

**Design**

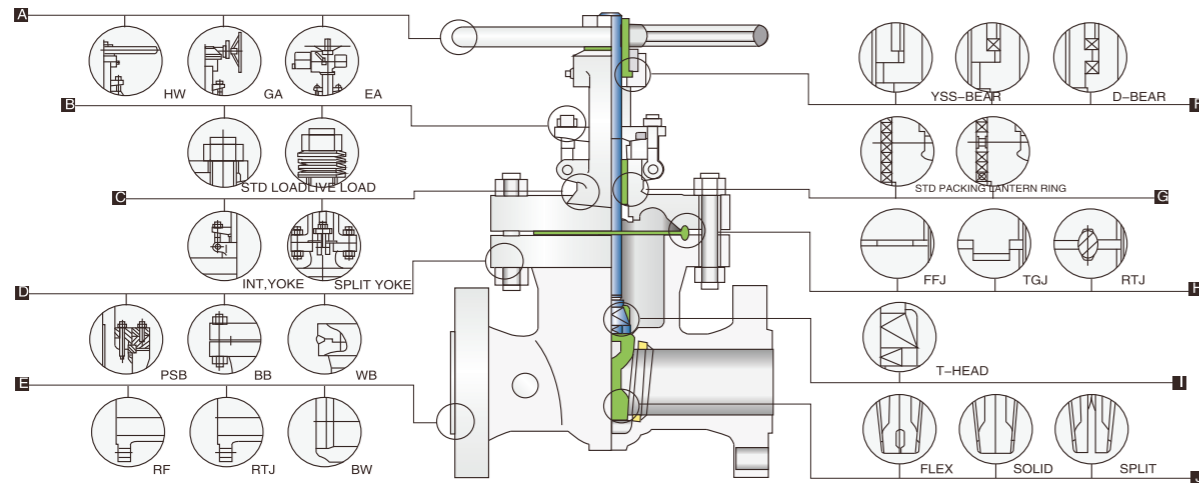
WEKEcast steel gate valves are designed and manufactured to provide maximum service life and dependability. All gate valves are full ported and meet the design requirements of American Petroleum Institute standard API 600&API 6D,British standard BS1414& BS EN 1984 and generally, conform to American Society of Mechanical Engineers standard ASME B16.34. Valves are available in a complete range of body/bonnet materials and trims.

**Available Modifications For Cast Steel Valves**

- Trim Changes
- End Connection Modifications
- Packing and Gasket Change
- Operator Mounting
- Handwheel Extensions
- Pressure Equalizing
- By-Pass
- Customer Specified Coatings
- Weld End Bore Changes
- Oxygen & Chlorine Clearing & Packaging

**Ranges of materials**

Standard body/bonnet materials include nine grades of carbon, low alloy and stainless steels. For special applications they can be supplied in other grades of alloy and stainless steel. There's a full range of trim materials to match any service. optional packing and gasket materials are available for a full range of service conditions.



