

**N V F**® NINGBO VALVE FACTORY

# Globe Valve



Since Professional We Can Do Better

## COMPANY PROFILE

Found in 1959, NVF is a China-leading manufacturer of industrial valves, we have three specialized manufacturing plants in Wenzhou with more than 50000 square meters. With more than 50 years manufacturing experience and professional technical support, we are able to provide high quality industrial valves, including gate valve, globe valve, check valve, ball valve, butterfly valve, casting steel valve and forging steel valves with cost-effective and reliable service for the customers. Our products have been exported to more than 30 countries, including USA, Europe, Asia, Middle East, South America, South Africa etc., and have gained a good reputation in these markets.

The products are widely applied in petroleum, chemical industry, natural gas, electric power, metallurgy, pharmacy, pulp & paper, urban construction and long transportation pipeline projects. Our products are sold well worldwide include America, Europe, Southeast Asia, Middle East and Africa etc. Certificated with ISO9001, API6D, CE/ PED.

We has established the technical research, development center and quality inspection center with a relatively sound management system. In addition, it has introduced advanced manufacturing technology from abroad, and has advanced machining centers, CNC machine tools, metal cutting and processing equipment, physical and chemical testing equipment, nondestructive tester, spectrum analyzer, valve comprehensive performance tester and other equipment to ensure the products reach the purpose of zero leakage.

We insist on the concept of "Quality first, Prestige important", a well-trained and dedicated team including engineers, technicians and other employees, This allows us to offer customers quality product, competitive price and prompt delivery time.

We always work hard to improve our existing products and pursue new ideas and ways to stay ahead of the every changing market. With our professional and experience hope can enlarge your market and obtain a new brilliance in the future.

## APPLICATIONS

The valve are used in a broad spectrum of market sectors, including refining, chemical processing, power generation, marine, pulp and paper, petroleum production, and gas processing.

Applications include process liquids, process gases, flue gas, cryogenics, steam, condensate, petroleum products, thermal fluid, and water.



## Standards

Design and Manufacture: Cast steel globe valve to Bs1873 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.

## 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 Class 1500 ~ Class2500 check valves are usually of pressurized seal design.

## 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 Class 600, 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 ~ Class 2500 globe valve.



## 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 3.2um). 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.

## The features of globe valve

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

## 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.

## Stem Design

The stem is of integral forged design. The minimum diameter of the stem shall be 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.



