

# INTERNATIONAL VALVE TECHNOLOGIES

## CAST STEEL VALVES



Gate Valve



Swing Check Valve



Globe Valve

VALVE TYPE		END CONNECTION		PRESSURE CLASS					
CV	Check Valve - Swing (Cast)	1	THREADED	150	ANSI 150				
GV	Gate Valve (Cast)	2	SOCKET WELD	300	ANSI 300				
GL	Globe Valve (Cast)	3	BUTT WELD	600	API 600				
		4	FLANGED	900	API 900				
		*	CONSULT FACTORY FOR ADDITIONAL MODELS	1500	API 1500				
				2500	API 2500				
BODY MATERIAL		TRIM		OPERATOR		SIZE		SIZE	
						INCH	MM	INCH	MM
CS	Carbon Steel (WCB)	T1	Trim 1	H*	Handwheel*	2"	50	14"	350
SS	Stainless Steel (CF8M)	T2	Trim 2	CW	Chainwheel	3"	80	16"	400
		T3	Trim 3	G	Gear Operator	4"	100	18"	450
		T4	Trim 4	L	Level Operator	6"	150	20"	500
		T5	Trim 5	A	Actuator	8"	200	24"	600
		T6	Trim 6			10"	250	30"	750
		T7	Trim 7			12"	300	36"	900
		T8	Trim 8						

*More trims and body materials available, consult factory.*  
Standard offering materials of construction highlighted in blue.

## YOKE SLEEVE

The upper portion of the Yoke Sleeve is hexagonally tapered to fix the handwheel. The standard material of the Yoke Sleeve is Nodular Ni-resist D2 with over 1150°C (2100°F) dissolution point in accordance with API Std. specifications.

## BOLTING

The body-bonnet bolts are manufactured in accordance with API Std. 600 specifications. The nuts also strictly conform with ANSI B 1.1. The stud-bolt nuts, hexagonal, rigid and hot-forged, bear material notation as well as do the bolt nuts made according to ANSI B18.2.2

## BONNET

The bonnet and valve body have the same wall thickness. The body-bonnet flange drilling is spot-faced to exactly meet stud-bolt nuts. The bonnet back seat bushing guarantees packing replacement even when the valve is fully opened. The stem packing dimensions of the stuffing box are in accordance with API specifications.

## STEM

The machined forged stem comes with a T-shape head, which connects the slot of the wedge. The spherically shaped contacting surface of the head gives greater strength and durability. The stem dimensions are in accordance with API Std. 600 specifications. The heat treated stem delivers adequate mechanical properties as well as excellent surface hardness. Further, opening/shutting friction is minimized by accurate machining and lapping.

## SEAT RING

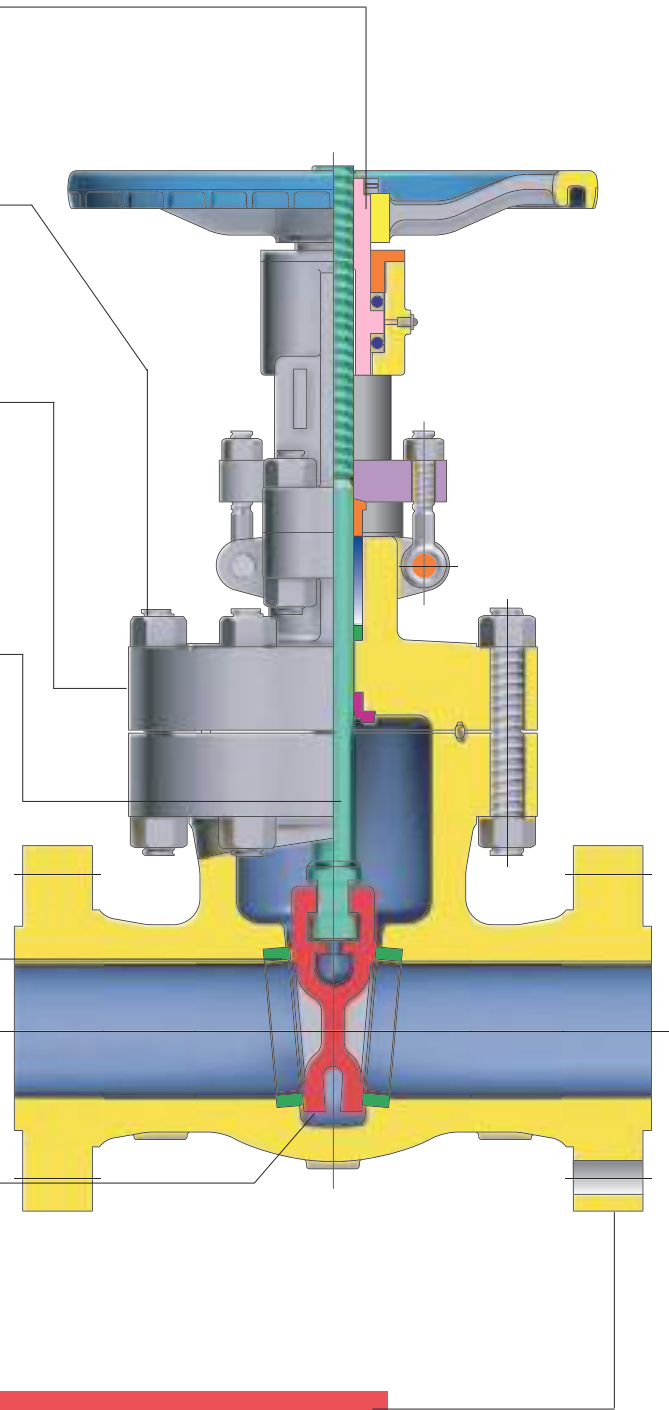
Bottom seated type seat rings are welded or screwed into the body. The seating surface is finished by lapping. They are forgings that have been heat treated to deliver the best mechanical properties and required hardness. The difference in hardness between seats and wedge is in accordance with API specifications.

## FLEXIBLE WEDGE

The standard disc of our valves is a one-piece flexible wedge. Slots are machined on both sides of the wedge to allow it to travel correctly in the integrally cast body guides. The wedge seating surfaces have been accurately machined, grind and lapped to a mirror finish to prevent leakage and eliminate galling.

## BODY

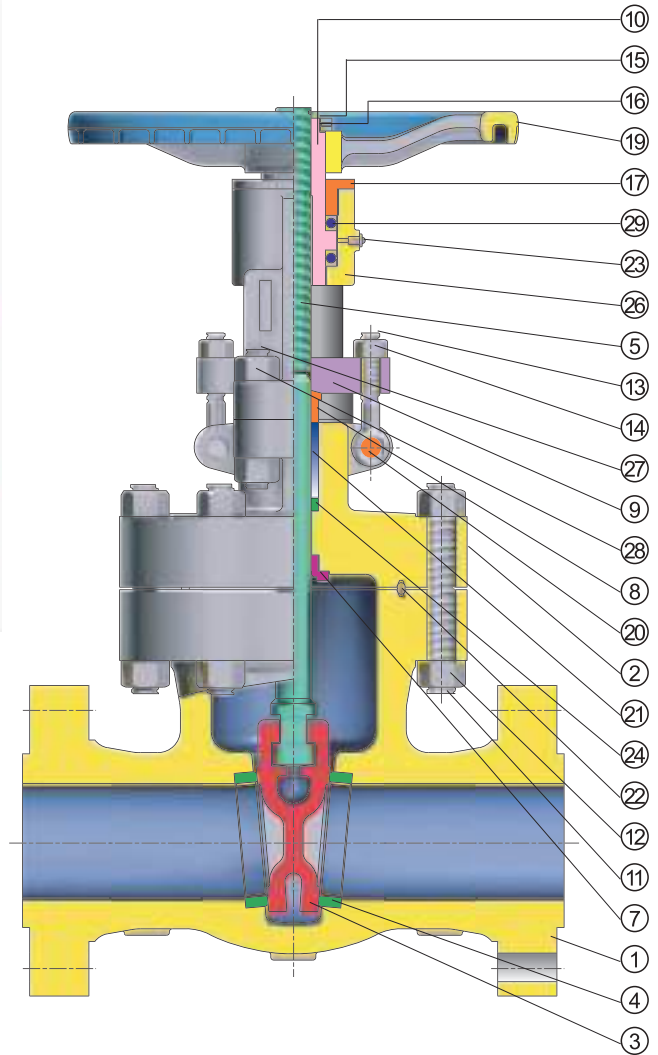
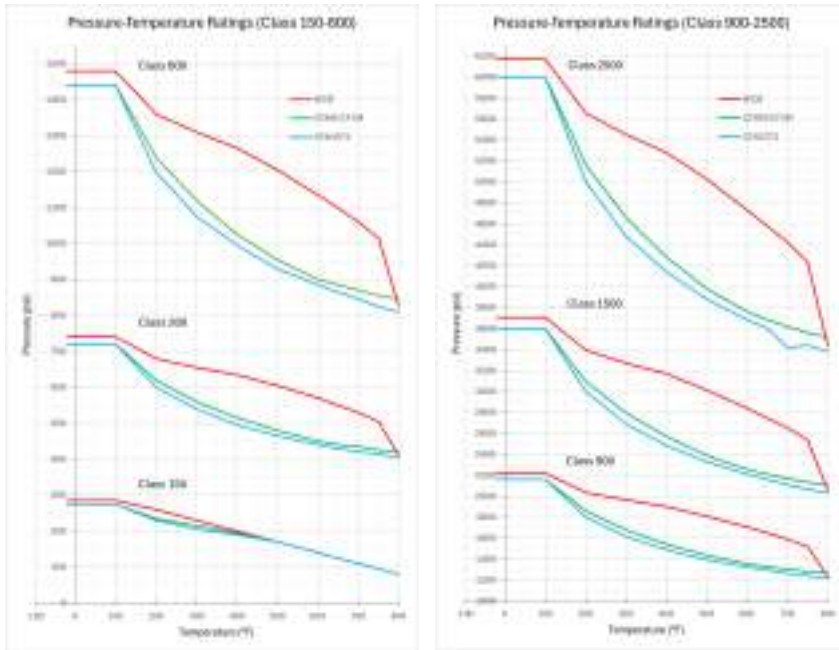
The cast steel body is designed to insure a wall thickness which is greater at any point than the minimum specified by API Std. 600. Special care has been taken with the design of the Class 150 valve body so that the elliptically shaped center section is free from intensified stresses in the critical area. The body of above Class 300 are made circular in shape as much as possible to minimize distortion even under extreme operating conditions. Inlet and outlet port dimensions conform with ASME B16.34 Pipe Fitting. The welded-in type seat ring is standard to insure interchangeability. Except for Class 150, the standard body-bonnet joint is male and female.



