



## **STANDARDS**

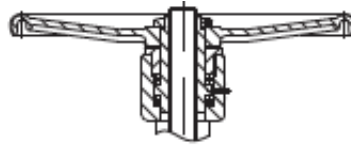
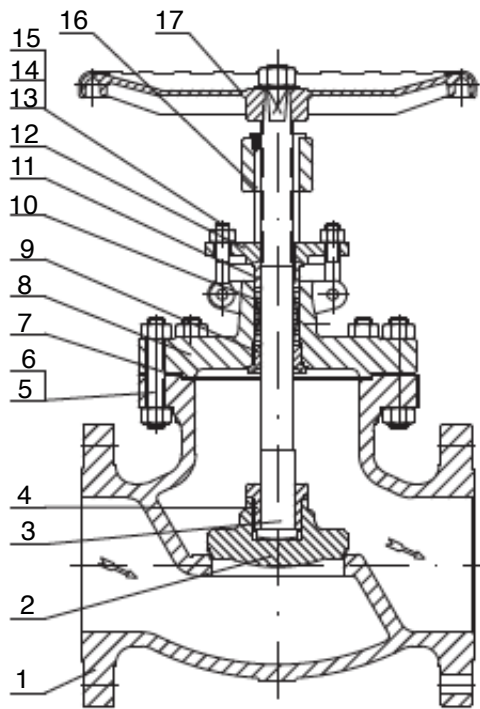
- Design and manufacture: BS 1873 and ASME B16.34
- Test Inspection: API 598
- End flange dimension: ASME B16.5
- BW end dimension: ASME B16.25
- Face to face and end to end dimension: ASME B16.10
- Pressure - temperature rating: ASME B16.34

# **J Flow Controls GB Series Globe Valves**

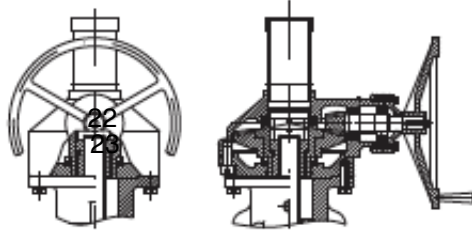
## **FEATURES & BENEFITS**

- Bolted bonnet; outside screw and yoke; rising stems; metallic seating surfaces
- The body and bonnet of Class 150 - Class 900 valves are usually with studs and nuts. And the body and bonnet of Class 1500 - Class 2500 valves are usually of a pressure seal design.
- Gasket of cover flange: stainless steel + flexible graphite wounded gasket is used for Class 150 and Class 300 globe valve. Stainless steel + flexible graphite wounded gasket is used for Class 600, and ring joint gasket is optional for Class 600. Ring joint gasket is used for Class 900 globe valve. Pressurized seal design is used for Class 1500 - 2500 globe valve.
- Actuation: handwheel, impact hand wheel and gear box are usually used for globe valve actuation. Chain wheel and electric actuator can be used for globe valve actuation if requested by customers.
- If requested by the customer, the Belleville spring loaded packing impacting can be adopted for enhancing the durability and reliability of the packing seal.
- All our globe valves have the back seat sealing design. In most cases, the carbon steel globe valve is fitted with a renewable back seat. For stainless steel globe valve, the back is machined directly in the bonnet or is machined after welding. When the globe valve is at fully open position, the sealing of the back seat can be very reliable.

