



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 B16.5.

BW end dimension: ASME B16.25

Socket-weld dimension: ASME B16.10.

Face to face and end to end: ASME B16.10

Pressure-temperature ratings: ASME B16.34

Gasket of Cover Flange

Stainless steel + flexible graphite wounded gasket is used for Class 150 and Class300 globe valve. Stainless steel+flexible graphite wounded gasket is used for Class600, and ring joint gasket is also optional for Class600. Ring joint gasket is used for Class900 globe valve. Pressurized seal design is used for Class 1500~Class2500 globe valve.

The features of globe valve

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

Stem Design

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

Back Seating Design

All our globe valves have the back seating design. In most cases, the carbon steel globe valve 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.

Stem Nut

Usually, the stem nut is made of ASTM A439 D2. It is also can be made of copper alloy, 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.



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.

Body and Bonnet Connection

The body and bonnet of Class150~Class900 check valves are usually with studs and nuts. And the body and bonnet of Class1500~Class2500 check valves are usually of pressurized seal design.

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 ($Ra3.2\mu m$). 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 ($Ra0.8\mu m$) 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.

Seat

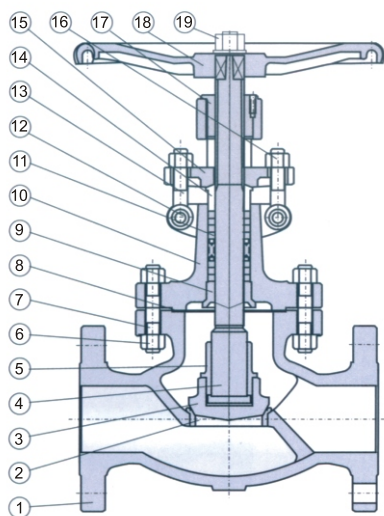
For carbon steel globe valve, the seat is usually forged steel. The sealing surface of the seat is spray welded with hard alloy specified by the customer. Renewable threaded seat is used for $NPS \leq 10$ globe valve, and welded on seat can be also optional if being requested by the customer. Welded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

Special Globe Valve

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



Parts and Material list



Standards

Design and Manufacture:
BS 1873 and ASME B 16.34

Inspection and Test:
API 598

End flange dimension
ASME B16.5

BW end dimension:
ASME B16.25

Socket-weld dimension:
ASME B16.11

Face to face and end to end:
ASME B16.10

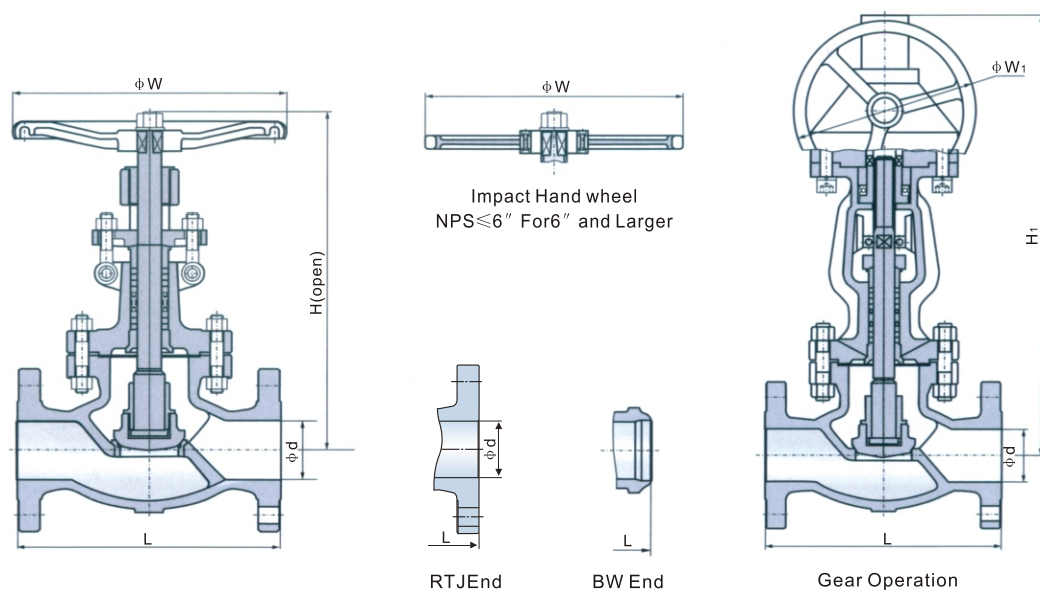
Pressure-temperature ratings:
ASME B16.34

