

AUTOMA Cast Steel Bolted Bonnet Gate Valves

Design

cast steel gate valve has been designed to conform to API600,BS1414, and ASME B16.34.

Wall thickness dimensions comply with API600.

Face to face, end to end, and center to face dimensions of flanged and butt welded valves are in accordance with ASME B16.10 BS 2080,and ISO 5752.

End flange dimension conform to ASME B16.5 for sizes NPS 24 and smaller, ASME B16.47 series A for sizes NPS 26 and larger.

BW end dimension conform to ASME B16.25.

Inspection and test are in accordance with API598 and BS EN 12266

Body And Bonnet

- Castings are precisely machined.

The gasket contacting surface is smooth finish that has a roughness between Ra 3.2 and 6.3 micrometer(125–250microinch).

The surface roughness of gasket grooves of ring joint faces do not exceed 63 microinch.

Body seat construction of ARITA cast steel valves has three types: threaded seat ring, welded seat ring and integral seat ring.

Provided with bosses for optional by-passes or drains.

Stem

- Non-rotating stem with precision Acme threads and burnished finish. Double Acme for faster operation.

All wedge gate valves are provided with upset forged T-head stems.

16 to 32 RMS stem surface finish, straightness and roundness are precisely controlled according to ARITA design and Manufacturing standards.

Stuffing Box

- Maximum 125 RMS surface finish. Cylindricity and verticality are precisely controlled according to ARITA design and manufacturing Standards.

Optional lantern rings and grease injectors are available.

Gland And Packing

- Gland has a two-piece construction for easy alignment.

Middle rings die-formed 100% laminated flexible graphite rings, top and bottom rings lattice braided graphite fiber with corrosion inhibitor.

Bonnet Gasket

- Class 150: Jacketed graphite with stainless steel.

Class 300 Class 600: Jacketed graphite with stainless steel or Spiral wound graphite with stainless steel.

Class 900 and over: Ring joint metal gasket.

Bonnet Bolting

- Coarse thread series for bolt sizes 1 inch and smaller,8-thread series for bolt sizes 1 1/8 inch and larger, both conform to Class 2A/2B tolerances.

Operators

- Gate valves normally are to be supplied to complete with the suitable hand wheel.

An available with gear, electric motor actuators, or cylinder actuators for remote operation.

All valve with hand-wheels operator, including those on gear operators,be marked "open" or "close" with an arrow indicating the direction of rotation.

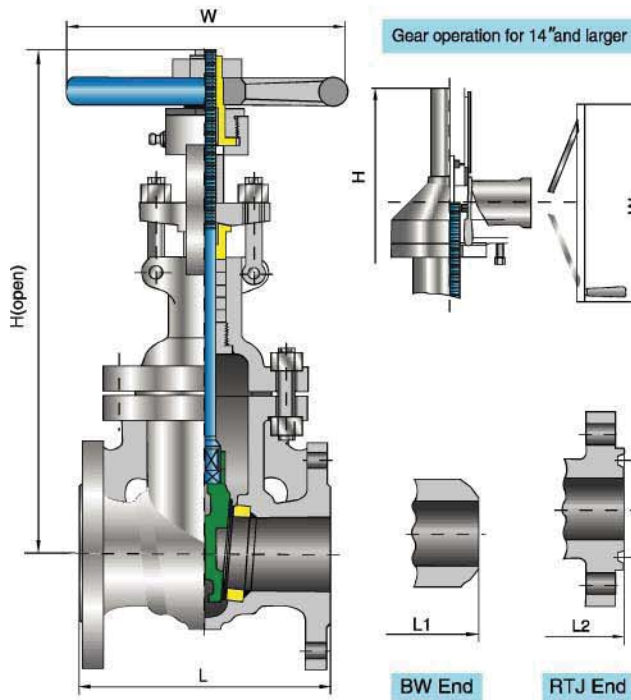
Under maximum differential pressure,maximum allowable Rim Pull is 350N.



AUTOMA Cast Steel Bolted Bonnet Gate Valves

Class 150

Bolted Bonnet, Outside Screw And Yoke, Rising Stem, Non-rising Handwheel, Flexible Wedge.



