KSPM

Global Consulting Inc.

"Managing Projects to Success"

GLOBE VALUE SERIES

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Steel Globe Valve

• Standards

Design and Manufacture
Cast steel globe valve to BS 1873 and ASME B16.34
Forged steel globe valve to API 602.
Inspection and Test: API 598.
End flange dimension: ASME B 16.5
BW end dimension : ASME B16.25
Socket-weld dimension : ASME B16.11
Face to face and end to end : ASME B16.10
Pressure-temperature rating: ASME B16.34

• The Features of Globe Valve

Bolted Bonnet, Outside Screw and Yoke, Rising stems Metalic seating surfaces.

• Body and Bonnet Connection

The body and bonnet of Class 150~Class900 check valves are usually with studs and nuts. And the body and bonnet of Class 1500~Class2500 check valves are usually of pressure seal designe.

• 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 Class600 and ring joint gasket is also optional for Class 600. Ring joint gasket is used for class 900 globe valve. Pressurized seal design is used for Class 1500 ~ Class 2500 globe Valve.

• Actuation

Hand wheel, impact hand wheel & gear box is usually used for globe valve actuation. Chain wheel and electric actuator can be also used for globe valve actuation if being requested by the customers.

• Packing Seal

Molded flexible graphite is used for packing material. PTFE or combined packing material can be also used if being requested by the customer. The internal surface of the stuffing box, of which area is contacted with the packing, is of excellent finish (Ra3.2u.m) The stem surface, contacting with the packing, should be rolled and pressed after being precisely machined, so as to reach to the high finish and compactness (Ra 0.8um) and ensure the reliable tightness of the stem area.

• Belleville Spring Loaded Packing Impacting System

If being requested by the customer, the Belleville spring loaded packing impacting can be adopted for enhancing the durability and reliability of the packing seal.

• Back Seating Design

All our globe valves have the back seat design. In most cases, the carbon steel globe valves is fitted with a renewable back seat. For stainless steel globe valve, the back seat 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. However, as per the requirement of API, it is not advisable to add or change packing by the mean of back seating when the valve is pressure containing.

• Seat

For carbon steel globe valve, the seat is usually forged steel. The sealing surface of the seat is spray welded with hard alloy specified by the customer. Renewable threaded seat is used for NPS < 10 globe valve, and welded on seat can be also optional if being requested by the customer. Welded on seat is used for NPS > 12 carbon steel globe valves. For stainless steel globe valve integral seat is usally adopted, or to weld hard alloy directly integrally. Threaded or welded on seat is also optional of stainless steel globe valve if being requested by the customer.

• Stem Design

The stem is of integral forged design. The minimum diamter of the stem shall per the standard requirement.

• Stem Nut

Usually, the stem nut is copper alloy. It is also can be made of ASTM A439 D2 if being requested by the customer. For large sized globe valve, rolling bearing is fitted at the two sides of stem nut in order to minimize the open and close torque of the globe valve.

• Special Glove Valve

Beside the common globe valves, we also makes cryogenic globe valve, bellow sealed globe valve, Jacketed globe valve, etc.

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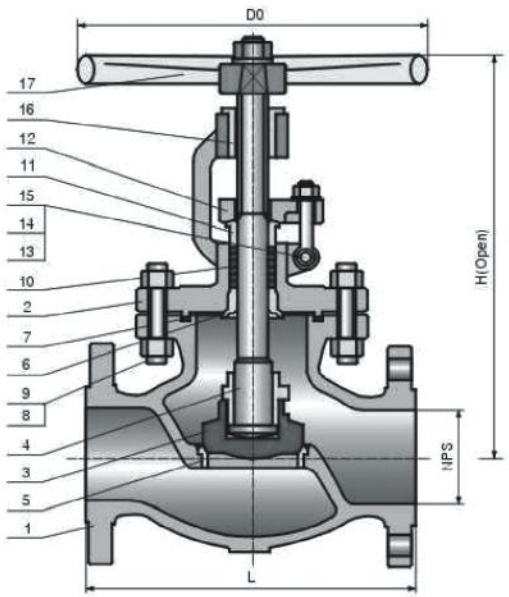
Cast Steel Globe Valve

• Design Description

Straight Pattern body design
OS & Y, Outside screw and yoke
BB, Bolted bonnet
Yoke integral with bonnet
Rising stem and handwheel
Loose disc, choice of plug or ball
Ren evable seat ring
Impact handwheel for 10" & above
Horizontal service
Flanged or butt welding ends
Available with BG operator

• Applicable Standards

Design standard: BSI873/API 600/ASME B16.34
Face to face : ASME B16.10
End flanges : ASME B16.5
Butt welding ends: ASME B16.25
Inspection and test: API 598



150Lb ~ 300Lb

• Materials of Parts

No.	Part Name	ASTM Material			
1	Body	A216-WCB	A217-WC6	A352-LCB	A352 CF8
2	Bonnet	A216-WCB	A217-WC6	A352-LCB	A351 CF8
3	Disc	A105+CR13	A182-11+HF	A350-LF2+CR 13	A182-F304
4	Stem	A182-F6a	A182-F6a	A182-F6a	A182-F304
5	Seat ring	A105+CR13	A182-F11+HF	A350-LF2-CR13	/
6	Stem backseat	A276-420	A276-304	A276-420	/
7	Bonnet gasket	Spiral wound(Grphite+304)			
8	Bonnet stud	A193-B7	A193-B16	A320-L7	A193-B8
9	Bonnet Stud nut	A194-2H	A194-4	A194-7	A194-8
10	Packing	Graphite			
11	Gland	A276-420	A276-304	A276-420	A276-304
12	Gland flange	A216-WCB	A217-WC6	A352-LCB	A351 CF8
13	Eyebolt pin	Carbon Steel	A276-420	Carbon steel	Carbon steel
14	Eyebolt	A193-B7	A193-E16	A320-LA	A193-B8
15	Eyebolt nut	A194-2H	A194-4	A194-7	A194-8
16	Yoke sleeve	Almuinum-bronze/A439-D2			
17	Handwheel	A216-WCB			

Note:
1). A Ductile Ni-resist optional
2). Disc and seat ring may either be solid facing material or base material equal to or better than the body/bonnet material with facing as shown.

