

GLT GLOBE VALVE

Globe Valve Application

Globe valves are primarily used as control valves where throttling or both throttling and shut-off are required. Globe valves can also be used for on-off service; however, because of the design, a pressure drop becomes inherent. This is generally confined to on-off applications where the valve is normally closed and pressure drop is not important when the valve is open. Globe valves are uni-directional valves and normal applications will find the globe valve with the flow and pressure under the disc. GLT cast steel globe valves are commonly made in outside screw and yoke designs with full ports and heavy-duty type discs.

Manufacturing Standards

General Design	API 600 / BS 1873 (Cast Steel Valves)
	API 602 (Forged Steel Valves)
Pressure Rating	ASME / ANSI B16.34
Face to Face	ASME / ANSI B16.10
Flange Dimensions	ASME / ANSI B16.5
Butt-weld End	ASME / ANSI B16.25
Inspection and Test	API 6D / API 598

Body and Bonnet Connection

Standard body-bonnet joints of globe valves are connected by studs and nuts and are machined as follows:

PRESSURE CLASS	JOINT DESIGN	GASKET TYPE
150 & 300	Male-female	Spiral wound metal with Graphite
600	Male-female/Ring type joint	Spiral wound/Ring joint metal
900 & Above	Ring type joint	Ring joint metal

Disc

The valve is normally supplied with the conical plug type disc. The disc rotates freely on the stem and incorporates a differential angle from that on the seat ring. This design provides the maximum assurance of shut off, is less likely to stick in the body seat, and is considered the simplest design for field repair.

Seat Ring

The seat ring design, normally supplied is as follows:

PRESSURE CLASS	SEAT DESIGN
150	2" - 8" Integral
	≥10" Seal Welded
300 & Above	2" - 6" Integral
	≥8" Seal Welded

Other design are available for request.

Stem

All stem are rotating, rising and designed with integral backseat features which provide an ultimate seal during packing changes.

Packing

The stem packing is designed and arranged to ensure a maximum seal along the stem during operation or while at position, thus allowing for a greater reduction in fugitive emissions. Our packings are made of Graphite (Non-asbestos)

End Connections

Our standard end connection produce valves with:

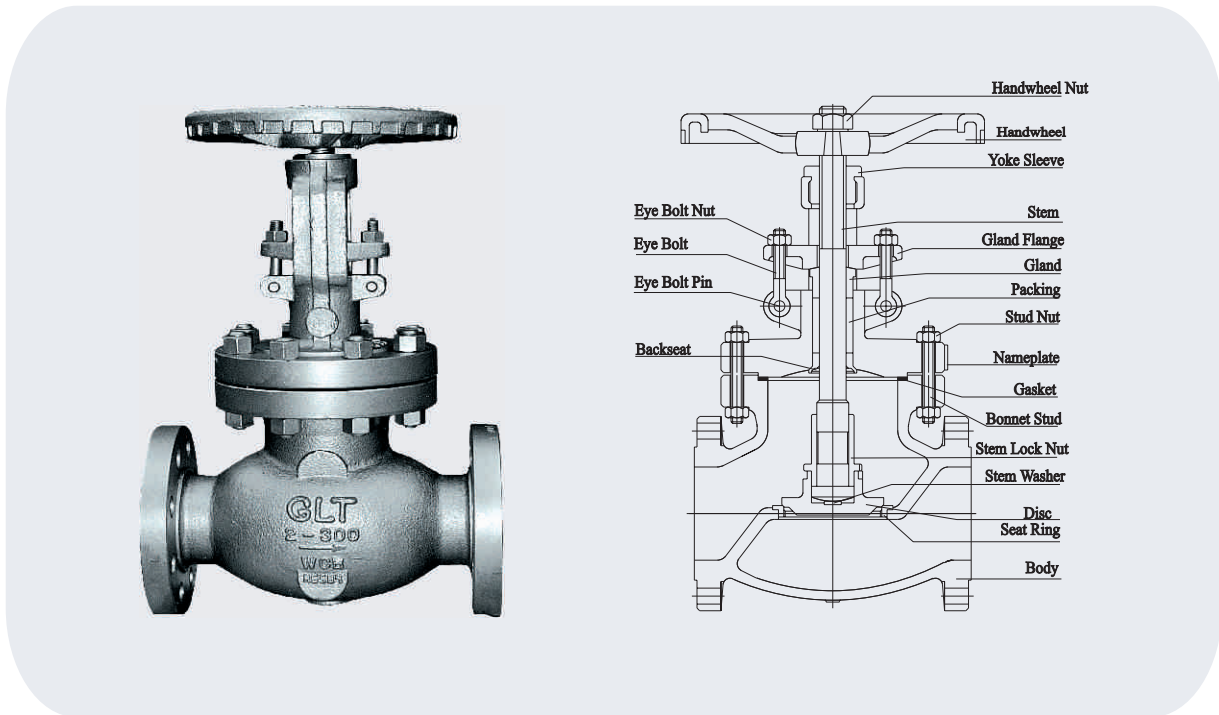
- Flange end type with Raised Face (RF), Flat Face (FF) or Ring Type Joint (RTJ) that conform to ANSI B16.5.
- Butt-welding ends (BW) that conform to ANSI B16.25.
- Threaded ends (NPT) that conform to ANSI B1.20.1
- socket weld ends that conform to ANSI B16.11
- All face-to-face/end-to-end dimensions conform to ANSI B16.10.

