.25	236.5	9.312	240.01	9.451	18.26	0.719
		60					230	9.062	234.44	9.232	21.44	0.844
		80					222	8.750	227.51	8.959	25.40	1.000
		100					216	8.500	221.95	8.740	28.58	1.125
350	14	STD	355.6	14.00	362	14.25	305	12.000	306.08	12.053	9.53	0.375
		40					303	11.938	304.72	11.999	10.31	0.406
		XS					298.5	11.750	300.54	11.834	12.70	0.500
		60					295	11.626	297.79	11.725	14.27	0.562
350	14	80				289	11.374	292.17	11.505	17.48	0.688	
		100				281	11.062	285.24	11.232	21.44	0.844	
		120				273	10.750	278.31	10.959	25.40	1.000	
		140				266.5	10.500	272.75	10.740	28.58	1.125	
350	14	160				257	10.126	264.45	10.413	33.32	1.312	
		STD	355.6	14.00	362	14.25	336.5	13.250	337.88	13.303	9.53	0.375
		40					333.5	13.124	335.08	13.192	11.13	0.438
		X3					330	13.000	332.34	13.084	12.70	0.500
350	14	60				325.5	12.812	328.15	12.920	15.09	0.594	
		80				317.5	12.500	321.22	12.646	19.05	0.750	
		100				308	12.124	312.86	12.318	23.83	0.938	
		120				300	11.812	305.93	12.044	27.79	1.094	
350	14	140				292	11.500	299.00	11.771	31.75	1.250	
		160				284	11.188	292.07	11.498	35.71	1.106	

