

● Technical Specification

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 B16.11.

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

Pressure-temperature ratings: ASME B16.34.

● The features of globe valve

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

● Body and Bonnet Connection

The body and bonnet of Class 150 ~ Class 900 globe valves are usually with studs and nuts. And the body and bonnet of Class 1500 ~ Class 2500 globe valves are usually of pressurized 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 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 (Ra 3.2 μ 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 0.8 μ m) and ensure the relizable tightness of the stem area.

● Belleville Spring Loaded Packing Impacting System

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

● 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.

● 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 valves, 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 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.

● Stem Design

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

● Stem Nut

Usually, the stem nut is made of ASTM A439 D2. it is also can be made of copper ally 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 Gate Valve

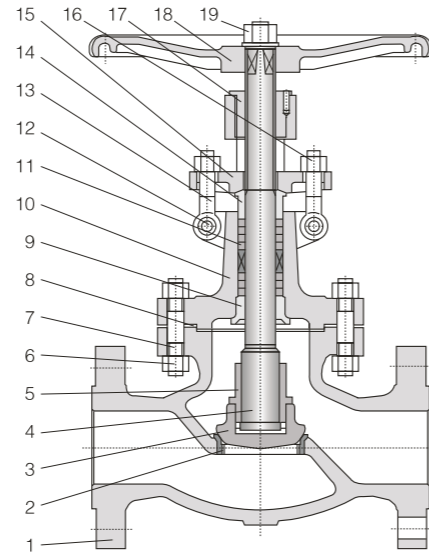
Besides the common globe valves, Our company also makes cryogenic globe valve, Bellow sealed globe valve, Jacketed globe valve, etc.



Bellow Sealed Globe Valve



Forged Steel Globe Valve



● **Technical Specification**

Design and Manufacture: BS1873 or ASME B16.34
 Inspection and Test: API 598
 End flange dimension: ASME B16.5
 BW end dimension: ASME B16.25

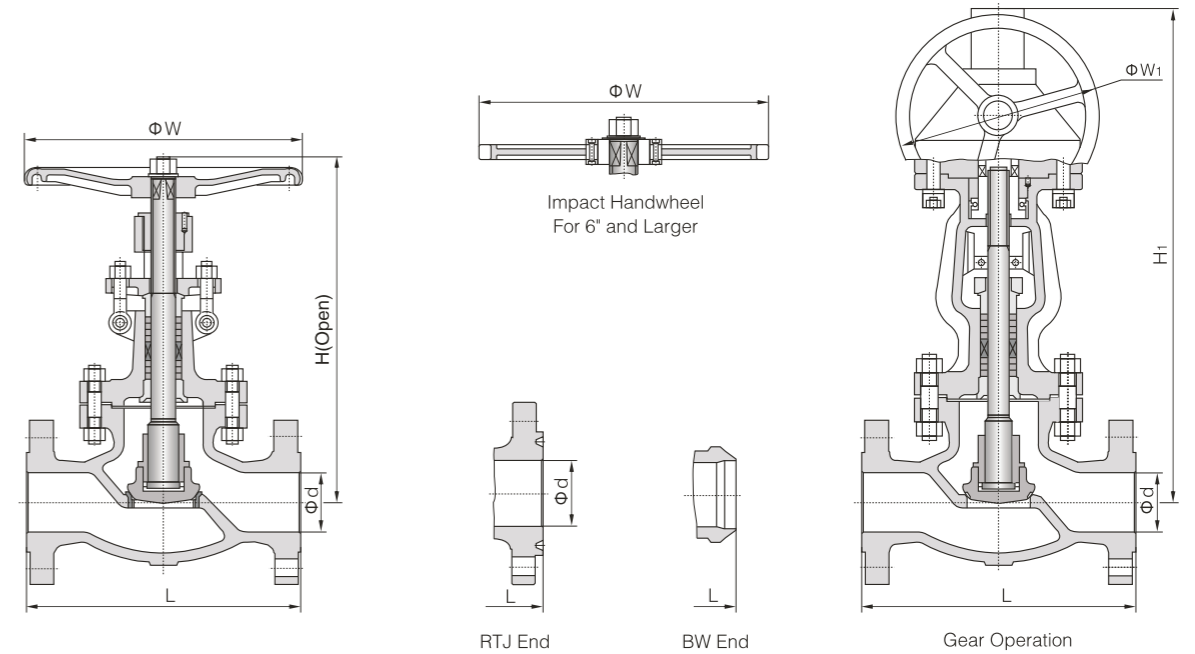
Socket-weld dimension: ASME B16.11
 Face to face and end to end: ASME B16.10
 Pressure-temperature ratings: ASME B16.34