# GATE VALVES

## BOLTED BONNET

### MODEL GV-4



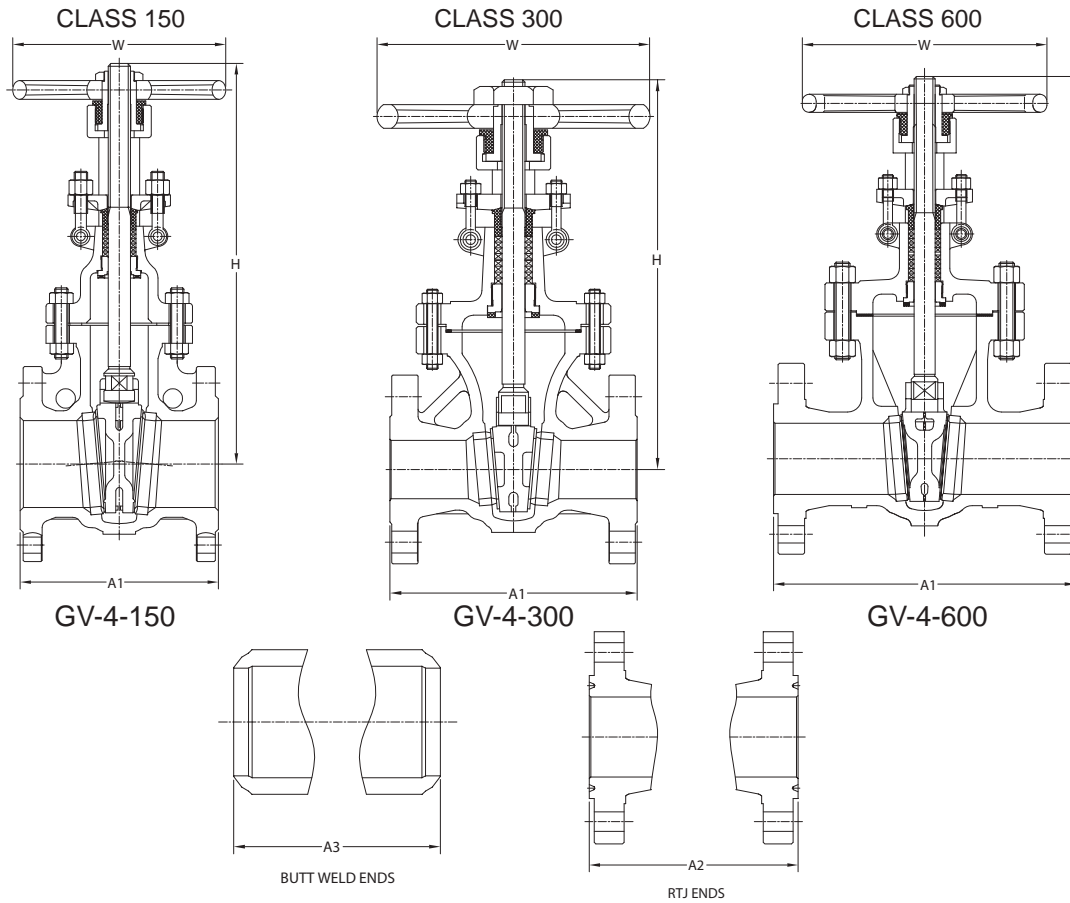
### DESIGN SPECIFICATIONS

NO	NAME OF PART	ASTM SPECIFICATION
15	HANDLE NUT	STEEL
16	SET SCREW	STEEL
17	SLEEVE GLAND	STEEL
19	HANDWHEEL	A395
21	PACKING	GRAPHITE
22	GASKET	GRAPHITE
23	GREASE NIPPLE	STEEL
29	BEARING	GRAPHITE

NO	NAME OF PART	ASTM SPECIFICATION												
		STANDARD	HIGH TEMPERATURE SERVICE				LOW TEMPERATURE SERVICE		STAINLESS STEEL			ALLOY STEEL		
1	BODY	A216-WCB	A217-WC6	A217-WC9	A217-C5	A352-LCB	A352-LC1L/C2L/C3	A351-CF8	A351-CF8M	A351-CF3	A351-CF3M	A351-CN7M	A351-CK3MCUN	
2	BONNET	A216-WCB	A217-WC1	A217-WC6	A217-WC9	A217-C5	A352-LCB	A352-LC1L/C2L/C3	A351-CF8	A351-CF8M	A351-CF3	A351-CF3M	A351-CN7M	A351-CK3MCUN
3	*DISC	A217-CA15	A217-CA15	A217-CA15	A217-CA15	A351-CF8	A351-CF8	A351-CF8	A351-CF8M	A351-CF3	A351-CF3M	A351-CN7M	A351-CK3MCUN	
4	BODY SEAT RING	A105+STL	A182-F1	A182-F11	A182-F22	A182-F5a	A350-LF2	A350-LF2	A240-304	A240-316	A240-304L	A240-316L	ALLOY 20	A182-F51
5	STEM		A479-410				A276-304	A276-304	A276-316	A276-304L	A276-316L	ALLOY 20	A182-F51	
7	BONNET BUSH		A479-410				A276-304	A276-304	A276-316	A276-304L	A276-316L	ALLOY 20	A276-304	
8	PACKING GLAND		A479-410						A276-304			A276-304		
9	GLAND FLANGE		A105 or A283-D						AISI 304			AISI 304		
10	YOKE SLEEVE		A439-D2						A439-D2			A439-D2		
11	BONNET BOLT	A193-B7	A193-B7	A193-B16	A193-B16	A193-B16	A320-L7	A320-L7	A193-B8	A193-B8	A193-B8	A193-B8	A193-B8	A193-B8
12	BONNET NUT	A194-2H	A194-2H	A194-4	A194-4	A194-4	A194-4L	A194-4L	A194-8	A194-8	A194-8	A194-8	A194-8	A194-8
13	GLAND BOLT		A307-B						A193-B8			A193-B8		
14	GLAND NUT		A194-2H						A194-8			A194-8		
20	HINGE PIN		A108-1020						A276-304			A276-304		
24	LANTERN		A479-410				A276-304	A276-304	A276-316	A276-304L	A276-316L	ALLOY 20	A182-F51	
26	YOKE		A216-WCB						A351-CF8			A351-CF8		
27	YOKE BOLT		A193-B7						A193-B8			A193-B8		
28	YOKE NUT		A194-2H						A194-8			A194-8		

\*Note : In case of 12" and larger size, we'll use trim material overlayed one on the same or equivalent material of the Body.

