

Cast Steel Globe Valve (Bolt Bonnet)

Applicable Standards:

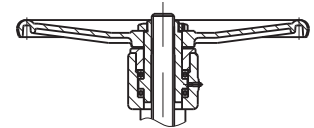
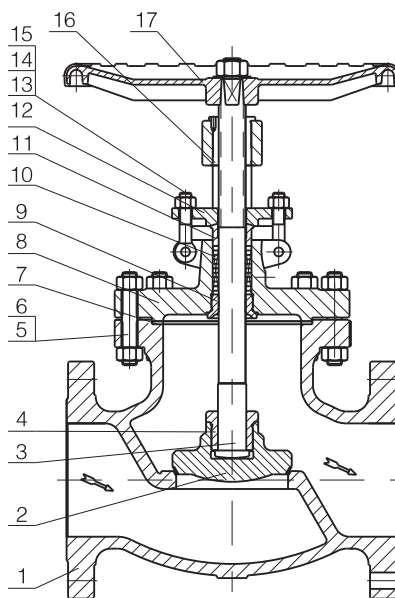
Design and Manufacture: BS 1873
 Face to Face and End to End: ASME B 16.10
 Flanged ends: ASME B16.5
 Butt welded ends: ASME B16.25
 Test & Inspection: API 598

Design Description:

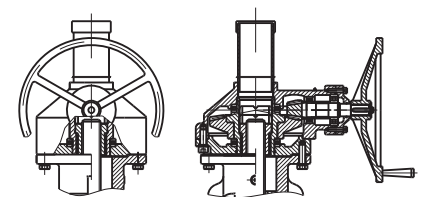
Straight pattern body design
 Outside Screw and Yoke (OS & Y)
 Bolted Bonnet (BB)
 Yoke integral with bonnet
 Rising stem and handwheel
 Loose disc, optional plug or ball type
 Renewable seat ring upon request
 Impact handwheel for NPS 10 & above
 Horizontal service
 Flanged or butt welding ends
 Available with bevel gear operator

Main Materials:

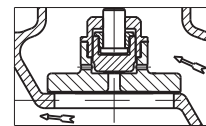
WCB, LCB, WC6, WC9, CF8, CF8M,
 CF3, CF3M, A995 4A, A995 5A, A995 6A,
 Alloy 20, Monel, Inconel