● **Form of Major Part Material**

Parts No.	Parts Name	Materials				
		WCB/Trim 1	WCB/Trim 5	WCB/Trim 8	CF8/304	CF8M/316
1	Body	ASTM A216 WCB	ASTM A216 WCB	ASTM A216 WCB	ASTM A351 CF8	ASTM A351 CF8M
2	Seat ring	A105 + 13Cr	A105 + STL	A105 + STL	ASTM A351 CF8	ASTM A351 CF8M
3	Disc	ASTM A216 WCB + 13Cr	ASTM A216 WCB + STL	ASTM A216 WCB + 13Cr	ASTM A351 CF8	ASTM A351 CF8M
4	Stem	ASTM A182 F6a	ASTM A182 F6a	ASTM A182 F6a	ASTM A182 F304	ASTM A182 F316
5	Disc nut	ASTM A216 WCB	ASTM A216 WCB	ASTM A216 WCB	ASTM A351 CF8	ASTM A351 CF8M
6	Bonnet nut	ASTM A194 2H	ASTM A194 2H	ASTM A194 2H	ASTM A194 8	ASTM A194 8M
7	Bonnet bolt	ASTM A193 B7	ASTM A193 B7	ASTM A193 B7	ASTM A193 B8	ASTM A193 B8M
8	Gasket	304 sheet + Graphite	304 sheet + Graphite	304 sheet + Graphite	304 + Graphite	316 + Graphite
9	Backseat bushing	ASTM A182 F6a	ASTM A182 F6a	ASTM A182 F6a	ASTM A351 CF8	ASTM A351 CF8M
10	Bonnet	ASTM A216 WCB	ASTM A216 WCB	ASTM A216 WCB	ASTM A351 CF8	ASTM A351 CF8M
11	Packing	Graphite	Graphite	Graphite	Graphite	Graphite
12	Eyebolt pin	ASTM A36	ASTM A36	ASTM A36	304ss	316ss
13	Gland eyebolt	ASTM A193 B7	ASTM A193 B7	ASTM A193 B7	ASTM A193 B8	ASTM A193 B8M
14	Gland	ASTM A182 F6a	ASTM A182 F6a	ASTM A182 F6a	ASTM A182 F304	ASTM A182 F316
15	Gland flange	ASTM A216 WCB	ASTM A216 WCB	ASTM A216 WCB	ASTM A351 CF8	ASTM A351 CF8M
16	Eyebolt nut	ASTM A194 2H	ASTM A194 2H	ASTM A194 2H	ASTM A194 8	ASTM A194 8M
17	Stem nut	ASTM A439 D2	ASTM A439 D2	ASTM A439 D2	ASTM A439 D2	ASTM A439 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