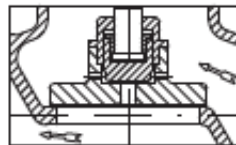
## PARTS IDENTIFICATION



Available with Handwheel Operator



Bearings For Large Torque Loads



Double Disc For High Axial Stress

### Design Description

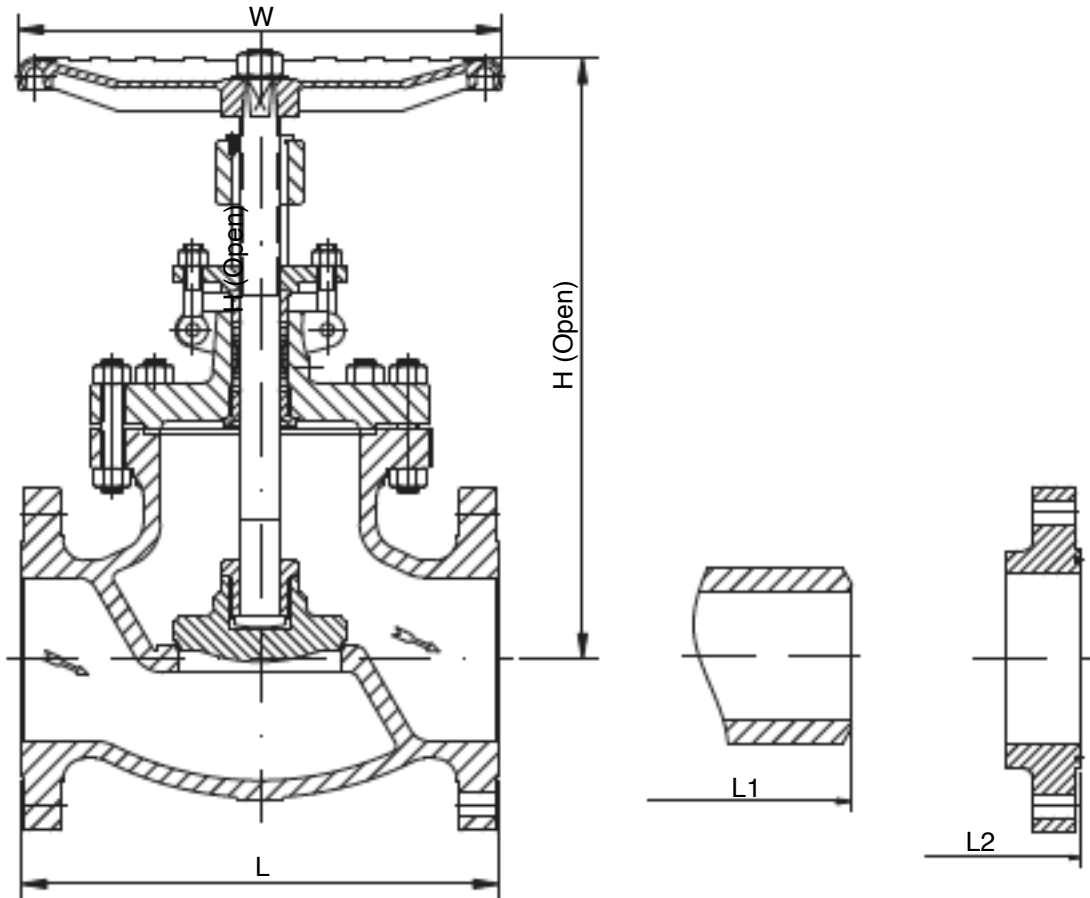
- Straight pattern body design
- Outside screw and yoke (OS&Y)
- Bolted Bonnet (BB)
- Yoke integral with bonnet
- Rising stem and handwheel
- Loose disc, optional plug or ball type
- Renewable seat ring
- Impact handwheel for NPS 10 and above
- Horizontal service
- Flanged or butt welding ends
- Available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

### Main Materials

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

No	Part Name	Material				
		WCB	LCB	WC6	CF8 (M)	CF3 (M)
1	Body	A216 WCB + 13 Cr	A352 LCB + 13 Cr	A217 WC6+STL	A351 CF8 (M)+STL	A351 CF3 (M) + STL
2	Disc	A216 WCB + 13 Cr	A352 LCB + 13 Cr	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	

***DIMENSIONS (Class 150 and 300)***

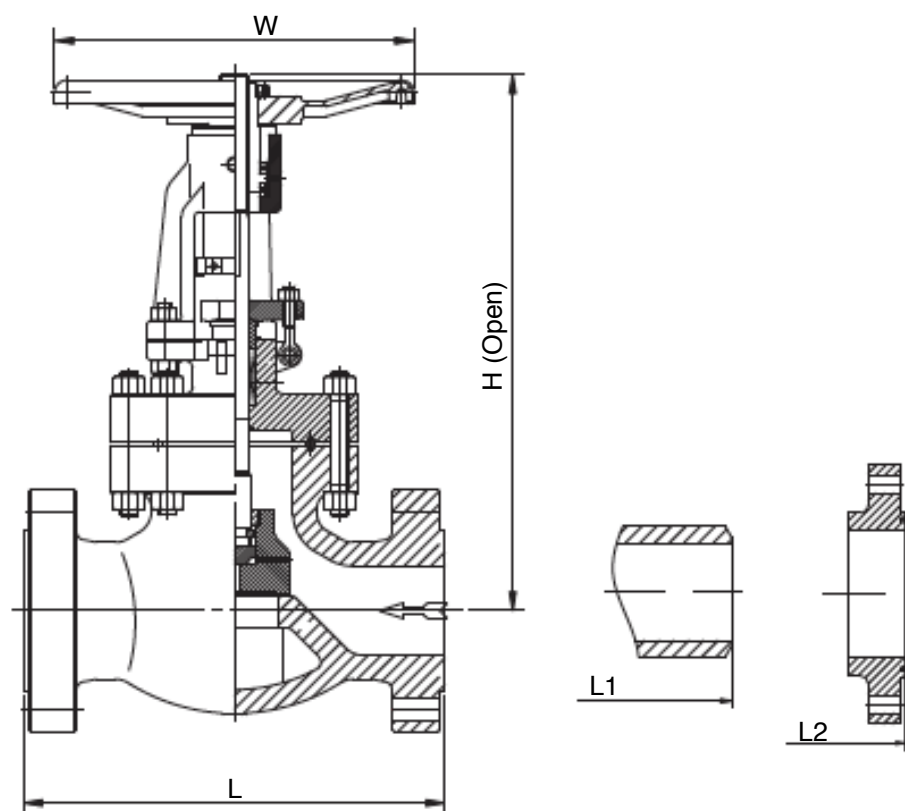


Size	CLASS 150										
Inches	1-1/2	2	2-1/2	3	4	6	8	10	12	14	16
L/L1 (RF/BW)	6.5	8.0	8.5	9.5	11.5	16.0	19.5	24.5	27.5	31.0	36.0
L2 (RTJ)	7.0	8.0	8.50	9.50	11.50	16.00	19.50	24.50	27.50	31.00	36.00
H (Open)	14.25	15.00	21.00	17.50	20.25	22.00	24.25	32.00	35.88	48.38	57.00
DO	7.88	7.00	10	11	11	13	13	16	18	20	24
WT (RF/RTJ)	18	19	30	41	64	86	110	280	380	510	740
WT (BW)	14	16	22	33	43	72	88	245	345	450	665