Parts List

PART	MATERIALS		
Body	ASTM A216 WCB	ASTM A351 CF8	ASTM A351 CF8M
Seat ring	A105+STL	ASTM A351 CF8	ASTM A351 CF8M
Wedge	WCB+13Cr	ASTM A351 CF8	ASTM A351 CF8M
Stem	ASTM A182 F6a	ASTM A182 F304	ASTM A182 F316
Back seat	ASTM A182 F6a	ASTM A182 F304	ASTM A182 F316
Packing	Graphite	Graphite	Graphite
Gland	ASTM A182 F6a	ASTM A182 F304	ASTM A182 F316
Gland eyebolt	ASTM A193 B7	ASTM A193 B8	ASTM A193 B8M
Eyebolt nut	ASTM A194 2H	ASTM A194 8	ASTM A194 8M
Eyebolt pin	ASTM A36	304 S.S.	316 S.S.
Gland flange	ASTM A216 WCB	ASTM A351 CF8	ASTM A351 CF8M
Bonnet bolt	ASTM A193 B7	ASTM A193 B8	ASTM A193 B8M
Bonnet nut	ASTM A194 2H	ASTM A194 8	ASTM A194 8M
Gasket	SS304+Graphite	SS304+Graphite	SS316+Graphite
Bonnet	ASTM A216 WCB	ASTM A351 CF8	ASTM A351 CF8M
Nipple	Carbon steel	Carbon steel	Carbon steel
Stem nut	ASTM A439 D2	ASTM A439 D2	ASTM A439 D2
Yoke	ASTM A216 WCB	ASTM A216 WCB	ASTM A216 WCB
Handwheel	Ductile Iron	Ductile Iron	Ductile Iron
Handwheel nut	Carbon steel	Carbon steel	Carbon steel

Features

- Face to face and end to end dimension: 36" and smaller to ASME B16.10
- Flange dimension: 24" and smaller to ASME B16.5, 28" and larger to ASME B16.47 series A
- Shell wall thickness: 28" and smaller to API600, 28" and larger to manufacturer's standard
- B.W. end to ASME B16.25
- 8" and smaller valves have a one-piece bonnet and yoke design
- 10" and larger valves have a two-piece bonnet and yoke design.

Dimensions And Weights

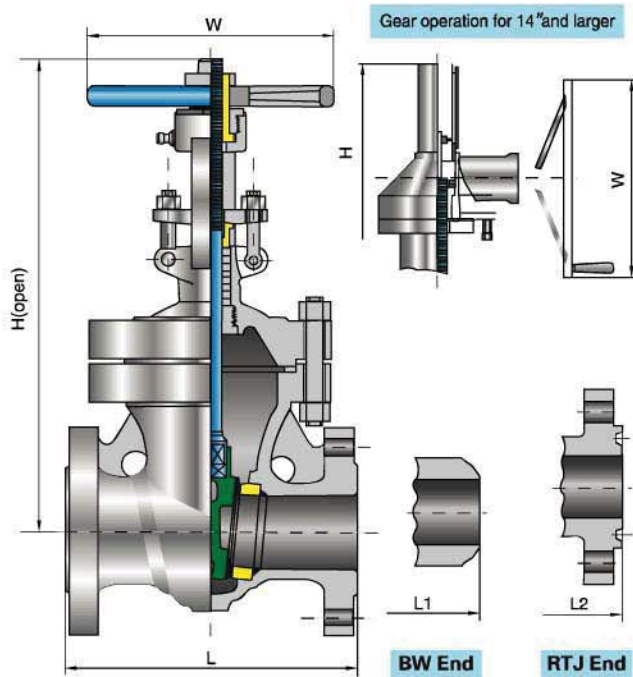
Valve Size	in.	1 1/2	2	2 1/2	3	4	5	6	8	10	12	14	16	18	20	24	28	30	32	36
	mm	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	750	800	900
L (RF)	in.	6.5	7	7.5	8	9	10	10.5	11.5	13	14	15	16	17	18	20	24	24	26	28
	mm	165	178	190	203	229	254	267	292	330	356	381	406	432	457	508	610	610	660	711
L1 (BW)	in.	6.5	8.5	9.5	11.13	12	15	15.88	16.5	18	19.75	22.5	24	26	28	32	36	36	38	40
	mm	165	216	241	283	305	381	403	419	457	502	572	610	660	711	813	914	914	965	1016
L2 (RTJ)	in.	7.0	7.5	8	8.5	9.5	10.5	11	12	13.5	14.5	15.5	16.5	17.5	18.5	20.5	24.5	24.5	26.5	28.5
	mm	178	191	203	216	242	267	279	305	343	368	394	419	445	470	521	622	622	673	724
H (open)	in.	15.7	16.13	18.56	20.94	24.13	27.94	31.75	39	46.69	55.31	63.56	71.31	78.19	87	106.25	119.31	130.56	137.25	150.56
	mm	392	409	472	532	612	710	806	990	1186	1405	1615	1811	1986	2210	2698	3030	3317	3487	3825
W	in.	7.86	7.86	7.86	9.86	9.86	11.81	11.81	13.75	17.69	19.69	18.13	18.13	18.13	24	24	24	24	24	30
	mm	200	200	200	250	250	300	300	350	450	500	460	460	460	610	610	610	610	610	760
WT (kg)	RF	18.5	20	30	36	53	71	85	136	220	323	387	553	660	810	1250	1931	2380	2490	3600
	BW	15.5	17	26	29	46	66	77	116	202	294	350	506	575	720	1130	1765	2028	2280	3080

