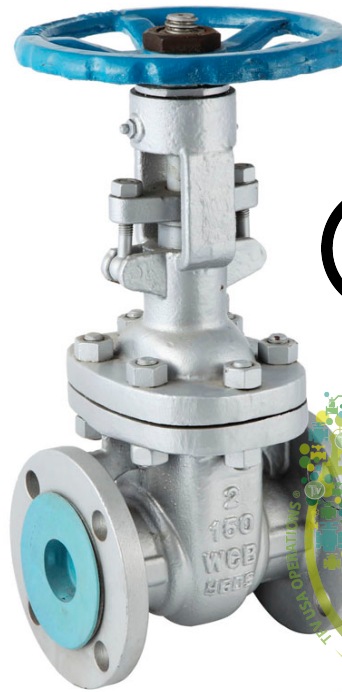


# GATE VALVES

## CAST STEEL GATE VALVES

Series 50 (API 600) & 51 (API 603)<sup>(1)</sup>



### FEATURES

- OS&Y
- SOLID AND FLEXIBLE WEDGE DESIGN
- RENEWABLE WELDED SEAT RINGS
- CAST & STAINLESS STEEL
- SIZES 2" - 52" CLASS 150 - 2500
- BASIC DESIGN API 600 & ANSI B 16.34
- SHELL WALL THICKNESS API 600, API 603 & ANSI B 16.34
- FACE TO FACE DIMENSION ANSI 600, API 603, ANSI B16.10
- FLANGE END DIMENSION ANSI B16.5 (A" TO 24") MSS SP- 44( 26" & UP)
- BUTT - WELD END DIMENSION ANSI B16.25
- INSPECTION & TESTING API 598

### TRIM MATERIAL

Trim No.	Seat ring surface	Wedge seat surface	Stem	Backseat bushing
1	TRIM 1 is obsolete			
2	TRIM 2 is obsolete			
5	BM + STL6	BM <sup>(2)</sup> +STL6	ASTM A276 410	ASTM A276 410
6	Cu+Ni	BM <sup>(2)</sup> +13%Cr	ASTM A276 410	ASTM A276 410
8	BM + STL6	BM <sup>(2)</sup> +13%Cr	ASTM A276 410	ASTM A276 410
9	Monel	Monel	Monel	Monel
10	SS316	BM <sup>(2)</sup> +SS316	ASTM A276 316	ASTM A276 316
13	Alloy20	BM <sup>(2)</sup> +Alloy20	ASTM B473	ASTM B473

#### GENERAL NOTES:

Integral: Seat Ring is not renewable, is body's part.

STL6: Hard Face on Surface (AWS A5.13 ECoCr-a or AWS A5.21 ERCoCr-A).

13%Cr.: Material applied by Welding (AWS A5.9 ER410).

SS316: Material applied by Welding (AWS A5.9 ER316).

Note 1: The Integral and Body Material only applies when the Trim materials are different from Body Material.

Note 2: The Gate and Seat Ring Material are least equal in corrosion resistance to that of the body material according to Table 7 from API 600.

(1) Wall Thickness.

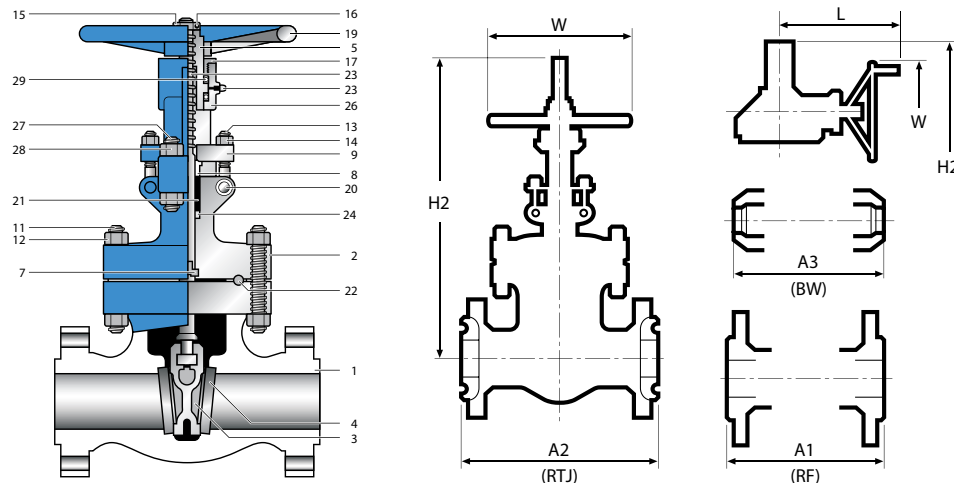
(2) Body Material.