## ANSI 150/300/600 CLASS



### CLASS 150

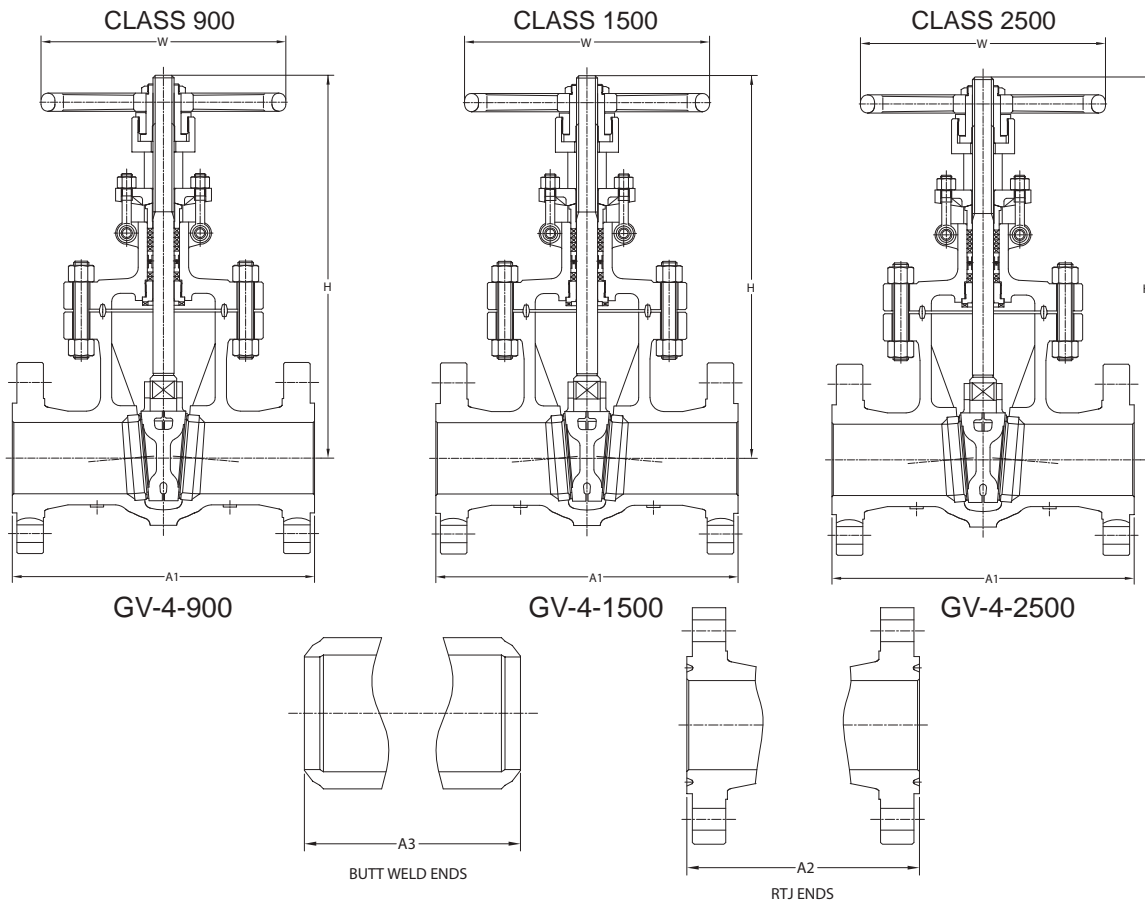
VALVE SIZE																				WEIGHT		
																				BAR / INCH		
in	2	2.5	3	4	6	8	10	12	14	16	18	20	24	28	30	36	40	42	48	52		
	mm	50	65	80	100	150	200	250	300	350	400	450	500	600	700	750	900	1000	1050	1200	1300	
A1	in	7.0	7.5	8.0	9.0	10.5	11.5	13.0	14.0	15.0	16.0	17.0	18.0	20.0	24.0	24.0	28.0	30.0	32.0	34.0	36.0	
	mm	178	190	203	229	267	292	330	356	381	406	432	457	508	610	610	711	762	813	864	914	
A3	in	8.5	9.5	11.1	12.0	15.9	16.5	18.0	19.8	22.5	24.0	26.0	28.0	32.0	36.0	36.0	40.0	42.0	43.0	41.9	54.0	
	mm	216	241	282	305	403	419	457	502	572	610	660	711	813	914	914	1016	1067	1092	1064	1372	
H	in	13.7	16.6	18.0	22.3	29.5	36.7	46.3	52.2	60.0	71.2	87.2	99.3	112.2	129.3	139.0	156.7	169.0	181.1	204.7	224.4	
	mm	347	422	457	566	749	931	1176	1326	1525	1809	2214	2522	2850	3284	3530	3980	4292	4600	5200	5700	
W	in	7.9	7.9	7.9	9.8	11.8	14.0	15.7	17.7	19.7	22.0	19.7	24.8	28.0	28.0	28.0	31.5	35.4	35.4	35.4	39.4	
	mm	200	200	200	250	300	355	400	450	500	560	500	630	630	710	710	800	900	900	900	1000	

### CLASS 300

VALVE SIZE																				WEIGHT	
																				BAR / INCH	
in	2	2.5	3	4	6	8	10	12	14	16	18	20	24	28	30	36	40	42	48		
	mm	50	65	80	100	150	200	250	300	350	400	450	500	600	700	750	900	1000	1050	1200	
A1&A3	in	8.5	9.5	11.1	12.0	15.9	16.5	18.0	19.8	30.0	33.0	36.0	39.0	45.0	53.0	55.0	68.0	76.0	78.0	87.2	
	mm	216	241	282	305	403	419	457	502	762	838	914	991	1143	1346	1397	1727	1930	1981	2215	
A2	in	9.1	10.1	11.7	12.6	16.5	17.1	18.6	20.4	30.6	33.6	36.6	39.8	45.9	54.0	56.0	69.1	-	-	-	
	mm	232	257	298	321	419	435	473	518	778	854	930	1010	1165	1372	1422	1756	-	-	-	
H	in	14.8	18.0	18.7	23.1	30.6	37.9	46.4	55.8	68.1	77.0	89.3	95.0	109.6	136.2	137.8	156.4	188.6	174.4	217.4	
	mm	375	456	475	586	776	963	1179	1417	1730	1955	2267	2414	2785	3460	3501	3973	4791	4430	5522	
W	in	7.9	7.9	8.9	9.8	14.0	15.7	17.7	19.7	19.7	19.7	24.8	24.8	31.5	35.4	35.4	35.4	39.4	39.4	39.4	
	mm	200	200	225	250	355	400	450	500	500	500	630	630	800	900	900	900	1000	1000	1000	

### CLASS 600

VALVE SIZE																				WEIGHT
																				BAR / INCH
in	2	2.5	3	4	6	8	10	12	14	16	18	20	24	28	30	36	40	42		
	mm	50	65	80	100	150	200	250	300	350	400	450	500	600	700	750	900	1000	1050	
A1&A3	in	11.5	13.0	14.0	17.0	22.0	26.0	31.0	33.0	35.0	39.0	43.0	47.0	55.0	61.0	65.0	82.0	94.0	96.0	
	mm	292	330	356	432	559	660	787	838	889	991	1092	1194	1397	1549	1651	2083	2387	2438	
A2	in	11.6	13.1	14.1	17.1	22.1	26.1	31.1	33.1	35.1	39.1	43.1	47.2	55.4	61.5	65.5	82.6	-	-	
	mm	295	333	359	435	562	663	790	841	892	994	1095	1200	1407	1562	1663	2098	-	-	
H	in	18.5	19.4	22.0	26.9	37.4	42.6	49.8	66.9	73.0	84.3	103.0	108.2	111.1	128.8	138.6	179.5	207.6	240.1	
	mm	471	494	558	682	951	1081	1264	1699	1855	2140	2616	2749	2823	3272	3521	4560	5273	6098	
W	in	8.8	8.8	9.8	11.8	17.7	19.7	24.8	24.8	24.8	28.0	31.5	31.5	35.4	35.4	39.4	39.4	39.4	39.4	
	mm	224	224	250	300	450	500	630	630	630	710	800	800	900	900	1000	1000	1000	1000	



### CLASS 900

WEIGHT  
BAR / INCH

VALVE SIZE	in	2	2.5	3	4	6	8	10	12	14	16	18	20	24	WEIGHT BAR / INCH
	mm	50	65	80	100	150	200	250	300	350	400	450	500	600	
A1&A3	in	14.5	16.5	15.0	18.0	24.0	29.0	33.0	38.0	40.5	44.5	48.0	52.0	61.0	
	mm	368	419	381	457	610	737	838	965	1029	1130	1219	1321	1549	
A2	in	14.6	16.6	15.1	18.1	24.1	29.1	33.1	38.1	40.9	44.9	48.5	52.5	61.7	
	mm	371	422	384	460	613	740	841	968	1038	1140	1232	1334	1568	
H	in	21.0	26.4	26.6	30.8	35.0	48.8	71.2	75.7	72.0	80.2	86.4	110.2	124.0	
	mm	534	671	676	783	888	1239	1808	1923	1830	2036	2195	2800	3150	
W	in	11.8	11.8	14.0	15.7	22.0	19.7	24.8	28.0	28.0	31.5	35.4	35.4	39.4	
	mm	300	300	355	400	560	500	630	710	710	800	900	900	1000	