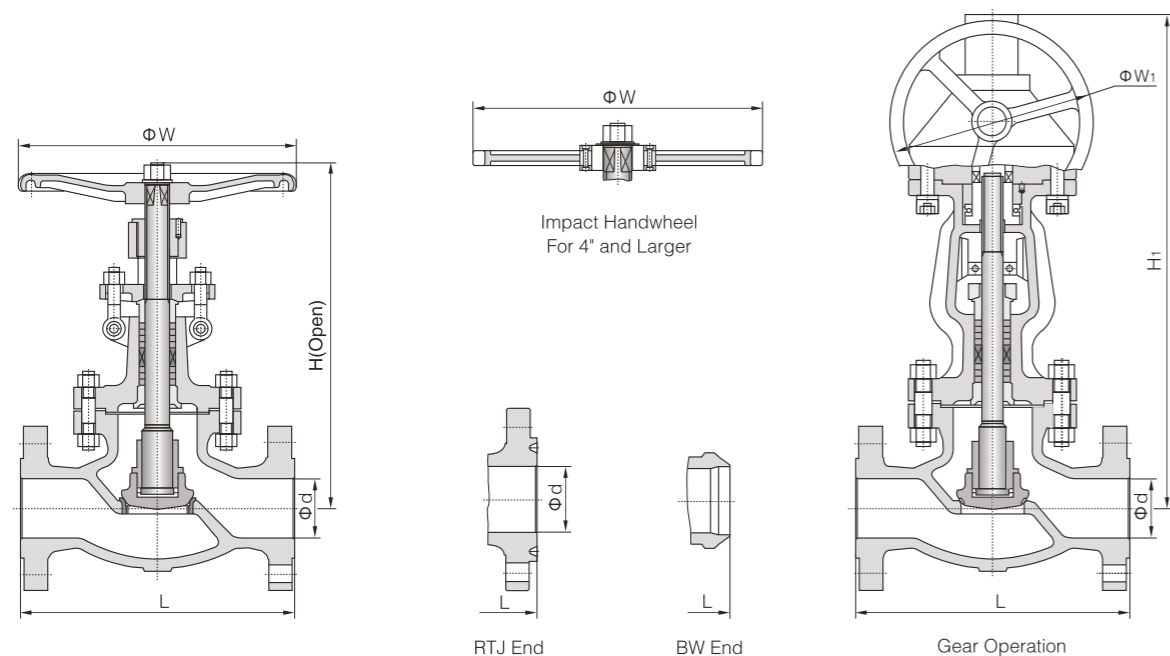
Note: The chart above only lists out some common composition of steel check valve parts. We may provide other different parts material composition according to the customer's request or the actual valve working condition.

