

**Value Valves**

**Globe Valves**

**Gate Valves**

**Swing Check Valves**

# Value Valves

## API Gate Valves

### FEATURES AND BENEFITS

#### Design of disc

Gate valves with  $NPS \geq 2$  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 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 + 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 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 for gate valve actuation if being requested by the customers.

#### Seat

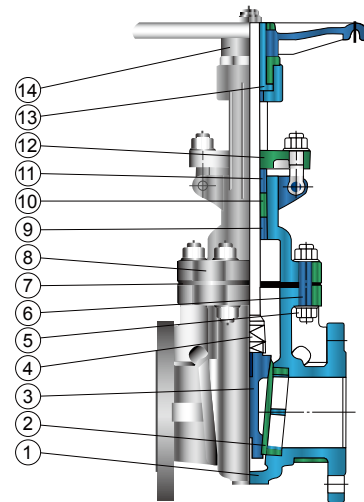
For carbon steel gate valve, the seat is usually forged steel. The sealing surface of the seat spray welded with hard alloy specified by the customer. Welded on seat is used for  $NPS 1/2-2$ , Renewable, threaded seat is used for  $NPS \leq 8$  gate valves, and welded on seat can be also optional if being requested by the customer. Welded on seat is used for  $NPS > 8$  carbon steel gate valves. For stainless steel gate valve Integral seat is usually adopted, or to weld hard alloy directly integrally, Threaded or welded on seat is also optional for stainless gate valve if being requested by customer, if the customer have any other request about the seat please kindly advise before placing the order.

#### Back seating design

All of our gate valves have the back seating design. In most cases, the carbon steel gate valve is fitted with a renewable back seat. For stainless steel gate valve, the back seat is machined directly in the bonnet or is machined after welding.



# API Gate Valves



### Standard Material to API 600

Trim code	Seat Ring Surface Part No.2	Wedge Surface Part No.3	Stem Part No.4	Backseat Part No.9
1	F6	F6	F6	F6
2	F304	F304	F304	F304
5	Stellite	Stellite	F6	F6
8	Stellite	F6	F6	F6
9	Monel	Monel	Monel	Monel
10	F316	F316	F316	F316
13	Alloy 20	Alloy 20	Alloy 20	Alloy 20

Noted: Usually, trim 2 and trim 10 are not adopted because the sealing face would be destroyed easily.

### Standards

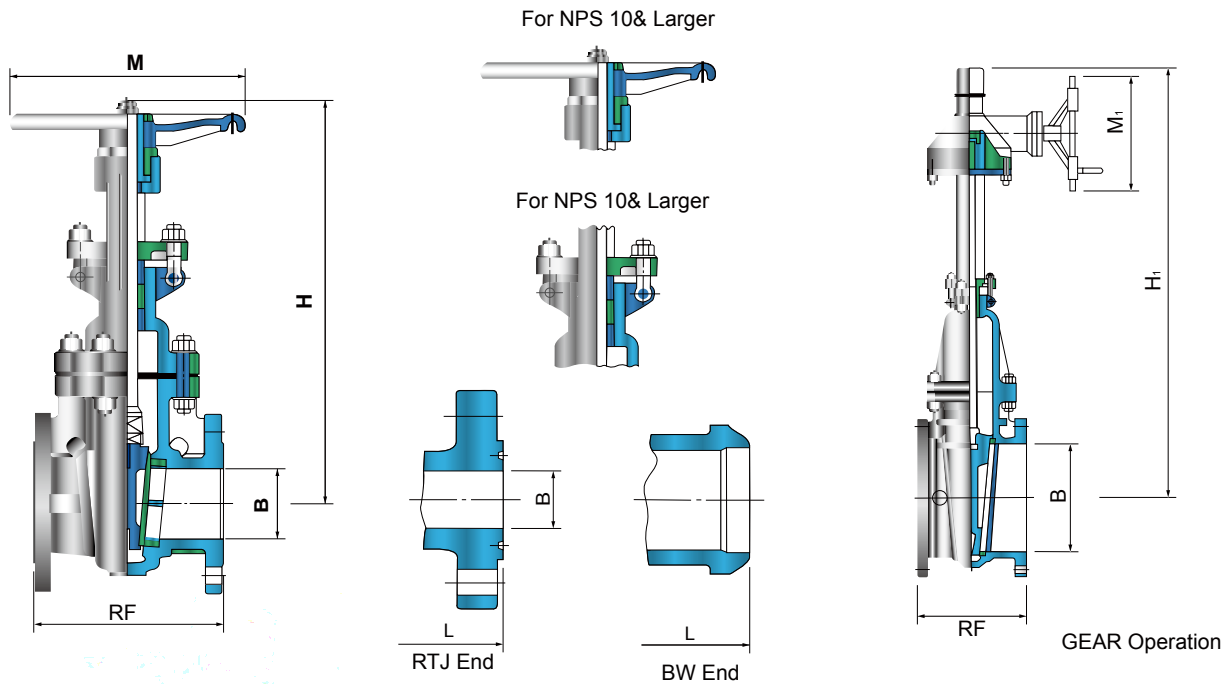
Design and Manufacture	API 600, API 6D, JIS B2073-2083
Inspection and Test	API 598, API 6D, JIS B2003, API 600
End Flange dimension	ASME B 16.5, JIS B2212-2214
End Flange dimension	ASEM 16.47 A, MSS SP-44
End Flange dimension	ASEM B 16.47 B, API 605
BW end dimension	ASEM B 16.25
Face to Face	ASEM B 16.10, JIS B2002
Pressure-temperature ratings	ASEM B16.34

### Standard Material Specifications

Parts name	Carbon Steel to ASTM		Alloy Steel to ASTM				Stainless Steel to ASTM			
1 Body	A216 WCB	A352 LCB	A217 WC1	A217 WC6	A217 WC9	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
8 Bonnet	A216 WCB	A352 LCB	A217 WC1	A217 WC6	A217 WC9	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
6 Bolts	A193 B7	A320 L7	A193 B7	A193 B16	A193 B16	A193 B16	A193 B8	A193 B8	A193 B8	A193 B8
5 Nuts	A194 2H	A194 4	A194 2H	A194 4	A194 4	A194 4	A194 8	A194 8	A194 8	A194 8
11 Glands	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F304	A182 F316	A182 F304L	A182 F3 16L
12 Gland Flange	A216 WCB	A352 LCB	A217 WC1	A217 WC6	A217 WC9	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
2 Disc	A216 WCB	A352 LCB	A217 WC1	A217 WC6	A217 WC9	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
7 Gasket	SS Spiral Wound W/graphite, or SS Spiral Wound W/PTFE, or Reinforced PTFE									
10 Packing	Braided graphite, or Die-formed graphite ring or PTFE									
13 Stem Nut	Copper alloy or A439 D2									
14 Hand Wheel	Ductile iron or Carbon steel									