Parts NO.	Parts name	Materials				
		WCB/Trim 1	WCB/Trim 5	WCB/Trim 8	CF8/304	CF8M/316
1	Body	ASTMA216WCB	ASTMA216WCB	ASTMA216WCB	ASTMA351 CF8	ASTMA351 CF8M
2	Seat ring	A105+13Cr	A105+STL	A105+13STL	ASTMA351 CF8	ASTMA351 CF8M
3	Disc	ASTMA216WCB+13Cr	ASTMA216WCB+STL	ASTMA216WCB+13Cr	ASTMA351 CF8	ASTMA351 CF8M
4	Stem	ASTMA182F6a	ASTMA182F6a	ASTMA182F6a	ASTMA182 F304	ASTMA182 F316
5	Disc nut	ASTMA216WCB	ASTMA216WCB	ASTMA216WCB	ASTMA351 CF8	ASTMA351 CF8M
6	Bonnet nut	ASTMA1942H	ASTMA194 2H	ASTMA194 2H	ASTMA194 8	ASTMA194 8M
7	Bonnet bolt	ASTMA193 B7	ASTMA193 B7	ASTMA193 B7	ASTMA193 B8	ASTMA193 B8M
8	Gasket	304sheel+Graphite	304sheel+Graphite	304sheel+Graphite	304+Graphite	304+Graphite
9	Backseat bushing	ASTMA182F6a	ASTMA182F6a	ASTMA182F6a	ASTMA351 CF8	ASTMA351 CF8M
10	Bonnet	ASTMA216 WCB	ASTMA216 WCB	ASTMA216 WCB	ASTMA351 CF8	ASTMA351 CF8M
11	Packing	Graphite	Graphite	Graphite	Graphite	Graphite
12	Eyebolt pin	ASTMA36	ASTMA36	ASTMA36	304ss	316ss
13	Gland eyebolt	ASTMA193B7	ASTMA193B7	ASTMA193B7	ASTMA 193 B8	ASTMA 193 B8M
14	Gland	ASTMA182F6a	ASTMA182F6a	ASTMA182F6a	ASTMA182F304	ASTMA182F316
15	Gland flange	ASTMA216WCB	ASTMA216WCB	ASTMA216WCB	ASTMA351 CF8	ASTMA351 CF8M
16	Eyebolt nut	ASTMA194 2H	ASTMA194 2H	ASTMA194 2H	ASTMA194 8	ASTMA194 8M
17	Stem nut	ASTM A439 D2	ASTMA439 D2	ASTMA439 D2	ASTMA439 D2	ASTMA439 D2
18	Hand wheel	Ductile Iron	Ductile Iron	Ductile Iron	Ductile Iron	Ductile Iron
19	Hand wheel nut	Carbon steel	Carbon steel	Carbon steel	Carbon steel	Carbon steel

Note: The chart above only lists out some common composition of steel gate valve parts. We may provide other different parts material composition according to the customer's request or the actual valve working condition.



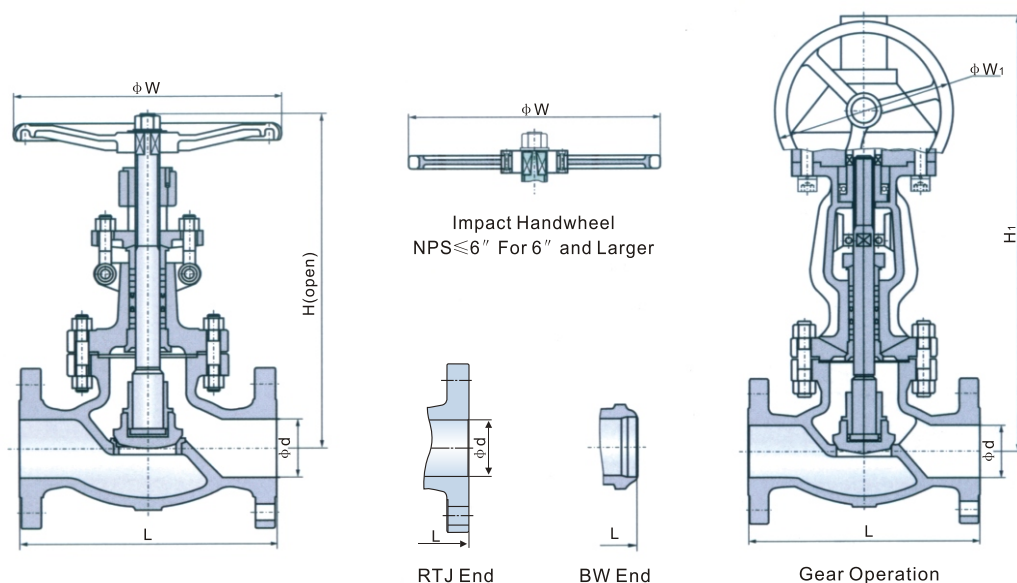
Class 150 & JIS 10K Cast Steel Globe Valve



Class	Size		Dimensions(mm)								Weight(kg)	
	NPS	DN	L			d	H	H ₁	W	W ₁	H.W	G.O
			RF	RFF	BW							
150	1/2	15	108	108	108	13	182	-	100	-	3	-
	3/4	20	117	117	117	19	193	-	100	-	4	-
	1	25	127	127	127	25	217	-	100	-	5	-
	1 1/4	32	140	140	140	32	235	-	135	-	8	-
	1 1/2	40	165	165	165	38	258	-	135	-	9	-
	2	50	203	203	203	51	330	-	200	-	19	-
	2 1/2	65	216	216	216	64	360	-	250	-	27	-
	3	80	241	241	241	76	390	-	280	-	36	-
	4	100	292	292	292	102	445	-	300	-	53	-
	5	125	356	356	356	127	480	-	350	-	75	-
	6	150	406	406	406	152	520	556	350	310	94	126
	8	200	495	495	495	203	600	658	400	310	148	180
	10	250	622	622	622	254	773	805	450	460	242	291
	12	300	698	698	698	305	880	955	500	460	438	480