AUTOMA Cast Steel Bolted Bonnet Gate Valves

Class 300

Bolted Bonnet, Outside Screw And Yoke, Rising Stem, Non-rising Handwheel, Flexible Wedge.

Parts List



PART	MATERIALS		
Body	ASTM A216 WCB	ASTM A351 CF8	ASTM A351 CF8M
Seat ring	A105+STL	ASTM A351 CF8	ASTM A351 CF8M
Wedge	WCB+13Cr	ASTM A351 CF8	ASTM A351 CF8M
Stem	ASTM A182 F6a	ASTM A182 F304	ASTM A182 F316
Back seat	ASTM A182 F6a	ASTM A182 F304	ASTM A182 F316
Packing	Graphite	Graphite	Graphite
Gland	ASTM A182 F6a	ASTM A182 F304	ASTM A182 F316
Gland eyebolt	ASTM A193 B7	ASTM A193 B8	ASTM A193 B8M
Eyebolt nut	ASTM A194 2H	ASTM A194 8	ASTM A194 8M
Eyebolt pin	ASTM A36	304 S.S.	316 S.S.
Gland flange	ASTM A216 WCB	ASTM A351 CF8	ASTM A351 CF8M
Bonnet bolt	ASTM A193 B7	ASTM A193 B8	ASTM A193 B8M
Bonnet nut	ASTM A194 2H	ASTM A194 8	ASTM A194 8M
Gasket	SS304+Graphite	SS304+Graphite	SS316+Graphite
Bonnet	ASTM A216 WCB	ASTM A351 CF8	ASTM A351 CF8M
Nipple	Carbon steel	Carbon steel	Carbon steel
Stem nut	ASTM A439 D2	ASTM A439 D2	ASTM A439 D2
Yoke	ASTM A216 WCB	ASTM A216 WCB	ASTM A216 WCB
Handwheel	Ductile Iron	Ductile Iron	Ductile Iron
Handwheel nut	Carbon steel	Carbon steel	Carbon steel

Features

- Face to face and end to end dimension: 36" and smaller to ASME B16.10
- Flange dimension: 24" and smaller to ASME B16.5, 28" and larger to ASME B16.47 series A
- Shell wall thickness: 28" and smaller to API600, 28" and larger to manufacturer's standard
- B.W. end to ASME B16.25
- 8" and smaller valves have a one-piece bonnet and yoke design
- 10" and larger valves have a two-piece bonnet and yoke design.