● **Cast Steel Globe Valve Class 150**

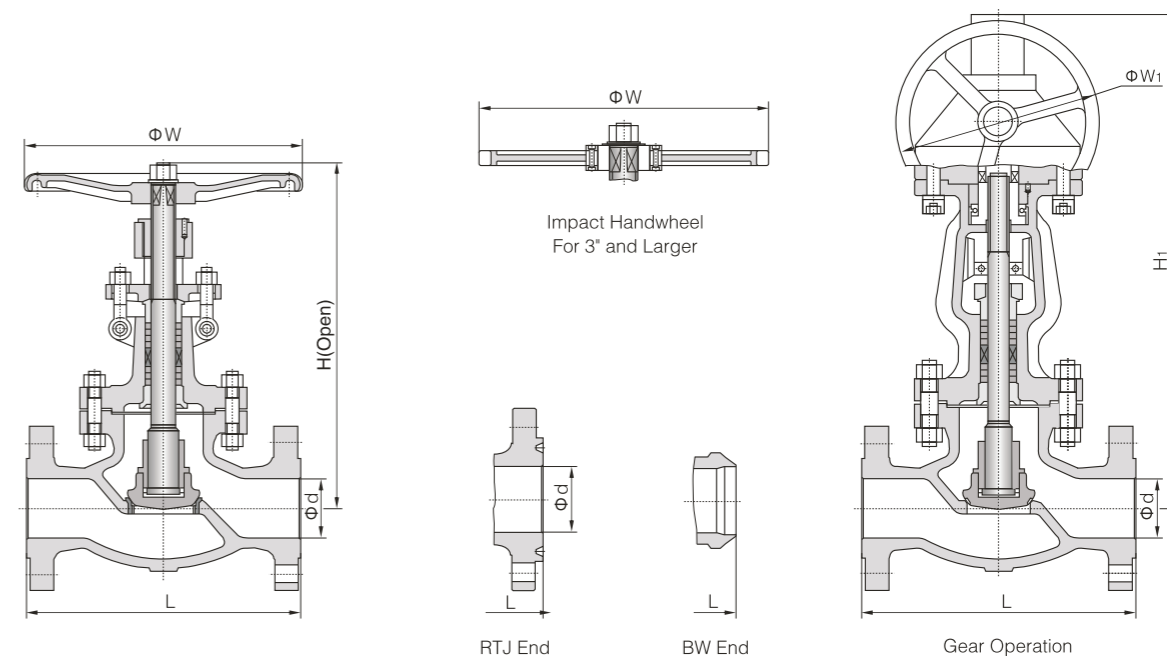


Class	Size		Dimensions(mm)							Weight(kg)		
	NPS	DN	L			d	H	H ₁	W	W ₁	H.W	G.O
			RF	RTJ	BW							
150	1/2	15	108	119	108	13	182	-	100	-	4	-
	3/4	20	117	130	117	19	193	-	100	-	6	-
	1	25	127	140	127	25	217	-	100	-	8	-
	1 1/4	32	140	152	140	32	235	-	135	-	12	-
	1 1/2	40	165	178	165	38	258	-	135	-	16	-
	2	50	203	216	203	51	330	-	200	-	25	-
	2 1/2	65	216	229	216	64	360	-	250	-	42	-
	3	80	241	254	241	76	390	-	280	-	46	-
	4	100	292	305	292	102	445	-	300	-	74	-
	5	125	356	369	356	127	480	-	350	-	111	-
	6	150	406	419	406	152	520	556	350	310	165	258
	8	200	495	508	495	203	600	658	400	310	275	300
10	250	622	635	622	254	773	805	450	460	400	450	
12	300	698	711	698	305	880	955	500	460	624	725	