## 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.

## 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.

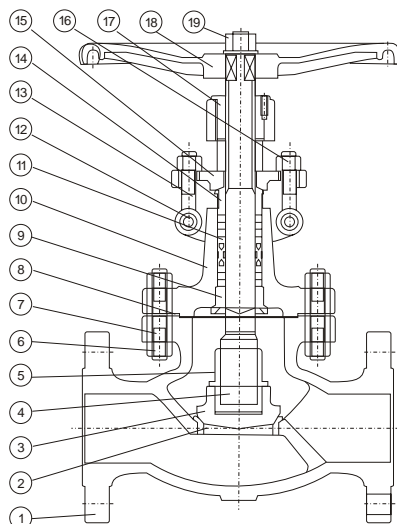


## Special Globe Valve

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



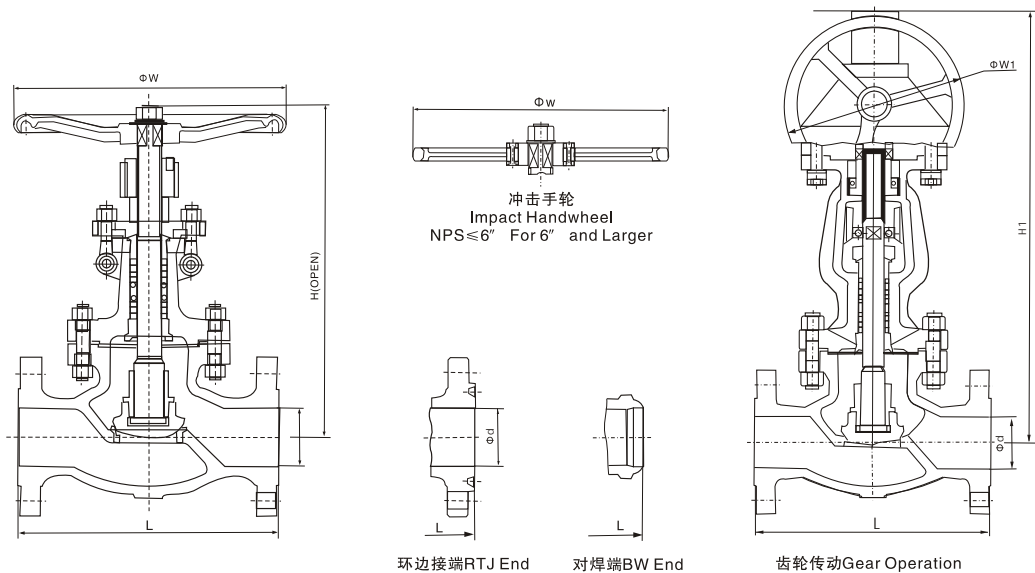
Parts and material list



Parts Number	Parts name	Materials 材料				
		WCB/Trim 1	WCB/Trim 5	WCB/Trim 8	CF8/304	CF8/316
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	Stem	ASTM A216 WCB+13Cr	ASTM A216 WCB+STL	ASTM A216 WCB+13Cr	ASTM A351 CF8	ASTM A351 CF8M
4	Disc	ASTM A182F6a	ASTM A182F6a	ASTM A182F6a	ASTM A182F304	ASTM A182F316
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 2 H	ASTM A194 2H	ASTM A194 8	ASTM A194 8M
7	Bonnet bolt	ASTM A193B 7	ASTM A193B 7	ASTM A193B 7	ASTM A193B 8	ASTM A193 B8M
8	Gasket	304sheet+Graphite	304sheet+Graphite	304sheet+Graphite	304sheet+Graphite	304sheet+Graphite
9	Backseat bushing	ASTM A182F6a	ASTM A182F6a	ASTM A182F6a	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 A193B 8	ASTM A193 B8M
14	Gland	ASTM A182F6a	ASTM A182F6a	ASTM A182F6a	ASTM A182F304	ASTM A182F316
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 gate valve parts. We may provide other different parts material composition according to the customer's request or the actual valve working condition.

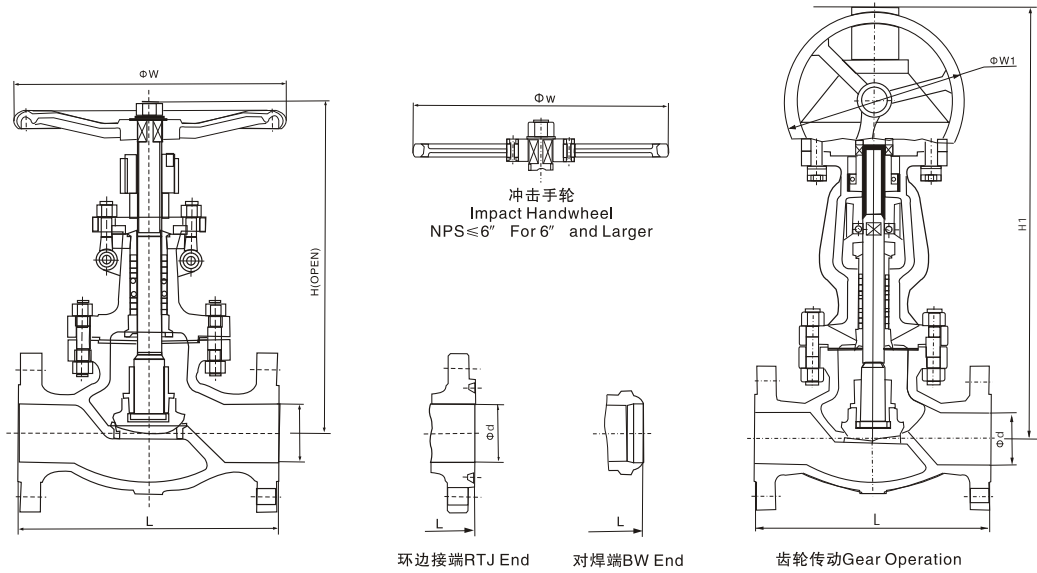
Class 150 & JIS 10K Cast Steel Globe Valve



Class	Size		Dimensions(mm)								Weight(Kg)	
	NPS	DN	L			D	H	H1	W	W1	H.W	G.O
			RF	RTJ	BW							
150	1/2	15	108	119	108	13	182	-	100	-	3	-
	3/4	20	117	130	117	19	193	-	100	-	4	-
	1	25	127	140	127	25	217	-	100	-	5	-
	1 1/4	32	140	152	140	32	235	-	135	-	8	-
	1 1/2	40	165	178	165	38	258	-	135	-	9	-
	2	50	203	216	203	51	330	-	200	-	19	-
	2 1/2	65	216	229	216	64	360	-	250	-	27	-
	3	80	241	254	241	76	390	-	280	-	36	-
	4	100	292	305	292	102	445	-	300	-	53	-
	5	125	356	369	356	127	480	-	350	-	75	-
	6	150	406	419	406	152	520	556	350	310	94	126
	8	200	495	508	495	203	600	658	400	310	148	180
10	250	622	635	622	254	773	805	450	460	242	291	
12	300	698	711	698	305	880	955	500	460	438	480	