# GATE VALVES

## CAST STEEL GATE VALVES

### CAST & STAINLESS STEEL GATE VALVES

### CLASS 150 - 2500

**2" - 52"**

**BILL OF MATERIAL**

NO	NAME OF PART	ASTM SPECIFICATION						
		CARBON STEEL	HIGH TEMPERATURE SERVICE			LOW TEMPERATURE SERVICE	STAINLESS STEEL	
1	BODY	A216 WCB	A217 WC6	A217 WC9	A217 C5	A352-LCB/LC2/LC3	CF8M	CF8C
2	BONNET	A216 WCB	A217 WC6	A217 WC9	A217 C5	A352-LCB/LC2/LC3	CF8M	CF8C
3	DISC	A105+13%Cr Or A216 WCB+13%Cr	A182 F11 +13%Cr Or A217 WC6 +13%Cr	A182 F22 +13%Cr Or A217 WC9 +13%Cr	A182 F5a +13%Cr Or A217 C5 +13%Cr	A352-LCB/LC2/LC3	A351 CF8M	A351 CF8C
4	BODY SEAT RING	A105+13%Cr Or A216 WCB+13%Cr	A182 F11 +13%Cr Or A217 WC6 +13%Cr	A182 F22 +13%Cr Or A217 WC9 +13%Cr	A182 F5a +13%Cr Or A217 C5 +13%Cr	A182 F304	A182 F316	A182 F347
5	STEM	A276 410	A276 410	A276 410	A276 410	A182 F304	F316	F347
7	BONNET BUSH	A276 410	A276 410	A276 410	A276-410	A276 304	F316	F347
8	PACKING GLAND	A276-410	A276-410	A276-410	A276-410	A276-304	F316	F347
9	GLAND FLNGE	A105 or A216 WCB	A105 or A216 WCB	A105 or A216 WCB	A105 or A216 WCB	A360 LF2	CF8M	CF8C
10	YOKE SLEEVE	A439 D2C	A439 D2C	A439 D2C	A439 D2C	B147 B8	F316	F347
11	BONNET BOLT	A193 B7	A193 B16	A193 B16	A193 B16	A320 L7	A193 B8	A193 B8
12	BONNET NUT	A194 2H	A194 4	A194 4	A194 4	A194 4	A194 8	A194 8
13	GLAND BOLT	A193 B7	A193 B7	A193 B7	A193 B7	A320 L7	A193 B	A193 B8
14	GLAND NUT	A194 2H	A194 2H	A194 2H	A194 4	A194 2H	A194 8	A194 8
15	HANDLE NUT	STEEL						
16	SET SCREW	STEEL						
17	SLEEVE GLAND	STEEL						
19	HANDWHEEL	A395 DI						
20	HINGE PIN	A276 410	A276 410	A276 410	A276 410	A276 304	F316	F347
21	PACKING	GRAPHITE	GRAPHITE	GRAPHITE	GRAPHITE	COMMERCIAL	GRAPHITE	GRAPHITE
22	GASKET	SS304+GRAPHITE	SS304+GRAPHITE	SS304+GRAPHITE	SS304+GRAPHITE	COMMERCIAL	SS304+GRAPHITE	SS304+GRAPHITE
23	GREASE NIPPLE	STEEL						
24	LANTERN	A276 410	A276 410	A276 410	A276 410	A276 304	F316	F347
26	YOKE	A216 WCB	A216 WC6	A216 WC9	A216 C5	A352 LC1/LC2/LC3	CF8M	CF8C
27	YOKE BOLT	A193 B7	A193 B16	A193 B16	A193 B16	A320 L7	A193 B8	A193 B8
28	YOKE NUT	A194 2H	A194 4	A194 4	A194 4	A194 2H	A194 8	A194 8
29	BEARING	COMMERCIAL						

HARD FACE STANDARD STELLITE 6 (OTHER OPTIONS AVAILABLE UPON REQUEST)