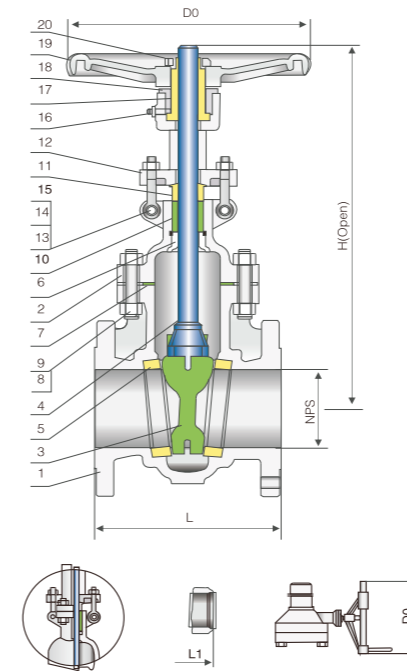
- A) Operation**  
Large handwheels for easy operation.also available with gearing,motor actuators, pneumatic or hydraulic actuators for more difficult services.
- B) Live Load Packing**  
In services requiring frequent cycling or with high pressure/temperature variations,live loading extends the service life between maintenance periods byrequiring less stments.Belleville springs are employed to provide constant packing gland stress.
- C) OS&Y**  
Outside screw and yoke.Cast steel gate valve yoke integral with bonnet for 150Lb-8" 600Lb-6", 900Lb-4"&small.
- D) BB**  
bolted bonnet .welding bonnet and pressure seal bonnet in services requiring frequent cycling or with high pressure/temperature variations.
- E) End Connections**  
A choice of flanged ,RTJ flanged or buttwelding end for piping flexibility.
- F) Yokesleeve**  
Extra long thread engagement between yoke sleeve and stem provide long thread life.valves of sizes larger than 150Lb-12", 300Lb-10",600Lb-6", 900Lb/1500Lb/2500Lb-4" are regularly provided with roll bearing yokes.
- G) Lantern Ring And Double Packing Set**  
lantern ring leak-off fitting connection and double packing stack is optionally available for critical services.
- H) Body-to-Bonnet Joint**  
A flat face gasket joint is used in the 150lb valves. A male and female joint is used in 300lb to 600lb valves.ring joint is used in the body to bonnet connections in 900lb & higher rated valves.
- I) Stem**  
All wedge gate valves are provided with upset forged T-head stems. By forging the T-head ,the stem at the stem-wedge connection is streghtened,this design also allows the wedge possibility of a bent stem jamming the wedge.
- J) Wedge**  
Integral guide rib faces assure self-centering of wedge.flexible wedge gate valve has a one-piece,twin-disc wedge,which is designed so that each half flexes independently.avalaible in solid, flex split and his designs.

**Applicable standards:**

- STEEL GATE VALVES API 600/API 6D
- STEEL GATE VALVES ISO 10434/ISO 14313
- STEEL VALVES,ASME B16.34
- FACE TO FACE ,ASME B16.10
- END FLANGES ,ASME B16.5
- BUTTWELDING ENDS,ASME B16.25
- INSPECTION AND TEST API 598/API 6D

**Design descriptions:**

- FULL PORT DESIGN
- OS&Y OUTSIDE SRCEW AND YOKE
- BB.BOLTED BONNET
- FLEXIBLE WEDGE,FULLY GUIDED
- CHOICE OF SOLID OR SPLIT WEDGE
- RENEWABLE SEAT RINGS
- FORGED T-HEAD STEM
- RISING STEM AND NON-RISING HANDWHEEL
- FLANGED OR BUTTWELDING ENDS
- AVAILABLE WITH BG OPERATOR



**Materials of parts**

No	Part Name	Carbon steel	ASTM Material 1"/4cr-1/2mo	Carbon Steel
1	Body	A216-WCB	A217-WC6	A352-LCB
2	Bonnet	A216-WCB	A217-WC6	A352-LCB
3	Wedge	A216-WCB+CR13	A217-WC6+HF	A352-LCB+CR13
4	Stem	A182-F6a	CR-MO-V	A182-F6a
5	Seat ring	A105+CR13	A182-F11+HF	A350-LF2+CR13
6	Stem Backseat	A276-420	A276-304	A276-420
7	Bonnet Gasket	Spiral wound(Graphite+304)		
8	Bonnet Stud	A193-B7	A193-B16	A320-L7
9	Bonnet Stud Nut	A194-2H	A194-7	A194-4
10	Packing	Graphite		
11	Gland	A276-420	A276-304	A276-420
12	Gland Flange	A216-WCB	A217-WC6	A352-LCB
13	EyeBolt Pin	Carbon steel	A276-420	Carbon steel
14	Eyebolt	Carbon steel	A193-B7	Carbon steel
15	Eyebolt Nut	Carbon steel	A194-2H	Carbon steel
16	Grease Fitting	Brass+Steel		
17	Yoke Sleeve	Aluminum-Bronze		
18	Yokesleeve Jam nut	Carbon Steel		
19	Handwheel	Malleable Iron		
20	Handwheel Nut	Carbon Steel		

Note: 1) ductile ni-resist optional  
2) wedge and seat ring may either be solid facing material or a base material equal to or better than the body/bonnet material with facing as shown.

