

Newco®

Cast Steel Bolted Bonnet Gate Valves

Manufactured by Newmans™

Sizes: 2" thru 48" • Pressure Class: 150 thru 1500



Typical Newco Cast Steel Bolted Bonnet Gate Valve Expanded View

1. Body: Newco cast steel bodies provide low resistance flow and optimum strength and performance.

2. Yoke & Bonnet: Newco bonnet assemblies are built to the same standards as the bodies. Larger size gate valves utilize a multi-piece bonnet design.

3. Grease Fitting: The grease fitting allows for easy stem lubrication.

4. Stem: The stem is precision machined and inserts into the horizontal channel in the disc.

5. Wedge: Newmans 1-piece flex wedge is machined to the tightest tolerances to ensure trouble free shutoff and cycling.

6. Back Seat Bushing: The back seat, when engaged with the stem head, provides a stable shutoff to the stuffing box which isolates the packing from flow exposure.

7. Gland: Compresses the packing to create a stem seal above the back seat, between the bonnet and stem.

8. Gland Flange: Applies pressure to the gland for accurate packing adjustments.

9. & 10. Gland Bolts & Nuts: The gland bolt and nut allows for easy adjustments for packing compression.

11. Gland Bolt Pin: The gland bolt pin secures the gland bolts to the yoke & bonnet.

12. Packing: The packing creates a seal above the back seat, between the bonnet and stem.

13. Stuffing Box: The stuffing box contains the packing.

14. Stem Nut: The stem nut provides a precision guide for proper stem alignment.

15. Yoke Bushing: The retaining nut secures the stem nut to the bonnet assembly.

16. Handwheel: The handwheel cycles the valve.

17. Handwheel Nut: The handwheel nut secures the handwheel to the bonnet assembly.

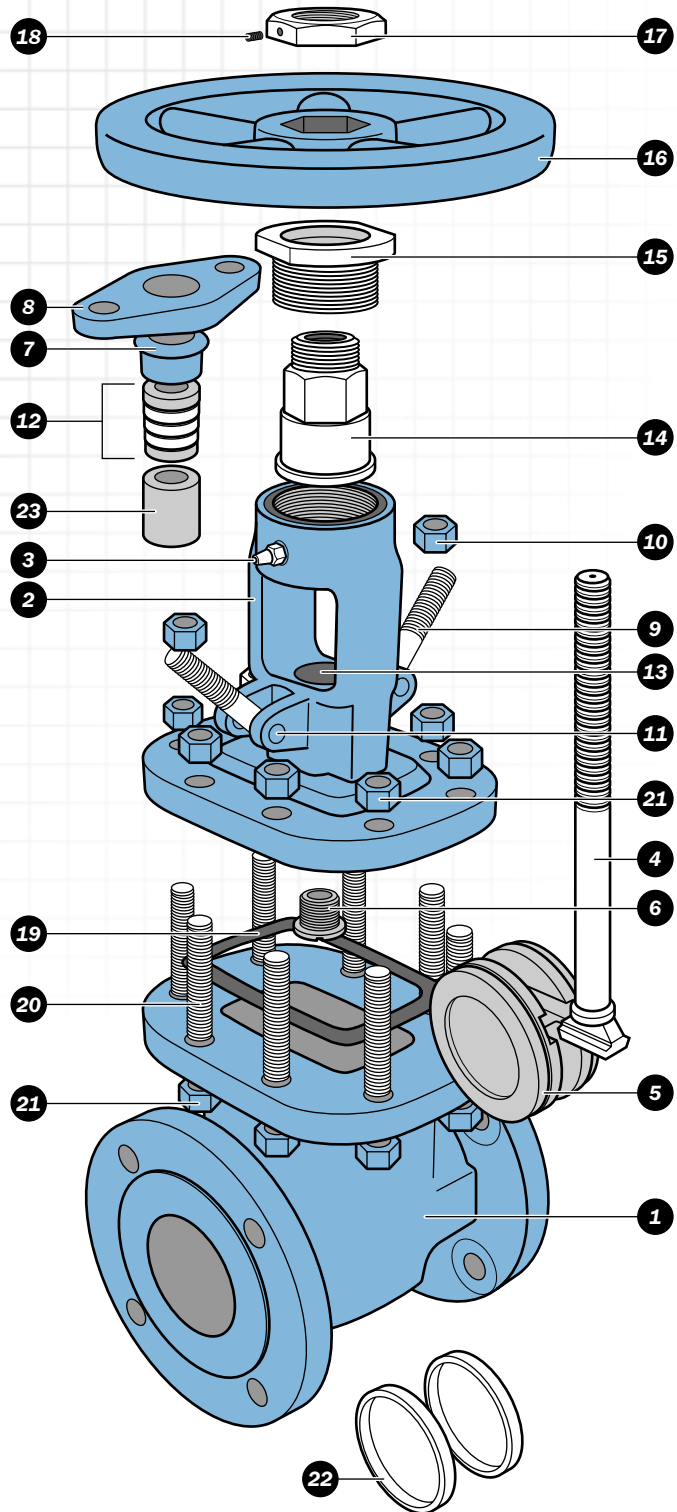
18. Set Screw: The set screw prevents handwheel nut loosening.