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## CAST STEEL GATE VALVES

### CLASS 150 - CAST & STAINLESS STEEL GATE VALVES

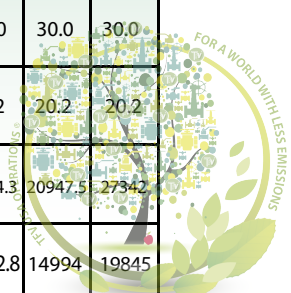
#### DIMENSIONS & WEIGHTS

VALVE SIZE	in	2	2.5	3	4	6	8	10	12	14	16	18	20	24	28	30	36	40	42	48	52
A1 (RF)	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	31.0	34.0	36.0
A2 (RTJ)	in	8.5	9.5	11.12	12.0	15.87	16.5	18.0	19.75	22.5	24.0	26.0	28.0	32.0	36.0	36.0	40.0	42.0	43.0	46.0	54
A3 (BW)	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	31.0	34.0	36.0
H2	in	15.4	16.7	18.1	22.8	30.6	38.4	46.4	54.6	60.0	68.7	79.1	91.7	109.6	127.4	134.5	161.8	183.9	174.4	217.5	227
W	in	7.9	7.9	7.9	9.8	11.8	14.0	17.7	17.7	19.7	22.0	13.8	17.7	17.7	22.0	22.0	27.9	31.5	31.5	35.4	35.4
L	in	-	-	-	-	-	-	-	-	-	-	13.1	14.3	14.3	16.3	16.3	18.4	20.7	20.7	26.4	26.4
WGT (RF)	lb	48.5	55.1	66.2	99.2	187	295.5	445	639	816	1177	1475	1786	3153	4558	4827	7856	10370	10143	15677	18742
WGT (BW)	lb	44.1	46.3	61.7	92.6	161	244	399	584	750	1111	1365	1697	3336	4756	4988	8011	10436	10198	15545	18853

### CLASS 300 - CAST & STAINLESS STEEL GATE VALVES

#### DIMENSIONS & WEIGHTS

VALVE SIZE	in	2	2.5	3	4	6	8	10	12	14	16	18	20	24	28	30	36	40	42	48
A1 (RF)	in	8.5	9.5	11.12	12.0	15.88	16.5	18.0	19.75	30.0	33.0	36.0	39.0	45.0	53.0	55.0	68.0	76.0	78.0	87.2
A2 (RTJ)	in	9.12	10.12	11.75	12.62	16.5	17.12	18.62	20.37	30.62	33.62	36.62	39.75	45.88	54.0	56.0	69.12	-	-	-
A3 (BW)	in	8.5	9.5	11.12	12.0	15.88	16.5	18.0	19.75	30.0	33.0	36.0	39.0	45.0	53.0	55.0	68.0	76.0	78.0	87.2
H2	in	16.2	17.7	19.0	23.7	32.0	40.2	48.8	56.8	66.1	78.4	85.9	93.5	112.6	130.0	148.5	169.8	188.6	198.1	217.4
W	in	7.9	7.9	8.8	9.8	14.0	15.7	17.7	19.7	17.7	17.7	22.0	22.0	27.9	35.4	35.4	30.0	30.0	30.0	30.0
L	in	-	-	-	-	-	-	-	-	14.3	14.3	16.3	16.3	18.4	21.8	21.8	21.8	20.2	20.2	20.2
WGT (RF)	lb	63.9	88.2	105.8	163.2	313.1	485.1	721.0	1094	1530	2170	2880	3409	5204	8070.3	9591.6	15104.31	18654.3	20947.5	27342
WGT (BW)	lb	52.9	77.2	81.6	141.1	269.0	379.2	511.6	862	1420	1839	2317	2703	4212	6637.1	7629.3	11003	13582.8	14994	19845