**FIG.VK721 Dimensional datas of ANSI Gate Valve Class 150LB**

NPS DN	2	2 1/2	3	4	6	8	10	12	14	16	18	20	24	26	28	30	32	36	in
	50	65	80	100	150	200	250	300	350	400	450	500	600	650	700	750	800	900	mm
L (RF)	7.00	7.50	8.00	9.00	10.50	11.50	13.00	14.00	15.00	16.00	17.00	18.00	20.00	22.00	24.00	24.00	28.00	28.00	in
L1 (BW)	178	191	203	229	267	292	330	356	381	406	432	457	508	559	610	610	711	711	mm
H (open)	85	9.50	11.12	12.00	15.88	16.50	18.00	19.75	22.50	24.00	26.00	28.00	32.00	34.00	36.00	36.00	38.00	40.00	in
Do	216	241	283	305	403	419	457	502	572	610	660	711	813	864	914	914	965	1016	mm
wt(kg)	15.25	17.00	18.88	23.00	30.50	37.62	45.50	53.12	59.38	67.00	74.50	83.50	98.25	110.50	116.50	124.00	129.00	146.50	in
	386	434	480	584	765	956	1149	1350	1508	1703	1892	2119	2500	2806	2960	3150	3280	3720	mm
	8	8	10	12	14	16	15	20	22	24	26	29	29	32	32	38	40	40	in
	200	200	250	300	300	350	400	450	500	550	600	640	700	720	800	800	950	1000	mm
	18	25	32	50	77	121	178	265	463	463	621	792	1521	1521	1838	2261	2490	3310	RF
	15	18	26	41	69	108	156	248	424	424	587	752	1570	1570	1900	3310	2540	3380	BW

**FIG.VK722 Dimensional datas of ANSI Gate Valve Class 300LB**

NPS DN	2	2 1/2	3	4	6	8	10	12	14	16	18	20	24	26	28	30	32	36	in
	50	65	80	100	150	200	250	300	350	400	450	500	600	650	700	750	800	900	mm
L/L1 (RF/BW)	8.50	9.50	11.12	12.00	15.88	16.50	18.00	19.75	30.00	33.00	36.00	39.00	45.00	49.00	53.00	55.00	60.00	68.00	in
L2 (RTJ)	216	241	283	305	403	419	457	502	762	838	914	991	1143	1245	1346	1397	1524	1727	mm
H (open)	9.12	10.12	11.75	12.62	16.50	17.12	18.62	20.38	30.62	33.62	36.62	39.75	45.88	50.00	54.00	56.00	61.12	69.12	in
Do	232	257	298	321	419	435	473	518	778	854	930	1010	1165	1270	1372	1422	1553	1756	mm
wt(kg)	16.12	17.88	20.00	24.00	31.75	39.38	47.62	55.75	62.25	67.88	77.12	86.38	102.00	117.00	122.00	126.00	130.00	152.00	in
	410	453	509	612	805	1000	1210	1415	1580	1725	1960	2195	2590	2975	3100	3200	3300	3860	mm
	8	8	10	12	14	16	18	20	22	24	26	29	29	32	32	38	40	40	in
	200	200	250	300	350	400	450	500	550	550	600	640	720	720	800	800	950	1000	mm
	23	35	50	71	144	209	322	482	683	950	1145	1635	2660	3090	3310	3595	3720	3985	RF
	17	26	39	53	113	164	256	390	565	805	965	1410	2305	2540	2725	3055	3360	3630	BW