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

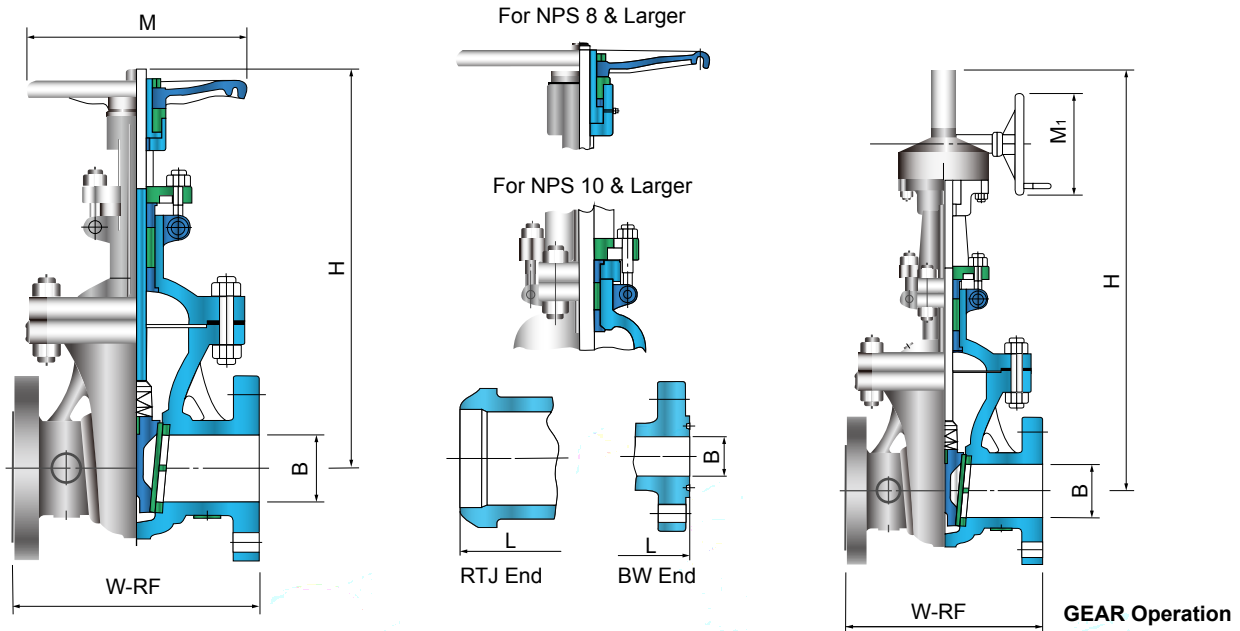
# API Gate Valves - Class 150 & JIS 10K



Class	Size		Dimension(mm)								Weight(Kg)	
	NPS	DN	RF	L	B	H	H1	M	M1	H.W	G.O	
150 10k	1/2	15	108	119	108	14	218	-	120	-	4	-
	3/4	20	117	130	117	19	190	-	120	-	5	-
	1	25	127	140	127	25	256	-	140	-	7	-
	1 1/4	32	140	153	140	31	268	-	180	-	10	-
	1 1/2	40	165	178	165	38	326	-	200	-	15	-
	2	50	178	191	216	30	340	-	200	-	20	-
	2 1/2	65	191	203	241	63	365	-	200	-	23	-
	3	80	203	216	283	76	410	-	250	-	36	-
	4	100	229	241	305	100	485	-	280	-	54	-
	5	125	254	267	381	127	520	-	280	-	62	-
	6	150	267	279	403	150	595	795	300	310	82	104
	8	200	292	305	419	200	755	1015	360	310	136	150
	10	250	330	343	457	250	895	1210	400	310	196	215
	12	300	356	368	502	300	1040	1405	450	460	299	315
	14	350	381	394	572	336	1145	1535	500	460	381	451
	16	400	406	419	610	387	1333	1780	500	460	536	597
	18	450	432	445	660	438	1420	1900	600	460	608	651
	20	500	457	470	711	488	1635	2220	700	530	827	863
	24	600	508	521	813	590	1862	2557	800	530	1202	1357
	26	650	559	-	864	633	-	2680	-	530	1281	1550
	28	700	610	-	914	684	-	2890	-	530	-	1880
	30	750	610	-	914	735	-	3110	-	600	-	2300
	32	800	711	-	965	779	-	3280	-	600	-	2550
	34	850	711	-	1016	830	-	3500	-	600	-	2950
36	900	711	-	1016	874	-	3640	-	600	-	3390	
40	1000	812.8	-	1067	-	-	4200	-	1000	-	3042	
48	1200	106.7	-	1168	-	-	5020	-	1000	-	5520	

Noted: We may provide other different actuators according to the customer's request, such as pneumatic, electric, hydraulic actuators, the details of the according to the actual valve working condition.

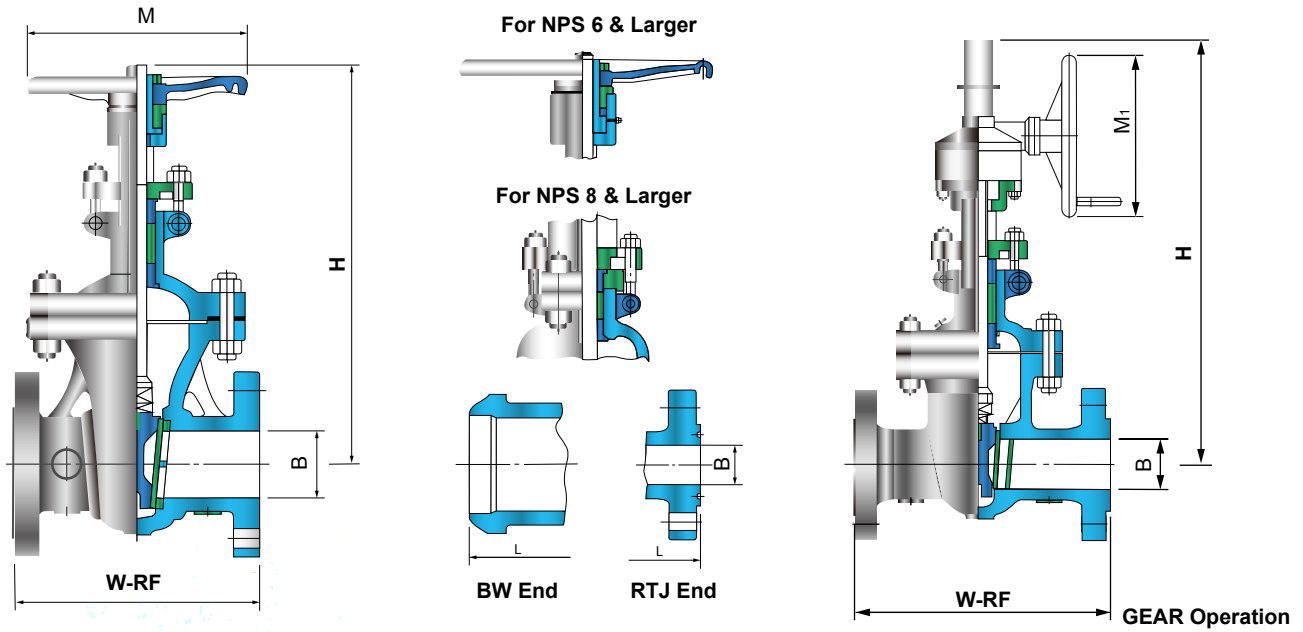
# API Gate Valves - Class 300 & JIS 20K



Class	Size		Dimension(mm)								Weight(Kg)	
	NPS	DN	RF	L	BW	B	H	H1	M	M1	H.W	G.O
300 20k	1/2	15	140	151	140	14	198	-	120	-	6	-
	3/4	140	152	165	152	19	215	-	140	-	7	-
	1	25	165	178	165	25	220	-	160	-	8.5	-
	1 1/4	32	178	191	178	31	306	-	180	-	15	-
	1 1/2	40	190	203	190	38	342	-	200	-	18	-
	2	50	216	232	216	50	364	-	200	-	26	-
	2 1/2	65	241	257	241	63	385	-	200	-	36	-
	3	80	283	298	283	76	460	-	250	-	55	-
	4	100	305	321	305	100	540	650	280	310	67	100
	5	125	381	397	381	127	548	750	300	310	99	126
	6	150	403	419	403	150	649	835	350	310	147	186
	8	200	419	435	419	200	798	1030	400	310	228	235
	10	250	457	473	457	250	940	1255	450	460	332	416
	12	300	502	518	502	300	1129	1460	500	460	512	502
	14	350	762	778	762	336	1195	1585	600	460	715	756
	16	400	838	854	838	387	1340	1830	500	460	850	965
	18	450	914	930	914	431	1503	2000	650	460	1100	1224
	20	500	991	1010	991	482	1625	2175	750	530	1300	1400
	24	600	1143	1165	1143	584	1965	2620	900	530	2200	2385
	26	650	1245	1270	1245	633	-	2850	-	600	-	3000
28	700	1346	1372	1346	684	-	3080	-	600	-	3300	
30	750	1397	1422	1397	735	-	3180	-	600	-	3550	
32	800	1524	1553	1524	779	-	3300	-	600	-	4400	
34	850	1626	1654	1626	830	-	3550	-	600	-	5200	
36	900	1727	1756	1727	874	-	3760	-	600	-	6050	
40	1000	1956	-	-	-	-	4340	-	1000	-	8100	

Noted: We may provide other different actuators according to the customer's request, such as pneumatic, electric, hydraulic actuators, the details of the according to the actual valve working condition.