Other special end connections are supplied according to customer's requirements.

Operator

Standard valves come with manual operator. Gear operation can be installed if required. Other accessories such as actuators, chainwheels, locking device and many others are available to meet customer requirements.

GLT GLOBE VALVE



Standard Parts & Material

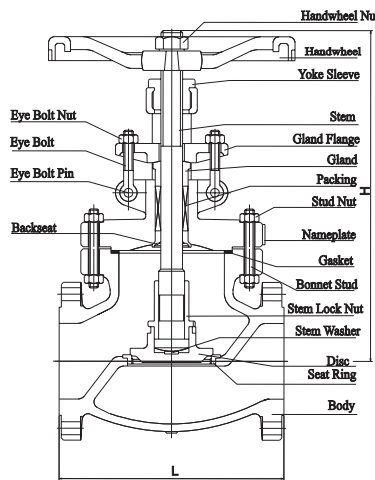
PART NAME	WCB Series	304 Series	316 Series	Cr-Mo(V) Series	LCB, LCC Series
Body & Bonnet	A216-WCB	A351-CF8 A351-CF3	A351-CF8M A351-CF3M	A217-WC5 A217-C9 A217-C5	A352-LCB A352-LCC
Disc	A216-WCB	A351-CF8 A351-CF3	A351-CF8M A351-CF3M	A217-WC5 A217-C9 A217-C5	A352-LCB A352-LCC
Stem	A182-F6a	A182-F304 A182-F304L	A182-F316 A182-F316L	A182-F6a	A182-F6a
Seat Ring	A105 / A182-F6a	A182-F304 A182-F304L	A182-F316 A182-F316L	A182-F6a	A182-F6a
Sealing Material	Cr13 / Cr13 304 / 304 HF / 304 HF / HF 316 / 316 HF / 316 HF / Monel	304 / 304 HF / 304	316 / 316 HF / 316	HF / Cr13 HF / HF	316 / 316 HF / Monel HF / 316
Backseat	A182-F6a	A182-F304 A182-F304L	A182-F316 A182-F316L	A182-F6a	A182-F6a
Yoke Sleeve	A439-D2	A439-D2	A439-D2	A439-D2	A439-D2
Stud	A193-B7	A320-B8	A193-B8	A193-B7	A193-B7
Nut	A194-2H	A194-8	A194-8M	A194-2H	A194-2H
Packing	Graphite				
Gasket	Spiral Wound + Graphite / Ring Joint Metal				
Handwheel	Carbon Steel / Ductile Cast Iron				

NOTE: Other valve material composition are available on special request

CLASS 150 GLOBE VALVE

Designed to API 600 

Cast steel globe valve, Bolted bonnet, Outside screw & yoke, Rising stem, Rising handwheel, Swivel Plug Disc.