Size	CLASS 300										
Inches	1-1/2	2	2-1/2	3	4	6	8	10	12	14	16
L/L1 (RF/BW)	9	10.5	11.5	12.5	14.0	17.5	22.0	24.5	28.0	-	-
L2 (RTJ)	9.5	11.12	12.12	13.12	14.62	18.12	22.62	25.12	28.62	-	-
H (Open)	14.17	16.75	19.00	19.88	22.50	25.25	33.25	35.50	38.62	-	-
DO	7.88	8	10	11	13	16	18	20	24	-	-
WT (RF/RTJ)	25	26	32	38	56	96	150	360	550	-	-
WT (BW)	20	21	22	27	41	75	117	310	492	-	-

## GB Series Globe Valves

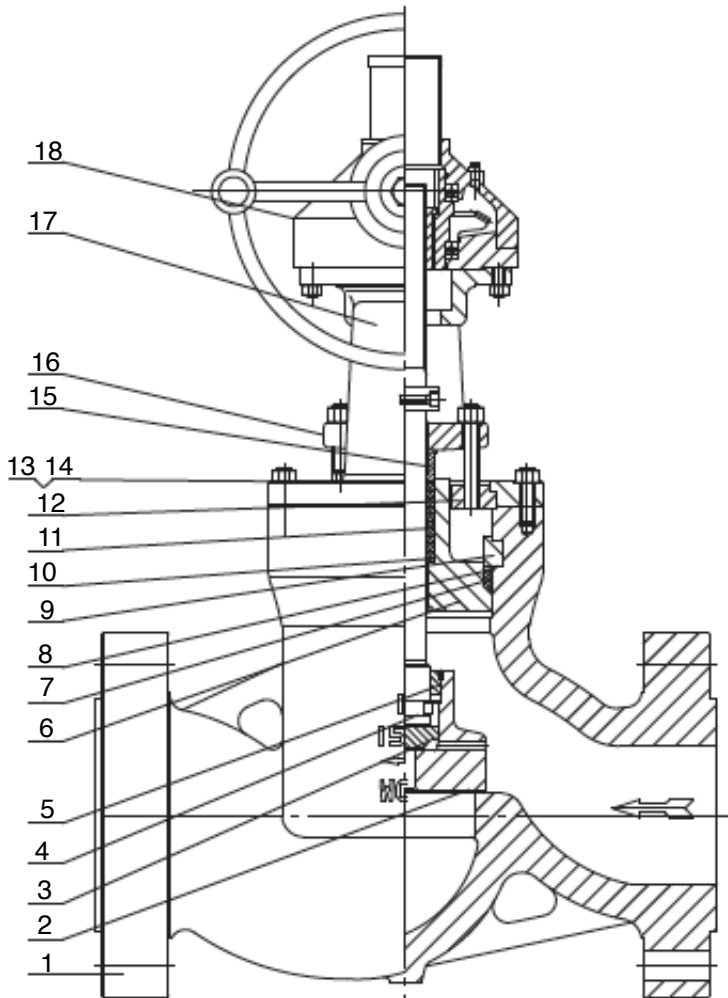
### DIMENSIONS (Class 600 and 900)



Size	CLASS 600													
	1/2	3/4	1	1-1/2	2	2-1/2	3	4	6	8	10	12	14	16
L/L1 (RF/BW)	6.50	7.50	8.50	9.50	11.50	13.00	14.00	17.00	22.00	26.00	31.00	33.00	-	-
L2(RTJ)	-	-	-	-	11.62	13.12	14.12	17.12	22.12	26.12	31.12	33.13	-	-
H (Open)	7.25	7.62	9.00	11.00	17.50	19.75	21.00	24.50	29.50	36.50	44.88	53.12	-	-
DO	4	4	6	8	10	11	13	16	18	20	24	24	-	-
WT (RF/RTJ)	6	8	14	23	35	50	60	110	230	410	770	1140	-	-
WT (BW)	4.8	6.2	9.5	16.5	27	34	42	84	192	350	680	1030	-	-

Size	CLASS 900							
	2	2-1/2	3	4	6	8	10	12
L1 (BW)	8.50	10.00	12.00	14.00	20.00	26.00	31.00	36.00
L (RF)	14.50	16.50	15.00	18.00	24.00	29.00	33.00	38.00
L2 (RTJ)	14.62	16.62	15.12	18.12	24.12	29.12	33.12	38.12
H (open)	22	22	22	27	36.38	43.38	50.62	57
DO	16	16	16	16	28	28	36	36
WT (BW)	46	53	68	100	270	450	740	1150
WT (RF/RTJ)	75	82	95	135	355	680	1050	1480