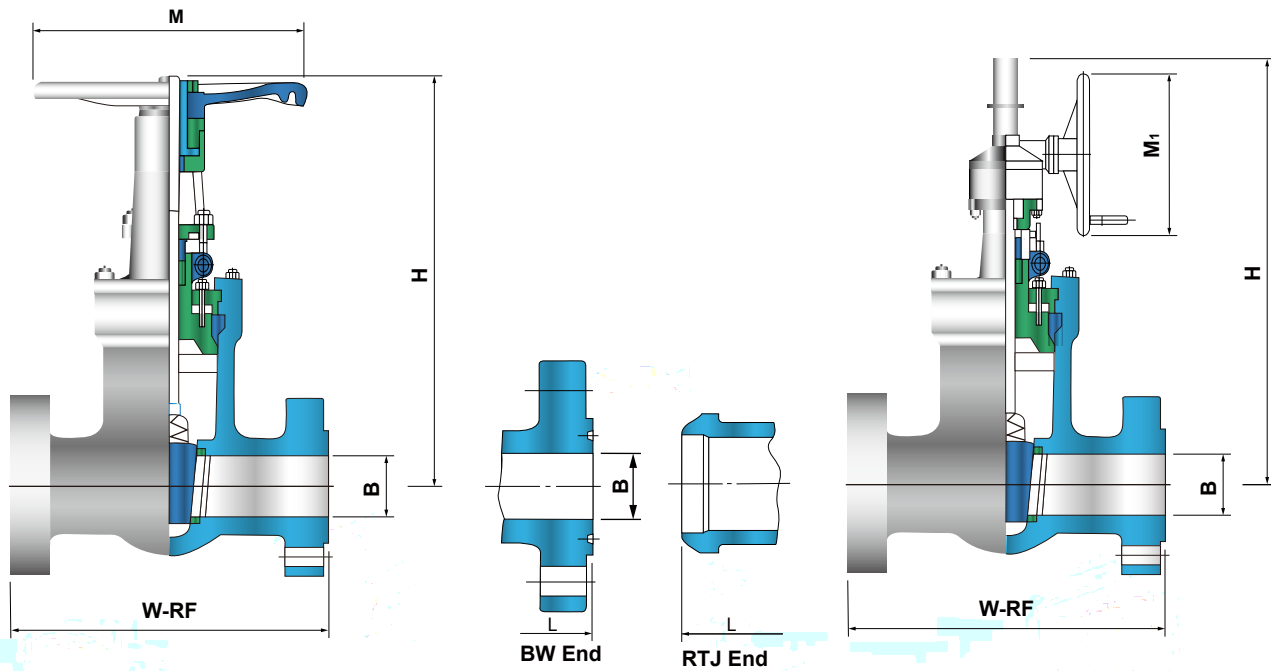
# API Gate Valves - Class 600 & Class 900



Class	Size		Dimension(mm)								Weight(Kg)	
	NPS	DN	RF	L RTJ	BW	B	H	H1	M	M1	H.W	G.O
600	1/2	50	292	295	292	50	380	-	200	-	37	-
	2 1/2	65	330	333	330	63	420	-	250	-	50	-
	3	80	356	359	356	76	500	585	280	310	82	87
	4	100	432	435	432	100	575	695	300	310	142	134
	5	125	508	511	508	127	700	790	350	310	175	227
	6	150	559	562	559	150	750	900	450	460	245	286
	8	200	660	664	660	199	850	1110	500	460	423	472
	10	250	787	791	787	247	1005	1300	650	460	682	657
	12	300	838	841	838	298	1130	1650	700	460	932	893
	14	350	889	892	889	326	1270	1750	900	530	1177	1318
	16	400	991	994	991	374	1365	1900	900	530	1513	1720
	18	450	1092	1095	1092	419	-	2020	-	600	-	1980
20	500	1194	1200	1194	463	-	2172	-	600	-	2460	
24	600	1397	1407	1397	558	-	2650	-	600	-	3650	
900	2	50	368	371	368	47	500	-	280	-	70	-
	2 1/2	65	419	422	419	57	450	-	280	-	110	-
	3	80	381	384	381	72	505	-	300	310	140	167
	4	100	457	460	457	98	575	625	350	310	178	227
	5	125	559	562	559	125	630	740	400	310	258	285
	6	150	610	613	610	146	795	900	500	460	358	396
	8	200	737	740	737	190	885	1000	650	460	550	627
	10	250	838	841	838	238	1035	1130	700	530	1000	1100
	12	300	965	968	965	282	1180	1520	900	530	1215	1310
	14	350	1029	1038	1029	311	1350	1600	900	530	1600	1665
	16	400	1130	1140	1130	355	1890	2100	900	600	2150	2330
	18	450	1219	-	-	400	-	2232	-	800	-	3000
20	500	1321	-	-	444	-	2435	-	800	-	3800	

Noted: We may provide other different actuators according to the customer's request, such as pneumatic, electric, hydraulic actuators, the details of the according to the actual valve working condition.

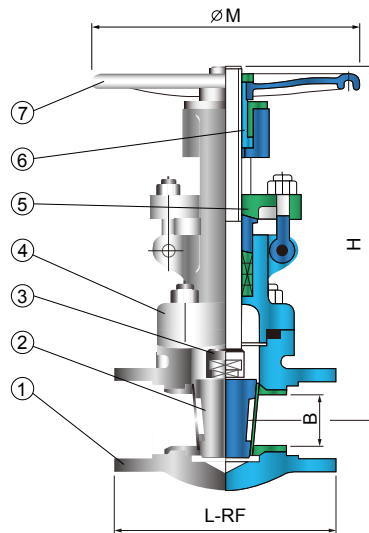
# API Gate Valves - Class 1500 & Class 2500



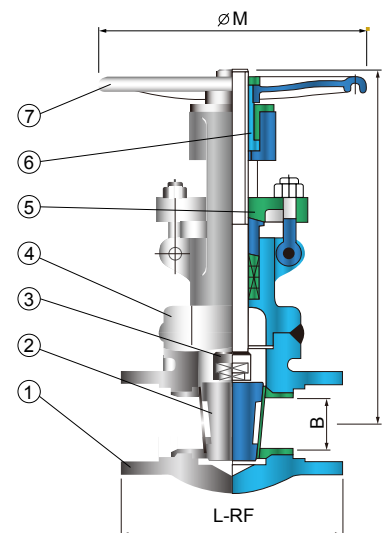
Class	Size		Dimension(mm)									Weight(Kg)			
	NPS	DN	L						B	H	H1	M	M1	H.W	G.O
			RF	RTJ	BW(BB)	BW(PSB)	W-RF	RTJ End							
1500	2	50	368	371	368	216	47	430	-	280	-	70	-		
	2 1/2	65	419	422	419	254	57	490	-	300	-	110	-		
	3	80	470	473	470	305	69	540	680	350	310	175	202		
	4	100	546	549	546	406	92	650	810	400	310	270	300		
	5	125	673	676	673	483	125	780	920	450	310	378	405		
	6	150	705	711	705	559	136	835	1035	500	460	520	575		
	8	200	832	841	832	711	177	925	1180	750	530	820	915		
	10	250	991	1000	991	864	222	1230	1525	900	600	1560	1750		
	12	300	1130	1146	1130	991	263	-	1620	-	600	-	2120		
	14	350	1257	1276	1257	1067	288	-	1905	-	600	-	3306		
16	400	1384	1407	1384	1194	330	-	2050	-	600	-	3450			
2500	2	50	451	454	451	279	38	490	580	280	310	100	130		
	2 1/2	65	508	514	508	330	47	580	630	300	310	150	180		
	3	80	578	584	578	368	57	630	765	350	310	245	275		
	4	100	673	683	673	457	72	725	850	400	310	390	420		
	5	125	794	807	794	533	96	900	960	500	460	550	580		
	6	150	914	927	914	610	111	1040	1100	600	530	780	835		
	8	200	1022	1038	1022	762	146	1150	1150	750	460	1260	1355		
	10	250	1270	1292	1270	914	184	1400	1460	900	600	2380	2565		
12	300	1422	1445	1422	1041	218	-	1660	-	600	-	3250			

Noted: We may provide other different actuators according to the customer's request, such as pneumatic, electric, hydraulic actuators, the details of the according to the actual valve working condition.