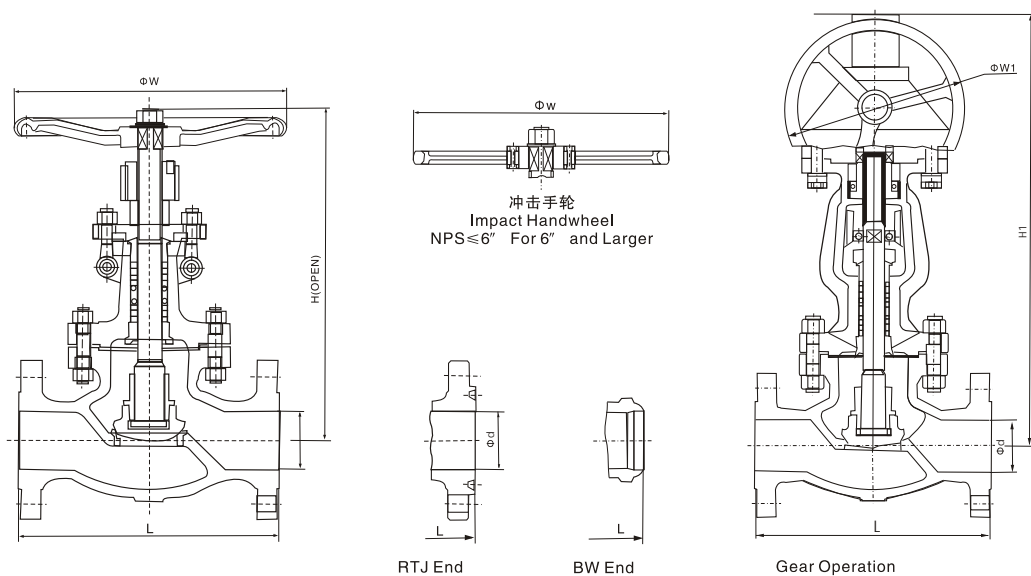


Class 300 & JIS 20K Cast Steel Globe Valve



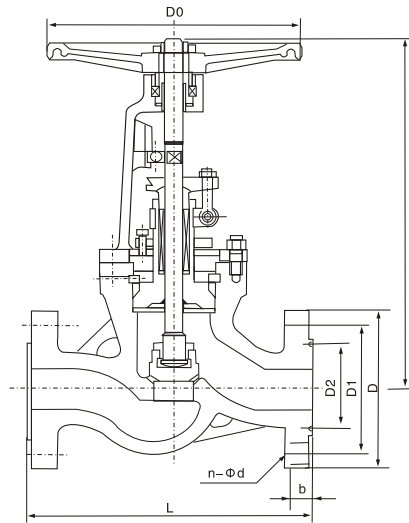
Class	Size		Dimensions(mm)								Weight(Kg)	
	NPS	DN	L			D	H	H1	W	W1	H.W	G.O
			RF	RTJ	BW							
300	1/2	15	152	164	152	14	185	-	100	-	5	-
	3/4	20	178	191	178	19	195	-	100	-	7	-
	1	25	203	216	203	25	220	-	135	-	10	-
	1 1/4	32	216	229	216	32	240	-	135	-	14	-
	1 1/2	40	229	241	229	38	260	-	160	-	19	-
	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 600 & Class 900 Cast Steel Globe Valve**

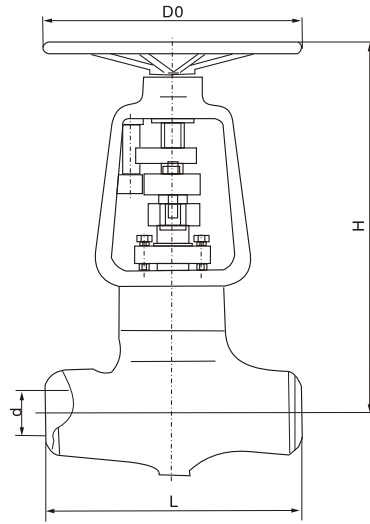


Class	Size		Dimensions(mm)								Weight(Kg)	
	NPS	DN	L			D	H	H1	W	W1	H.W	G.O
			RF	RTJ	BW							
600	2	50	292	295	292	51	360	-	250	-	32	-
	2 <sup>1</sup> / <sub>2</sub>	65	330	333	330	64	410	-	280	-	42	-
	3	80	356	359	356	76	465	-	300	-	63	-
	4	100	432	435	432	102	545	575	400	310	107	138
	5	125	508	511	508	127	625	660	500	310	185	215
	6	150	559	562	559	152	785	820	550	460	290	342
900	2	50	368	371	368	51	480	-	350	-	55	-
	2 <sup>1</sup> / <sub>2</sub>	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