● Cast Steel Globe Valve Class 300

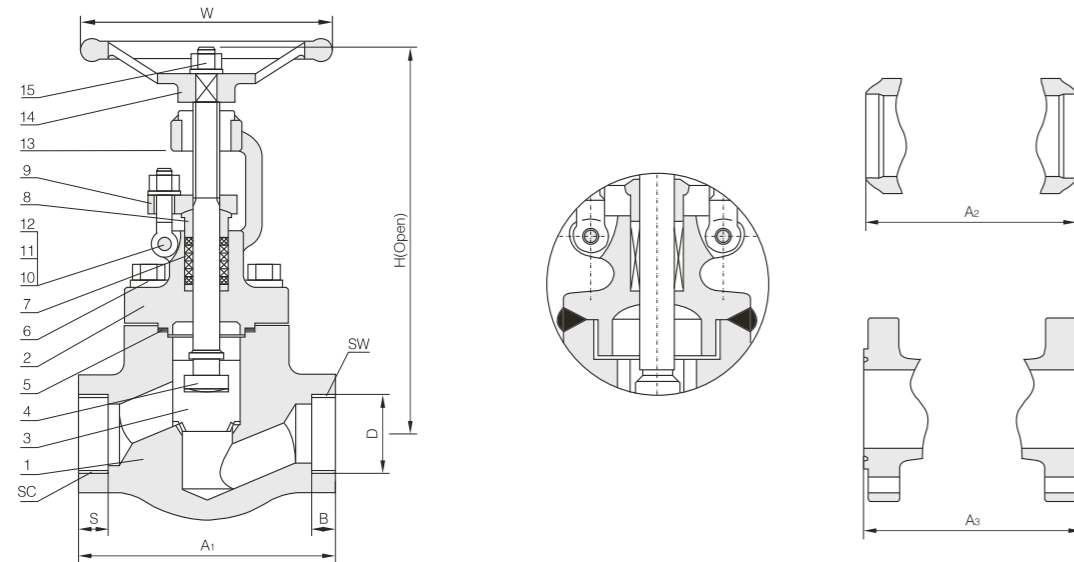


● Cast Steel Globe Valve Class 600/900



Class	Size		Dimensions(mm)								Weight(kg)	
	NPS	DN	L			d	H	H ₁	W	W ₁	H.W	G.O
			RF	RTJ	BW							
300	1/2	15	152	164	152	14	185	-	100	-	5	-
	3/4	20	178	191	178	19	195	-	100	-	7	-
	1	25	203	216	203	25	220	-	135	-	10	-
	1 1/4	32	216	229	216	32	240	-	135	-	14	-
	1 1/2	40	229	241	229	38	260	-	160	-	19	-
	2	50	267	283	267	51	385	-	200	-	25	-
	2 1/2	65	292	308	292	64	420	-	200	-	42	-
	3	80	318	333	318	76	440	-	280	-	46	-
	4	100	356	371	356	102	515	-	350	-	74	-
	5	125	400	416	400	127	580	-	350	-	111	-
	6	150	444	460	444	152	660	690	400	310	165	195
	8	200	559	575	559	203	900	950	550	460	275	327
10	250	622	638	622	254	950	990	600	460	400	452	
12	300	711	727	711	305	1030	1080	700	460	624	725	

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	-
	2 1/2	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
	2	50	368	371	368	51	480	-	350	-	55	-
900	2 1/2	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



● **Technical Specification**

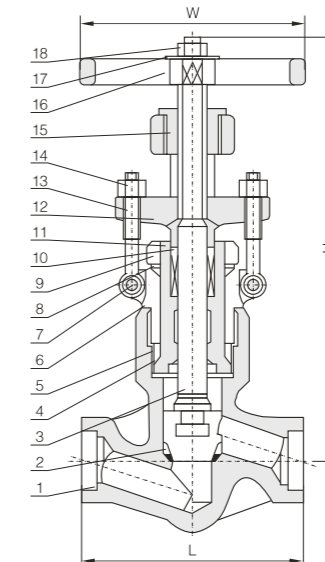
Steel Globe Valves, API 602
Steel Valves, ASME B16.34
Face to Face, Manufacturer Standard
Face to Face, Flanged, ASME B16.10
End Flanges, ASME B16.5
Buttwelding Ends, ASME B16.25
Socket-welding Ends, ASME B16.11
Screwed Ends, ASME B1.20.1
Inspection and Test, API 598

● **Design Description**

Outside Screw and Yoke (OS&Y)
Bolted Bonnet
Choice of WB, Welding Bonnet
Seat Rings Integral with Body
Yoke Integral with Bonnet
Rising Stem and Handwheel
Horizontal Service
SW, Socket-welding Ends
SC, Screwed Ends
BW, Buttwelding Ends

● **Form of Major Part Material**

No.	Part Name	ASTM Material							
		Carbon Steel	F11	F22	304 Type	316 Type	304L Type	316L Type	20 Alloy
1	Body	A105	A182 F11	A182 F22	A182 F304	A182 F316	A182 F304L	A182 F316L	20-Alloy
2	Bonnet	A105	A182 F11	A182 F22	A182 F304	A182 F316	A182 F304L	A182 F316L	20-Alloy
3	Disc	A182 F6a	A182 F11+HF	A182 F22+HF	A182 F304	A182 F316	A182 F304L	A182 F316L	20-Alloy
4	Stem	A182 F6a	A182 F11	A182 F22	A182 F304	A182 F316	A182 F304L	A182 F316L	20-Alloy
5	Bonnet Gasket	304+Graphit	304+Graphit	304+Graphit	304+Graphit	316+Graphit	304L+Graphit	316L+Graphit	316+Graphit
6	Bonnet Bolt	A193 B7	A193 B7	A193 B16	A193 B8	A193 B8	A193 B8	A193 B8	A193 B8
7	Packing	Graphite	Graphite	Graphite	Graphite *2	Graphite *2	Graphite *2	Graphite *2	Graphite *2
8	Gland	A276 410	A276 410	A276 410	A276 304	A276 316	A276 304L	A276 316L	20-Alloy
9	Gland Flange	A182 F6a	A182 F11	A182 F22	A182 F304	A182 F304	A182 F304	A182 F304	A182 F304
10	Eyebolt	Carbon Steel	A193 B7	A193 B7	A193 B8	A193 B8	A193 B8	A193 B8	A193 B8
11	Eyebolt Nut	Carbon Steel	A194 2H	A194 2H	A194 8	A194 8	A194 8	A194 8	A194 8
12	Eyebolt Pin	A276 410	A276 410	A276 410	A276 304	A276 304	A276 304	A276 304	A276 304
13	Yoke Sleeve	Bronze	Bronze *3	Bronze *3	Bronze	Bronze	Bronze	Bronze	Bronze
14	Hand wheel	Malleable iron	Malleable iron	Malleable iron	Malleable iron	Malleable iron	Malleable iron	Malleable iron	Malleable iron
15	Wheel Nut	Carbon Steel	Carbon Steel	Carbon Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
*1	PN≥600Class seal face will be HF								
*2	PTFE Optional								
*3	Ductile Ni-Resist iron Optional								
Na	Integral with vessel								