# API Forged Steel Gate Valve - Class 150 & Class 2500



Bolted Bonnet  
Socket-Welding End



Welded Bonnet  
Socket-Welding End

## Standards

Design and Manufacture	API 602
Inspection and Test	API 598
Socket-weld dimension	ASME B 16.11
End threads dimension	ASME B 1.20.1
Pressure-temperature ratings	ASEM B 16.34

## Standards

Parts name	Material		
1 Body	ASTM A 105	ASTM A 182 F304	ASTM A 182 F316
2 Disc	ASTM A 105	ASTM A 182 F304	ASTM A 182 F316
3 Stem	ASTM A 182 F6	ASTM A 182 F304	ASTM A 182 F316
4 Bonnet	ASTM A 105	ASTM A 182 F304	ASTM A 182 F316
5 Gland Flange	ASTM A 105	ASTM A 182 F304	ASTM A 182 F316
6 Stem Nut	ASTM A276 410		
7 Handwheel	ASTM A 197		

Class	Size		Dimension(mm)				NPT	Weight(Kg)
	NPS	DN	L	B	H	M		
150-800	1/2	15	79	13	153	100	1/2	2.0
	3/4	20	92	13	153	100	3/4	2.2
	1	25	111	18	185	125	1	3.6
	1 1/4	32	120	29	222	160	1 1/4	6.2
	1 1/2	40	120	29	240	160	1 1/2	6.2
900-1500	2	50	140	36.5	279	180	2	9.7
	1/2	15	92	13	181	125	1/2	3.5
	3/4	20	111	13	181	125	3/4	4.0
	1	25	120	18	218	160	1	6.0
	1 1/4	32	120	24	237	160	1 1/4	7.0
	1 1/2	40	140	29	274	180	1 1/2	10.8
2500	2	50	160	36.8	319	200	2	15.5
	1/2	15	150	14	284	160	1/2	10.0
	3/4	20	150	14	284	160	3/4	12.8
	1	25	170	19	327	200	1	22.5
	1 1/4	32	200	25	374	250	1 1/4	31.5
	1 1/2	40	200	28	377	250	1 1/2	33.0
	2	50	250	35	434	300	2	38.0



## API Globe Valve

### 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~ Class 900 globe valves are usually with studs And nuts. And the body and bonnet of the Class 1500~Class 2500 globe valve are usually of pressure 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. Pressure seal design is used for Class 1500~Class 2500 globe valve.

### Actuation

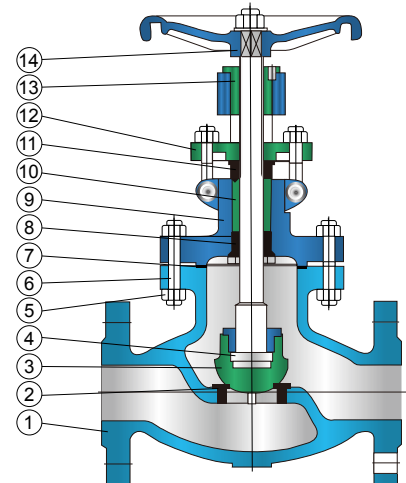
Hand wheel, impact hand wheel & gear box is usually used for globe valve actuation. China wheel and electric actuator can be also used for globe valve actuation if being requested by the customers.

### Seat

For carbon steel globe valve, the seat is usually used forged steel. The sealing surface of the seat is spray welded with hard alloy specified by the customer. The seat have two type: welded on seat and integral seal, for stainless globe valve, integral seat is advise before placing the order.



# API Forged Steel Globe Valves



## Standard Material to API 600

Trim code	Seat Ring Surface Part No.2	Wedge Surface Part No.3	Stem Part No.4	Backseat Part No.8
1	F6	F6	F6	F6
2	F304	F304	F304	F304
5	Stellite	Stellite	F6	F6
8	Stellite	F6	F6	F6
9	Monel	Monel	Monel	Monel
10	F316	F316	F316	F316
13	Alloy 20	Alloy 20	Alloy 20	Alloy 20

## Standard Material Specifications

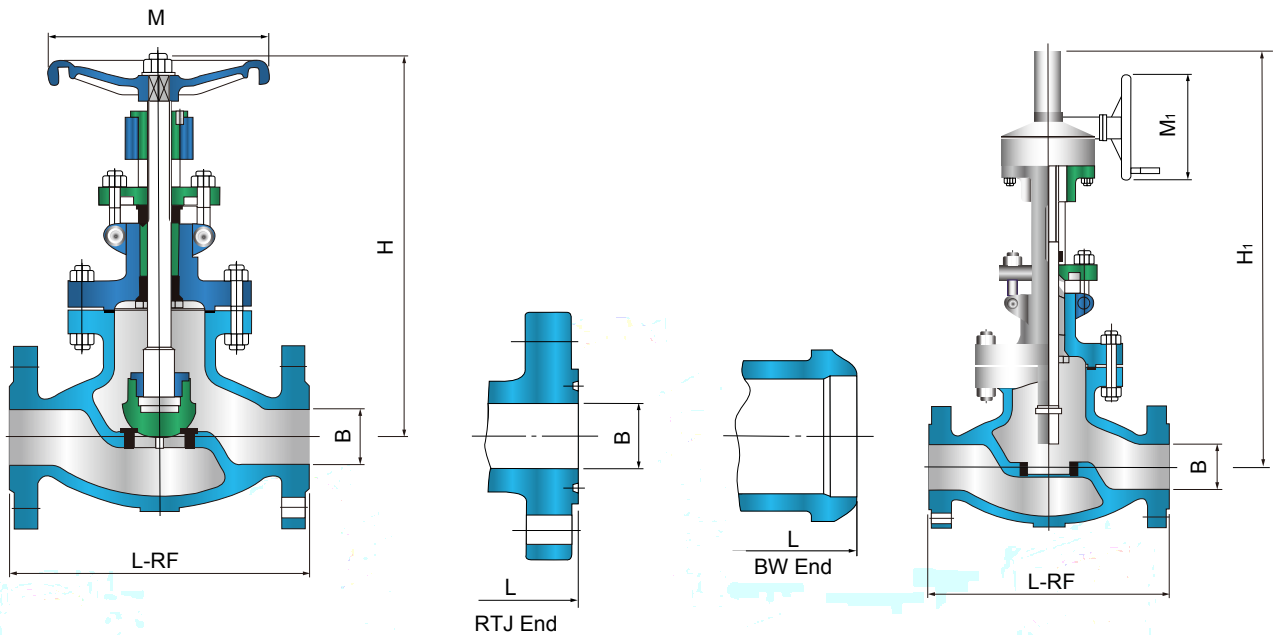
Design and Manufacture	BB 1873 and ASME B16.34
Inspection and Test	API 598
End Flange dimension	ASME B 16.5
BW end dimension	ASEM B 16.25
Socket-weld dimension	ASEM B 16.11
Face to Face	ASEM B 16.10
Pressure-temperature ratings	ASEM B 16.34

## Parts and Material List

Parts name	Carbon Steel to ASTM		Alloy Steel to ASTM				Stainless Steel to ASTM			
	A216 WCB	A352 LCB	A217 WC1	A217 WC6	A217 WC9	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
1 Body	A216 WCB	A352 LCB	A217 WC1	A217 WC6	A217 WC9	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
9 Bonnet	A216 WCB	A352 LCB	A217 WC1	A217 WC6	A217 WC9	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
6 Bolts	A193 B7	A320 L7	A193 B7	A193 B16	A193 B16	A193 B16	A193 B8	A193 B8	A193 B8	A193 B8
5 Nuts	A194 2H	A194 2H	A194 2H	A194 4	A194 4	A194 4	A194 8	A194 8	A194 8	A194 8
11 Glands	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F6a	304	316	304L	316L
12 Gland Flange	A216 WCB	A352 LCB	A217 WC1	A217 WC6	A217 WC9	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
3 Disc	A216 WCB	A352 LCB	A217 WC1	A217 WC6	A217 WC9	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
7 Gasket	SS Spiral Wound W/graphite, or SS Spiral Wound W/PTFE, or Reinforced PTFE									
10 Packing	Braided graphite, or Die-formed graphite ring or PTFE									
13 Stem Nut	Copper alloy or A439 D2									
14 Hand Wheel	Ductile iron or Carbon steel									