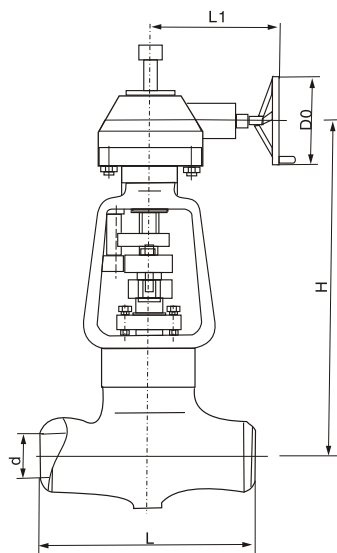




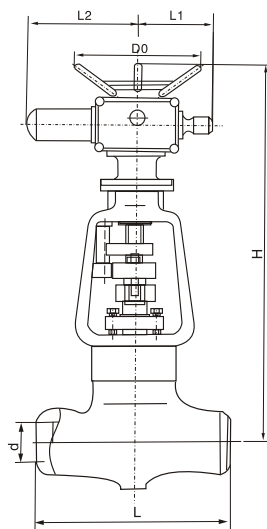
Class	DN		RTJ							
	mm	in	L	D	D1	D2	b	n-φd	H	D0
1500Lb	65	2 1/2	422	244	190.5	108.0	49.0	8-φ28.5	461	400
	80	3	473	267	203.2	136.5	55.7	8-φ32	554	450
	100	4	549	311	241.3	161.9	61.8	8-φ35	639	500
	125	5	676	375	292.1	193.7	81.1	8-φ41	780	560
	150	6	711	394	317.5	211.1	92.1	12-φ38	904	630
	200	8	841	483	393.7	269.9	103.0	12-φ44.5	1140	680
2500Lb	65	2 1/2	514	267	196.9	111.1	66.7	8-φ32	492	400
	80	3	584	305	228.6	127.0	76.0	8-φ32	559	450
	100	4	683	356	273.0	157.2	87.3	8-φ41	715	560
	125	5	806	419	323.9	190.5	104.6	8-φ48	830	630
	150	6	927	483	368.3	228.6	120.7	8-φ54	1070	630
	200	8	1038	552	438.2	279.4	141.3	12-φ54	1300	680



600Lb						900Lb		
DN		Dimensions (mm)			WT(kg)	Dimensions (mm)		
mm	in	L	H	D0	Weight	L	H	D0
50	2	292	460	250	35	368	620	300
65	2 1/2	330	490	300	45	419	680	350
80	3	356	555	350	60	381	680	400
100	4	432	630	450	110	457	780	450
150	6	559	955	560	240	610	1240	630
200	8	660	1310	630	500	737	1520	710
1500Lb						2500Lb		
DN		Dimensions (mm)			WT(kg)	Dimensions (mm)		
mm	in	L	H	D0	Weight	L	H	D0
50	2	368	620	250	110			
65	2 1/2	419	680	300	150			
80	3	470	760	350	210	578	937	610
100	4	546	1100	450	300	673	1048	660
150	6	705	1500	560	620			
200	8	832	1750	630	1180			



Class	mm	in	d	L	H	D0	L1	Gear device code
1500Lb	125	5	100	580	995	460	332	BA-1
					1170	610	417	BA-2
	150	6	125	630	1360	460	332	BA-1
					1500	610	417	BA-2
2000Lb	100	4	80	570	1125	460	332	BA-1
					1185	610	417	BA-2
	125	5	96	660	1370	610	417	BA-2
					1435	760	459	BA-3
	150	6	118	760	1430	610	417	BA-2
					1495	760	459	BA-3
2500Lb	100	4	70	570	1125	460	332	BA-1
					1185	610	417	BA-2
	125	5	88	660	1370	610	417	BA-2
					1435	760	459	BA-3
	150	6	104	760	1430	610	417	BA-2
					1495	760	459	BA-3



Class	DN		Dimensions						Electric Actuator Code
	mm	in	d	L	H	D0	L1	L2	
1500Lb	80	3	64	390	1030	305	400	555	SMC-00
					1077	305	410	565	SMC-0
	100	4	84	480	1033	305	410	565	SMC-0
					1070	305	420	654	SMC-1
	125	5	100	580	1125	305	420	654	SMC-1
					1135	457	440	688	SMC-2
150	6	125	630	1681	305	420	654	SMC-1	
200	8	158	770	1960	305	420	654	SMC-1	
2500Lb	65	2 1/2	46	420	975	305	410	565	SMC-0
					1015	305	420	654	SMC-1
	80	3	54	470	1065	305	410	565	SMC-0
					1095	305	420	654	SMC-1
	100	4	70	570	1220	305	420	654	SMC-1
					1235	457	440	688	SMC-2
	125	5	88	660	1425	457	440	688	SMC-2
					1500	610	690	840	SMC-3
150	6	104	760	1480	457	440	688	SMC-2	
				1680	610	690	840	SMC-3	