● **Technical Specification**

Steel Globe Valves, API 602
Steel Valves, ASME B16.34
Face to Face, Manufacturer Standard
Face to Face, ASME B16.10
Buttwelding Ends, ASME B16.25
Socket-welding Ends, ASME B16.11
Screwed Ends, ASME B1.20.1
Inspection and Test, API 598

● **Design Description**

Outside Screw and Yoke (OS&Y)
Pressure Seal Bonnet
Choice of WB, Welding Bonnet
Single wedge, Fully Guided
Renewable Seat Rings
Yoke Integral with Bonnet
Rising Stem and Handwheel
SW, Socket-welding Ends
SC, Screwed Ends
BW, Buttwelding Ends

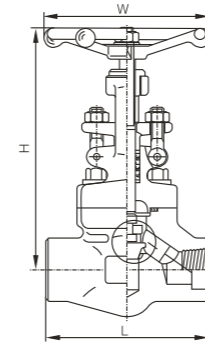
● **Form of Major Part Material**

No.	Part Name	CS to ASTM	AS to ASTM	SS to ASTM	
		Type A 105N	Type F22	Type F304(L)	Type F316(L)
1	Body	A105N	A182 F22	A182 F304(L)	A182 F316(L)
2	Disc	A276 420+STL	A276 304+STL	A276 304(L)+STL	A276 316(L)+STL
3	Stem	A276-410	A182 F22	A182 F304(L)	A182 F316(L)
4	Seal Place	A105	A182 F22	A182 F304(L)	A182 F316(L)
5	Packing Ring	A182 F304	A182 F304	A182 F304(L)	F316(L)
6	Bonnet	A105N	A182 F22	A182 F304(L)	A182 F316(L)
7	Pin	A276 420	A276 420	A182 F304	A182 F304
8	Gasket	A105N	A182 F22	A182 F304(L)	A182 F316(L)
9	Promotes the Nut	A194 2H	A194 4	A194 8	A194 8M
10	Stem Packing	Flexible graphite+304	Flexible graphite+304	Flexible graphite+316	Flexible graphite+316
11	Gland	A276 420	A276 420	A182 F304	A182 F304
12	Gland Flange	A105	A105	A182 F304	A182 F304
13	Gland Eyebolt	A193 B7	A193 B16	A193 B8	A193 B8M
14	Gland Nut	A194 2H	A194 4	A194 8	A194 8M
15	Yoke Nut	A276 420	A276 420	A276 420	A276 420
16	Hand Wheel	A197	A194 4	A197	A197
17	Nameplate	SS	SS	SS	SS
18	Stem Nut	C.S	C.S	SS	SS

● **Class800 Main Outline Dimensions & Weight**

Bold fastening valve cover, outside screw stem & yoke (OS&Y).
Designs according to BS5,352.