Standard Parts & Material - Fig. 2A1C1

PARTS	MATERIALS
Body	A216 WCB
Bonnet	A216 WCB
Stem	A182 F6a
Disc	A216 WCB + Cr13
Seat Ring	A105 + Cr13 / STL
Gasket	Spiral Wound + Graphite
Packing	Graphite
Gland	A182-F6a
Gland Flange	A216 WCB
Bonnet Bolt	A193-B7
Bonnet Nut	A194-2H

NOTE: Other valve material composition are available

Dimensions

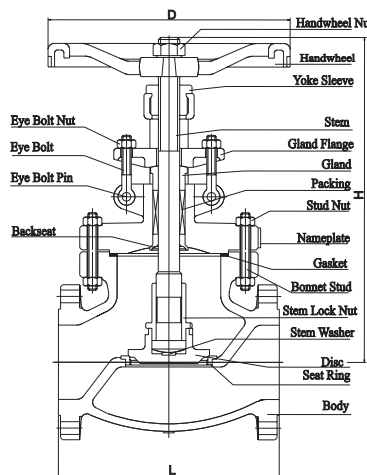
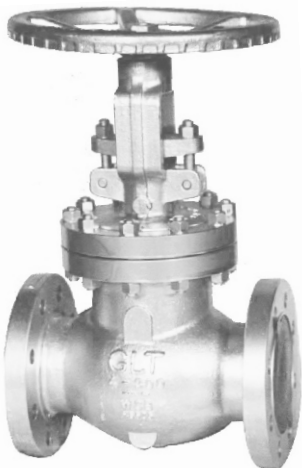
Valve Size			2"	2½"	3"	4"	5"	6"	8"	10"	12"	14"	16"
			50mm	65mm	80mm	100mm	125mm	150mm	200mm	250mm	300mm	350mm	400mm
Face to Face (L)	RF	mm	203	216	241	292	356	406	495	622	698	787	914
	RTJ	mm	216	229	254	305	369	419	508	635	711	800	927
	BW	mm	203	216	241	292	356	406	495	622	698	787	914
Valve Center to Top (H)		mm	320	340	375	430	480	510	625	710	845	1320	1520
Approximate Weight		kg	21	28	36	54	76	98	170	250	430	640	870

Working Pressure: Carbon Steel - 285 p.s.i. @ 100°F / 38°C

CLASS 300 GLOBE VALVE

Designed to API 600 

Cast steel globe valve, Bolted bonnet, Outside screw & yoke, Rising stem, Rising handwheel, Swivel Plug Disc.



Standard Parts & Material - Fig. 2A1C3

PARTS	MATERIALS
Body	A216 WCB
Bonnet	A216 WCB
Stem	A182 F6a
Disc	A216 WCB + Cr13
Seat Ring	A105 + Cr13 / STL
Gasket	Spiral Wound + Graphite
Packing	Graphite
Gland	A182-F6a
Gland Flange	A216 WCB
Bonnet Bolt	A193-B7
Bonnet Nut	A194-2H