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

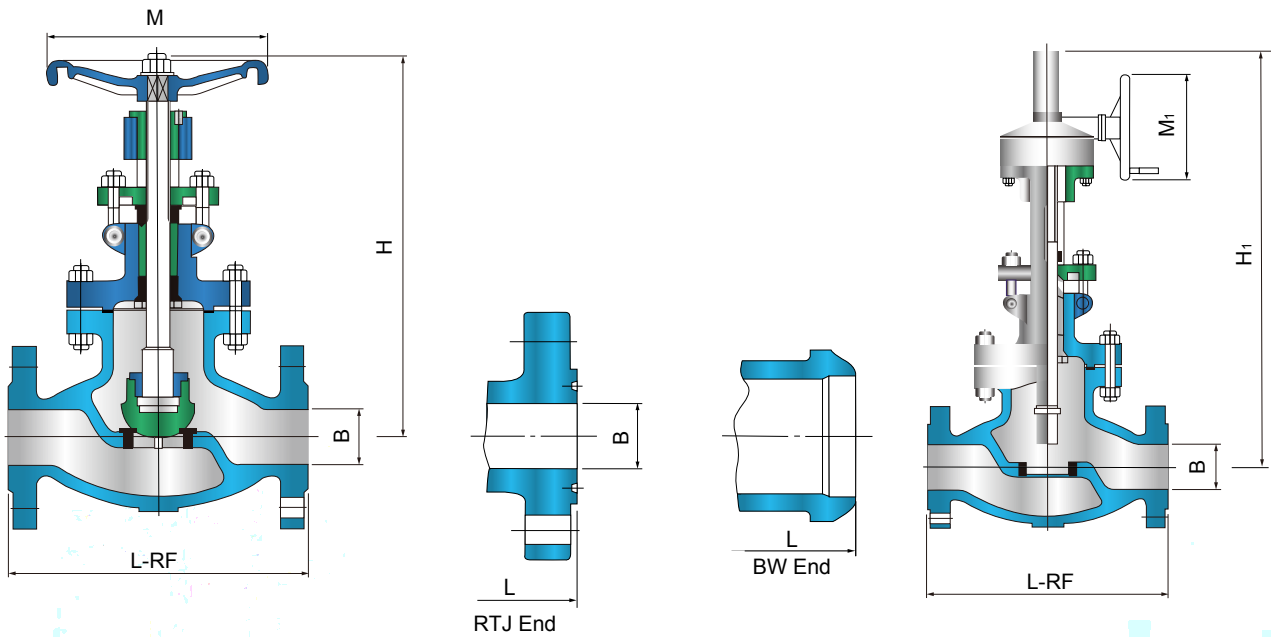
# API Globe Valves - Class 150 & JIS 10K



Class	Size		Dimensions							Weight(kg)			
	NPS	DN	RF	L	RTJ	BW	B	H	H1	M	M1	H.W	G.O
150 10K	1/2	15	108	119	108		13	185	-	100	-	4	-
	3/4	20	117	130	117		19	190	-	100	-	4.5	-
	1	25	127	140	127		25	211	-	100	-	5.5	-
	1 1/4	32	140	152	140		32	220	-	135	-	8.5	-
	1 1/2	40	165	178	165		38	240	-	135	-	12	-
	2	50	203	216	203		51	328	-	200	-	18	-
	2 1/2	65	216	229	216		64	360	-	250	-	26	-
	3	80	241	254	241		76	373	-	280	-	43	-
	4	100	292	305	292		102	400	-	300	-	54	-
	5	125	356	369	356		127	435	-	350	-	71	-
	6	150	406	419	406		152	528	556	350	310	95	114
	8	200	495	508	495		203	680	658	400	310	160	158
	10	250	622	635	622		254	775	805	450	460	299	259
	12	300	698	711	698		305	880	955	500	460	373	378
	14	350	787	800	787		337	-	1100	-	460	-	640
	16	400	914	927	914		387	-	1175	-	460	-	920
20	500	978	991	978		488	-	1450	-	600	-	1650	
24	600	1295	1308	1295		590	-	1690	-	600	-	2200	

Noted: We may provide other different actuators according to the customer's request, such as pneumatic, electric, hydraulic actuators, the details of the according to the actual valve working condition.

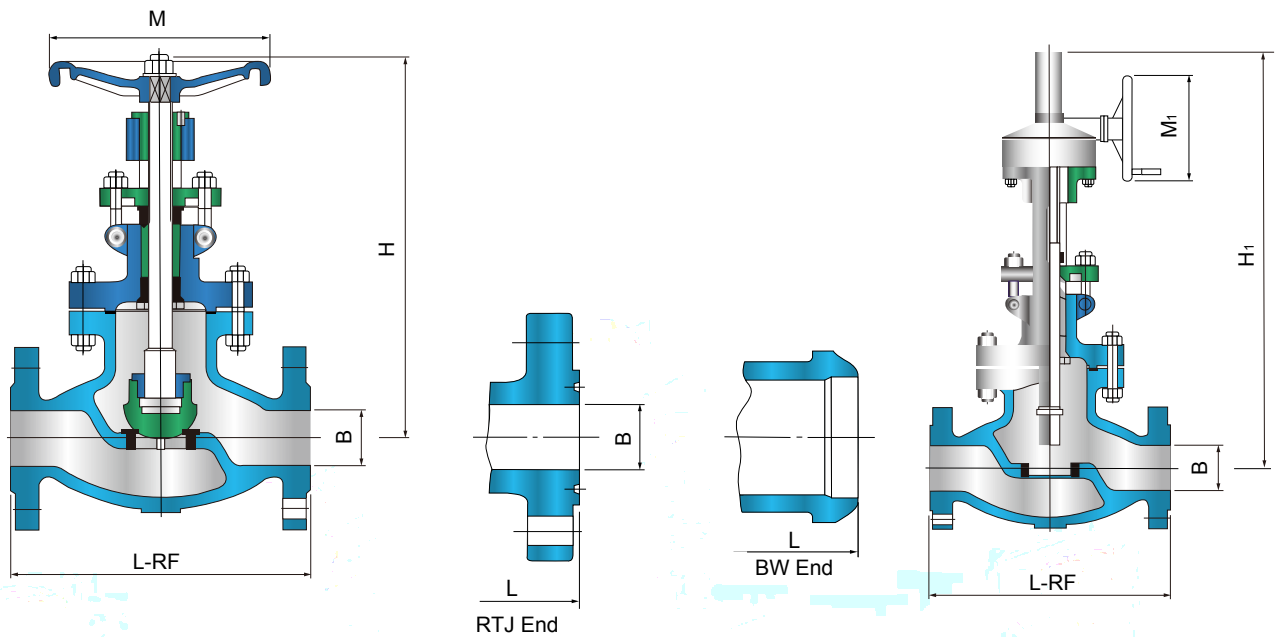
# API Globe Valve - Class 300& JIS 20K Cast Steel



Class	Size		Dimensions								Weight(kg)		
	NPS	DN	RF			B	H	H1	M	M1	H.W	G.O	
			RF	RTJ	BW								
300 20K	1/2	15	152	164	152	13	184	-	120	-	5	-	
	3/4	20	178	191	178	19	226	-	160	-	6.5	-	
	1	25	203	216	203	25	233	-	160	-	9	-	
	1 1/4	32	216	229	216	32	253	-	160	-	12	-	
	1 1/2	40	229	241	229	38	273	-	160	-	16	-	
	2	50	267	283	267	51	346	-	200	-	29	-	
	2 1/2	65	292	308	292	64	390	-	250	-	44	-	
	3	80	318	333	318	76	403	-	280	-	59	-	
	4	100	356	371	356	102	474	-	350	-	87	-	
	5	125	400	416	400	127	540	-	350	-	181	-	
	6	150	444	460	444	152	635	690	450	310	162	177	
	8	200	559	575	559	203	870	950	550	460	281	389	
	10	250	622	638	622	254	950	990	600	460	355	409	
	12	300	711	727	711	305	1030	1155	700	460	575	635	
	14	350	838	-	-	336	-	1155	-	600	-	-	880
	16	400	864	-	-	387	-	1325	-	600	-	-	1300
	18	450	977	-	-	431	-	1473	-	720	-	-	1600
20	500	1016	-	-	482	-	1574	-	720	-	-	2100	

Noted: We may provide other different actuators according to the customer's request, such as pneumatic, electric, hydraulic actuators, the details of the according to the actual valve working condition.