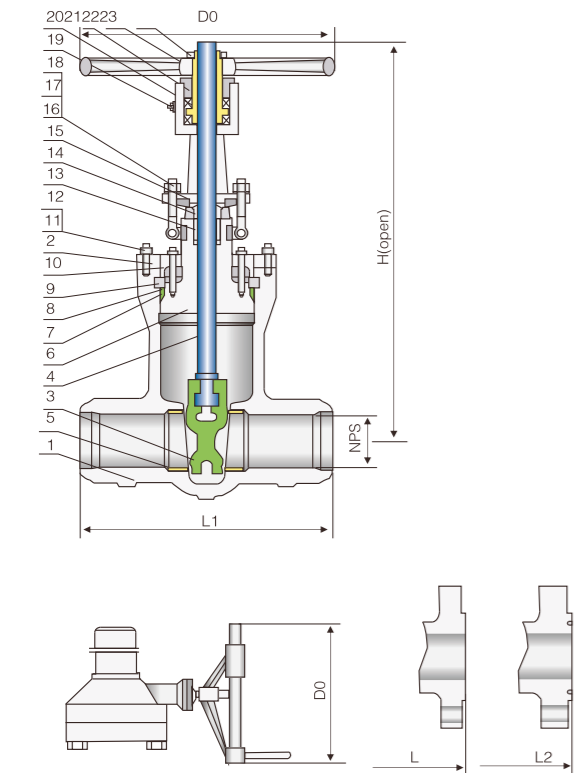


**Applicable Standards:**

- STEEL GATE VALVES, API 600/API 6D
- STEEL GATE VALVES, ISO 10434/ISO 14313
- STEEL VALVES, ASME B16.34
- FACE TO FACE, ASME B16.10
- END FLANGES ASME B16.5
- BUTTWELDING ENDS, ASME B16.25
- INSPECTION AND TEST ,API 598/API 6D

**Design descriptions:**

- PSB,PRESSURE SEAL BONNET
- FLEXIBLE WEDGE, FULLY GUIDED
- CHOICE OF SOLID OR SPLIT WEDGE
- RENEWABLE SEAT RINGS
- FORGED T-HEAD STEM
- RISING STEM AND NON-RISING HANDWHEEL
- FLANGED OR BUTTWELDING ENDS
- AVAILABLE WITH BG OPERATOR



**Materials of parts**

No	Part Name	Carbon Steel	ASTM Materials 1 $\frac{1}{2}$ Cr- $\frac{1}{2}$ Mo	18Cr-9Ni-2Mo
1	Body	A216-WCB	A217-WC6	A351-CF8M
2	Yoke	A216-WCB	A217-WC6	A351-CF8M
3	Wedge	A216-WCB+HF	A217-WC6+HF	A351-CF8M+HF
4	Stem	A182-F6a	CR-MO-V	A182-316
5	Seat Ring	A105+HF	A182-F11+HF	A240-316+HF
6	Bonnet	A105	A182-F11	A240-316
7	Bonnet Gasket	Steel Ring	304SS RING	316SS RING
8	Adapter Ring	Carbon Steel	A276-420	A276-316
9	Retainer	Carbon Steel	A276-420	A276-316
10	Yoke Cap	Carbon Steel	Alloy Steel	Stainless Steel
11	Bonnet Stud	A193-B7	A193-B16	A193-B8M
12	Bonnet Stud Nut	A194-2H	A194-7	A194-8M
13	Packing	Graphite		
14	Gland	A276-420	A276-304	A276-316L
15	Gland Flange	A216-WCB	A217-WC6	A351-CF8M
16	Eyebolt Pin	Carbon Steel	A276-420	A276-316
17	Eyebolt	CarbonSteel	A193-B7	A193-B8
18	Eyebolt Nut	Carbon Steel	A194-2H	A194-8
19	Grease Fitting	Brass+Steel		
20	Yokesleeve	Aluminum-Bronze <sup>2)</sup>		
21	Yokesleeve Jam Nut	CarbonSteel		Stainless Steel
22	Handwheel	Malleable Iron		
23	Handwheel Nut	Carbon steel		

Note: 1)Graphite optional  
2)Ductile Ni-resist optional  
3)Wedge and seat ring may either be solid facing material or a base material equal to or better than the body/bonnet material with facing as shown.