NOTE: Other valve material composition are available

Dimensions

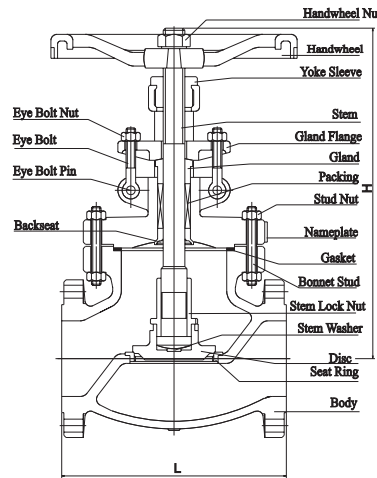
Valve Size			2"	2½"	3"	4"	5"	6"	8"	10"	12"	14"	16"
			50mm	65mm	80mm	100mm	125mm	150mm	200mm	250mm	300mm	350mm	400mm
Face to Face (L)	RF	mm	267	292	318	356	400	444	559	622	711	838	863
	RTJ	mm	283	308	333	371	416	460	575	638	727	854	879
	BW	mm	267	292	318	356	400	444	559	622	711	838	863
Valve Center to Top (H)		mm	350	392	425	498	560	630	795	1125	1240	1385	1560
Approximate Weight		kg	28	45	58	86	134	178	260	480	680	820	1060

Working Pressure: Carbon Steel - 740 p.s.i. @ 100°F / 38°C

CLASS 600 GLOBE VALVE

Designed to API 600

Cast steel globe valve, Bolted bonnet, Outside screw & yoke, Rising stem, Rising handwheel, Swivel Plug Disc.



Standard Parts & Material - Fig. 2A1C6

PARTS	MATERIALS
Body	A216 WCB
Bonnet	A216 WCB
Stem	A182 F6a
Disc	A216 WCB + Cr13
Seat Ring	A105 + Cr13 / STL
Gasket	Ring Joint Metal
Packing	Graphite
Gland	A182-F6a
Gland Flange	A216 WCB
Bonnet Bolt	A193-B7
Bonnet Nut	A194-2H

NOTE: Other valve material composition are available

Dimensions

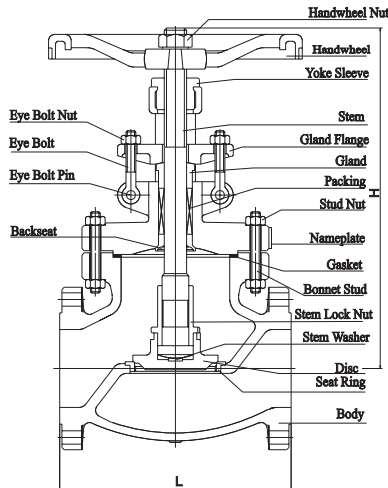
Valve Size			2"	2½"	3"	4"	6"	8"	10"	12"
			50mm	65mm	80mm	100mm	150mm	200mm	250mm	300mm
Face to Face (L)	RF	mm	292	330	356	432	559	660	787	838
	RTJ	mm	295	333	359	435	562	664	791	841
	BW	mm	292	330	356	432	559	660	787	838
Valve Center to Top (H)		mm	395	435	480	540	690	740	980	1120
Approximate Weight		kg	38	56	70	128	250	380	680	870

Working Pressure: Carbon Steel - 1480 p.s.i. @ 100°F / 38°C

CLASS 900 GLOBE VALVE

Designed to API 600

Cast steel globe valve, Bolted bonnet, Outside screw & yoke, Rising stem, Rising handwheel, Swivel Plug Disc.



Standard Parts & Material - Fig. 2A1C9

PARTS	MATERIALS
Body	A216 WCB
Bonnet	A216 WCB
Stem	A182 F6a
Disc	A216 WCB + Cr13
Seat Ring	A105 + Cr13 / STL
Gasket	Ring Joint Metal
Packing	Graphite
Gland	A182-F6a
Gland Flange	A216 WCB
Bonnet Bolt	A193-B7
Bonnet Nut	A194-2H