### CLASS 1500

WEIGHT  
BAR / INCH

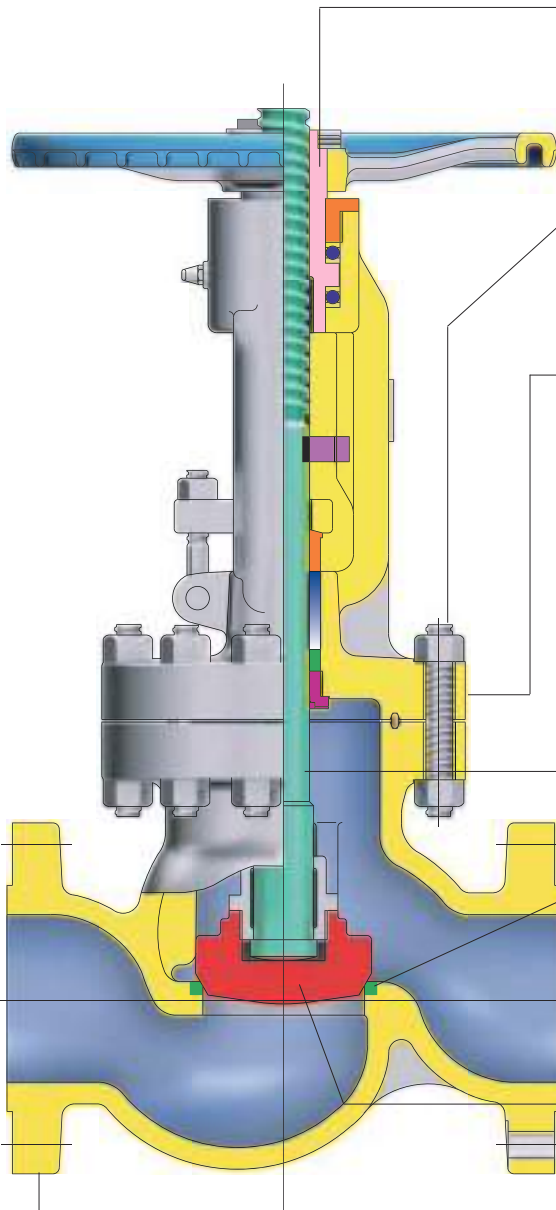
VALVE SIZE	in	2	2.5	3	4	6	8	10	12	14	16	18	20	24	WEIGHT BAR / INCH
	mm	50	65	80	100	150	200	250	300	350	400	450	500	600	
A1&A3	in	14.5	16.5	18.5	21.5	27.8	32.8	39.0	44.5	49.5	54.5	60.5	65.5	76.5	
	mm	368	419	470	546	705	832	991	1130	1257	1384	1537	1664	1943	
A2	in	14.6	16.6	18.6	21.6	28.0	33.1	39.4	45.1	50.2	55.4	61.4	66.4	77.6	
	mm	371	422	473	549	711	842	1000	1146	1276	1406	1559	1686	1971	
H	in	21.0	26.4	29.1	30.8	51.9	63.0	66.4	82.3	85.1	97.9	108.7	122.1	146.5	
	mm	534	671	738	783	1318	1600	1686	2090	2162	2486	2762	3102	3721	
W	in	11.8	11.8	15.7	19.7	19.7	28.0	28.0	35.4	35.4	35.4	39.4	39.4	39.4	
	mm	300	300	400	500	500	710	710	900	900	900	1000	1000	1000	

### CLASS 2500

WEIGHT  
BAR / INCH

VALVE SIZE	in	2	2.5	3	4	6	8	10	12	WEIGHT BAR / INCH
	mm	50	65	80	100	150	200	250	300	
A1&A3	in	17.8	20.0	22.8	26.5	36.0	40.2	50.0	56.0	
	mm	451	508	578	673	914	1022	1270	1422	
A2	in	17.9	20.2	23.0	26.9	36.5	40.9	50.9	56.9	
	mm	454	514	584	683	927	1038	1292	1444	
H	in	24.4	31.9	31.9	42.3	57.1	63.0	82.5	90.2	
	mm	619	809	809	1074	1451	1600	2096	2292	
W	in	11.8	17.7	17.7	24.8	24.8	28.0	31.5	35.4	
	mm	300	450	450	630	630	710	800	900	

CAST STEEL  
**GLOBE VALVES**  
MODEL GL-4



**YOKE SLEEVE**

The standard material of the Yoke Sleeve is Nodular Ni-resist D2 with over a 1150°C (2100°F) dissolution point in conformity with API Std. Specifications.

**BOLTING**

The body-bonnet bolts are manufactured in accordance with API Std. 600 specifications. The nuts also strictly conform with ANSI B 1.1. The stud-bolt nuts, hexagonal, rigid and hot-forged, bear material notation as well as do the bolt nuts made according to ANSI B18.2.2

**BONNET**

The bonnet is integral or separate with the yoke and is the same material as the body. The body-bonnet flange drilling is spot-faced to exactly meet stud bolt nuts. The back seat bushing in the bonnet guarantees that the packing can be replaced even when the valve is fully opened. The stem packing dimensions of the stuffing box are in accordance with API Std. specifications.

**STEM**

The heat-treated stems of one-piece construction insure adequate mechanical properties and surface hardness. Friction at the time of opening and shutting is reduced to a minimum friction to accurate machining and lapping. The round finished surface of the stem head helps to achieve point contact with the inside of the disc housing to eliminate friction.

**SEAT RING**

The shoulder seated type seat ring is welded or screwed into body. The seating surface is finished by lapping. The seat ring is forged and heat-treated to deliver the best mechanical properties and required hardness. The difference in hardness between the seats and disc conforms to API Std. specifications.

**DISC**

The disc of our globe valves is a loose disc and can freely revolve around the stem. This prevents friction and galling with the seating surface when the valve is shut. The disc is furnished with a conical seating surface that has been ground and lapped to a mirror finish. It is of one-piece construction, and forged and heat-treated to deliver the required mechanical properties and hardness.

**BODY**

The cast steel body is designed to insure a wall thickness which is greater at any point than the minimum specified by API Std. 600. Port and seat passage dimensions conform to ASME B16.34.

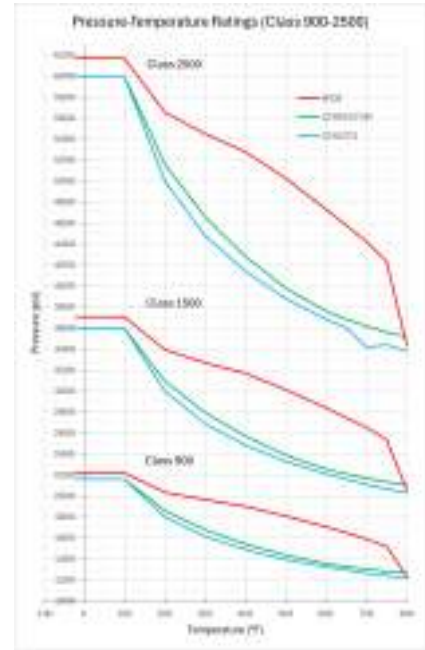
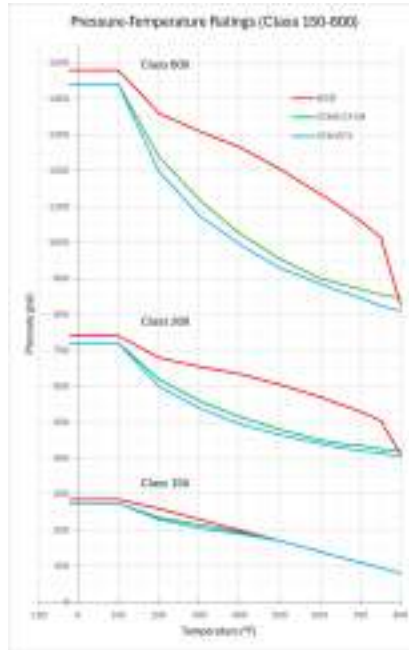
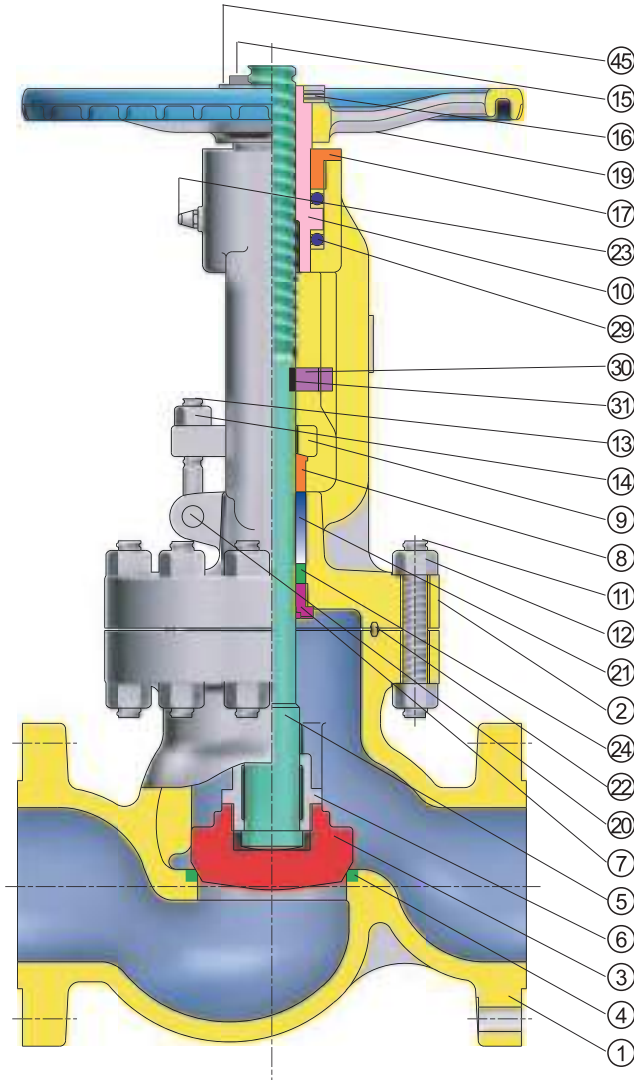
The welded-in type seat ring is standard to allow interchangeability.

The standard body-bonnet joint is male-female, and the flange is round for all valves. Accurate machining insures perfect coaxiality of the valve ends and seat ring in addition to exact perpendicularity of the body-bonnet flanges.