Available With Handwheel Operator



BEARINGS FOR LARGE TORQUE LOADS



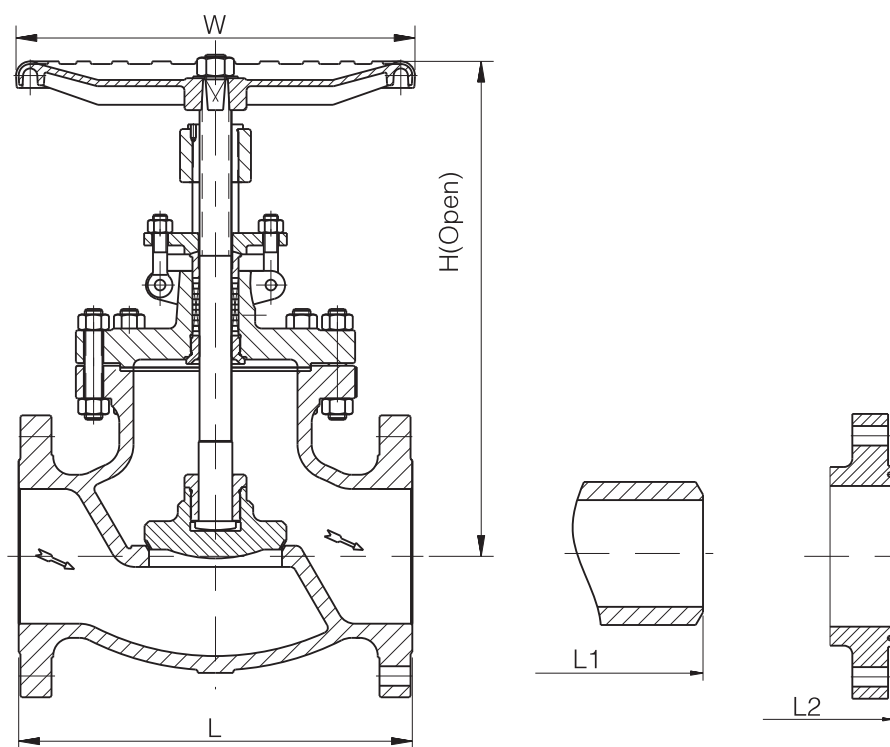
DOUBLE DISC FOR HIGH AXIAL STRESS

Main Parts Material Sheet

NO.	PART	ASTM Material				
		WCB	LCB ⁽¹⁾	WC6	CF8(M)	CF3(M)
1	BODY	A216 WCB+13Cr	A352 LCB+13Cr	A217 WC6+STL	A351 CF8(M)+STL	A351 CF3(M)+STL
2	DISC	A216 WCB+13Cr	A352 LCB+13Cr	A182 F11+STL	A351 CF8(M)	A351 CF3(M)
3	STEM	A182 F6	A182 F6	A182 F6	A182 F304(F316)	A182 F304L(F316L)
4	SLEEVE	A105	A105	A182 F11	A182 F304(F316)	A182 F304L(F316L)
5	BONNET BOLT	A193 B7	A320 L7	A193 B16	A193 B8(M)	A193 B8(M)
6	BONNET NUT	A194 2H	A194 7	A194 4	A194 8(M)	A194 8(M)
7	GASKET	SS304+GRAPHITE			PTFE / SS304+GRAPHITE	PTFE / SS316+GRAPHITE
8	BONNET	A216 WCB	A352 LCB	A217 WC6	A351 CF8(M)	A351 CF8M
9	BACKSEAT	A182 F6	A182 F6	A182 F6	-	-
10	PACKING	FLEXIBLE GRAPHITE			PTFE / FLEXIBLE GRAPHITE	
11	GLAND	A182 F6	A182 F6	A182 F6	A182 F304(F316)	A182 F304L(F316L)
12	GLAND FLANGE	A216 WCB	A352 LCB	A217 WC6	A351 CF8	A351 CF3
13	GLAND EYEBOLT	A193 B7			A193 B8	A193 B8
14	NUT	A194 2H			A194 8	A194 8
15	PIN	AISI 1025			AISI 1025	
16	STEM NUT	BRONZE			BRONZE	
17	HANDWHEEL NUT	AISI 1035			AISI 1035	

Different Trim are available upon request.

Cast Steel Globe Valve (Bolt Bonnet)



Dimensions

CLASS 150

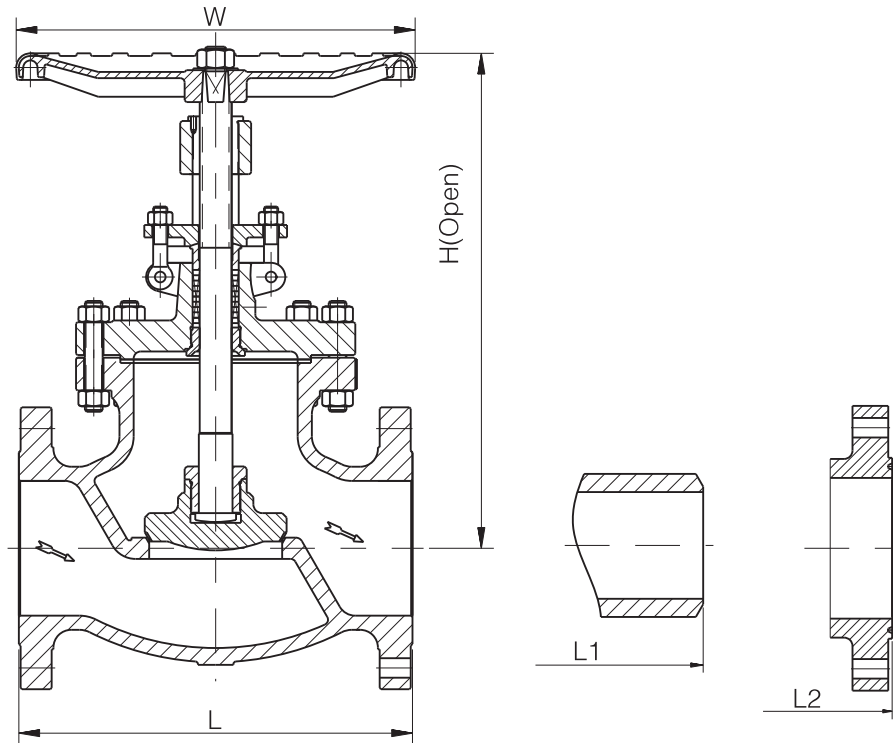
Size	in	1 1/2	2	2 1/2	3	4	6	8	10	12	14	16
	mm	40	50	65	80	100	150	200	250	300	350	400
L/L1 (RF/BW)	in	6.5	8.00	8.50	9.50	11.50	16.00	19.50	24.50	27.50	31.00	36.00
	mm	165	203	216	241	292	406	495	622	698	787	914
L2 (RTJ)	in	7.0	8.00	8.50	9.50	11.50	16.00	19.50	24.50	27.50	31.00	36.00
	mm	178	203	216	241	292	406	495	622	698	787	914
H (Open)	in	14.25	15.00	21.00	17.50	20.25	22.00	24.25	32.00	35.88	48.38	57.00
	mm	326	380	535	445	515	560	615	815	910	1230	1450
D0	in	7.88	7	10	11	11	13	13	16	18	20	24
	mm	200	180	240	280	280	320	320	400	450	500	600