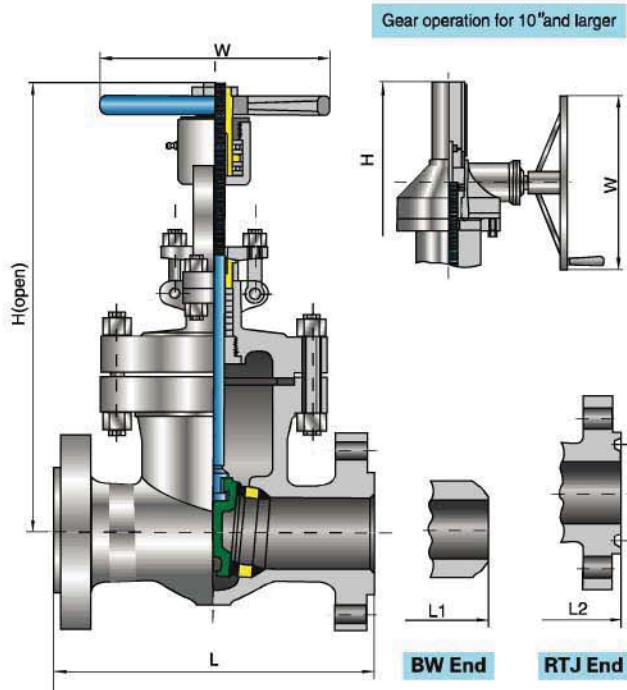
Dimensions And Weights

Valve Size	in.	1 1/2	2	2 1/2	3	4	5	6	8	10	12	14	16	18	20	24	28	30	32	36
	mm	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	750	800	900
L-L1 (RF-BW)	in.	7.5	8.5	9.5	11.12	12	15	15.88	16.5	18	19.75	30	33	36	39	45	54	55	61.12	68
	mm	190	216	241	283	305	381	403	419	457	502	762	838	914	991	1143	1372	1397	1553	1727
L2 (RTJ)	in.	8.0	9.12	10.12	11.74	12.62	15.62	16.5	17.12	18.62	20.37	30.62	33.62	36.62	39.75	45.88	54	56	61.12	69.12
	mm	203	232	257	298	321	397	419	435	473	518	778	854	930	1010	1165	1372	1422	1553	1756
H (open)	in.	14.7	15.75	18.75	21.38	25.63	30.31	34.63	40.81	50.19	56.63	65	72.44	79.94	88.19	114.19	122	139.8	152	169.75
	mm	374	400	477	543	650	770	880	1037	1275	1438	1650	1840	2030	2240	2900	3100	3540	3860	4312
W	in.	7.88	7.88	9.88	9.88	11.81	11.81	13.75	17.69	19.69	22.06	18.13	18.13	24	24	24	24	30	30	30
	mm	200	200	250	250	300	300	350	450	500	560	460	460	610	610	610	610	760	760	760
WT (kg)	RF	26	30	39	55	83	92	137	240	333	536	699	1010	1205	1720	2800	3150	3786	4210	6850
	BW	22	26	34	47	68	77	118	195	271	432	595	848	1025	1460	2294	2870	3220	3675	4990

AUTOMA Cast Steel Bolted Bonnet Gate Valves

Class 600

Bolted Bonnet, Outside Screw And Yoke, Rising Stem, Non-rising Handwheel, Flexible Wedge.



Parts List

PART	MATERIALS		
	ASTM A216 WCB	ASTM A351 CF8	ASTM A351 CF8M
Body	ASTM A216 WCB	ASTM A351 CF8	ASTM A351 CF8M
Seat ring	A105+STL	ASTM A351 CF8	ASTM A351 CF8M
Wedge	WCB+13Cr	ASTM A351 CF8	ASTM A351 CF8M
Stem	ASTM A182 F6a	ASTM A182 F304	ASTM A182 F316
Back seat	ASTM A182 F6a	ASTM A182 F304	ASTM A182 F316
Packing	Graphite	Graphite	Graphite
Gland	ASTM A182 F6a	ASTM A182 F304	ASTM A182 F316
Gland eyebolt	ASTM A193 B7	ASTM A193 B8	ASTM A193 B8M
Eyebolt nut	ASTM A194 2H	ASTM A194 8	ASTM A194 8M
Eyebolt pin	ASTM A36	304 S.S.	316 S.S.
Gland flange	ASTM A216 WCB	ASTM A351 CF8	ASTM A351 CF8M
Bonnet bolt	ASTM A193 B7	ASTM A193 B8	ASTM A193 B8M
Bonnet nut	ASTM A194 2H	ASTM A194 8	ASTM A194 8M
Gasket	SS304+Graphite	SS304+Graphite	SS316+Graphite
Bonnet	ASTM A216 WCB	ASTM A351 CF8	ASTM A351 CF8M
Nipple	Carbon steel	Carbon steel	Carbon steel
Stem nut	ASTM A439 D2	ASTM A439 D2	ASTM A439 D2
Yoke	ASTM A216 WCB	ASTM A216 WCB	ASTM A216 WCB
Handwheel	Ductile Iron	Ductile Iron	Ductile Iron
Handwheel nut	Carbon steel	Carbon steel	Carbon steel
Bearing	Steel	Steel	Steel