## CAST STEEL GATE VALVE (PRESSURE SEAL BONNET)



### Applicable Standards

- Design and Manufacture: ASME B16.34
- Face to Face and End to End: ASME B16.10
- Flanged End: ASME B16.5
- But Welded End: 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
- Impact handwheel for NPS 10 and above
- Horizontal service
- Flanged or butt welded ends
- Available with bevel gear operation

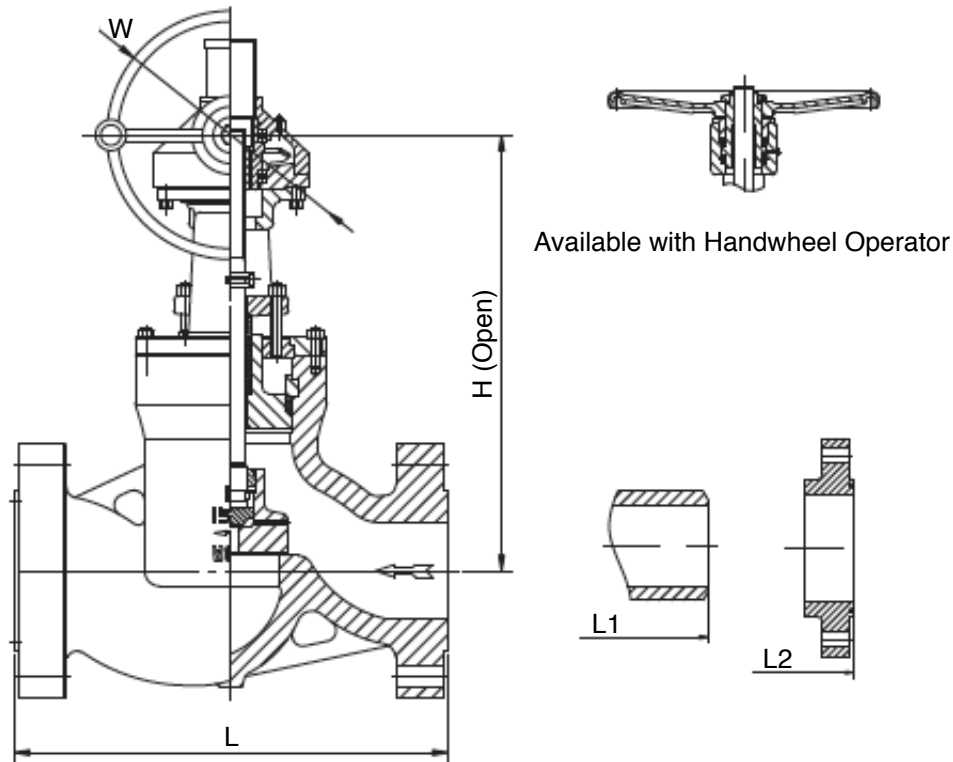
### Main Materials

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

No	Part Name	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)+STL6	A351 CF3 (M)+STL6
3	Small Disc	A105 + STL	A217 WC6 + STL	A217 WC9 + STL	A351 CF8 (M) + STL 6	A351 CF3 (M) + STL6
4	Stem	A182 F6	A182 F6	A182 F6	A182 F304 (F316)	A182 F304L (F316L)
5	Disc Cover	A105	A217 WC6	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				