19. Bonnet Gasket: The bonnet gasket creates a leakproof seal between the bonnet and body.

20. & 21. Bonnet Studs & Nuts: The bonnet studs and nuts secure the bonnet to the body.

22. Seat Rings: To ensure a stable shutoff, seat rings are aligned and seal-welded into the valve, then precision ground for optimal seating.

23. Spacer Ring: Assists the packing rings in creating a seal above the back seat, between the bonnet and stem.



Cast Steel Bolted Bonnet Gates

Styles: CB2, CB3, & CB4/2

Class 150 - Sizes: 2" thru 48"

Pressure Class Range: 150 thru 1500

Design and Manufacturing Standards

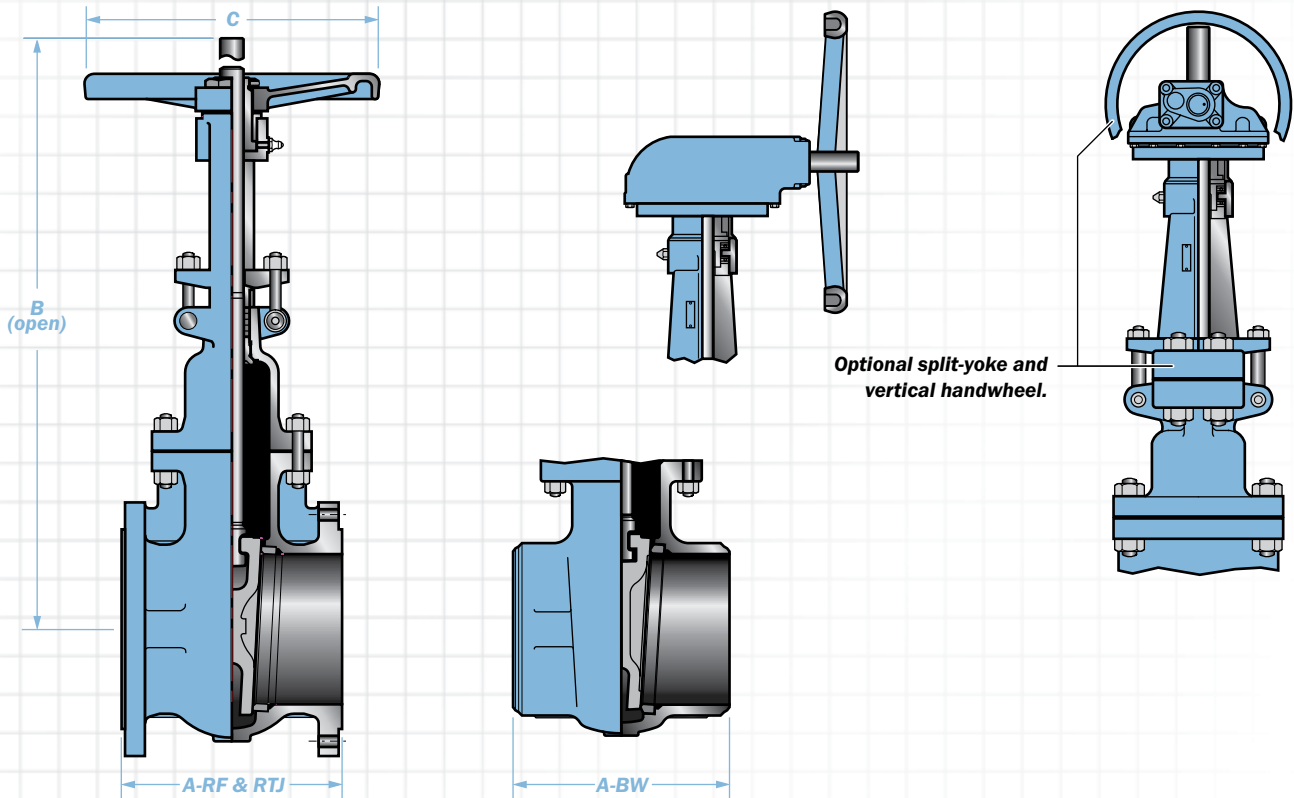
Valve Design: ASME B16.34/API 600

Flange Dimensions: ASME B16.5, B16.47 (Series A)