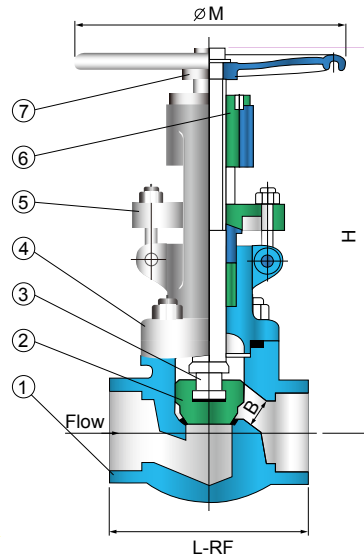
# API Globe Valves - Class 600 ~ Class 1500



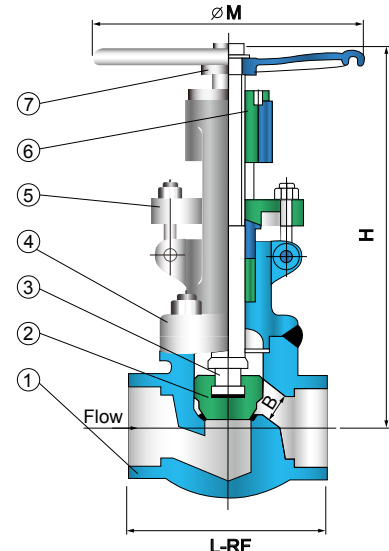
Class	Size		Dimensions								Weight(kg)	
	NPS	DN	RF	RTJ	BW	B	H	H1	M	M1	H.W	G.O
600	2	50	292	295	292	51	360	-	250	-	35	-
	2 1/2	65	330	333	330	64	410	-	280	-	42	-
	3	80	356	359	356	76	465	-	280	-	66	-
	4	100	432	435	432	102	545	575	400	310	117	148
	5	125	508	511	508	127	625	660	500	310	243	208
	6	150	559	562	559	152	785	975	550	460	263	334
	8	200	660	664	660	200	930	1120	650	460	469	544
	10	250	787	791	787	248	-	1219	-	600	-	875
900	12	300	838	841	838	298	-	1570	-	600	-	1280
	2	50	368	371	368	48	480	-	350	-	55	-
	2 1/2	65	419	422	419	57	520	-	350	-	68	-
	3	80	381	384	381	73	564	630	400	310	113	128
	4	100	457	460	457	98	685	720	450	310	179	210
	5	125	559	562	559	127	780	840	550	460	270	325
	6	150	610	613	610	146	950	1015	650	460	429	480
	8	200	737	740	737	190	1050	-	700	-	815	-
1500	2	50	368	371	368	48	505	-	350	-	137	-
	2 1/2	65	419	422	419	57	550	-	400	-	141	-
	3	80	470	473	470	70	630	765	450	310	261	320
	4	100	546	549	546	92	808	890	460	310	336	397
	6	150	705	711	705	137	930	1020	610	530	966	1035
	8	200	832	841	832	178	1140	1230	610	530	1210	1280

Noted: We may provide other different actuators according to the customer's request, such as pneumatic, electric, hydraulic actuators, the details of the according to the actual valve working condition.

# API Forged Steel Globe Valve - Class 150 & Class 2500



Welded Bonnet  
Socket-Welding End



Bolted Bonnet  
Socket-Welding End

## Standard

Design and Manufacture	API 602
Inspection and Test	API 598
Socket-weld dimension	ASME B 16.11
End threads dimension	ASME B 1.20.1
Pressure-temperature ratings	ASEM B 16.34

## Standard Material Specifications

Parts Name	Material		
1 Body	ASTM A 105	ASTM A 182 F304	ASTM A 182 F316
2 Disc	ASTM A 105	ASTM A 182 F304	ASTM A 182 F316
3 Stem	ASTM A 182 F6	ASTM A 182 F304	ASTM A 182 F316
4 Bonnet	ASTM A 105	ASTM A 182 F304	ASTM A 182 F316
5 Gland Flange	ASTM A 105	ASTM A 182 F304	ASTM A 182 F316
6 Stem Nut	ASTM A276 410		
7 Handwheel	ASTM A 197		

Class	Size		Dimension(mm)				NPT	Weight(Kg)
	NPS	DN	L	d	H	W		
150-800	1/2	15	79	10	158	100	1/2	2.0
	3/4	20	92	13	158	100	3/4	2.2
	1	25	111	17.5	192	125	1	2.5
	1 1/4	32	120	23	227	160	1 1/4	5.5
	1 1/2	40	152	28.5	240	160	1 1/2	7.0
900-1500	2	50	172	35	279	180	2	11.5
	1/2	15	92	10	187	125	1/2	3.5
	3/4	20	111	13	187	125	3/4	4.0
	1	25	120	17.5	227	160	1	6.3
	1 1/4	32	152	23	242	160	1 1/4	8.0
2500	1 1/2	40	172	28.5	278	180	1 1/2	12.5
	2	50	220	35	325	200	2	19.5
	1/2	15	150	11	293	160	1/2	10.8
	3/4	20	150	11	293	160	3/4	12.0
	1	25	170	14	344	200	1	13.5
	1 1/4	32	200	16	383	250	1 1/4	18.5
	1 1/2	40	200	25	383	250	1 1/2	22.0
	2	50	250	28	442	300	2	37.0

# API Swing Check Valve



## The features of check valve

Bolted Bonnet, Swing and lift disc; Metallic seating surface. Bolted cover and pressure seal cover swing and lift disc, Threaded or welded seat ring.

## Body and Bonnet Connection

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

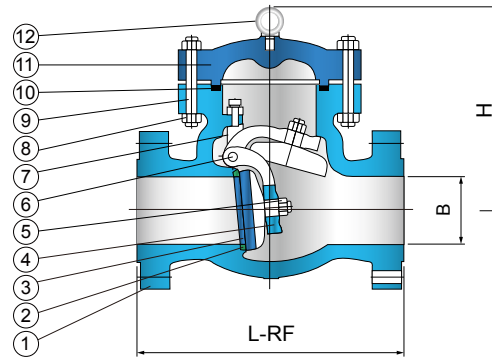
## Gasket

Stainless steel+ flexible graphite wounded gasket is used for Class 150 and Class 300 check valve; Stainless steel+ flexible graphite wounded gasket is used for Class 600 check valve, and joint gasket is also optional for Class 600 check valve; Ring joint gasket is used for Class 900 check valve; Pressurized seal design is used for Class 1500~ Class 2500 check valves.

## Seat

For carbon steel check valve, the seat is usually forged steel. The sealing surface of the seat is spray welded with hard alloy specified by the customer. Welded on seat is used of NPS 1/2-2 Renewable threaded seat is used for NPS  $\leq$  8 check valve, and welded on seat can be also optional if being requested by the customer. Welded on seat is used for NPS  $>$  8 carbon steel check valve. For stainless steel check valve, integral seat is usually adopted, or to weld hard alloy directly integrally. Threaded or welded on seat is also optional for stainless steel check valve if being requested by the customer. If the customer have any other request about the seat, please kindly advise before placing the order.