Features

- Face to face and end to end dimension: ASME B16.10
- Flange dimension: 24" and smaller to ASME B16.5
- Shell wall thickness: 24" and smaller to API 600
- B.W.end to ASME B16.25
- 6" and smaller valves have a one-piece bonnet and yoke design
- 8" and larger valves have a two-piece bonnet and yoke design.

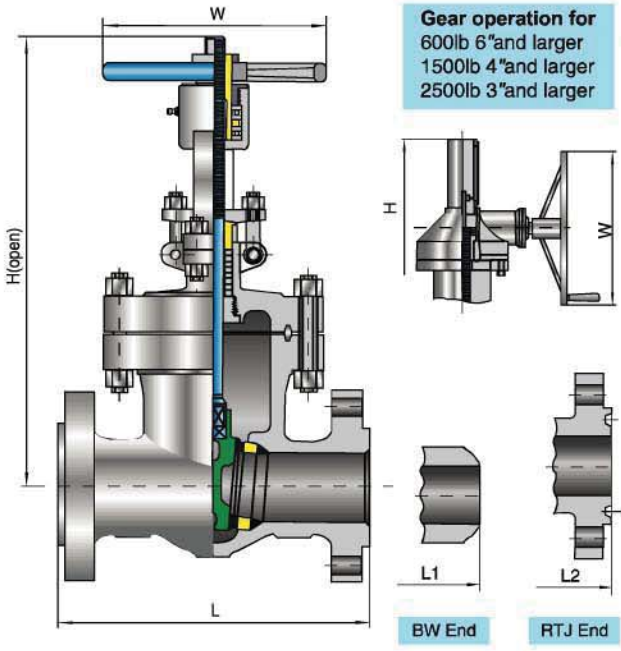
Dimensions And Weights

Valve Size	in.	2	2 1/2	3	4	5	6	8	10	12	14	16	18	20	24
	mm	50	65	80	100	125	150	200	250	300	350	400	450	500	600
L-L1 (RF-BW)	in.	11.5	13	14	17	20	22	26	31	33	35	39	43	47	55
	mm	292	330	356	432	508	559	660	787	838	889	991	1092	1194	1397
L2 (RTJ)	in.	11.62	13.12	14.12	17.12	20.12	22.12	26.12	31.12	33.12	35.12	39.12	43.12	47.25	55.38
	mm	295	333	359	435	511	562	663	790	841	892	994	1095	1200	1407
H (open)	in.	18.63	21.75	23.38	28.06	30.3	38.19	44.19	52.38	59.81	68.13	72.75	90.13	98.81	119
	mm	474	553	593	713	770	970	1122	1330	1519	1730	1835	2290	2510	3022
W	in.	9.88	9.88	11.81	13.75	15.7	19.69	22.06	28.38	24	24	24	24	30	30
	mm	250	250	300	350	400	500	560	720	610	610	610	610	760	760
WT (kg)	RF	41	58	88	131	7.56	253	413	623	784	1288	1820	2150	2540	4080
	BW	35	50	68	104	192	208	328	496	637	1120	1448	1828	2201	3360

AUTOMA Cast Steel Bolted Bonnet Gate Valves Class 900/1500/2500

Bolted Bonnet, Outside Screw And Yoke, Rising Stem, Non-rising Handwheel, Flexible Wedge.