NOTE: Other valve material composition are available

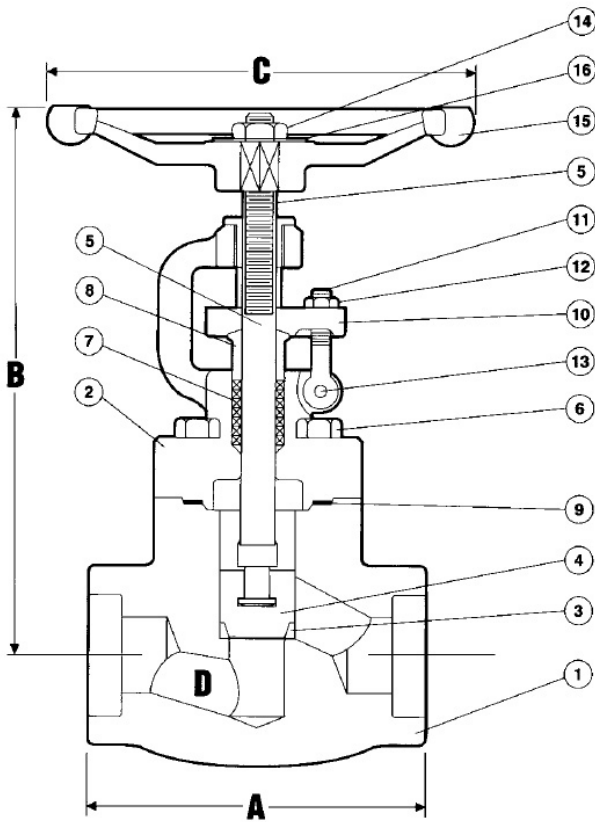
Dimensions

Valve Size			2"	3"	4"	6"	8"
			50mm	80mm	100mm	150mm	200mm
Face to Face (L)	RF	mm	368	381	457	610	737
	RTJ	mm	371	384	460	613	740
	BW	mm	368	381	457	610	737
Valve Center to Top (H)		mm	495	540	605	960	1120
Approximate Weight		kg	105	120	190	435	784

Working Pressure: Carbon Steel - 2220 p.s.i. @ 100°F / 38°C

GLT FORGED STEEL GLOBE VALVE

Forged steel globe valve, Bolted bonnet, Outside screw & yoke, Rising stem, Rising handwheel, Regular & full port, Threaded and socket weld ends.



Standard Parts & Material - Fig. 2A2F8, 2A2F15

NO.	PARTS	MATERIALS
1	Body	A105
2	Bonnet	A105
3	Seat	A276-410+STL
4	Disc	A276-420
5	Stem	A276-410
6	Bonnet Bolt	A193-B7
7	Packing	Grafoil
8	Gland	A276-410
9	Gasket	304+Graphite
10	Gland Flange	A216 WCB
11	Eye Bolt	A276-410
12	Eye Bolt Nut	A194-2H
13	Eye Bolt Pin	A276-410
14	Stem Nut	A108-1020
15	Handwheel	A197
16	Nameplate	Stainless Steel

NOTE: Other valve material composition are available

Manufacturing Standards

General Design	API 602
Pressure Rating	ANSI B16.34
Face to Face	ANSI B16.10
Screwed Ends (NPT)	ANSI B16.11
Socket Weld Ends	ANSI B16.11
Inspection and Test	API 598

CLASS 800 GLOBE VALVE

Designed to API 602 Φ

Regular Port		-	1/2"	3/4"	1"	1.1/4"	1.1/2"	2"	-
Full Port		1/4"	3/8"	1/2"	3/4"	1"	1.1/4"	1.1/2"	2"
Face to Face (A)	mm	79	79	92	111	130	152	172	200
Valve Height (B)	mm	176	176	176	212	230	254	294	327
Handwheel Diameter (C)	mm	100	100	100	125	160	160	180	200
Seat Port Diameter (D)	mm	8	10	13	17	23	30	37	46
Approximate Weight	kg	2.2	2.1	2.1	3.9	5.8	7.2	10.8	16