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## CAST STEEL GATE VALVES

### CLASS 600 - CAST & STAINLESS STEEL GATE VALVES

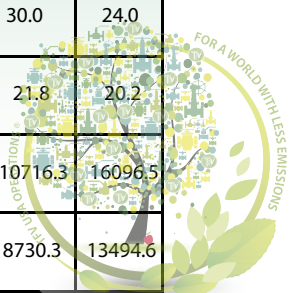
#### DIMENSIONS & WEIGHTS

VALVE SIZE	in	2	2.5	3	4	6	8	10	12	14	16	18	20	24	28	30	36	40	42
A1 (RF)	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	98.0
A2 (RTJ)	in	11.62	13.12	14.12	17.12	22.12	26.12	31.12	33.12	35.12	39.12	43.12	47.25	55.38	61.5	65.5	82.62	-	-
A3 (BW)	in	11.5	13.0	14.0	17.0	22.20	26.0	31.0	33.0	35.0	39.0	43.0	47.0	55.0	61.0	65.0	82.0	94.0	98.0
H2	in	18.5	19.5	22.1	26.7	37.2	43.7	52.1	65.9	72.1	82.9	98.0	104.8	116.9	140.2	152.8	179.5	207.6	240.0
W	in	8.8	8.8	9.8	11.8	17.7	19.7	24.8	22.0	22.0	27.9	27.9	31.5	35.4	30.0	30.0	30.0	30.0	30.0
L	in	-	-	-	-	-	-	-	16.3	16.3	18.4	18.4	20.7	26.4	20.2	20.2	20.2	20.2	20.2
WGT (RF)	lb	94.8	132.3	154.4	295.5	628	988	1499	2355	2836	4059	5700	6853	10337	13340.6	15313.7	21476.7	23262.8	24144.8
WGT (BW)	lb	61.7	99.2	132.3	229.3	452	690	1180	2145	2571	3332	4741	5640	8595	10980.9	12590.6	17948.7	18830.7	19337.9

### CLASS 900 - CAST & STAINLESS STEEL GATE VALVES

#### DIMENSIONS & WEIGHTS

VALVE SIZE	in	2	2.5	3	4	6	8	10	12	14	16	18	20	24
A1 (RF)	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
A2 (RTJ)	in	14.62	16.62	15.12	18.12	24.12	29.12	33.12	38.12	40.88	44.88	48.5	52.5	61.75
A3 (BW)	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
H2	in	21.2	26.4	26.4	30.8	42.4	55.5	67.7	77.4	74.9	80.7	88.8	110.2	124.0
W	in	11.8	11.8	14.0	15.7	22.0	17.7	22.0	22.0	24.0	24.0	30.0	30.0	24.0
L	in	-	-	-	-	-	14.3	16.3	16.3	20.2	20.2	21.8	21.8	20.2
WGT (RF)	lb	181	342	364	384	999	1720	2752	3400	4895.1	6615.0	8533.4	10716.3	16096.5
WGT (BW)	lb	130	375	287	295	789	1378	2267	2844	4167.5	5655.8	7276.5	8730.3	13494.6





# GATE VALVES

## CAST STEEL GATE VALVES

### CLASS 1500 - CAST & STAINLESS STEEL GATE VALVES

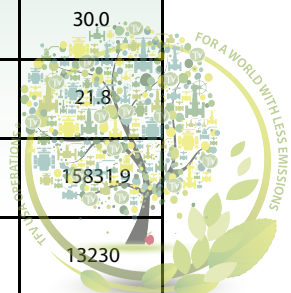
#### DIMENSIONS & WEIGHTS

VALVE SIZE	in	2	2.5	3	4	6	8	10	12	14	16	18	20	24
A1 (RF)	in	14.5	16.5	18.5	21.5	27.75	32.75	39.0	44.5	49.5	54.5	60.5	65.5	76.5
A2 (RTJ)	in	14.62	16.62	18.62	21.62	28.0	33.13	39.38	45.12	50.25	55.38	61.38	66.38	77.62
A3 (BW)	in	14.5	16.5	18.5	21.5	27.75	32.75	39.0	44.5	49.5	54.5	60.5	65.5	76.5
H2	in	21.2	26.4	29.1	30.8	47.1	60.8	66.5	82.3	85.1	97.9	108.7	122.1	146.5
W	in	11.8	11.8	15.7	19.7	13.8	22.0	27.9	27.9	30.0	30.0	30.0	24.0	24.0
L	in	-	-	-	-	13.1	16.3	18.4	18.4	21.8	21.8	21.8	20.2	20.2
WGT (RF)	lb	181	341.8	401	573	1360	3175	4412	8414	9073.6	15324.8	19845	24541.7	35875.4
WGT (BW)	lb	130	286.7	324	353	975	2646	3541	7080	7056	13230	17066.7	21079.8	30362.9