## GB Series Globe Valves

### DIMENSIONS (CLASS 900 AND 1500)

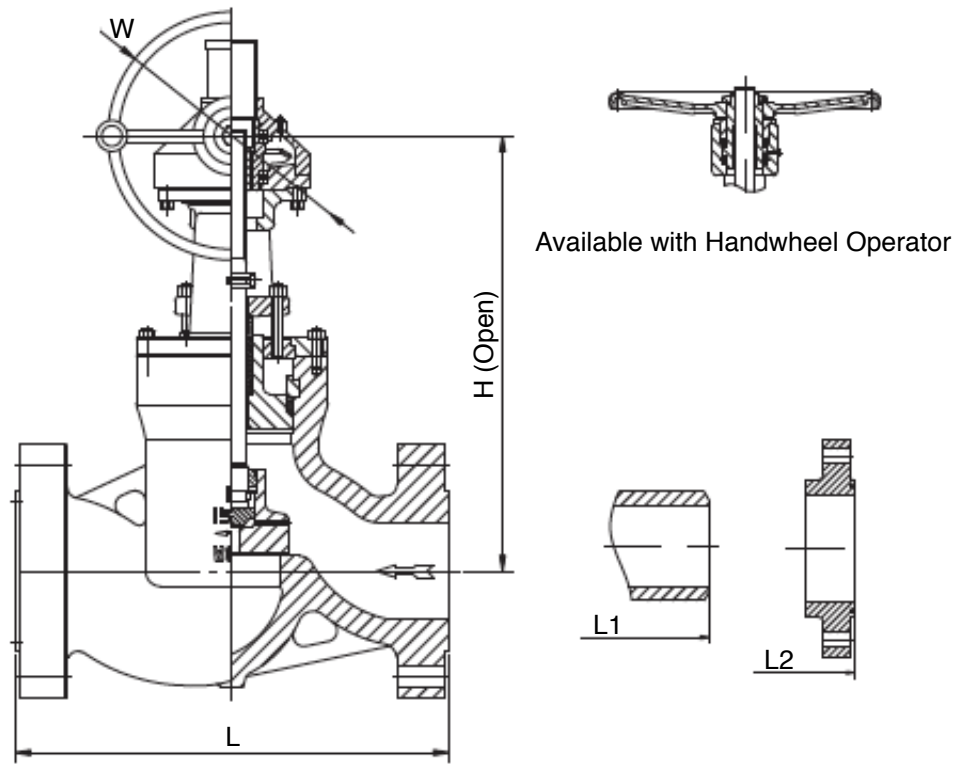


Size	CLASS 900							
Inches	2	2-1/2	3	4	6	8	10	12
L1 (BW)	8.50	10.00	12.00	14.00	20.00	26.00	31.00	36.00
L (RF)	14.50	16.50	15.00	18.00	24.00	29.00	33.00	38.00
L2 (RTJ)	14.62	16.62	15.12	18.12	24.12	29.12	33.12	38.12
H (open)	22	22	22	27	36.38	43.38	50.62	57
DO	16	16	16	16	28	28	36	36
WT (BW)	46	53	68	100	270	450	740	1150
WT (RF/RTJ)	75	82	95	135	355	680	1050	1480

Size	CLASS 1500							
Inches	2	2-1/2	3	4	6	8	10	12
L1 (BW)	8.50	10.00	12.00	22.00	22.00	28.00	-	-
L (RF)	14.50	16.50	18.50	27.75	27.75	32.75	-	-
L2 (RTJ)	14.62	16.62	18.62	28.00	28.00	33.12	-	-
H (open)	22	22	24.38	44.62	44.62	54.75	-	-
DO	16	18	20	28	28	36	-	-
WT (BW)	57	65	190	450	450	730	-	-
WT (RF/RTJ)	86	112	240	580	580	950	-	-

## GB Series Globe Valves

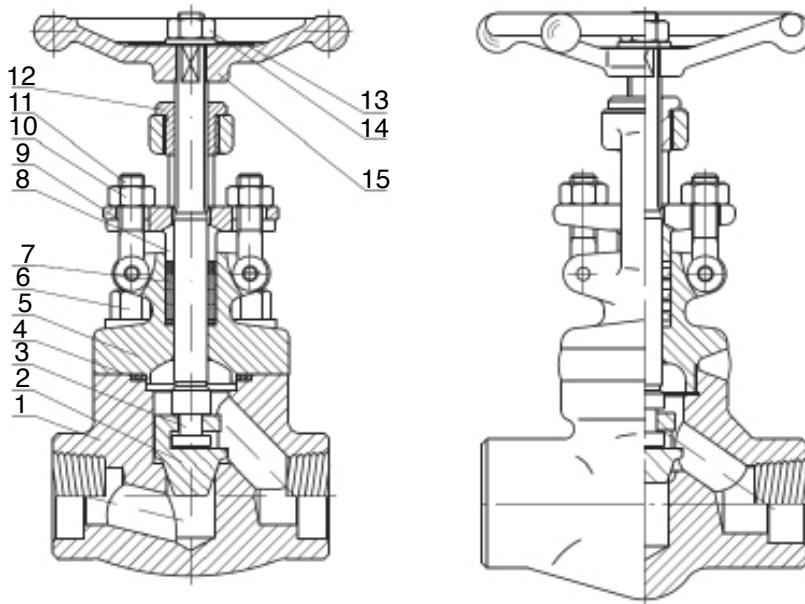
### DIMENSIONS (CLASS 2500)



Size	CLASS 2500							
Inches	2	2-1/2	3	4	6	8	10	12
L1 (BW)	11.00	13.00	14.50	18.00	24.00	-	-	-
L (RF)	17.75	20.00	22.75	26.50	36.00	-	-	-
L2 (RTJ)	17.88	20.54	23.00	26.88	36.50	-	-	-
H (open)	23.38	20.38	28	32.25	49.62	-	-	-
DO	16	20	24	28	36	-	-	-
WT (BW)	65	78	125	155	480	-	-	-
WT (RF/RTJ)	115	136	205	275	860	-	-	-



## FORGED STEEL GLOBE VALVE



### Applicable Standards

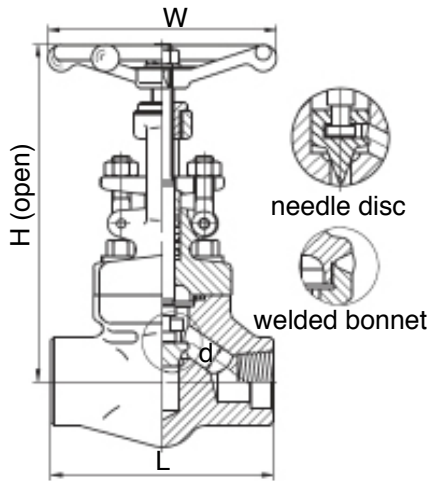
- Design and Manufacture: API 602, BS5352, ASME B16.34
- Connection End:  
Socket Weld End (SW): ASME B16.11  
Threaded End (NPT): ASME B1.20.1  
Butt Weld End (BW): ASME B16.25  
Flange End (RF/RTJ): ASME B16.5
- Test & Inspection: API 602, API 598
- Design Description:  
Bolted Bonnet (BB), Welded Bonnet (WB), Outside Screw and Yoke (OS&Y)
- Main Materials: A05, LF2, F5, F11, F22, 304(L), 316(L), F347, F321, F51, Alloy 20, Monel