Face-to-Face Dimensions: ASME B16.10

Tested in Accordance with: API 598

Recommended Spare Parts*



** = Gear operated is standard; Handwheel available upon request.

Typical Bill of Materials (See page 5 for available materials.)

Component	CB2	CB3	CB4/2	Component	CB2	CB3	CB4/2
Body	ASTM A216-WCB			Gland Flange	ASTM A216-WCB		
Seat Rings	ASTM A105/HF			Gland Bolt Pins	ASTM A36		
Wedge 2" - 3"	ASTM A276-410	ASTM A216-WCB/HF	ASTM A351-CF8M/A276-316	Gland Bolts	ASTM A307-B		
Wedge 4" & larger	ASTM A216-WCB w/13% Chrome		ASTM A276-316	Gland Nuts	ASTM A194-2H		
Stem	ASTM A182-F6a		ASTM A182-316	Nameplate Rivets	Stainless Steel - Commercial		
Yoke & Bonnet	ASTM A216-WCB			Grease Fitting	Carbon Steel - Commercial		
*Bonnet Gasket	Multilayered Corrugated 316 w/Graphite			Stem Nut	ASTM A439-D2		
Bonnet Nuts	ASTM A194-2H	ASTM A194-2HM		Yoke Bushing	ASTM A536 (65-45-12)		
Bonnet Studs	ASTM A193-B7	ASTM A193-B7M		Handwheel	ASTM A536 (65-45-12)		
Back Seat Bushing	ASTM A276-410	ASTM A276-316		Handwheel Nut	ASTM A536 (65-45-12)		
*Packing	Graphite w/Braided Carbon Fiber End Rings			Set Screw	ASTM A193-B6		
Gland	ASTM A276-410	ASTM A276-316		Spacer Ring	N/A		

Class 150

Size	nps	2	2.5	3	4	5	6	8	10	12	14	16	18	20	24	30	36	42	48
	dn	50	65	80	100	125	150	200	250	300	350	400	450	500	600	750	900	1050	1200
A-RF	in	7.0	7.5	8.0	9.0	10.0	10.5	11.5	13.0	14.0	15.0	16.0	17.0	18.0	20.0	24.0	28.0	31.0	34.0
	mm	178	191	203	229	254	267	292	330	356	381	406	432	457	508	610	711	813	864
A-BW	in	8.5	9.5	11.1	12.0	15.0	15.9	16.5	18.0	19.8	22.5	24.0	26.0	28.0	32.0	24.0	28.0	43.0	46.0
	mm	216	241	282	305	381	404	419	457	503	572	610	660	711	813	610	711	1092	1168
B	in	14.8	17.1	18.2	22.6	28.1	33.2	38.9	46.4	54.6	63.5	72.4	79.2	86.0	100.8	125.1	153.2	174.4	217.5
	mm	376	434	462	574	714	843	988	1179	1387	1613	1839	2012	2184	2560	3178	3891	4430	5525
C	in	8.0	8.0	8.0	10.0	13.8	14.0	16.0	18.0	20.0	22.0	24.0	27.0	30.0	30.0	35.0	43.0	35.4	35.4
	mm	203	203	203	254	350	356	406	457	508	559	610	686	762	762	889	1092	**900	**900
RF Wt.	lbs	46	56	71	111	163	196	289	449	639	860	1190	1389	1786	2602	4466	4850	10134	15677
	kg	21	25	32	50	74	89	131	204	290	391	541	631	812	1183	2030	1193	4600	8500
BW Wt.	lbs	40	46	58	91	152	180	259	425	584	811	1146	1349	1720	2534	4037	4385	10198	15545
	kg	18	21	26	41	69	82	118	193	265	369	521	613	782	1152	1835	1993	4625	8550

Note: Dimensions: Inches/Millimeters - Weights: Pounds/Kilograms. Larger sizes available on request. Dimensions are subject to change without notice.