Dimensions

CLASS 300

Size	in	1 1/2	2	2 1/2	3	4	6	8	10	12	14	16
	mm	40	50	65	80	100	150	200	250	300	350	400
L/L1 (RF/BW)	in	9	10.50	11.50	12.50	14.00	17.50	22.00	24.50	28.00	-	-
	mm	229	267	292	318	356	444	559	622	711	-	-
L2 (RTJ)	in	9.5	11.12	12.12	13.12	14.62	18.12	22.62	25.12	28.62	-	-
	mm	241	282	308	333	371	460	575	638	727	-	-
H (Open)	in	14.17	16.75	19.00	19.88	22.50	25.25	33.25	35.50	38.62	-	-
	mm	360	425	485	505	570	640	845	900	980	-	-
D0	in	7.88	8	10	11	13	16	18	20	24	-	-
	mm	200	200	240	280	320	400	450	500	600	-	-

Cast Steel Globe Valve (Bolt Bonnet)



Dimensions

CLASS 600

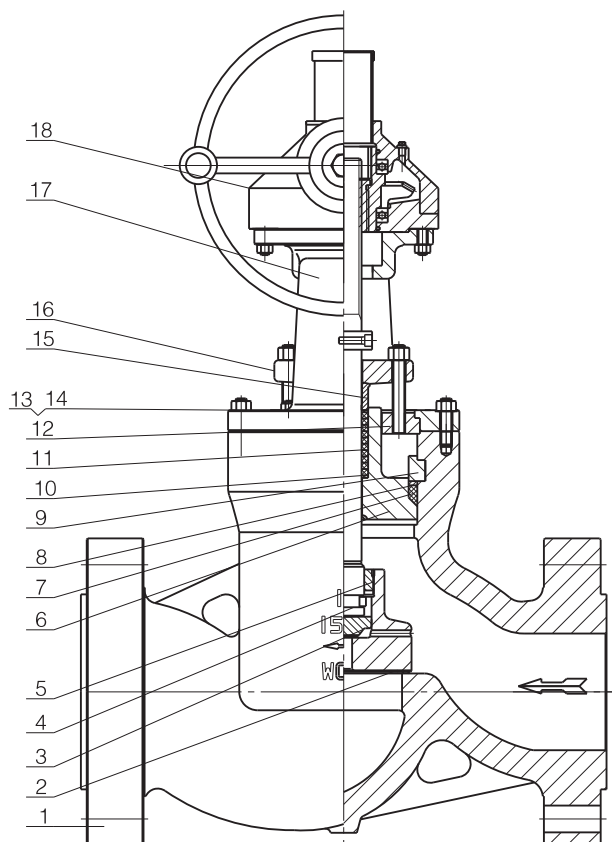
Size	in	1/2	3/4	1	1 1/2	2	2 1/2	3	4	6	8	10	12	14	16
	mm	15	20	25	40	50	65	80	100	150	200	250	300	350	400
L/L1 (RF/BW)	in	6.50	7.50	8.50	9.50	11.50	13.00	14.00	17.00	22.00	26.00	31.00	33.00	-	-
	mm	165	190	216	241	292	330	356	432	559	660	787	838	-	-
L2 (RTJ)	in	-	-	-	-	11.62	13.12	14.12	17.12	22.12	26.12	31.12	33.13	-	-
	mm	-	-	-	-	295	333	359	435	562	663	790	841	-	-
H (Open)	in	7.25	7.62	9.00	11.00	17.50	19.75	21.00	24.50	29.50	36.50	44.88	53.12	-	-
	mm	185	195	230	280	445	502	533	622	750	927	1140	1350	-	-
D0	in	4	4	6	8	10	11	13	16	18	20	24	24	-	-
	mm	100	100	140	200	240	280	320	400	450	500	600	600	-	-