No	Part Name	Material					
		105	LF2	F11	F304(L)	F316(L)	F51
1	Body	A105+SS304	LF2	F11	F304(L)	F316(L)	F51
2	Disc	F6a	F6a	F6a+STL	F304(L)	F316(L)	F51
3	Stem	410	410	410	F304(L)	316(L)	F51
4	Gasket	A105	LF2	F11	304+Graphite	316(L)+Graphite	316(L)+Graphite
5	Bonnet	304 + Graphite		B16	F304(L)	F316(L)	F51
6	Bolt	B7	L7	A182 F22	B8(M)	B8(M)	B8M
7	Packing	Flexible Graphite					
8	Gland	A182 F6	LF2	F11	F304	F304	F304
9	Gland Flange	A105	LF2		F304	F304	F304
10	Nut	A194 2H				8	
11	Eyebolt	A193 B7				B8	
12	Stem Nut	A276 410					
13	Lock Nut	AISI 1035					
14	Nameplate	AL					
15	Handwheel	ASTM A197					



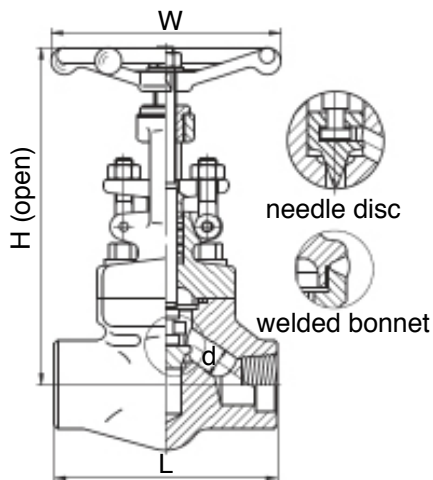
## GB Series Globe Valves

### CL800



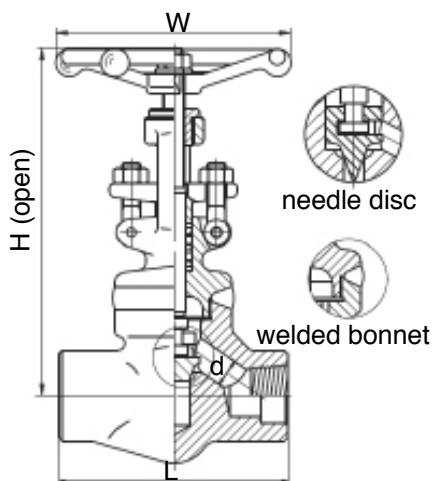
Size NPS	R.P.	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2
	F.P.	3/8	1/2	3/4	1	1-1/4	1-1/2	2
Face to Face	L	3.11	3.62	4.37	4.72	5.98	6.77	8.66
Handwheel Diameter	W	3.94	3.94	4.92	6.30	6.30	7.09	7.87
Height	H	6.46	6.46	7.99	8.82	10.24	11.81	13.98
Flow Port Diameter	d	0.41	0.53	0.67	0.87	1.10	1.34	1.69
Weight	BB	5.0	5.2	9.5	12.7	17.2	28	39
Weight	WB	3.7	4.2	7.3	11	15	23	30

### CL900 ~ 1500



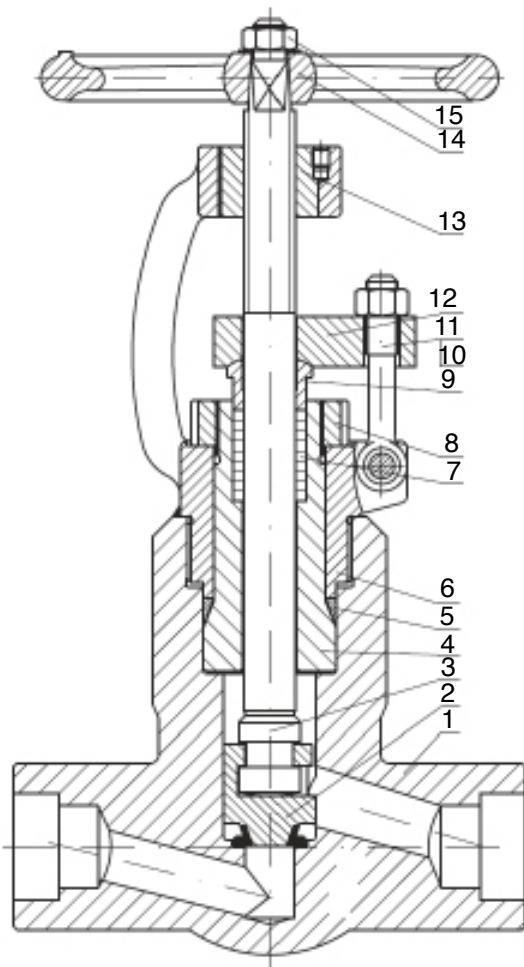
Size NPS	R.P.	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2
	F.P.	3/8	1/2	3/4	1	1-1/4	1-1/2	2
Face to Face	L	3.62	4.37	4.72	5.98	6.77	8.66	-
Handwheel Diameter	W	3.94	4.92	6.30	6.30	7.09	9.45	-
Height	H	6.73	8.15	9.45	10.16	12.99	14.57	-
Flow Port Diameter	d	0.28	0.41	0.53	0.87	1.10	1.34	-
Weight	BB	5.1	8.2	15	17	26	48	-
Weight	WB	4.4	7.5	13	12	23	40	-