Cast Steel Bolted Bonnet Gates

Styles: CB2, CB3, & CB4/2

Class 300 - Sizes: 2" thru 36"

Pressure Class Range: 150 thru 1500

Design and Manufacturing Standards

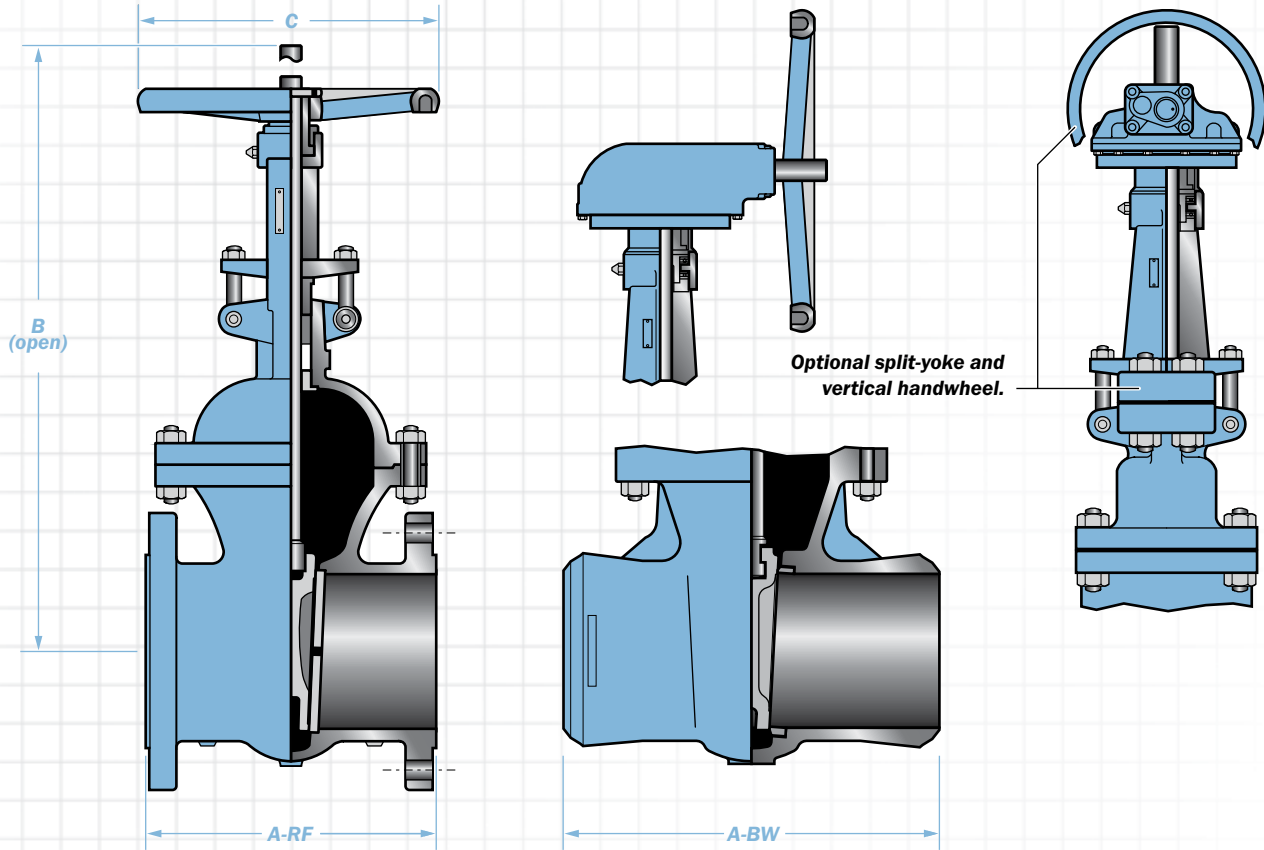
Valve Design: ASME B16.34/API 600

Flange Dimensions: ASME B16.5, B16.47 (Series A)

Face-to-Face Dimensions: ASME B16.10

Tested in Accordance with: API 598

Recommended Spare Parts*



** = Gear operated is standard; Handwheel available upon request.

Typical Bill of Materials (See page 5 for available materials.)