# API Swing Check Valve



## Standard Materil

Trim code	Seat Ring Surface Part No.2	Wedge Surface Part No.3	Stem Part No.4
1	F6	F6	F6
2	F304	F304	F304
5	Stellite	Stellite	F6
8	Stellite	F6	F6
9	Monel	Monel	Monel
10	F316	F316	F316
13	Alloy 20	Alloy 20	Alloy 20

## Standard

Design and Manufacture	BB 1868-1873, ASME B16.34, API 6D
Inspection and Test	API 598, API 6D
End Flange dimension	ASME B 16.5
End Flange dimension	ASME B 16.47A, MSS SP-44
End Flange dimension	ASME B 16.47B, API 605
BW end dimension	ASEM B 16.25
Face to Face	ASEM B 16.10
Pressure-temperature ratings	ASEM B 16.34
Wall thickness dimension	API 600 and BS 1868

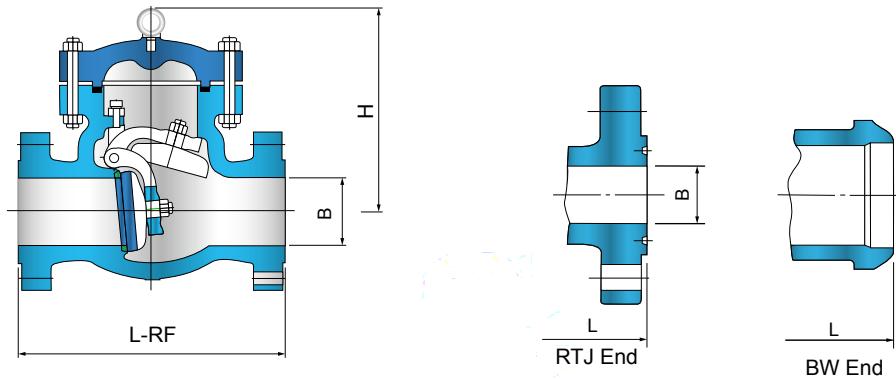
## Standard Material Specifications

Parts Name	Carbon Steel to ASTM		Alloy Steel to ASTM				Stainless Steel to ASTM			
	A216 WCB	A352 LCB	A217 WC1	A217 WC6	A217 WC9	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
1 Body	A216 WCB	A352 LCB	A217 WC1	A217 WC6	A217 WC9	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
11 Cover	A216 WCB	A352 LCB	A217 WC1	A217 WC6	A217 WC9	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
3 Disc	A216 WCB	A352 LCB	A217 WC1	A217 WC6	A217 WC9	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
4 Hinge	A216 WCB	A352 LCB	A217 WC1	A217 WC6	A217 WC9	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
9 Bolt	A193 B7	A320 L7	A193 B7	A193 B16	A193 B16	A193 B16	A193 B8	A193 B8	A193 B8	A193 B8
8 Nut	A194 2H	A194 4	A194 2H	A194 4	A194 4	A194 4	A194 8	A194 8	A194 8	A194 8
5 Disc Nut	A194 2H	410	410	410	410	410	304	316	304L	316L
10 Gasket	SS Spiral Wound W/graphite, or SS Spiral Wound W/PTFE, or Reinforced PTFE									
12 Eye bolt	Steel									
7 Yoke	A216 WCB	A352 LCB	A217 WC1	A217 WC6	A217 WC9	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M

Noted: 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.

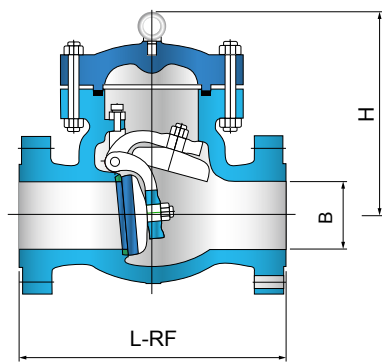


# API Swing Check Valve - Class 150 & Class 300

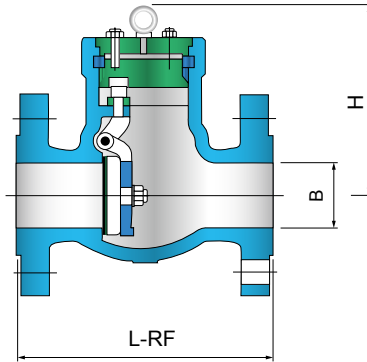


Size		Class 150 Dimensions(mm)						Class 300 Dimensions(mm)					
NPS	DN	RF	RTJ	BW	d	H	Weight (kg)	RF	RTJ	BW	B	H	Weight (kg)
2	50	203	216	203	51	138	14	267	283	267	51	150	22
2 1/2	65	216	229	216	64	160	19	292	308	292	64	178	35
3	80	241	254	241	76	172	24	318	333	318	76	223	44
4	100	292	305	292	102	245	43	356	371	356	102	255	57
5	125	330	343	330	127	260	59	400	416	400	127	280	80
6	150	356	368	356	152	280	72	445	460	445	152	310	120
8	200	495	508	495	203	347	124	533	549	533	203	355	194
10	250	622	635	622	254	390	196	622	638	622	254	445	290
12	300	699	711	699	305	435	330	711	727	711	305	485	450
14	350	787	800	787	337	465	417	838	854	838	337	515	587
16	400	864	876	864	387	525	503	864	879	864	387	560	761
18	450	978	991	978	438	580	630	978	994	978	432	620	1030
20	500	978	991	978	489	615	791	1016	1035	1016	483	685	1191
24	600	1295	1308	1295	591	710	960	1346	1368	1346	584	760	1892
26	650	1295	-	1295	633	840	1250	1346	1372	1346	633	850	2300
28	700	1448	-	1448	684	920	1580	1499	1524	1499	684	920	2600
30	750	1524	-	1524	735	980	1950	1594	1619	1594	735	1150	3200
32	800	1727	-	1727	779	1016	2800	1727	-	1727	779	1260	3700
36	900	1956	-	1956	874	1092	3200	2083	-	2083	874	1390	4300

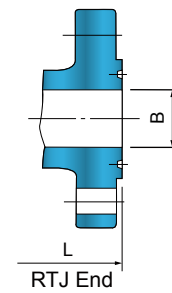
# API Swing Check Valve - Class 600~ Class 2500



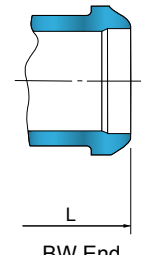
Class 600~ Class 900



Class 1500~ Class 2500



RTJ End

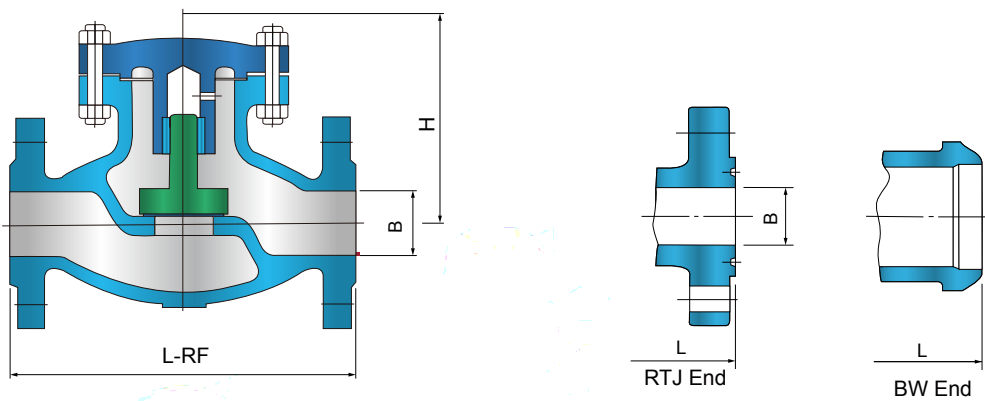


BW End

Size		Class 600 Dimensions(mm)							Class 900 Dimensions(mm)					
NPS	DN	RF	L	BW	B	H	Weight(kg)	RF	L	BW	B	H	Weight(kg)	
2	50	292	295	292	51	170	26	368	371	368	51	183	72	
2 1/2	65	330	333	330	64	178	35	419	422	419	64	220	75	
3	80	356	359	356	76	225	59	381	384	381	73	280	102	
4	100	432	435	432	102	275	99	457	460	457	98	315	134	
5	125	508	511	508	127	320	155	559	562	559	127	360	200	
6	150	559	562	559	152	385	208	610	613	610	146	390	354	
8	200	660	664	660	200	445	357	737	740	737	190	460	514	
10	250	787	791	787	248	500	561	838	841	838	238	540	754	
12	300	838	841	838	298	570	752	965	968	965	283	640	818	
14	350	889	892	889	327	590	889	1029	1038	1029	311	680	1180	
16	400	991	994	991	375	650	1285	1130	1140	1130	356	780	1909	
18	450	1092	1095	1092	419	778	1800	1219	1232	1219	400	845	2500	
20	500	1194	1200	1194	464	970	2150	1321	1334	1321	444	1050	2960	
24	600	1397	1407	1397	559	1100	3200	1549	1568	1549	533	1200	4600	