# GLOBE VALVES

## BOLTED BONNET

### MODEL GL-4

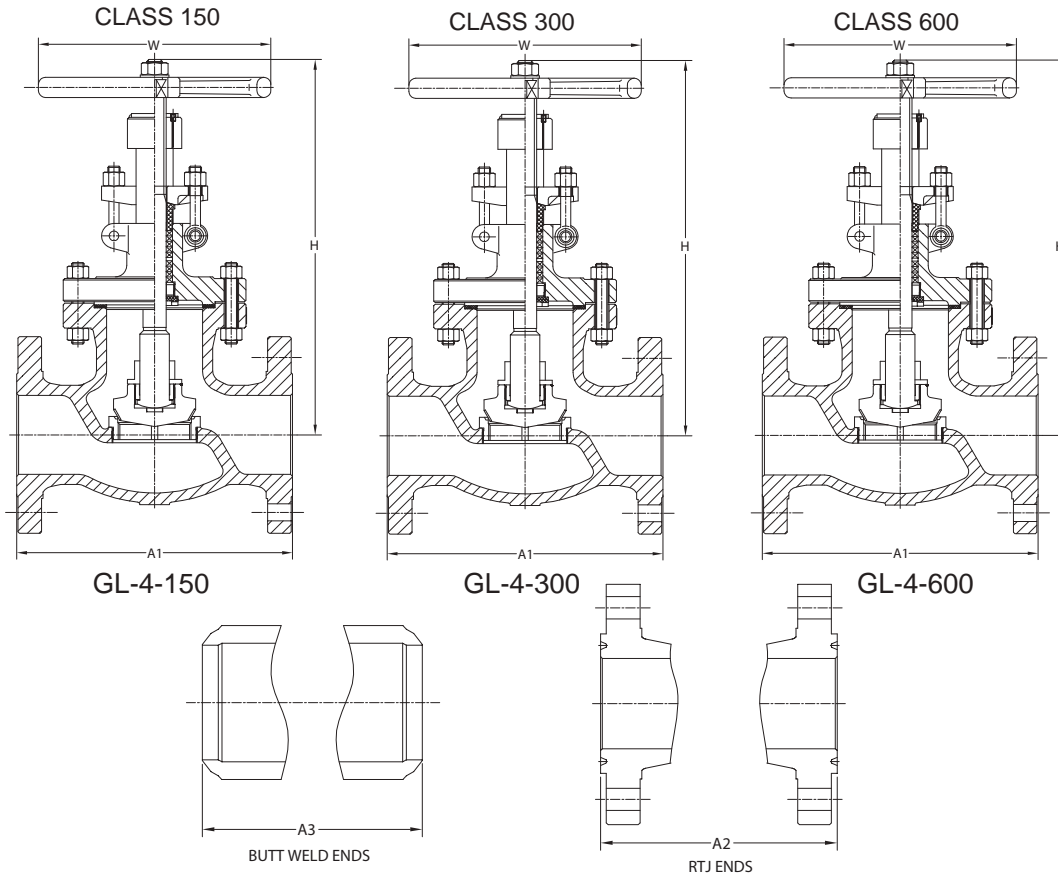


### DESIGN SPECIFICATIONS

NO	NAME OF PART	ASTM SPECIFICATION
15	HANDLE NUT	STEEL
16	SET SCREW	STEEL
17	SLEEVE GLAND	STEEL
19	HANDWHEEL	A395
21	PACKING	GRAPHITE
22	GASKET	GRAPHITE
23	GREASE NIPPLE	STEEL
29	BEARING	A295-52100
30	STOPPER	A283-D
31	KEY	STEEL
45	WASHER	STEEL

NO	NAME OF PART	ASTM SPECIFICATION												
		STANDARD	HIGH TEMPERATURE SERVICE				LOW TEMPERATURE SERVICE		STAINLESS STEEL				ALLOY STEEL	
1	BODY	A216-WCB	A217-WC1	A217-WC6	A217-WC9	A217-C5	A352-LCB	A352-LC1/LC2/LC3	A351-CF8	A351-CF8M	A351-CF3	A351-CF3M	A351-CN7M	A351-CK3MCUN
2	BONNET	A216-WCB	A217-WC1	A217-WC6	A217-WC9	A217-C5	A352-LCB	A352-LC1/LC2/LC3	A351-CF8	A351-CF8M	A351-CF3	A351-CF3M	A351-CN7M	A351-CK3MCUN
3	*DISC	A217-CA15	A217-CA15	A217-CA15	A217-CA15	A217-CA15	A351-CF8	A351-CF8	A351-CF8	A351-CF8M	A351-CF3	A351-CF3M	A351-CN7M	A351-CK3MCUN
4	BODY SEAT RING	A105+STL	A182-F1	A182-F11	A182-F22	A182-F5a	A350-LF2	A350-LF2	A240-304	A240-316	A240-304L	A240-316L	ALLOY 20	A182-F51
5	STEM	A479-410					A276-304		A276-304	A276-316	A276-304L	A276-316L	ALLOY 20	A182-F51
6	DISC GLAND	A217-CA15	A217-CA15	A217-CA15	A217-CA15	A217-CA15	A351-CF8	A351-CF8	A276-304	A276-316	A276-304L	A276-316L	ALLOY 20	A182-F51
7	BONNET BUSH	A479-410					A276-304		A276-304	A276-316	A276-304L	A276-316L	ALLOY 20	A276-304
8	PACKING GLAND	A479-410					A276-304		A276-304				A276-304	
9	GLAND FLANGE	A105 or A283-D							AISI 304				AISI 304	
10	YOKE SLEEVE	A439-D2							A439-D2				A439-D2	
11	BONNET BOLT	A193-B7	A193-B7	A193-B16	A193-B16	A193-B16	A320-L7	A320-L7	A193-B8	A193-B8	A193-B8	A193-B8	A193-B8	A193-B8
12	BONNET NUT	A194-2H	A194-2H	A194-4	A194-4	A194-4	A194-4L	A194-4L	A194-8	A194-8	A194-8	A194-8	A194-8	A194-8
13	GLAND BOLT	A307-B							A193-B8				A193-B8	
14	GLAND NUT	A194-2H							A194-8				A194-8	
20	HINGE PIN	A108-1020							A276-304				A276-304	
24	PACKING RING	A479-410					A276-304		A276-304	A276-316	A276-304L	A276-316L	ALLOY 20	A182-F51

\*Note : In case of 12" and larger size, we'll use trim material overlaid one on the same or equivalent material of the Body.



**CLASS 150**

												WEIGHT BAR / INCH	
VALVE SIZE	in	2	2.5	3	4	6	8	10	12	14	16	18	
	mm	50	65	80	100	150	200	250	300	350	400	450	
A1&A3	in	8.0	8.5	9.5	11.5	16.0	19.5	24.5	27.5	31.0	36.0	38.5	
	mm	203	216	241	292	406	495	622	699	787	914	978	
H	in	15.3	15.2	17.1	19.8	23.0	28.3	31.4	39.8	53.1	56.7	78.0	
	mm	388	387	434	503	585	718	798	1011	1349	1440	1980	
W	in	7.9	8.8	8.8	9.8	14.0	14.0	17.7	19.7	28.0	28.0	28.0	
	mm	200	224	224	250	355	355	450	500	710	710	710	
L	-	-	-	-	-	-	-	-	-	16.0	16.0	16.0	
	-	-	-	-	-	-	-	-	-	407	407	407	