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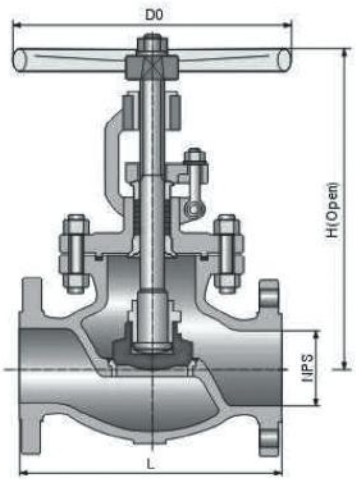
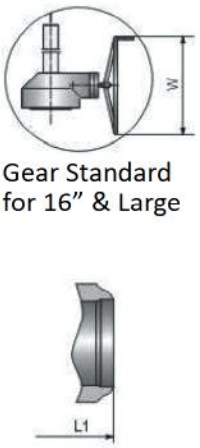
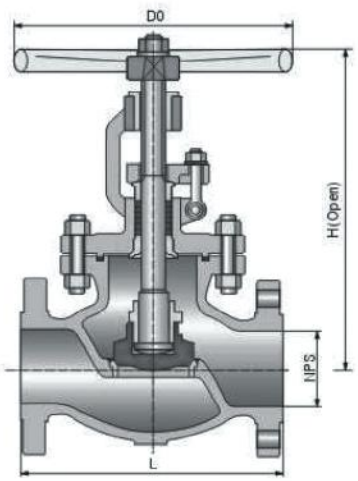
Cast Steel Globe Valve





Gear Standard
for 16" & Large

Class 150 ~ Class 300



Gear Standard
for 10" & Large

Class 600 ~ Class 900

• Dimensions Data

CLASS 150

Size	NPS	1/2	3/4	1	1 1/2	2	2 1/2	3	4	6	8	10	12	14	16	18
	DN	15	20	25	40	50	65	80	100	150	200	250	300	350	400	450
L/L1 (RF/BW)	in	4.25	4.63	5.00	6.5	8.00	8.50	9.50	11.50	16.00	19.50	24.50	27.50	31.00	36.00	38.50
	mm	108	118	127	165	203	216	241	292	406	495	622	698	787	914	978
H (Open)	in	8.31	8.31	9.08	14.25	13.58	14.8	15.94	19.09	20.47	23.62	30.00	33.94	38.58	47.05	5118
	mm	211	211	230	326	345	375	405	485	520	600	762	862	980	1195	1300
D0	in	4.00	4.00	4.00	7.88	8	8	10	12	14	18	20	25	25	24	24
	mm	102	102	102	200	200	200	250	300	350	450	500	640	640	610	610

CLASS 300

Size	NPS	1/2	3/4	1	1 1/2	2	2 1/2	3	4	6	8	10	12	14	16
	DN	15	20	25	40	50	65	80	100	150	200	250	300	350	400
L/L1 (RF/BW)	in	4.25	4.63	5.00	9	10.50	11.50	12.50	14.00	17.50	22.00	24.50	28.00	33.00	34
	mm	108	118	127	229	267	292	318	356	445	559	622	711	838	864
H (Open)	in	8.31	8.31	9.08	14.17	14.57	18.66	17.32	20.67	24.41	35.83	37.36	40.63	42.91	51.5
	mm	211	211	230	360	370	474	440	525	620	910	949	1032	1090	1310
D0	in	4.00	4.00	4.00	7.88	8	10	10	14	18	22	24	25	24	24
	mm	102	102	102	200	200	250	250	350	450	560	600	640	610	610

CLASS 600

Size	NPS	2	2 1/2	3	4	6	8	10	12	14	16
	DN	50	65	80	100	150	200	250	300	350	400
L/L1 (RF/BW)	in	11.50	13.00	14.00	17.00	22.00	26.00	31.00	33.00	35	39
	mm	292	330	356	432	559	660	787	838	889	991
L2 (RTJ)	in	11.62	13.12	14.12	17.12	22.12	26.12	31.12	33.12	35.12	39.12
	mm	295	33	359	435	562	663	790	841	892	994
H (Open)	in	18.19	21.26	23.03	26.38	34.88	36.69	40.94	50.39	57	63
	mm	462	540	585	670	886	932	1040	1280	1450	1600
D0	in	10	10	12	18	20	25	24	24	30	30
	mm	250	250	350	450	500	640	610	610	760	760

CLASS 900

Size	NPS	2	2 1/2	3	4	6	8	10	12
	DN	50	65	80	100	150	200	250	300
L/L1 (RF/BW)	in	14.50	16.50	15.00	18.00	24.00	29.00	33.00	38
	mm	386	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	23.62	25.98	26.18	31.50	43.62	46.61	61.88	69
	mm	600	660	665	800	1108	1184	1400	1755
D0	in	14	14	18	20	24	24	24	32
	mm	350	350	450	500	610	610	600	810

Class 1500,2500 proposed structure of self-sealing, For flange connection with the company.