Size		Class 1500 Dimensions(mm)							Class 2500 Dimensions(mm)					
NPS	DN	RF	L	BW	B	H	Weight(kg)	RF	L	BW	B	H	Weight(kg)	
2	50	368	371	368	48	265	67	451	454	451	38	285	93	
2 1/2	65	419	422	419	57	240	75	508	514	508	48	305	100	
3	80	470	473	470	70	303	188	578	584	578	57	350	196	
4	100	546	549	546	92	340	210	673	683	673	73	410	410	
5	125	673	676	673	127	380	294	794	807	794	96	490	440	
6	150	705	711	705	137	430	473	914	927	914	111	540	868	
8	200	832	841	832	178	500	634	1022	1038	1022	146	620	970	
10	250	991	1000	991	222	605	1140	1270	1292	1270	184	705	1700	
12	300	1130	1146	1130	264	785	1939	1422	1445	1422	219	855	2080	
14	350	1257	1276	1257	289	830	2000	-	-	-	-	-	-	
16	400	1384	1407	1384	330	950	2700	-	-	-	-	-	-	
18	450	1537	1559	1537	371	1080	3960	-	-	-	-	-	-	
20	500	1664	1686	1664	416	1145	4400	-	-	-	-	-	-	

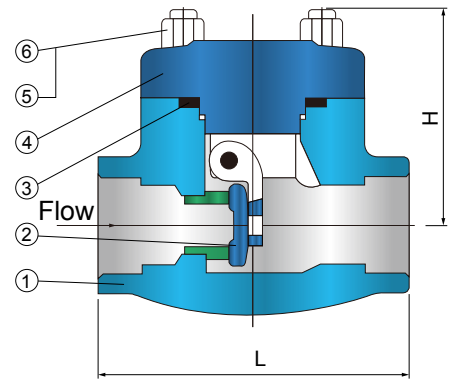
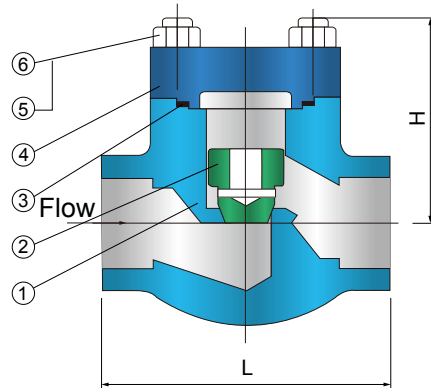
# API Lift Check Valve - Class 150~ Class 900



Size		Class 150 Dimensions(mm)						Class 300 Dimensions(mm)							
NPS	DN	RF	L			B	H	Weight(kg)	RF	L			B	H	Weight(kg)
			RTJ	BW					RTJ	BW					
1/2	15	108	119	108	13	76	3	152	162	152	13	78	5		
3/4	20	117	130	117	19	76	4	178	191	178	19	82	6		
1	25	127	140	127	25	98	5	203	216	203	25	102	8		
1 1/4	32	140	153	140	32	102	7	216	229	216	32	106	11		
1 1/2	40	165	178	165	38	115	8	229	242	229	38	118	13		
2	50	203	216	203	51	140	15	267	283	267	51	140	26		
2 1/2	65	216	229	216	64	162	22	292	308	292	64	164	33		
3	80	241	254	241	76	168	28	318	333	318	76	178	50		
4	100	292	305	292	102	194	42	356	371	256	102	195	86		
5	125	356	368	356	127	210	60	400	416	400	127	223	120		
6	150	406	419	406	152	226	75	445	460	445	152	245	180		
8	200	495	508	495	203	250	118	533	549	533	203	280	220		
10	250	622	635	622	254	275	194	622	638	622	254	336	310		
12	300	699	711	699	305	332	320	711	727	711	305	380	510		

Size		Class 600 Dimensions(mm)						Class 900 Dimensions(mm)							
NPS	DN	RF	L			B	H	Weight(kg)	RF	L			B	H	Weight(kg)
			RTJ	BW					RTJ	BW					
2	50	292	295	292	51	152	32	368	371	368	48	180	50		
2 1/2	65	330	333	330	64	167	45	419	422	419	57	200	65		
3	80	356	359	356	76	178	68	381	384	381	73	235	88		
4	100	432	435	432	102	215	98	457	460	457	98	270	140		
5	125	508	511	508	125	240	155	559	562	559	125	300	210		
6	150	559	562	559	152	279	230	610	613	610	146	350	300		
8	200	660	664	660	200	328	300	737	740	737	190	400	390		

# API Forged Steel Check Valve - Class 150~ Class 2500



## Standard

Design and Manufacture	API 602
Inspection and Test	API 598
Socket-weld dimension	ASME B 16.11
End threads dimension	ASME B 1.20.1
Pressure-temperature ratings	ASEM B 16.34

## Standard Material

Parts name	Material			
1 Body	ASTM A 105	ASTM A 182 F304	ASTM A 182 F316	
2 Disc	ASTM A 105	ASTM A 182 F304	ASTM A 182 F316	
3 Gasket	Graphite+ SS 304	Graphite+ SS 304	Graphite+ SS 304	
4 Bonnet	ASTM A 105	ASTM A 182 F304	ASTM A 182 F316	
5 Bolt	A 193 B7	A 193 B8	A 193 B8	
6 Nut	A 193 2H	A 193 8	A 193 8	

Class	Size		Piston Check Valve					Swing Check Valve				
	NPS	DN	Dimension(mm)			NPT	Weight(Kg)	Dimension(mm)			NPT	Weight(Kg)
			L	d	H			L	d	H		
150-800	1/2	15	79	10	54.5	1/2	1.4	79	13	54.5	1/2	1.3
	3/4	20	92	13	54.5	3/4	1.9	92	13	54.5	3/4	1.7
	1	25	111	17.5	72	1	2.6	111	18	72	1	2.4
	1 1/4	32	120	23	81	1 1/4	4.2	120	24	81	1 1/4	4
	1 1/2	40	152	28.5	94	1 1/2	5.3	120	29	94	1 1/2	5.1
	2	50	172	35	112	2	9.0	140	36.8	112	2	8.8
900-1500	1/2	15	92	10	73	1/2	2.4	92	13	73	1/2	2.2
	3/4	20	111	13	73	3/4	2.9	111	13	73	3/4	2.7
	1	25	120	17.5	84	1	4.6	120	18	84	1	4.4
	1 1/4	32	152	23	97	1 1/4	6.5	120	24	97	1 1/4	6.3
	1 1/2	40	172	28.5	115	1 1/2	10.5	140	29	115	1 1/2	10.3
	2	50	220	35	132	2	15.5	160	36.8	132	2	15.3
2500	1/2	15	150	11	102	1/2	7.8	-	-	-	-	-
	3/4	20	150	14	102	3/4	8.5	-	-	-	-	-
	1	25	170	19	107	1	12.0	-	-	-	-	-
	1 1/4	32	200	25	128	1 1/4	18.2	-	-	-	-	-
	1 1/2	40	200	28	128	1 1/2	19.5	-	-	-	-	-
	2	50	250	35	143	2	27.0	-	-	-	-	-



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