Component	CB2	CB3	CB4/2	Component	CB2	CB3	CB4/2
Body	ASTM A216-WCB			Gland Flange	ASTM A216-WCB		
Seat Rings	ASTM A105/HF			Gland Bolt Pins	ASTM A36		
Wedge 2" - 3"	ASTM A276-410	ASTM A216-WCB/HF	ASTM A351-CF8M/A276-316	Gland Bolts	ASTM A307-B		
Wedge 4" & larger	ASTM A216-WCB w/13% Chrome	ASTM A216-WCB/HF	ASTM A276-316	Gland Nuts	ASTM A194-2H		
Stem	ASTM A182-F6a		ASTM A182-316	Nameplate Rivets	Stainless Steel - Commercial		
Yoke & Bonnet	ASTM A216-WCB			Grease Fitting	Carbon Steel - Commercial		
*Bonnet Gasket	Spiral Wound 316 Stainless Steel/Graphite			Stem Nut	ASTM A439-D2		
Bonnet Nuts	ASTM A194-2H		ASTM A194-2HM	Yoke Bushing	ASTM A536 (65-45-12)		
Bonnet Studs	ASTM A193-B7		ASTM A193-B7M	Handwheel	ASTM A536 (65-45-12)		
Back Seat Bushing	ASTM A276-410		ASTM A276-316	Handwheel Nut	ASTM A536 (65-45-12)		
*Packing	Graphite w/Braided Carbon Fiber End Rings			Set Screw	ASTM A193-B6		
Gland	ASTM A276-410		ASTM A276-316	Spacer Ring	ASTM A276-410		

Class 300

Size	nps	2	2.5	3	4	5	6	8	10	12	14	16	18	20	24	30	36
	dn	50	65	80	100	125	150	200	250	300	350	400	450	500	600	750	900
A-RF	in	8.5	9.5	11.1	12.0	15.0	15.9	16.5	18.0	19.75	30.0	33.0	36.0	39.0	45.0	55.0	68.0
	mm	216	241	282	305	381	404	419	457	502	762	838	914	991	1143	1397	1727
A-BW	in	8.5	9.5	11.1	12.0	15.0	15.9	16.5	18.0	19.75	30.0	33.0	36.0	39.0	45.0	55.0	68.0
	mm	216	241	282	305	381	404	419	457	502	762	838	914	991	1143	1397	1727
B	in	17.2	19.1	20.0	24.0	29.6	33.0	41.1	49.3	57.0	67.0	73.1	82.2	95.5	104.7	136.3	169.8
	mm	437	485	508	610	752	838	1044	1252	1448	1702	1857	2088	2426	2659	3462	4312
C	in	8.0	10.0	10.0	12.0	13.7	16.0	18.0	20.0	22.0	25.2	27.0	27.0	30.0	30.0	31.9	31.9
	mm	203	254	254	305	350	406	457	508	559	640	686	686	762	762	**810	**810
RF Wt.	lbs	64	88	112	175	258	340	542	816	1072	1764	2183	2867	3682	5645	9702	15104
	kg	29	40	51	80	117	155	246	371	487	802	992	1303	1674	2566	4410	6850
BW Wt.	lbs	51	68	86	154	207	269	430	620	871	1323	1830	2381	3109	4873	8350	11003
	kg	23	31	39	70	94	122	195	282	396	601	832	1082	1413	2215	3795	4990

Note: Dimensions: Inches/Millimeters - Weights: Pounds/Kilograms. Larger sizes available on request. Dimensions are subject to change without notice.

Cast Steel Bolted Bonnet Gates

Styles: CB2, CB3, & CB4/2

Class: 600 - Sizes: 2" thru 24"