Dimensions

CLASS 900

Size	in	2	2 1/2	3	4	6	8	10	12
	mm	50	65	80	100	150	200	250	300
L1 (BW)	in	8.50	10.00	12.00	14.00	20.00	26.00	31.00	36.00
	mm	216	254	305	356	508	660	787	914
L (RF)	in	14.50	16.50	15.00	18.00	24.00	29.00	33.00	38.00
	mm	368	419	381	457	610	737	838	965
L2 (RTJ)	in	14.62	16.62	15.12	18.12	24.12	29.12	33.12	38.12
	mm	371	422	384	460	613	740	841	968
H (Open)	in	22	22	22	27	36.38	43.38	50.62	57
	mm	557	557	557	685	925	1100	1285	1450
D0	in	16	16	16	16	28	28	36	36
	mm	400	400	400	400	700	700	900	900

Cast Steel Globe Valve (Pressure Seal Bonnet)



Applicable Standards

Design and Manufacture :ASME B16.34
 Face to Face and End to End: ASME B 16.10
 Flanged ends: ASME B16.5
 Butt welded ends: ASME B16.25
 Test & Inspection: API 598

Design Description:

Straight pattern body design
 Outside Screw and Yoke(OS & Y)
 Bolted Bonnet(BB)
 Yoke integral with bonnet
 Rising stem and handwheel
 Loose disc, optional plug or ball type
 Renewable seat ring upon request
 Impact handwheel for NPS 10 & above
 Horizontal service
 Flanged or butt welded ends
 Available with bevel gear operator

Main Materials:

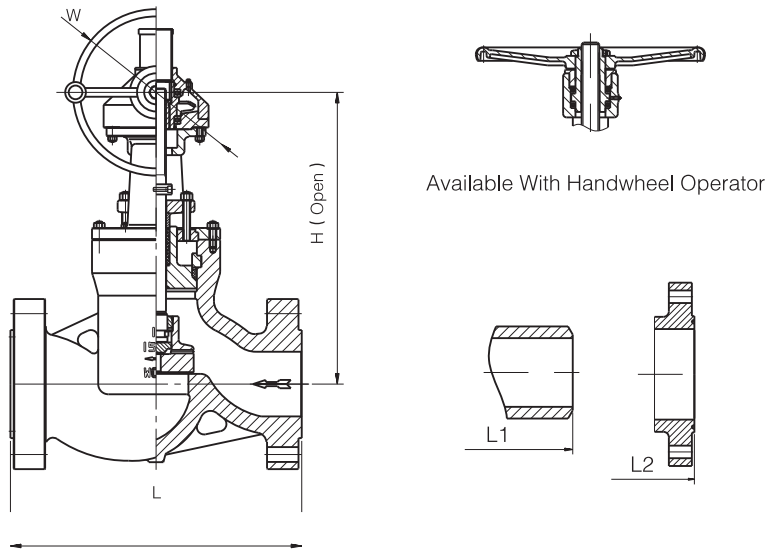
WCB, LCB, WC6, WC9, CF8, CF8M,
 CF3, CF3M, A995 4A, A995 5A, A995 6A,
 Alloy 20, Monel, Inconel