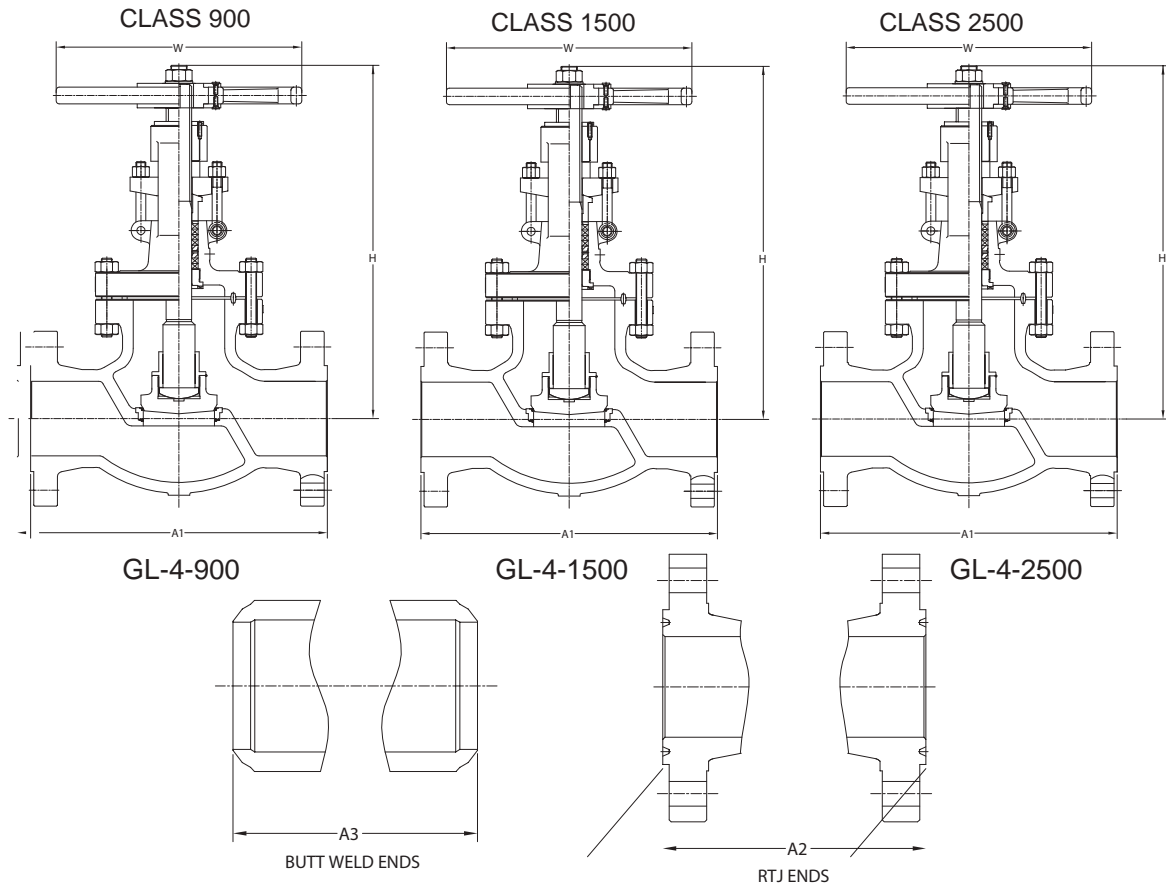
**CLASS 300**

												WEIGHT BAR / INCH
VALVE SIZE	in	2	2.5	3	4	6	8	10	12	14	16	
	mm	50	65	80	100	150	200	250	300	350	400	
A1&A3	in	10.5	11.5	12.5	14.0	17.5	22.0	24.5	28.0	33.0	36.0	
	mm	267	292	318	356	444	559	622	711	838	914	
A2	in	11.1	12.1	13.1	14.6	18.1	22.6	25.1	28.6	33.6	36.6	
	mm	283	308	333	371	460	575	638	727	854	929	
H	in	15.5	16.8	18.1	21.7	29.4	31.7	46.3	50.7	62.5	64.4	
	mm	393	427	461	552	746	806	1176	1287	1588	1635	
W	in	7.9	8.8	9.8	14.0	17.7	22.0	28.0	28.0	35.4	31.5	
	mm	200	224	250	355	450	560	710	710	900	800	

**CLASS 600**

												WEIGHT BAR / INCH
VALVE SIZE	in	2	2.5	3	4	6	8	10	12	14	16	
	mm	50	65	80	100	150	200	250	300	350	400	
A1&A3	in	11.5	13.0	14.0	17.0	22.0	26.0	31.0	33.0	35.0	39.0	
	mm	292	330	356	432	559	660	787	838	889	991	
A2	in	11.6	13.1	14.1	17.1	22.1	26.1	31.1	33.1	35.1	39.1	
	mm	295	333	359	435	562	664	791	841	892	994	
H	in	16.8	16.4	20.9	23.7	31.4	51.4	66.9	72.5	71.0	74.8	
	mm	426	416	530	601	798	1306	1700	1842	1804	1900	
W	in	8.8	8.8	11.0	14.0	17.7	31.5	39.4	39.4	39.4	39.4	
	mm	224	224	280	355	450	800	1000	1000	1000	1000	





**CLASS 900**

												BAR / INCH
VALVE SIZE	in	2	2.5	3	4	6	8	10	12	14	16	
	mm	50	65	80	100	150	200	250	300	350	400	
A1&A3	in	14.5	16.5	15.0	18.0	24.0	29.0	33.0	38.0	40.5	44.5	
	mm	368	419	381	457	610	737	838	965	1029	1130	
A2	in	14.6	16.6	15.1	18.1	24.1	29.1	33.1	38.1	40.9	44.9	
	mm	371	422	384	460	613	740	841	968	1038	1140	
H	in	27.2	27.0	30.2	34.6	53.9	67.7	69.5	67.1	87.0	103.1	
	mm	690	686	768	880	1370	1719	1765	1705	2210	2620	
W	in	15.7	15.7	15.7	15.7	28.0	35.4	31.5	35.4	35.4	35.4	
	mm	400	400	400	400	710	900	800	900	900	900	

**CLASS 1500**

												WEIGHT BAR / INCH
VALVE SIZE	in	2	2.5	3	4	6	8	10	12	14	16	
	mm	50	65	80	100	150	200	250	300	350	400	
A1&A3	in	14.5	16.5	18.5	21.5	27.8	32.8	39.0	44.5	49.5	54.5	
	mm	368	419	470	546	705	832	991	1130	1257	1384	
A2	in	14.6	16.6	18.6	21.6	28.0	33.1	39.4	45.1	50.2	55.4	
	mm	371	422	473	549	711	841	1000	1146	1276	1407	
H	in	27.2	27.0	31.5	39.8	53.0	77.2	90.9	105.1	126.0	160.0	
	mm	690	686	801	1012	1345	1960	2310	2670	3200	4064	
W	in	15.7	15.7	19.7	19.7	35.4	28.0	29.9	29.9	29.9	29.9	
	mm	400	400	500	500	900	710	760	760	760	760	

**CLASS 2500**

												WEIGHT BAR / INCH
VALVE SIZE	in	2	2.5	3	4	6	8	10	12			
	mm	50	65	80	100	150	200	250	300			
A1&A3	in	17.8	20.0	22.8	26.5	36.0	40.3	50.0	56.0			
	mm	451	508	578	673	914	1022	1270	1422			
A2	in	17.9	20.2	23.0	26.9	36.5	40.9	50.9	56.9			
	mm	454	514	584	682	927	1038	1292	1444			
H	in	23.9	31.5	32.8	49.6	75.0	97.0	110.2	138.0			
	mm	606	800	834	1260	1905	2465	2800	3505			
W	in	15.7	19.7	19.7	24.0	24.0	29.9	29.9	29.9			
	mm	400	500	500	610	610	760	760	760			

## BOLTING

The body-cover bolting conforms with ANSI B.1.1  
The nuts are manufactured to conform with ANSI B18.2.2

## COVER

The cover material is identical to the body.  
Depending on the valve size and pressure class, either a casting or a forging is used.

## HINGE PIN

The hinge pin is inserted into the valve and held in position by plug.  
The larger size valves are provided with bolted flanges instead of plugs.

## ARM

The arm material is identical to the body.  
Hinge bushing is provided in the larger valve sizes to minimize friction and eliminate seizing.

## SEAT RING

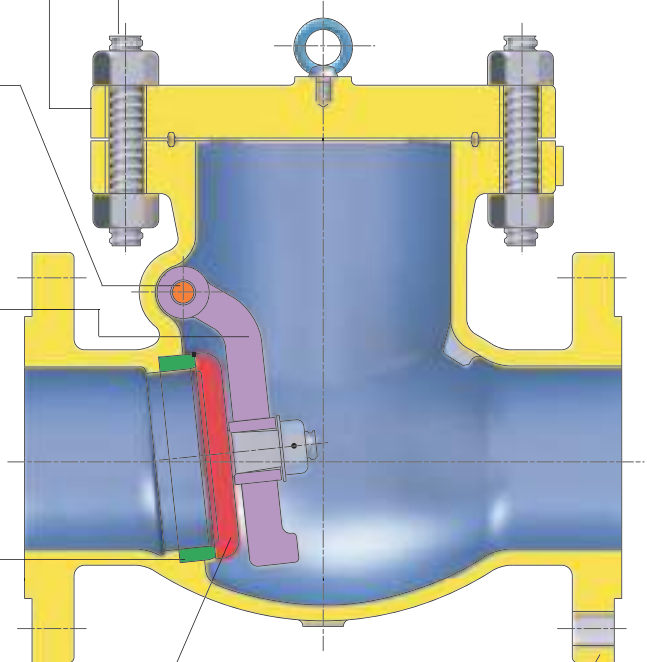
The bottom seated type seat ring is welded or screwed into the body.  
The seating surface is finished by lapping.  
The forged seat ring is heat-treated to deliver the best mechanical properties and required hardness.

## DISC

The disc has a sufficient seating surface area which is ground and lapped to a mirror finish.  
It is of one-piece construction and is heat treated to deliver the required mechanical properties and hardness.