Pressure Class Range: 150 thru 1500

Design and Manufacturing Standards

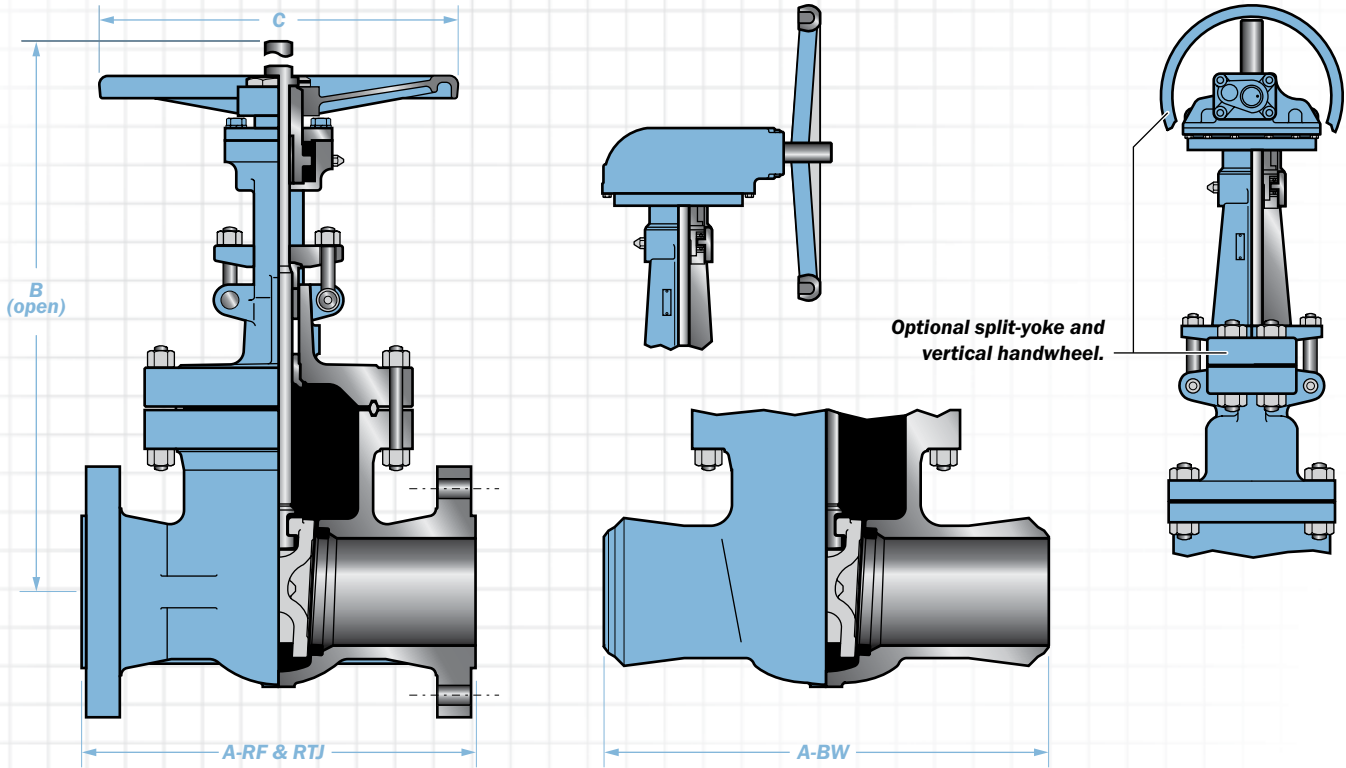
Valve Design: ASME B16.34/API 600

Flange Dimensions: ASME B16.5, B16.47 (Series A)

Face-to-Face Dimensions: ASME B16.10

Tested in Accordance with: API 598

Recommended Spare Parts*



** = Gear operated is standard; Handwheel available upon request.

Typical Bill of Materials (See page 5 for available materials.)

Component	CB2	CB3	CB4/2	Component	CB2	CB3	CB4/2
Body	ASTM A216-WCB			Gland Flange	ASTM A216-WCB		
Seat Rings	ASTM A105/HF			Gland Bolt Pins	ASTM A36		
Wedge 2" - 3"	ASTM A276-410	ASTM A216-WCB/HF	ASTM A351-CF8M/A276-316	Gland Bolts	ASTM A307-B		
Wedge 4" & larger	ASTM A216-WCB w/13% Chrome	ASTM A216-WCB/HF	ASTM A276-316	Gland Nuts	ASTM A194-2H		
Stem	ASTM A182-F6a		ASTM A182-316	Nameplate	Stainless Steel 304		
Yoke & Bonnet	ASTM A216-WCB			Nameplate Rivets	Stainless Steel - Commercial		
*Bonnet Gasket	Soft Steel Ring Joint			Grease Fitting	Carbon Steel - Commercial		
Bonnet Nuts	ASTM A194-2H		ASTM A194-2HM	Stem Nut	ASTM A439-D2		
Bonnet Studs	ASTM A193-B7		ASTM A193-B7M	Yoke Bushing	ASTM A536 (65-45-12)		
Back Seat Bushing	ASTM A276-410		ASTM A276-316	Handwheel	ASTM A536 (65-45-12)		
*Packing	Graphite w/Braided Carbon Fiber End Rings			Handwheel Nut	ASTM A536 (65-45-12)		
Gland	ASTM A276-410		ASTM A276-316	Set Screw	ASTM A193-B6		
				Spacer Ring	ASTM A276-410		