Main Parts Material Sheet

NO.	PART	ASTM Material				
		WCB	WC6	WC9	CF8(M)	CF3(M)
1	BODY	A216 WCB	A217 WC6	A217 WC9	A351 CF8(M)	A351 CF3(M)
2	BIG DISC	A105+STL	A217 WC6+STL	A217 WC9+STL	A351 CF8(M)+STL.6	A351 CF3(M)+STL.6
3	SMALL DISC	A105+STL	A217 WC6+STL	A217 WC9+STL	A351 CF8(M)+STL.6	A351 CF3(M)+STL.6
4	STEM	A182 F6	A182 F6	A182 F6	A182 F304(F316)	A182 F304L(F316L)
5	DISC COVER	A105	A182 F6	A182 F6	A182 F304(F316)	A182 F304L(F316L)
6	BONNET	A105	A182 F11	A182 F22	A182 F304(F316)	A182 F304L(F316L)
7	PRESSURE SEAL RING	PURE IRON			A182 F304	A182 F316L
8	RING	A182 F6			A182 F304(F316)	A182 F304L(F316L)
9	SEGMENT RING	A182 F6			A182 F304(F316)	A182 F304L(F316L)
10	PACKING WASHER	A182 F6			SS304	SS316
11	PACKING	SS304+FLEXIBLE GRAPHITE			SS304+GRAPHITE	SS316+GRAPHITE
12	BONNET RETAINER	A105	A182 F11	A182 F22	A182 F304(F316)	A182 F304L(F316L)
13	STUD	A193 B7	A193 B16	A193 B16	A193 B8	A193 B8
14	NUT	A194 2H	A194 4	A194 4	A194 8	A194 8
15	GLAND	A182 F6			A182 F304	A182 F316
16	GLAND FLANGE	CARBON STEEL			A351 CF8	A351 CF3(M)
17	YOKE	CARBON STEEL			A351 CF8	A351 CF3(M)
18	GEAR BOX	ASSEMBLY				

Different Trim are available upon request.

Cast Steel Globe Valve (Pressure Seal Bonnet)



Dimensions

Size	in	2	2 ¹ / ₂	3	4	6	8	10	12
	mm	50	65	80	100	150	200	250	300
CLASS 900									
L1 (BW)	in	8.50	10.00	12.00	14.00	20.00	26.00	31.00	36.00
	mm	216	254	305	356	508	660	787	914
L (RF)	in	14.50	16.50	15.00	18.00	24.00	29.00	33.00	38.00
	mm	368	419	381	457	610	737	838	965
L2 (RTJ)	in	14.62	16.62	15.12	18.12	24.12	29.12	33.12	38.12
	mm	371	422	384	460	613	740	841	968
H (Open)	in	22	22	22	27	36.38	43.38	50.62	57
	mm	557	557	557	685	925	1100	1285	1450
D0	in	16	16	16	16	28	28	36	36
	mm	400	400	400	400	700	700	900	900
CLASS 1500									
L1 (BW)	in	8.50	10.00	12.00	16.00	22.00	28.00	-	-
	mm	216	254	305	406	559	711	-	-
L (RF)	in	14.50	16.50	18.50	20.50	27.75	32.75	-	-
	mm	368	419	470	546	705	832	-	-
L2 (RTJ)	in	14.62	16.62	18.62	21.62	28.00	33.12	-	-
	mm	371	422	473	549	711	842	-	-
H (Open)	in	22	22	24.38	30	44.62	54.75	-	-
	mm	557	557	620	760	1135	1390	-	-
D0	in	16	18	20	24	28	36	-	-
	mm	400	450	500	600	700	900	-	-
CLASS 2500									
L1 (BW)	in	11.00	13.00	14.50	18.00	24.00	-	-	-
	mm	279	330	368	457	610	-	-	-
L (RF)	in	17.75	20.00	22.75	26.50	36.00	-	-	-
	mm	451	508	578	673	914	-	-	-
L2 (RTJ)	in	17.88	20.54	23.00	26.88	36.50	-	-	-
	mm	454	514	584	683	927	-	-	-
H (Open)	in	23.38	20.38	28	32.25	49.62	-	-	-
	mm	595	595	710	820	1260	-	-	-
D0	in	16	20	24	28	36	-	-	-
	mm	400	500	600	700	900	-	-	-

The logo consists of the letters 'SIO' in a bold, sans-serif font. The letter 'I' is replaced by a stylized valve symbol, which is a vertical stem with a horizontal crossbar and a small circle at the top. A registered trademark symbol (®) is located to the upper right of the 'O'.

SIO®

NINGBO SIO FLUID EQUIPMENT CO., LTD

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www.siovalve.com

Authorized distributor

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