### CL2500



Size NPS	R.P.	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2
	F.P.	3/8	1/2	3/4	1	1-1/4	1-1/2	2
Face to Face	L	4.37	4.72	5.98	6.77	8.66	-	-
Handwheel Diameter	W	4.92	6.30	6.30	7.09	9.45	-	-
Height	H	8.15	9.45	10.10	12.99	14.57	-	-
Flow Port Diameter	d	0.31	0.41	0.53	0.87	1.10	-	-
Weight	WB	7.5	13	12	23	40	-	-

## FORGED STEEL PRESSURE SEAL GLOBE VALVE



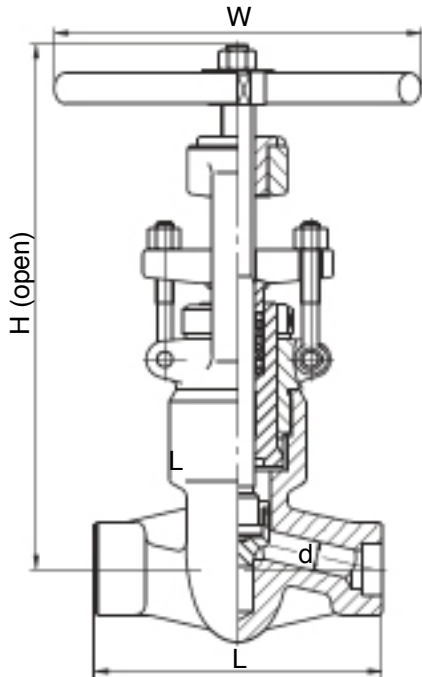
### Applicable Standards

- Design and Manufacture: API 602, BS5352, ASME B16.34
- Connection End:  
Socket Weld End (SW): ASME B16.11  
Threaded End (NPT): ASME B1.20.1  
Butt Weld End (BW): ASME B16.25  
Flange End (RF/RTJ): ASME B16.5
- Test & Inspection: API 602, API 598
- Design Description:  
Bolted Bonnet (BB), Welded Bonnet (WB), Outside Screw and Yoke (OS&Y)
- Main Materials: A05, LF2, F5, F11, F22, 304(L), 316(L), F347, F321, F51, Alloy 20, Monel

No	Part Name	Material					
		105	LF2	F11	F304(L)	F316(L)	F51
1	Body	A105/STL	LF2/STL	F11+STL	F304(L)	F316(L)	F51
2	Disc	F6a	F6a	F6a+STL	F304(L)+STL	F316(L)+STL	F51
3	Stem	410	410	410	304(L)	316(L)	F51
4	Bonnet	A105	LF2	F11	F304(L)	F316(L)	F51
5	Pressure Seal Ring	304 + Graphite			304+Graphite	316(L)+Graphite	
6	Yoke	A105	L7	F11	F304(L)	F316(L)	F51
7	Packing	Graphite/SS304+Graphite			Graphite		
8	Nut	Carbon Steel			F304		
9	Gland	A182 F6	LF2	F11	F304		
10	Nut	A194 2H		4	A194 8		
11	Eyebolt	A193 B7		B16	A193 B8		
12	Gland Flange	A105		F11	F304		
13	Stem Nut	A276 410					
14	Lock Nut	AISI 1035					
15	Handwheel	ASTM A197					