Class 600

Size	nps dn	2	2.5	3	4	5	6	8	10	12	14	16	18	20	24
		50	65	80	100	125	150	200	250	300	350	400	450	500	600
A-RF	in	11.5	13.0	14.0	17.0	20.0	22.0	26.0	31.0	33.0	35.0	39.0	43.0	47.0	55.0
	mm	292	330	356	432	508	559	660	787	838	889	991	1092	1194	1397
A-BW	in	11.5	13.0	14.0	17.0	20.0	22.0	26.0	31.0	33.0	35.0	39.0	43.0	47.0	55.0
	mm	292	330	356	432	508	559	660	787	838	889	991	1092	1194	1397
A-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
	mm	295	333	359	435		562	664	791	841	892	994	1095	1200	1406
B	in	18.3	19.9	21.7	26.9	31.6	36.5	44.0	52.8	61.4	64.8	71.7	79.3	104.8	116.9
	mm	465	505	551	683	803	927	1118	1341	1560	1646	1821	2014	2662	2970
C	in	10.0	10.0	12.0	15.0	18.0	20.0	24.0	27.0	27.0	30.0	35.0	43.0	43.0	31.9
	mm	254	254	305	381	457	508	610	686	686	762	889	1092	1092	**810
RFRTJ	lbs	97	132	176	320	520	680	1150	1715	2440	3150	4415	5010	6853	10337
Wt.	kg	44	60	80	145	236	309	523	780	1109	1432	2007	2277	3108	4688
BW	lbs	79	120	152	270	430	580	1020	1430	1950	2695	3800	5010	5640	8595
	kg	36	55	69	123	195	264	464	650	886	1225	1727	2277	2558	3898

Note: Dimensions: Inches/Millimeters - Weights: Pounds/Kilograms. Larger sizes available on request. Dimensions are subject to change without notice.

Cast Steel Bolted Bonnet Gates

Styles: CB2, CB3, & CB4/2

Class: 900 - Sizes: 2" thru 12"