### CLASS 2500 - CAST & STAINLESS STEEL GATE VALVES

#### DIMENSIONS & WEIGHTS

VALVE SIZE	in	2	2.5	3	4	6	8	10	12
A1 (RF)	in	17.75	20.0	22.75	26.5	36.0	40.25	50.0	56.0
A2 (RTJ)	in	17.87	20.25	23.0	26.8	36.5	40.87	50.88	56.88
A3 (BW)	in	17.75	20.0	22.75	26.5	36.0	40.25	50.0	56.0
H2	in	24.4	31.9	31.9	42.2	57.1	63.0	82.5	90.2
W	in	11.8	17.7	17.7	24.8	24.0	24.0	24.0	30.0
L	in	-	-	-	-	17.0	20.2	20.2	21.8
WGT	lb	205	331	443	1336	3506	5380.2	10085.7	15831.9
WGT (BW)	lb	128	221	289	1083	2866.5	4410	8379	13230





# GATE VALVES

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## CAST STEEL GATE VALVES

### HOW TO ORDER

VALVE TYPE			FEATURES		MATERIAL		ENDS	CLASS	SIZE <sup>(4)</sup>	OPERATION							
Body Design (Series)	Bonnet Design	Wedge/Disc Design			BODY	TRIM <sup>(5)</sup> (Seat/Wedge seal/Stem)											
50	Gate Valve OS&Y API 600	B Bolted Bonnet	F Flexible Wedge	NONE	NONE	20	A216 WCB	01	Obsolete	F	Flanged RF	0	ANSI 150#	02	2"	H	Hand wheel
			S Solid Wedge	6D	API 6D	21	A216 WCC	02	Obsolete	R	Flanged RTJ	3	ANSI 300#	02.5	2 1/2"		
51	Gate Valve OS&Y API 603	W Welded Bonnet	P Parallel Slide w/ Spring	N	NACE MR0175	22	A350 LCB <sup>(1)</sup>	05	BM+STL6/ BM+STL6/ (410 or 13Cr)	B	Butt Weld	6	ANSI 600#	03	3"	G	Gear Operator
			R Parallel Slide w/ Spreaders	ND	API 6D and NACE MR0175	23	A352 LC3 <sup>(1)</sup>	06	BM+13Cr/ Monel/ BM+13Cr	L	Flanged FF	9	ANSI 900#	04	4"		
			F	Fire Safe API 6FA	24	A217 WC1	08	BM+13Cr/ BM+STL6/ (410 or 13Cr)			1	ANSI 1500#	05	5"	E	Electric Actuator	
			O	Oxygen Service	25	A217 WC6 <sup>(2)</sup>	09	Monel			2	ANSI 2500#	06	6"	P	Pneumatic Actuator	
			FE	Fugitive Emmissions	26	A217 WC9 <sup>(2)</sup>	10	316 SS					08	8"	B	BARE SHAFT	
			BS	Bellows Seal	27	A217 C5 <sup>(2)</sup>	11	Monel/ Monel+STL6/ Monel					10	10"			
			CR	Criogenic Service	28	A217 C12 <sup>(1)</sup>	13	CN7M/CN7M/ B473			12	12"					
			G	Fire Safe API 6FA and NACE MR0175	30	A351 CF8M <sup>(3)</sup>	14	CN7M/ CN7M+STL6/ B473			14	14"					
					31	A351 CF3M <sup>(3)</sup>	15	304SS+STL6/ 304SS+STL6/ 304SS			16	16"					
					32	A351 CF8 <sup>(3)</sup>	16	316SS+STL6/ 316SS+STL6/ 316SS			18	18"					
					33	A351 CF3 <sup>(3)</sup>	17	347+STL6/ 347+STL6/ 347			20	20"					
					40	Monel	18	CN7M+STL6/ CN7M+STL6/ B473			24	24"					
					41	Alloy 20					26	26"					
					42	Hastelloy					28	28"					
					43	A182 Gr321					30	30"					
					44	A182 Gr347					36	36"					
					45	Duplex					40	40"					
					43	Triballoy 900					42	42"					
					44	Triballoy 800					48	48"					
					45	Triballoy 825					52	52"					

Example  
Gate Valve OS&Y API 603, Bolted Bonnet Flexible Wedge, Body WCB, Trim 5,  
Flanged ANSI Class 150# Size 6" with Handwheel

**51BF-2005-F006H**

(1) Low temperature Service

(2) High temperature Service

(3) Stainless Steel

(4) Available Sizes: ANSI Class 150# - from 2" to 52"

300# - from 2" to 48", 600, 900 & 1500# - from 2" to 24"

2500# - from 2" to 12"

(5) BM = Body Material

General Notes:

\*API 603 Light Wall (ANSI/ASME B16.34)

\*\*API 600 Heavy Wall

\*\*\*HF = Usually Stellite 6 other available under request