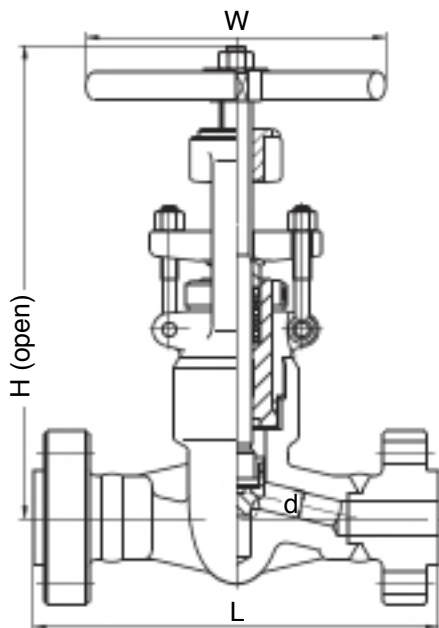
## GB Series Globe Valves

### CL900~1500; CL2500



Size NPS		R.P.	1/2	3/4	1	1-1/4	1-1/2	2
Face to Face	CL900~CL1500	L	5.51	5.51	7.01	7.01	8.5	8.7
	CL2500		7.32	7.32	7.32	9.13	11	7.9
Handwheel Diameter	CL900~CL1500	W	7.87	7.87	7.87	11.0	11.8	14
	CL2500		7.87	7.87	7.87	11.0	11.8	14
Height	CL900~CL1500	H	12.6	12.6	12.7	17.3	17.3	19.3
	CL2500		14.8	14.9	19.3	19.3	21.3	8.7
Flow Port Diameter		d	0.41	0.53	0.71	0.87	1.10	1.34
Weight	CL900~CL1500		25	24	23	43	46	122
	CL2500		27	26	24	57	63	110

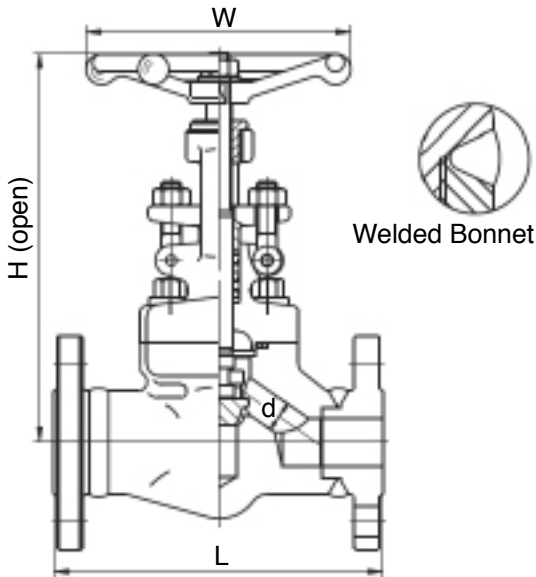
### CL2500



Size NPS	R.P.	3/8	1/2	3/4	1	1-1/4	1-1/2	2
Face to Face	L (RJ)	-	10.4	10.8	12.1	13.7	15.1	17.8
Handwheel Diameter	W	-	7.87	7.87	11.0	11.0	11.0	11.8
Height	H	-	12.6	12.6	12.6	17.3	17.3	19.3
Flow Port Diameter	d	-	0.41	0.53	0.71	0.87	1.10	1.34
Weight		-	47	55	67	106	128	198

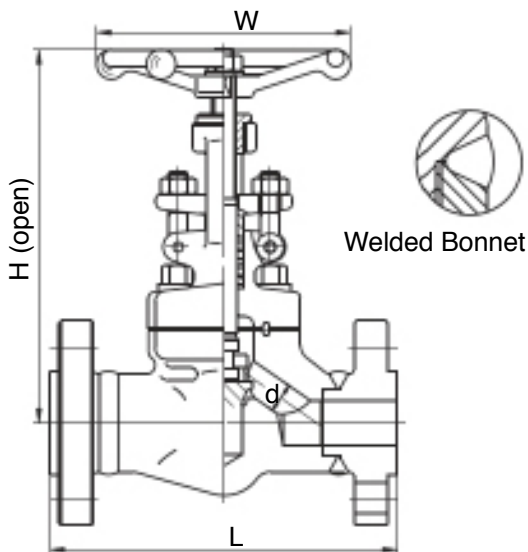
## GB Series Globe Valves

### FORGED STEEL GLOBE VALVE CL150 - 300 - 600



Size NPS		R.P.	3/8	1/2	3/4	1	1-1/4	1-1/2	2
Face to Face	CL150	L (RF)	-	4.25	4.61	5.00	5.51	6.50	7.99
	CL300		-	5.98	7.01	7.99	8.50	9.02	10.51
	CL600		-	6.50	7.48	8.50	9.02	9.49	10.51
Handwheel Diameter		W	-	3.94	3.94	4.92	6.30	6.30	7.09
Height	CL150	H	-	7.09	7.24	8.54	8.82	10.24	11.81
	CL300/600		-	6.46	6.46	7.99	8.82	10.24	11.81
Flow Port Diameter		d	-	0.35	0.51	0.69	0.91	1.18	1.38
Weight	CL150	RF	-	7.6	8.8	14	21	23	38
		BW	-	5.1	7.9	17	18	26	33
	CL300	RF	-	8.4	11	16	27	30	43
		BW	-	6.2	8.8	19	20	28	37
	CL600	RF	-	12	17	28	38	52	86
		BW	-	7.5	10	20	23	29	42

### CL900~1500



Size NPS	R.P.	3/8	1/2	3/4	1	1-1/4	1-1/2	2
Face to Face	L (RF)	-	8.50	9.02	13.9	11.0	12.0	15.0
Handwheel Diameter	W	-	4.92	4.92	6.30	6.30	7.09	7.87
Height	H	-	8.15	8/15	9.06	6.30	11.8	14.0
Flow Port Diameter	d	-	0.47	0.59	0.79	1.10	1.26	1.57
Weight	WB	-	24	29	38	42	54	68

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