## BODY

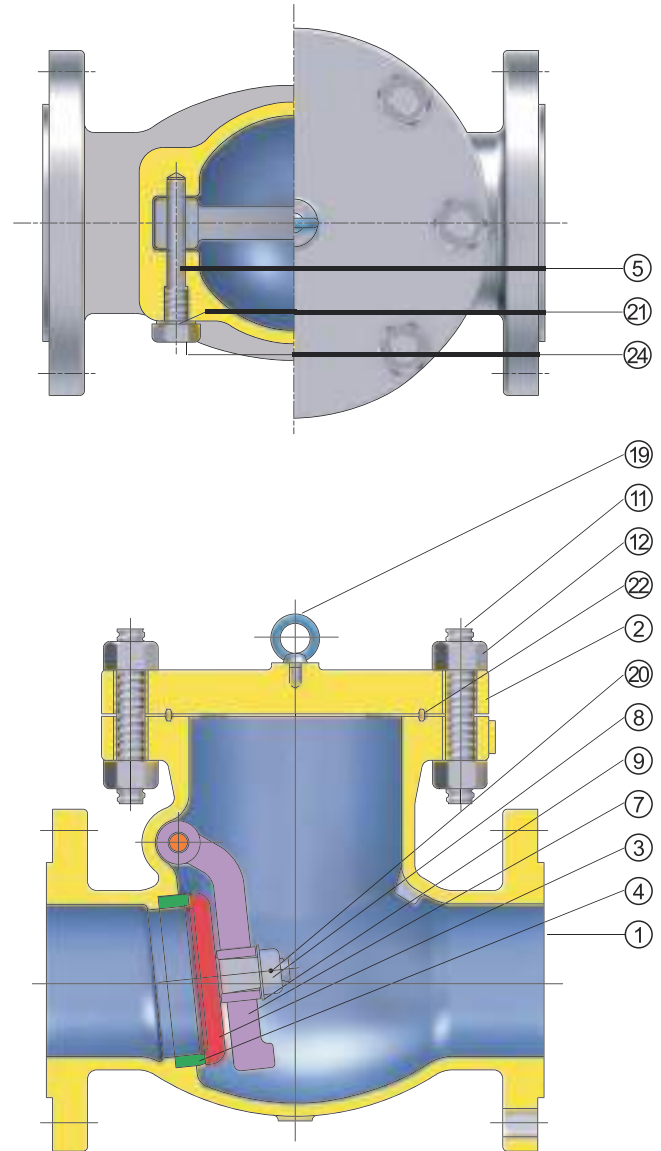
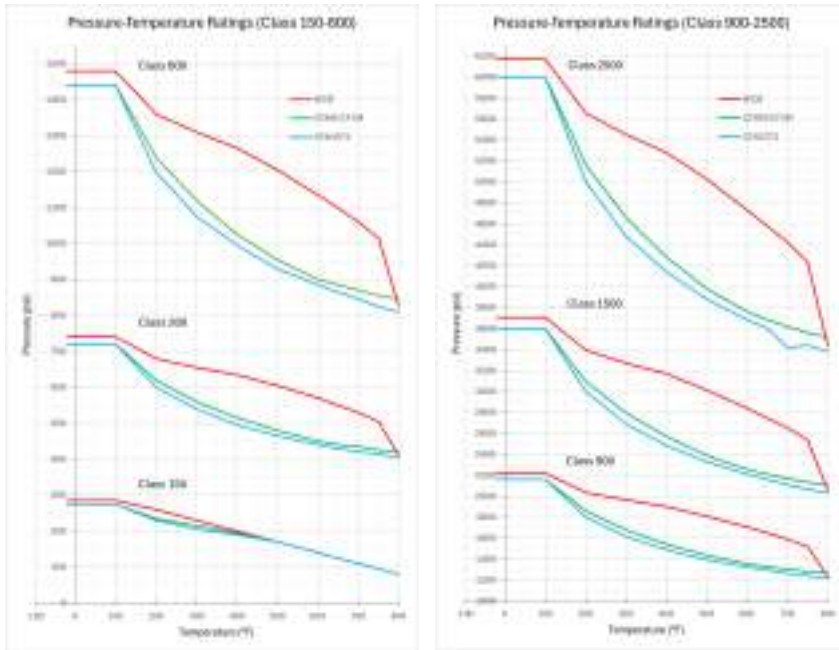
The cast steel body is designed with a wall thickness which is greater at any point than the minimum requirement provided by API Std. 600 or API 6D. Port and seat passage dimensions conform to ASME B16.34. The welded-in type seat ring is standard to allow interchangeability.  
The standard body-bonnet joint is male-female, and the flange is round for all valves.



# SWING CHECK VALVES

## BOLTED COVER

### MODEL CV-4



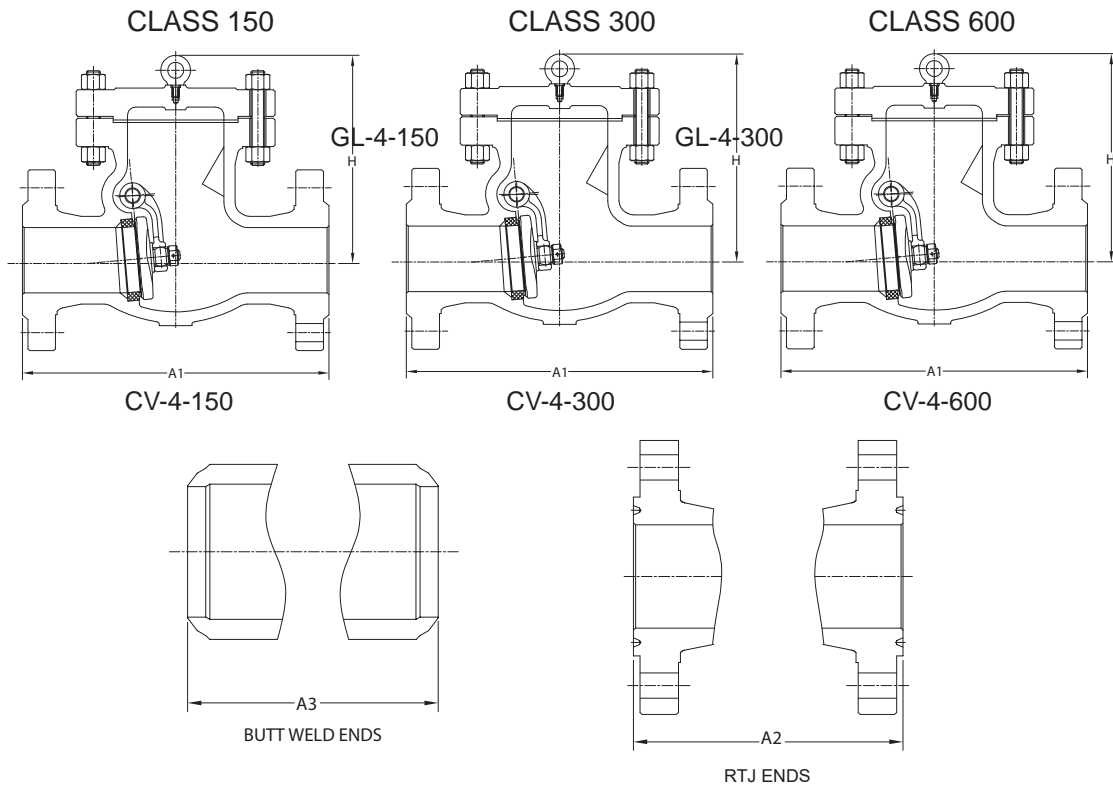
NO	NAME OF PART	ASTM SPECIFICATION
8	DISC NUT	A194-8
9	DISC WASHER	A240-304
19	EVE BOLT	A105
20	SPLIT PIN	A580-304
21	PLUG GASKET	GRAPHITE
22	GASKET	GRAPHITE
24	PLUG	A105

Swing check valves can be supplied with the following accessories.

- outside weight and lever
- slam retarders
- assisting springs
- position switches/indicators
- pneumatic safety control

NO	NAME OF PART	ASTM SPECIFICATION												
		STANDARD	HIGH TEMPERATURE SERVICE				LOW TEMPERATURE SERVICE			STAINLESS STEEL			ALLOY STEEL	
1	BODY	A216-WCB	A217-WC1	A217-WC6	A217-WC9	A217-C5	A352-LCB	352-LC1/LC2/LC3	A351-CF8	A351-CF8M	A351-CF3	A351-CF3M	A351-CN7M	A351-CK3MCUN
2	COVER	A216-WCB	A217-WC1	A217-WC6	A217-WC9	A217-C5	A352-LCB	352-LC1/LC2/LC3	A351-CF8	A351-CF8M	A351-CF3	A351-CF3M	A351-CN7M	A351-CK3MCUN
3	*DISC	A217-CA15	A217-CA15	A217-CA15	A217-CA15	A217-CA15	A351-CF8	A351-CF8	A351-CF8	A351-CF8M	A351-CF3	A351-CF3M	A351-CN7M	A351-CK3MCUN
4	BODY SEAT RING	A105+STL	A182-F1	A182-F11	A182-F22	A182-F5a	A350-LF2	A350-LF2	A240-304	A240-316	A240-304L	A240-316L	ALLOY 20	A182-F51
5	HINGE PIN		A479-304				A276-304		A276-304	A276-316	A276-304L	A276-316L	ALLOY 20	A182-F51
7	ARM	A216-WCB	A217-WC1	A217-WC6	A217-WC9	A217-C5	A352-LCB	352-LC1/LC2/LC3	A276-304	A276-316	A276-304L	A276-316L	ALLOY 20	A182-F51
11	BONNET BOLT	A193-B7	A193-B7	A193-B16	A193-B16	A193-B16	A320-L7	A320-L7	A193-B8	A193-B8	A193-B8	A193-B8	A193-B8	A193-B8
12	BONNET NUT	A194-2H	A194-2H	A194-4	A194-4	A194-4	A194-4L	A194-4L	A194-8	A194-8	A194-8	A194-8	A194-8	A194-8

\*Note : In case of 12" and larger size, we'll use trim material overlaid one on the same or equivalent material of the Body.