Butt Welding End Dimensions

ASME B16.25

Nominal Pipe Size		Schedule No. [Note(1)]	O.D.at Welding Ends				B		C[Note(3)]		T	
			Wrought or Fabricated Components, A[Note(1)]		Cast Steel Valves, A[Note(2)]							
			DN	NPS	mm	in	mm	in	mm	in	mm	in
400	16	STD	406.4	16.00	413	16.25	387.5	15.250	388.68	15.303	9.53	0.375
		40					381	15.000	383.14	15.084	12.70	0.500
		60					373	14.688	376.21	14.811	16.66	0.656
		80					363.5	14.312	367.84	14.482	21.44	0.844
		100					354	13.938	359.53	14.155	26.19	1.031
		120					344.5	13.562	351.18	13.826	30.96	1.219
		140					333.5	13.124	341.43	13.422	36.53	1.438
		160					325.5	12.812	334.50	13.170	40.49	1.594
450	18	STD	457.2	18.00	464	18.28	438	17.250	439.48	17.303	9.53	0.375
		XS					432	17.000	433.94	17.084	12.70	0.500
		40					428.5	16.876	431.19	16.975	14.27	0.562
		60					419	16.500	422.82	16.646	19.05	0.750
		80					409.5	16.124	414.46	16.318	23.83	0.938
		100					398.5	15.688	404.78	15.936	29.36	1.156
		120					387.5	15.250	395.03	15.553	34.93	1.375
		140					378	14.876	386.77	15.225	39.67	1.562
500	20	STD	508.0	20.00	516	20.31	489	19.250	490.28	19.303	9.53	0.375
		XS					482.5	19.000	484.74	19.084	12.70	0.500
		40					478	18.812	480.55	18.920	15.09	0.594
		60					467	18.376	470.88	18.538	20.62	0.812
		80					455.5	17.938	461.13	18.155	26.19	1.031
		100					443	17.438	450.02	17.717	32.54	1.281
		120					432	17.000	440.29	17.334	38.10	1.500
		140					419	16.500	429.17	16.896	44.45	1.750
550	22	STD	558.8	22.00	567	22.34	408	16.062	419.44	16.513	50.01	1.969
		XS					539	21.250	541.08	21.303	9.53	0.375
		40					533	21.000	535.54	21.084	12.70	0.500
		60					514	20.250	518.86	20.428	22.23	0.875
		80					501	19.750	507.75	19.990	28.58	1.125
		100					488.5	19.250	496.63	19.553	34.93	1.375
		120					476	18.750	485.52	19.115	41.28	1.625
		140					463	18.250	474.41	18.678	47.63	1.875
600	24	STD	609.6	24.00	619	24.38	450.5	17.750	483.30	18.240	53.98	2.125
		XS					590.5	23.250	591.88	23.303	9.53	0.375
		30					584	23.000	588.34	23.084	12.70	0.500
		40					581	22.876	583.59	22.975	14.27	0.562
		60					574.5	22.624	577.97	22.755	17.48	0.688
		80					560.5	22.062	565.49	22.263	24.61	0.969
		100					547.5	21.562	554.38	21.826	30.96	1.219
		120					532	20.938	540.49	21.280	38.89	1.531
650	26	STD	660.4	26.00	670	26.38	517.5	20.376	528.03	20.788	46.02	1.812
		XS					505	19.876	516.91	20.350	52.37	2.062
		30					490.5	19.312	504.37	19.857	59.54	2.344
		40					645.5	25.376	645.50	25.413	7.92	0.312
		60					635	25.000	637.14	25.084	12.70	0.500
		80					695.5	27.376	696.30	27.413	7.92	0.312
		100					686	27.000	687.94	27.084	12.70	0.500
		120					679.5	26.750	682.37	26.865	15.88	0.625
700	28	10	711.2	28.00	721	28.38	746	29.376	747.10	29.413	7.92	0.312
		20					736.5	29.000	738.74	29.084	12.70	0.500
		30					730	28.750	733.17	28.865	15.88	0.625
		40					797	31.376	797.90	31.413	7.92	0.312
750	30	10	762.0	30.00	772	30.38	787.5	31.000	789.54	31.084	12.70	0.500
		20					781	30.750	783.97	30.865	15.88	0.625
		30					778	30.624	781.17	30.755	17.48	0.688
		40					848	33.376	848.70	33.413	7.92	0.312
800	32	10	812.8	32.00	825	32.50	838	33.000	840.34	33.084	12.70	0.500
		20					832	32.750	834.77	32.865	15.88	0.625
		30					828.5	32.624	831.97	32.755	17.48	0.688
		40					898.5	35.376	899.50	35.413	7.92	0.312
850	34	10	863.6	34.00	876	34.50	889	35.000	891.50	35.084	12.70	0.500
		20					882.5	34.750	885.57	34.865	15.88	0.625
		30					876.5	34.500	880.02	34.646	19.05	0.750
		40										
900	36	10	914.4	36.00	927	36.50						
		20										
		30										
		40										

NORES:

(1) Letter designations signify

(a) STD=standard wall thickness

(b) XS=extra-strong wall thickness

(c) XXS=double extra-strong wall thickness

(2) The diameters listed are not requirements. They are provided for the convenience of the user.

(3) Internal machining for continuous backing rings for sizes DN 50(NPS 2)and smaller is not contemplated.