**FIG.VK734 Dimensional datas of ANSI Pressure Seal Gate Valve Class 900LB**

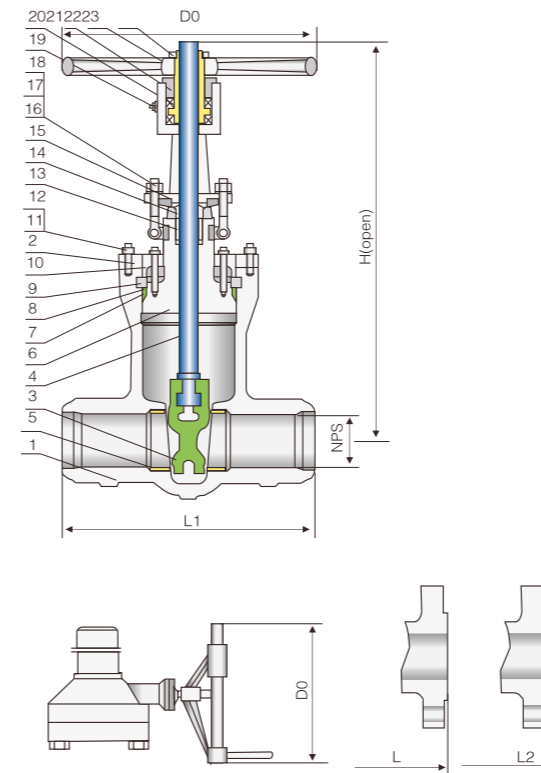
NPS DN	2	2½	3	4	6	8	10	12	14	16	in
	50	65	80	100	150	200	250	300	350	400	mm
<b>ANSI Class 900Lb</b>											
L1 (BW)	8.50	10.00	12.00	14.00	20.00	26.00	31.00	36.00	39.00	43.00	in
	216	254	305	356	508	660	787	914	991	1092	mm
L (RF)	14.50	165.50	15.00	18.00	24.00	29.00	33.00	38.00	40.50	44.50	in
	368	419	381	457	610	737	838	965	1029	1130	mm
L2 (RTJ)	14.62	16.62	15.12	18.12	24.12	29.12	33.12	38.12	40.88	44.88	in
	371	422	384	460	613	740	841	968	1038	1140	mm
H (open)	17.62	17.62	19.5	22.88	32.62	67362	45.5	53.12	59	70.5	in
	448	448	495	580	830	955	1165	1350	1500	1790	mm
D0	14	14	14	14	18	24	28	34	34	34	in
	350	350	350	350	450	600	700	850	850	850	mm
WT(kg)	39	39	48	69	158	289	482	710	998	1390	BW
	69	69	72	110	253	430	710	1025	1452	1960	RF/RTJ

**Applicable Standards:**

- STEEL GATE VALVES, API 600/API 6D
- STEEL GATE VALVES, ISO 10434/ISO 14313
- STEEL VALVES, ASME B16.34
- FACE TO FACE, ASME B16.10
- END FLANGES ASME B16.5
- BUTTWELDING ENDS, ASME B16.25
- INSPECTION AND TEST ,API 598/API 6D

**Design descriptions:**

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- AVAILABLE WITH BG OPERATOR