Parts List



PART	MATERIALS		
Body	ASTM A216 WCB	ASTM A351 CF8	ASTM A351 CF8M
Seat ring	A105+STL	ASTM A351 CF8	ASTM A351 CF8M
Wedge	WCB+13Cr	ASTM A351 CF8	ASTM A351 CF8M
Stem	ASTM A182 F6a	ASTM A182 F304	ASTM A182 F316
Back seat	ASTM A182 F6a	ASTM A182 F304	ASTM A182 F316
Packing	Graphite	Graphite	Graphite
Gland	ASTM A182 F6a	ASTM A182 F304	ASTM A182 F316
Gland eyebolt	ASTM A193 B7	ASTM A193 B8	ASTM A193 B8M
Eyebolt nut	ASTM A194 2H	ASTM A194 8	ASTM A194 8M
Eyebolt pin	ASTM A36	304 S.S.	316 S.S.
Gland flange	ASTM A216 WCB	ASTM A351 CF8	ASTM A351 CF8M
Bonnet bolt	ASTM A193 B7	ASTM A193 B8	ASTM A193 B8M
Bonnet nut	ASTM A194 2H	ASTM A194 8	ASTM A194 8M
Gasket	SS304+Graphite	SS304+Graphite	SS316+Graphite
Bonnet	ASTM A216 WCB	ASTM A351 CF8	ASTM A351 CF8M
Nipple	Carbon steel	Carbon steel	Carbon steel
Stem nut	ASTM A439 D2	ASTM A439 D2	ASTM A439 D2
Yoke	ASTM A216 WCB	ASTM A216 WCB	ASTM A216 WCB
Handwheel	Ductile Iron	Ductile Iron	Ductile Iron
Handwheel nut	Carbon steel	Carbon steel	Carbon steel
Bearing	Steel	Steel	Steel

Features

- Face to face and end to end dimension: ASME B16.10
- Flange dimension: ASME B16.5
- Shell wall thickness: API 600
- B.W. end to ASME B16.25
- 4" and smaller valves have a one-piece bonnet and yoke design
- 6" and larger valves have a two-piece bonnet and yoke design.

Dimensions And Weights

	Valve Size	in. mm	2	2 1/2	3	4	6	8	10	12
			50	65	80	100	150	200	250	300
900lb	L-L1 (RF-BW)	in. mm	14.5 368	16.5 419	15 381	18 457	24 610	29 737	33 838	38 965
	L2 (RTJ)	in. mm	14.62 371	16.62 422	15.12 384	18.12 460	24.12 613	29.12 740	33.12 841	38.12 968
	H (open)	in. mm	21.56 547	27.56 700	25.5 715	28.69 729	41 1041	49.63 1280	62.63 1590	70.69 1795
	W	in. mm	11.81 300	14 355	15.75 400	17.69 450	22.06 560	24 610	24 610	24 610
	WT (kg)	RF BW	90 82	110 93	123 108	148 122	420 359	650 566	1160 980	1700 1450
	1500lb	L-L1 (RF-BW)	in. mm	14.5 368	16.5 419	18.5 470	21.5 546	27.75 705	32.75 832	39 991
L2 (RTJ)		in. mm	14.62 371	16.62 422	18.62 473	21.62 549	28 711	33.13 841	39.38 1000	45.12 1146
H (open)		in. mm	22.63 574	27.56 700	31.75 806	34.94 887	42.5 1079	53.94 1370	59.81 1520	65 1651
W		in. mm	13.75 350	15.75 400	17.75 450	22.06 560	24 610	24 610	30 760	30 760
WT (kg)		RF BW	117 93	175 144	240 185	337 285	680 584	1228 978	2278 1990	3260 2850
2500lb		L-L1 (RF-BW)	in. mm	17.75 451	20 508	22.75 578	26.5 673	36 914	40.25 1022	50 1270
	L2 (RTJ)	in. mm	17.87 454	20.25 514	23 584	26.88 683	36.5 927	40.87 1038	50.88 1292	—
	H (open)	in. mm	27.56 700	29.5 750	34.63 887	42.5 1079	53.94 1370	60.25 1530	80.5 2045	—
	W	in. mm	13.75 350	17.75 450	22.06 560	28.38 720	18.13 460	24 610	30 760	—
	WT (kg)	RF BW	132 99	206 155	256 192	498 390	1550 1230	2395 1980	4460 3700	—