Material	CHEMICAL COMPOSITIONS(%) max									MECHANICAL PROPERTIES				
	C	Mn	P	S	Si	Ni	Cr	Mo	Other	Tensile, min MPa(ksi)	Yield, min MPa(ksi)	Elongation min (%)	Reduction of Area min(%)	Hardness Brinell
WCB	0.30	1.00	0.04	0.045	0.60	0.50	0.50	0.20	Cu 0.30 V0.03	485-655 (70-95)	250(36)	22	35	
WC1	0.25	0.50- 0.80	0.04	0.045	0.60	0.50	0.35	0.45- 0.65	Cu 0.50 V0.10	450-620 (65-90)	240(35)	24	35	
WC6	0.05- 0.20	0.50- 0.80	0.04	0.045	0.60	0.50	1.00- 1.50	0.45- 0.65	Cu 0.50 V0.10	485-655 (70-95)	275(40)	20	35	
WC9	0.05- 0.18	0.40- 0.70	0.04	0.045	0.60	0.50	2.00- 2.75	0.90- 1.20	Cu 0.50 V0.10	485-655 (70-95)	275(40)	20	35	
C5	0.20	0.40- 0.70	0.04	0.045	0.75	0.50	4.00- 6.50	0.45- 0.65	Cu 0.50 V0.10	620-795 (90-115)	415(60)	18	35	
C12	0.20	0.35- 0.65	0.04	0.045	1.00	0.50	8.00- 10.00	0.90- 1.20	Cu 0.50 V0.10	620-795 (90-115)	415(60)	18	35	
CA15	0.15	1.00	0.04	0.040	1.50	1.00	11.50- 14.00	0.50		620-795 (90-115)	450(65)	18	30	
LCB	0.30	1.00	0.04	0.045	0.60	0.50	0.50	0.20	Cu 0.30 V0.03	450-650 (65.0-90.0)	240(35.0)	24	35	J(lbf • ft) 18(13)
LCC	0.25	1.20	0.04	0.045	0.60	0.50	0.50	0.20	Cu 0.30 V0.03	485-655 (70.0-95.0)	275(40.0)	22	35	J(lbf • ft) 20(15)
LC2	0.25	0.50- 0.80	0.04	0.045	0.60	2.0-3.0				485-655 (70.0-95.0)	275(40.0)	24	35	J(lbf • ft) 20(15)
LC3	0.15	0.50- 0.80	0.04	0.040	0.60	3.0-4.0				485-655 (70.0-95.0)	275(40.0)	24	35	J(lbf • ft) 20(15)
CF8	0.08	1.50	0.040	0.040	2.00	8.0- 11.0	18.0- 21.0			485(70)	205(30)	35		
CF8M	0.08	1.50	0.040	0.040	1.50	9.0- 12.0	18.0- 21.0	2.0- 3.0		485(70)	205(30)	30		
CF3	0.03	1.50	0.040	0.040	2.00	8.0- 12.0	17.0- 21.0	0.50		485(70)	205(30)	35		
CF3M	0.03	1.50	0.040	0.040	1.50	9.0- 12.0	17.0- 21.0	2.0- 3.0		485(70)	205(30)	30		
CF8C	0.08	1.50	0.040	0.040	2.00	27.5- 30.5	18.0- 21.0	0.50	No ≥8xC≤1	485(70)	205(30)	30		
CN7M	0.07	1.50	0.040	0.040	1.50	0.40	19.0- 22.0	2.0- 3.0	Cu0.40 V0.03 Nb0.02	450(62)	170(25)	35		
A105	0.35	0.60- 1.05	0.040	0.050	0.35		0.30	0.12		485(70)	250(36)	22	30	≤187
F1	0.28	0.60- 0.90	0.045	0.450	0.15- 0.35			0.44- 0.65		485(70)	275(40)	20	30	143-192
F5	0.15	0.30- 0.60	0.030	0.030	0.50	0.50	4.0- 6.0	0.44- 0.65		485(70)	275(40)	20	35	143-217
F11-1	0.05- 0.15	0.30- 0.60	0.030	0.030	0.50- 1.00		1.00- 1.50	0.44- 0.65		415(60)	205(30)	20	45	121-174
F22-1	0.05- 0.15	0.30- 0.60	0.040	0.040	0.50		2.00- 2.50	0.87- 1.13		415(60)	205(30)	20	35	≤170
F6A	0.15	1.00	0.040	0.030	1.00	0.50	11.5- 13.5			585(85)	380(55)	18	35	167-229
F304	0.08	2.00	0.040	0.030	1.00	8.0- 11.0	18.0- 20.0			515(75)	205(30)	30	50	
F304L		2.00	0.040	0.030	1.00	8.0- 13.0	18.0- 20.0			485(70)	170(70)	30	50	