**Materials of parts**

No	Part Name	Carbon Steel	ASTM Materials 1 $\frac{1}{2}$ Cr- $\frac{1}{2}$ Mo	18Cr-9Ni-2Mo
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2	Yoke	A216-WCB	A217-WC6	A351-CF8M
3	Wedge	A216-WCB+HF	A217-WC6+HF	A351-CF8M+HF
4	Stem	A182-F6a	CR-MO-V	A182-316
5	Seat Ring	A105+HF	A182-F11+HF	A240-316+HF
6	Bonnet	A105	A182-F11	A240-316
7	Bonnet Gasket	Steel Ring	304SS RING	316SS RING
8	Adapter Ring	Carbon Steel	A276-420	A276-316
9	Retainer	Carbon Steel	A276-420	A276-316
10	Yoke Cap	Carbon Steel	Alloy Steel	Stainless Steel
11	Bonnet Stud	A193-B7	A193-B16	A193-B8M
12	Bonnet Stud Nut	A194-2H	A194-7	A194-8M
13	Packing	Graphite		
14	Gland	A276-420	A276-304	A276-316L
15	Gland Flange	A216-WCB	A217-WC6	A351-CF8M
16	Eyebolt Pin	Carbon Steel	A276-420	A276-316
17	Eyebolt	CarbonSteel	A193-B7	A193-B8
18	Eyebolt Nut	Carbon Steel	A194-2H	A194-8
19	Grease Fitting	Brass+Steel		
20	Yokesleeve	Aluminum-Bronze <sup>2)</sup>		
21	Yokesleeve Jam Nut	CarbonSteel		Stainless Steel
22	Handwheel	Malleable Iron		
23	Handwheel Nut	Carbon steel		

Note: 1)Graphite optional  
2)Ductile Ni-resist optional  
3)Wedge and seat ring may either be solid facing material or a base material equal to or better than the body/bonnet material with facing as shown.

**FIG.VK735/6 Dimensional datas of ANSI Pressure Seal Gate Valve Class 1500/2500LB**

NPS DN	2	2½	3	4	6	8	10	12	14	16	2	2½	3	4	6	8	10	12	14	16	in	
	50	65	80	100	150	200	250	300	350	400	50	65	80	100	150	200	250	300	350	400	400	mm
<b>ANSI Class 1500Lb</b>																						
L1 (BW)	8.50	10.00	12.00	16.00	22.00	28.00	34.00	39.00	42.00	47.00	11.00	13.00	14.50	18.00	24.00	30.00	36.00	41.00	-	-	-	in
	216	254	305	406	559	711	864	991	1067	1194	279	330	368	457	610	762	914	1041	-	-	-	mm
L (RF)	14.50	16.50	18.50	21.50	27.75	32.75	39.00	44.50	49.50	54.050	17.75	20.00	22.75	26.50	36.00	40.25	50.00	56.00	-	-	-	in
	368	419	470	546	705	832	991	1130	1257	1384	451	508	578	673	914	1022	1270	1422	-	-	-	mm
L2 (RTJ)	15.50	16.62	18.62	21.62	28.00	33.12	39.38	45.12	50.25	55.38	17.88	20.50	23.00	26.88	36.50	40.88	50.88	56.88	-	-	-	in
	371	422	473	549	711	841	1000	1146	1276	1407	454	514	584	683	927	1038	1292	1445	-	-	-	mm
H (open)	17.62	17.62	21.62	25.25	33.5	38.62	46.5	62.25	70.5	78	22.5	22.5	25.62	30	36.62	41.38	44.88	60.25	-	-	-	in
	448	448	550	640	850	980	1180	1580	1790	1980	570	570	650	760	930	1050	1140	1530	-	-	-	mm
D0	14	14	14	18	24	28	34	34	34	34	14	14	18	24	28	34	34	34	-	-	-	in
	350	350	350	450	600	700	850	850	850	850	350	350	450	600	700	850	850	850	-	-	-	mm
WT(kg)	45	45	55	77	175	323	540	795	1115	1556	110	110	150	175	380	575	980	1570	-	-	-	BW
	80	80	95	123	283	481	795	1148	1626	2195	165	195	235	316	635	910	1780	2680	-	-	-	RF/RTJ