Working Pressure: Carbon Steel - 1975 p.s.i. @ 100°F / 38°C

CLASS 1500 GLOBE VALVE

Designed to API 602 Φ

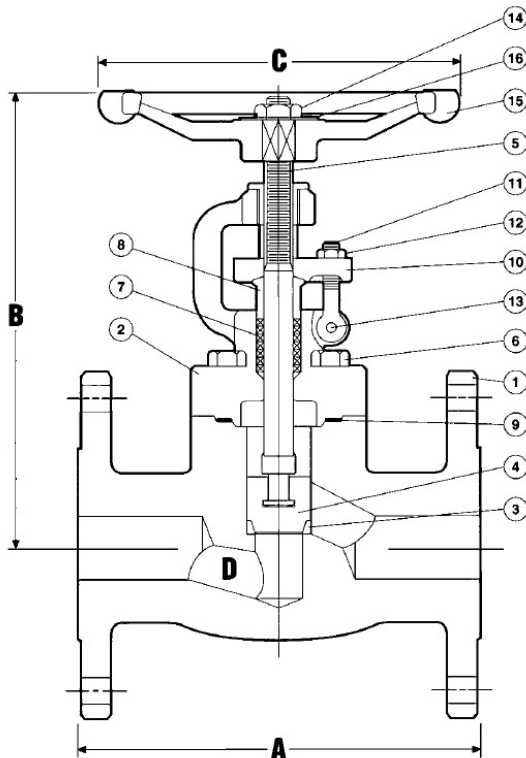
Regular Port		-	1/2"	3/4"	1"	1.1/4"	1.1/2"	2"	-
Full Port		1/4"	3/8"	1/2"	3/4"	1"	1.1/4"	1.1/2"	2"
Face to Face (A)	mm	111	111	111	130	152	172	200	220
Valve Height (B)	mm	207	207	207	240	258	330	355	370
Handwheel Diameter (C)	mm	125	125	125	160	160	180	200	240
Seat Port Diameter (D)	mm	7	10	13	17	23	30	37	46
Approximate Weight	kg	4.9	4.7	4.6	6.8	9.2	13.6	17.6	21.9

Working Pressure: Carbon Steel - 3705 p.s.i. @ 100°F / 38°C

CLASS 150/300/600 GLOBE VALVE

Designed to API 602 

Forged steel globe valve, Bolted bonnet, Outside screw & yoke, Rising stem, Rising handwheel, Regular port, Flanged ends.



Standard Parts & Material - Fig. 2A2F1, 2A2F3, 2A2F6

NO.	PARTS	MATERIALS
1	Body	A105
2	Bonnet	A105
3	Seat	A276-410+STL
4	Disc	A276-420
5	Stem	A276-410
6	Bonnet Bolt	A193-B7
7	Packing	Grafoil
8	Gland	A276-410
9	Gasket	304+Graphite
10	Gland Flange	A216 WCB
11	Eye Bolt	A276-410
12	Eye Bolt Nut	A194-2H
13	Eye Bolt Pin	A276-410
14	Stem Nut	A108-1020
15	Handwheel	A197
16	Nameplate	Stainless Steel

NOTE: Other valve material composition are available

Manufacturing Standards

General Design	API 602
Pressure Rating	ANSI B16.34
Face to Face	ANSI B16.10
Flange Dimensions	ANSI B16.5
Inspection and Test	API 598

Dimensions

Regular Port			1/2" 15mm	3/4" 20mm	1" 25mm	1.1/2" 40mm	2" 50mm
Face to Face (A)	Class 150	mm	108	117	127	165	203
	Class 300	mm	152	178	203	229	267
	Class 600	mm	165	190	216	241	292
Valve Height (B)		mm	176	176	212	254	294
Handwheel Diameter (C)		mm	100	100	125	160	180
Seat Port Diameter (D)		mm	10	13	17	30	37
Approx. Weight	Class 150	kg	2.7	4.0	6.3	10.3	14.7
	Class 300	kg	4.0	5.2	7.5	16.5	18.2
	Class 600	kg	5.6	6.9	9.8	18.4	20

Working Pressure: Carbon Steel
 Class 150 - 285 p.s.i. @ 100°F / 38°C
 Class 300 - 740 p.s.i. @ 100°F / 38°C
 Class 600 - 1480 p.s.i. @ 100°F / 38°C