Material	CHEMICAL COMPOSITIONS(%) max									MECHANICAL PROPERTIES				
	C	mn	P	S	Si	Ni	Cr	Mo	Other	Tensile, min MPa(ksi)	Yield, min MPa(ksi)	Elongation min (%)	Reduction of Area min(%)	Hardness Brinell
F316	0.08	2.00	0.040	0.030	1.00	10.0-14.0	16.0-18.0	2.00-3.00		515(75)	250(30)	30	50	
F316L	0.035	2.00	0.040	0.030	1.00	10.0-15.0	16.0-18.0	2.00-3.00		485(70)	170(25)	30	50	
F321	0.08	2.00	0.040	0.030	1.00	9.0-12.0	≥17.0		To ≥5xC≤0.70	515(75)	205(30)	30	50	
F347	0.08	2.00	0.040	0.030	1.00	9.0-13.0	17.0-20.0		Nb+Ta ≥5xC≤0.70	515(75)	205(30)	30	50	
410	0.15	1.00	0.040	0.030	1.00		11.50-13.50			480(70)	275(40)	20	45	
416	0.15	1.25	0.06	≥0.15	1.00		12.00-14.00							≤262
420	Over 0.15	1.00	0.040	0.030	1.00		12.00-14.00							≤241
D-2	3.00	0.70-1.25	0.08		1.50-3.00	18.00-22.00	1.75-2.75			400(58)	207(30)	8.0		139-202
B7	0.37-0.49	0.65-1.10	0.035	0.040	0.15-0.35		0.75-1.20	0.15-0.25		860(125)	720(105)	16	50	
B7M	0.37-0.49	0.65-1.10	0.035	0.040	0.15-0.35		0.75-1.20	0.15-0.25		690(100)	550(80)	18	50	≤HB235 or HRB 99
B16	0.36-0.47	0.45-0.70	0.035	0.040	0.15-0.35		0.80-1.15	0.50-0.65	V0.25-0.35	860(125)	725(105)	18	50	
B8	0.08	2.00	0.030	0.030	1.00	8.00-10.50	18.00-20.00			515(75)	205(30)	30	50	≤HB223or HRB 96
B8M	0.08	2.00	0.030	0.030	1.00	10.00-14.00	16.00-18.00	2.00-3.00		515(75)	205(30)	30	50	≤HB223or HRB 96
L7	0.38-0.48	0.75-1.00	0.040	0.040	0.15-0.35		0.80-1.10	0.15-0.25		860(125)	725(105)	16	50	
L7M	0.38-0.48	0.75-1.00	0.040	0.040	0.15-0.35		0.80-1.10	0.15-0.25		690(100)	550(80)	18	50	≤HB235 or HRB 99
B			0.04	0.05						415-690 (60-100)		18		HRB121-212 HRC 69-95
2H	≥0.40	1.00	0.040	0.050	0.40				Cu0.40 V0.03 Nb0.02					HRB248-352 HRC 24-38
2HM	≥0.40	1.00	0.040	0.050	0.40									HRB248-352 HRC ≤22
4	0.40-0.50	0.70-0.90	0.035	0.040	0.15-0.35			0.20-0.30						HRB248-352 HRC 24-38
7	0.37-0.49	0.65-1.10	0.040	0.040	0.15-0.35		0.75-1.20	0.15-0.25						HRB248-352 HRC 24-38
7M	0.37-0.49	0.65-1.10	0.040	0.040	0.15-0.35		0.75-1.20	0.15-0.25						HRB248-352 HRC ≤22
8	0.08	2.00	0.045	0.030	1.00	8.00-10.50	18.0-20.0							HB126-300 HRC 60-105
8M	0.08	2.00	0.045	0.030	1.00	10.0-14.0	16.0-18.0	2.00-3.00						HB126-300 HRC 60-105