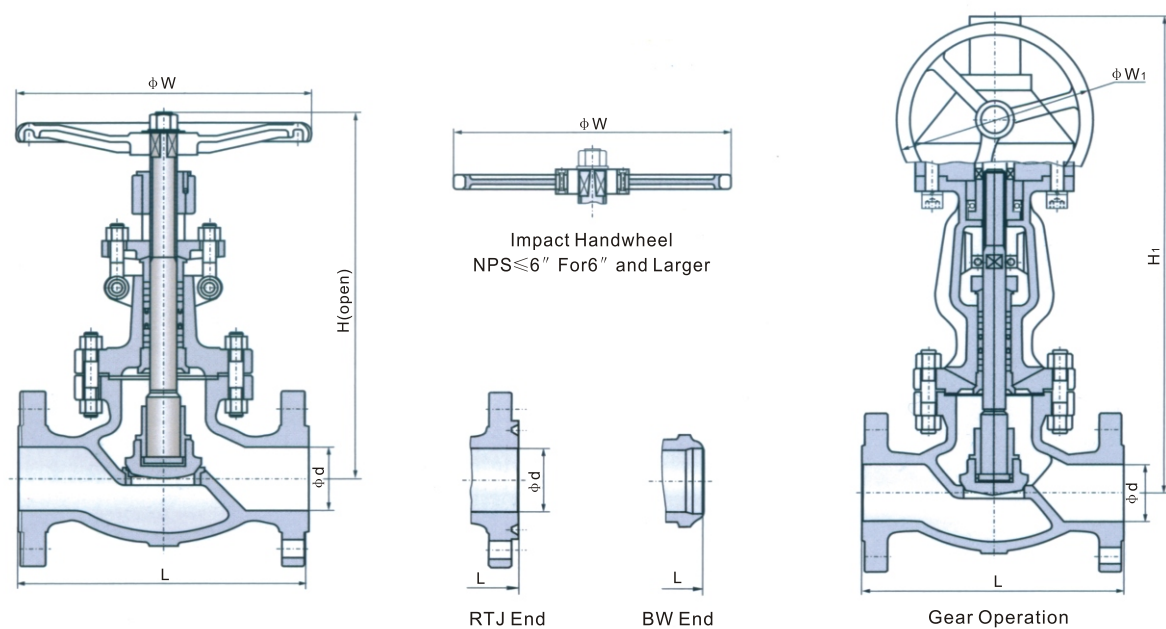
Class 300 & JIS 20K Cast Steel Globe Valve



Class	Size		Dimensions(mm)								Weight(kg)	
	NPS	DN	L			d	H	H ₁	W	W ₁	H.W	G.O
			RF	RFF	BW							
300	½	15	152	152	152	14	185	-	100	-	5	-
	¾	20	178	178	178	19	195	-	100	-	7	-
	1	25	203	203	203	25	220	-	135	-	10	-
	1¼	32	216	216	216	32	240	-	135	-	14	-
	1½	40	229	229	229	38	260	-	160	-	19	-
	2	50	267	267	267	51	385	-	200	-	25	-
	2½	65	292	292	292	64	420	-	200	-	42	-
	3	80	318	318	318	76	440	-	280	-	46	-
	4	100	356	356	356	102	515	-	350	-	74	-
	5	125	400	400	400	127	580	-	350	-	111	-
	6	150	444	444	444	152	660	690	400	310	165	195
	8	200	559	559	559	203	900	950	550	460	275	327
	10	250	622	622	622	254	950	990	600	460	400	452
	12	300	711	711	711	305	1030	1080	700	460	624	725



Class 600 & Class 900 Cast Steel Globe Valve



Class	Size		Dimensions(mm)								Weight(kg)	
	NPS	DN	L			d	H	H ₁	W	W ₁	H.W	G.O
			RF	RTJ	BW							
600	2	50	292	295	292	51	360	-	250	-	32	-
	2½	65	330	333	330	64	410	-	280	-	42	-
	3	80	356	359	356	76	465	-	300	-	63	-
	4	100	432	435	432	102	545	575	400	310	107	138
	5	125	508	511	508	127	625	660	500	310	185	215
	6	150	559	562	559	152	785	820	550	460	290	342
	8	200	660	664	660	200	930	960	650	460	540	645
900	2	50	368	371	368	51	480	-	350	-	55	-
	2½	65	419	422	419	64	520	-	350	-	68	-
	3	80	381	384	381	76	564	630	400	310	95	128
	4	100	457	460	457	102	685	720	450	310	160	210
	5	125	559	562	559	127	780	840	550	460	270	325
	6	150	610	613	610	152	950	1015	650	460	410	480