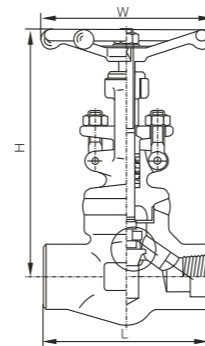
R.P	–	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2
F.P	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
L	79	79	92	111	120	152	172	200
W	100	100	100	125	160	160	180	200
H	164	164	164	203	224	260	300	355
d	7	9	13	17.5	23	30	35	46
Weight(kg)	1.9	2.28	2.37	4.3	5.75	7.8	12.5	17.5



● **Class800 Main Outline Dimensions & Weight**

Weld joint valve cover, outside screw stem & yoke (OS&Y).
Designs according to BS5,352.

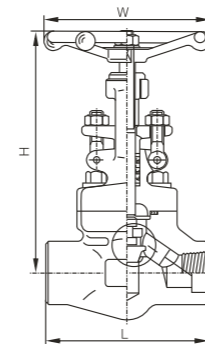
R.P	–	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2
F.P	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
L	79	79	92	111	120	152	172	200
W	100	100	100	125	160	160	180	200
H	164	164	164	203	224	260	300	355
d	7	9	13	17.5	23	30	35	46
Weight(kg)	1.7	1.7	1.9	3.3	5.2	6.8	10.6	13.8



● **Class900~1500 Main Outline Dimensions & Weight**

Bold fastening valve cover, outside screw stem & yoke (OS&Y).
Designs according to BS5,352.

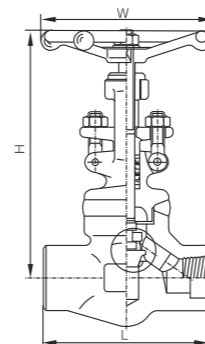
R.P	–	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2
F.P	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
L	92	111	111	120	152	172	200	220
W	100	125	125	160	160	180	200	240
H	171	207	207	240	258	330	355	370
d	7	12	15	20	28	32	40	45
Weight(kg)	2.3	3.7	3.6	6.8	7.6	11.6	15	21.9



● **Class900~1500 Main Outline Dimensions & Weight**

Weld joint valve cover, outside screw stem & yoke (OS&Y).
Designs according to BS5,352.

R.P	–	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2
F.P	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
L	92	111	111	120	152	172	200	220
W	100	125	125	160	160	180	200	240
H	171	207	207	240	258	330	355	370
d	7	12	15	20	28	32	40	45
Weight(kg)	2.0	3.4	3.3	6.0	5.6	10.3	14.2	18.5



● **Technical Specification**

Design and Manufacture: Cast steel gate valve to API 600 (ISO 10434) or API 6D; Cast stainless steel gate valve to API 600; Forged steel gate valve to API 602.

Inspection and Test: API 598, API 600 or API 6D.

End flange dimension: ASME B16.5 (for NPS ≤ 24), ASME B16.47 series B, API 605 or ASME B16.47 series A, MSS SP-44 (for NPS > 24).

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.

● **Design of Disc**

Gate Valves with NPS ≥ 2 are of wedge flexible gate; Gate valves with NPS < 2 are of wedge solid gate.

● **Body and Bonnet Connection**

The body and bonnet of Class 150 ~ Class 900 gate valves are usually connected with studs and nuts. And the body and bonnet of Class 1500 ~ Class 2500 gate valves are usually of pressurized seal design.

● **Gasket of Cover Flange**

Carbon steel or stainless steel + flexible graphite combined gasket is used for Class 150 gate valve; Stainless steel + flexible graphite wounded gasket is used for Class 300 gate valve; Stainless steel + flexible graphite wounded gasket is used for Class 600 gate valve, and ring joint gasket is also optional for Class 600 gate valve; Ring Joint gasket is used for Class 900 gate valve; Pressurized seal design is used for Class 1500 ~ Class 2500 gate valve.

● **Actuation**

Hand wheel or gear box is usually used for gate valve actuation. Chain wheel and electric actuator can be also used for gate 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 (Ra 3.2 μm). 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 0.8 μm) 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 system can be adopted for enhancing the durability and reliability of the packing seal.