### CLASS 150

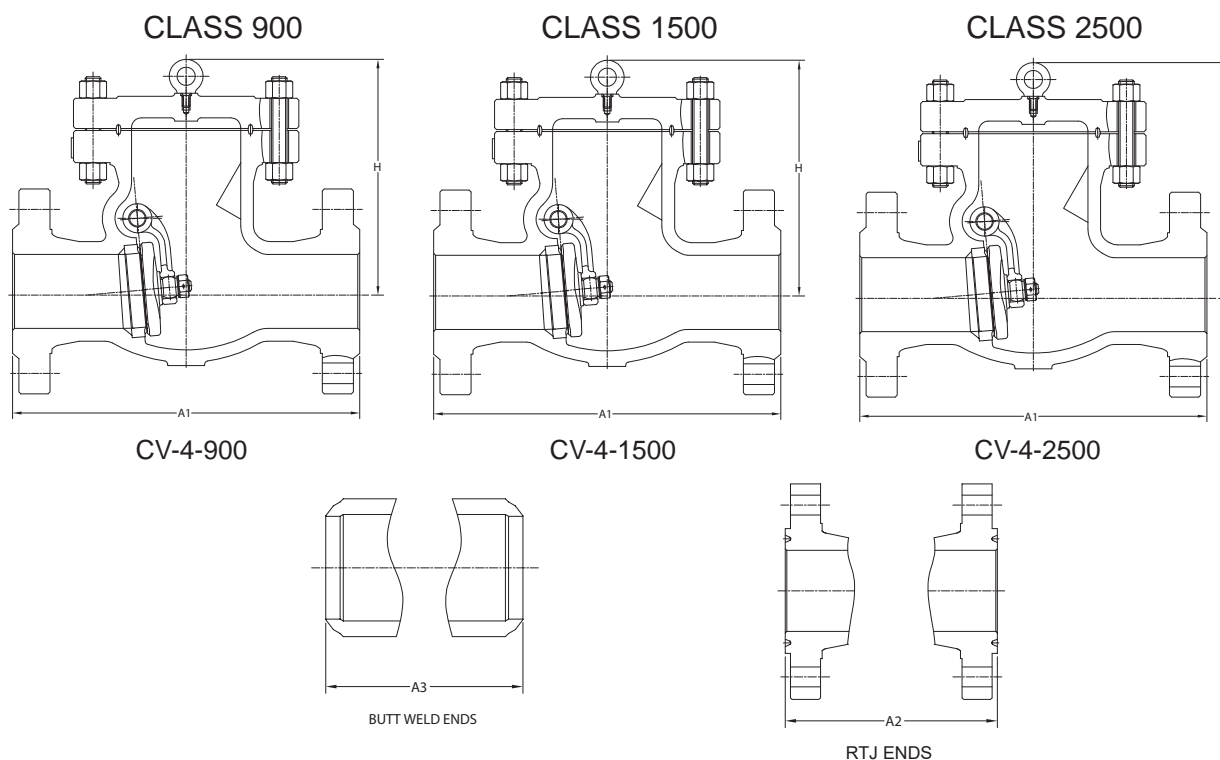
VALVE SIZE	in	2	2.5	3	4	6	8	10	12	14	16	18	20	24	26	28	30	32	36	WEIGHT BAR / INCH
	mm	50	65	80	100	150	200	250	300	350	400	450	500	600	650	700	750	800	900	
A1 & A3	in	8.0	8.5	9.5	11.5	14.0	19.5	24.5	27.5	31.0	34.0	38.5	38.5	51.0	51.0	57.0	60.0	60.0	77.0	
	mm	203	216	241	292	356	495	622	698	787	864	978	978	1295	1295	1448	1524	1524	1956	
H	in	5.8	6.4	6.9	8.0	11.4	13.8	16.9	19.6	23.9	25.6	30.5	25.5	31.5	33.5	40.0	35.0	37.0	53.1	
	mm	147	163	176	204	290	350	428	499	606	650	781	647	800	852	1017	888	941	1349	

### CLASS 300

VALVE SIZE	in	2	2.5	3	4	6	8	10	12	14	16	18	20	24	28	30	36	WEIGHT BAR / INCH
	mm	50	65	80	100	150	220	250	300	350	400	450	500	600	700	750	900	
A1 & A3	in	10.5	11.5	12.5	14.0	17.5	21.0	24.5	28.0	33.0	34.0	38.5	40.0	53.0	59.0	62.8	82.0	
	mm	267	292	318	356	444	533	622	711	838	864	978	1016	1346	1499	1594	2083	
A2	in	11.1	12.1	13.1	14.6	18.1	21.6	25.1	28.6	33.6	34.6	39.1	40.7	53.9	60.0	63.7	83.1	
	mm	283	308	333	371	460	549	638	727	845	880	994	1035	1368	1524	1619	2111	
H	in	6.4	7.1	7.8	8.7	13.1	15.0	18.8	21.1	22.8	27.4	31.4	30.5	40.4	45.2	50.0	46.1	
	mm	163	180	197	220	332	380	477	535	580	695	797	775	1025	1149	1270	1171	

### CLASS 600

VALVE SIZE	in	2	2.5	3	4	6	8	10	12	14	16	18	20	24	28	30	WEIGHT BAR / INCH
	mm	50	65	80	100	150	200	250	300	350	400	450	500	600	700	750	
A1 & A3	in	11.5	13.0	14.0	17.0	22.0	26.0	21.0	33.0	35.0	39.0	43.0	47.0	55.0	63.0	65.0	
	mm	292	330	356	432	559	660	787	838	889	991	1092	1194	1397	1600	1651	
A2	in	11.6	13.1	14.1	17.1	22.1	26.1	31.1	33.1	35.1	39.1	43.1	47.2	55.4	63.5	65.5	
	mm	295	333	359	435	562	664	791	841	892	994	1095	1200	1407	1613	1664	
H	in	8.3	8.6	10.5	12.2	15.5	21.2	24.6	24.4	26.8	32.0	37.8	40.5	47.3	54.6	51.7	
	mm	210	219	267	310	393	538	625	620	680	812	960	1029	1202	1388	1313	



#### CLASS 900

																WEIGHT BAR / INCH	
VALVE SIZE	in	2	2.5	3	4	6	8	10	12	14	16	18	20	24	28	30	
	mm	50	65	80	100	150	220	250	300	350	400	450	500	600	700	750	
A1 & A3	in	14.5	16.5	15.0	18.0	24.0	29.1	33.0	38.0	40.5	44.5	48.0	52.0	61.0	69.0	73.0	
	mm	368	419	381	457	610	737	838	965	1029	1130	1219	1321	1549	1753	1854	
A2	in	14.6	16.6	15.1	18.1	24.1	29.1	33.1	38.1	40.9	44.9	48.5	52.5	61.7	69.9	73.9	
	mm	371	422	384	460	613	740	841	968	1038	1140	1232	1333	1568	1775	1876	
H	in	12.2	13.0	8.1	15.3	17.9	22.2	28.7	30.7	29.8	34.3	36.3	41.4	47.2	55.1	61.8	
	mm	309	331	207	389	454	565	729	781	756	870	921	1051	1200	1400	1568	

#### CLASS 1500

																WEIGHT BAR / INCH	
VALVE SIZE	in	2	2.5	3	4	6	8	10	12	14	16	18	20	24			
	mm	50	65	80	100	150	200	250	300	350	400	450	500	600			
A1 & A3	in	14.5	16.5	18.5	21.5	27.8	32.8	39.0	44.5	49.5	54.4	60.5	65.5	76.5			
	mm	368	419	470	546	705	832	991	1130	1257	1383	1537	1664	1943			
A2	in	14.6	16.6	18.6	21.6	28.0	33.1	39.4	45.1	50.2	55.3	61.4	66.4	77.6			
	mm	371	422	473	549	711	841	1000	1146	1276	1405	1559	1686	1972			
H	in	12.2	13.0	14.8	17.0	22.3	26.3	28.9	35.6	40.7	42.0	47.1	51.1	57.1			
	mm	309	331	375	433	567	668	734	904	1035	1067	1197	1299	1451			

#### CLASS 2500

																WEIGHT BAR / INCH	
VALVE SIZE	in	2	2.5	3	4	6	8	10	12	14	16						
	mm	50	65	80	100	150	200	250	300	350	400						
A1 & A3	in	17.8	20.0	22.8	26.5	36.0	40.2	50.0	56.0	62.0	68.0						
	mm	451	508	578	673	914	1022	1270	1422	1574.8	1727.2						
A2	in	17.9	20.2	23.0	26.9	36.5	40.9	50.9	56.9	-	-						
	mm	454	514	584	683	927	1038	1292	1444	-	-						
H	in	16.4	16.5	17.4	21.3	28.9	28.4	33.5	39.4	47.2	51.1						
	mm	416	419	441	541	733	722	851	1000	1200	1299						



International Valve Technologies is a globally recognized manufacturer of Cast Steel gate, globe, and check valves with manufacturing operation in India, Taiwan, and China supported by a worldwide distribution network. Stringent quality checks at every manufacturing stage, unmatched performance, and prompt after sales service are some of the salient features of our business. IVT provides maximum safety, reliability and suitability virtually in all branches of industrial applications. We are a division of Flo-Tite Valves & Controls/ Max-Seal Valves & Controls. Our family of companies are all located in Lumberton, North Carolina and ready to serve our distribution network that spans all over the globe.

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