Pressure Class Range: 150 thru 1500

Design and Manufacturing Standards

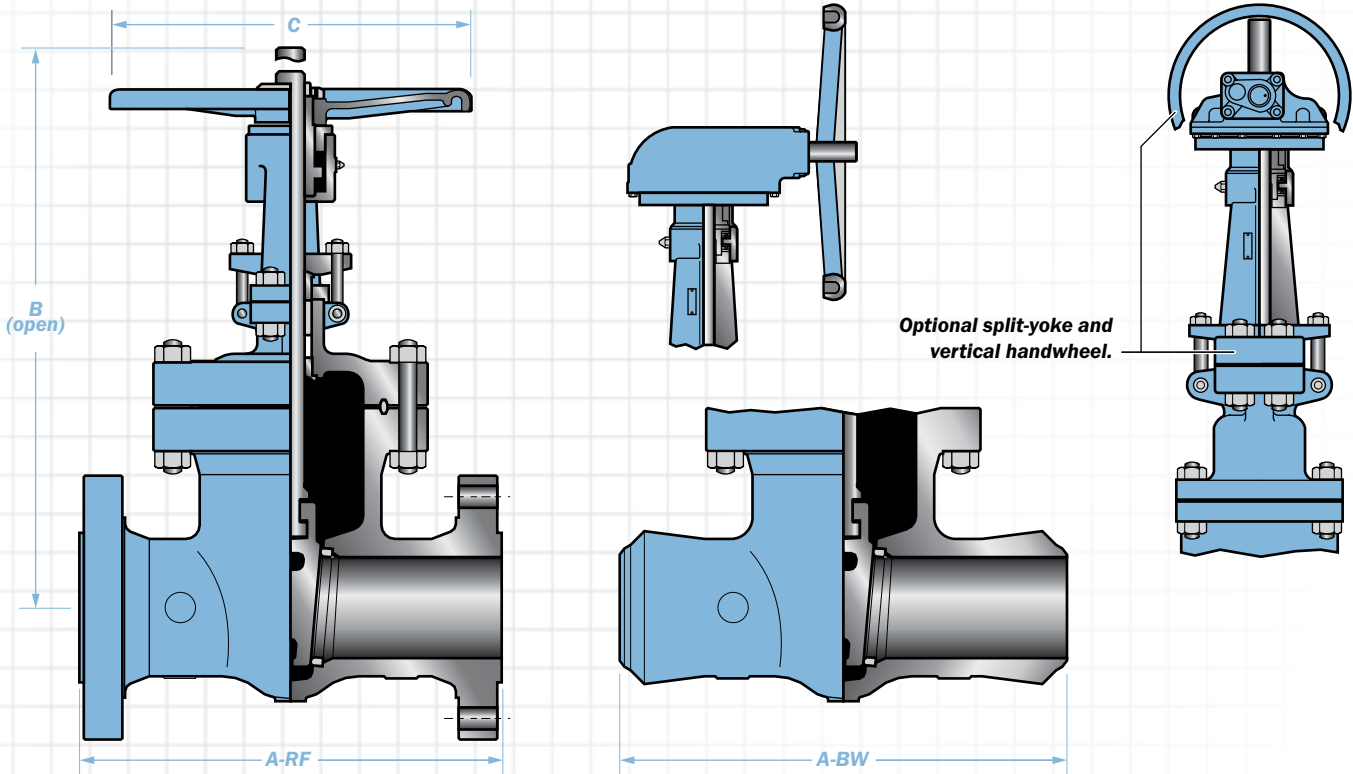
Valve Design: ASME B16.34/API 600

Flange Dimensions: ASME B16.5, B16.47 (Series A)

Face-to-Face Dimensions: ASME B16.10

Tested in Accordance with: API 598

Recommended Spare Parts*



Typical Bill of Materials (See page 5 for available materials.)

Component	CB2	CB3	CB4/2	Component	CB2	CB3	CB4/2
Body	ASTM A216-WCB			Gland Flange	ASTM A216-WCB		
Seat Rings	ASTM A105/HF			Gland Bolt Pins	ASTM A36		
Wedge 2" - 3"	ASTM A276-410	ASTM A216-WCB/HF	ASTM A351-CF8M/A276-316	Gland Bolts	ASTM A307-B		
Wedge 4" & larger	ASTM A216-WCB w/13% Chrome	ASTM A216-WCB/HF	ASTM A276-316	Gland Nuts	ASTM A194-2H		
Stem	ASTM A182-F6a		ASTM A182-316	Nameplate	Stainless Steel 304		
Yoke & Bonnet	ASTM A216-WCB			Nameplate Rivets	Stainless Steel - Commercial		
*Bonnet Gasket	Soft Steel Ring Joint			Grease Fitting	Carbon Steel - Commercial		
Bonnet Nuts	ASTM A194-2H		ASTM A194-2HM	Stem Nut	ASTM A439-D2		
Bonnet Studs	ASTM A193-B7		ASTM A193-B7M	Yoke Bushing	ASTM A536 (65-45-12)		
Back Seat Bushing	ASTM A276-410		ASTM A276-316	Handwheel	ASTM A536 (65-45-12)		
*Packing	Graphite w/Braided Carbon Fiber End Rings			Handwheel Nut	ASTM A536 (65-45-12)		
Gland	ASTM A276-410		ASTM A276-316	Set Screw	ASTM A193-B6		
				Spacer Ring	ASTM A276-410		

Class 900

Size	nps	2	2.5	3	4	6	8	10	12
A-RF	in	14.5	16.5	15.0	18.0	24.0	29.0	33.0	38.0
	mm	368	419	381	457	610	737	838	965
A-BW	in	14.5	16.5	15.0	18.0	24.0	29.0	33.0	38.0
	mm	368	419	381	457	610	737	838	965
A-RTJ	in	14.62	16.62	15.12	18.12	24.12	29.12	33.12	38.12
	mm	371	422	384	460	612	740	841	968
B	in	21.7	26.0	23.7	27.6	38.4	45.5	52.6	59.8
	mm	551	660	602	701	975	1156	1336	1519
C	in	9.8	9.8	13.8	13.8	22.0	25.2	30.0	30.0
	mm	250	250	350	350	560	640	760	760
RF	lbs	135	175	255	453	913	1705	2387	3600
Wt.	kg	61	385	116	206	415	775	1085	1636
BW	lbs	125	155	213	396	807	1465	1724	2790
Wt.	kg	57	70	97	180	367	665	784	1268

Note: Dimensions: Inches/Millimeters - Weights: Pounds/Kilograms. Larger sizes available on request. Dimensions are subject to change without notice.

Cast Steel Bolted Bonnet Gates

Styles: CB2, CB3, & CB4/2

Class: 1500 - Sizes: 2" thru 12"

Pressure Class Range: 150 thru 1500

Design and Manufacturing Standards

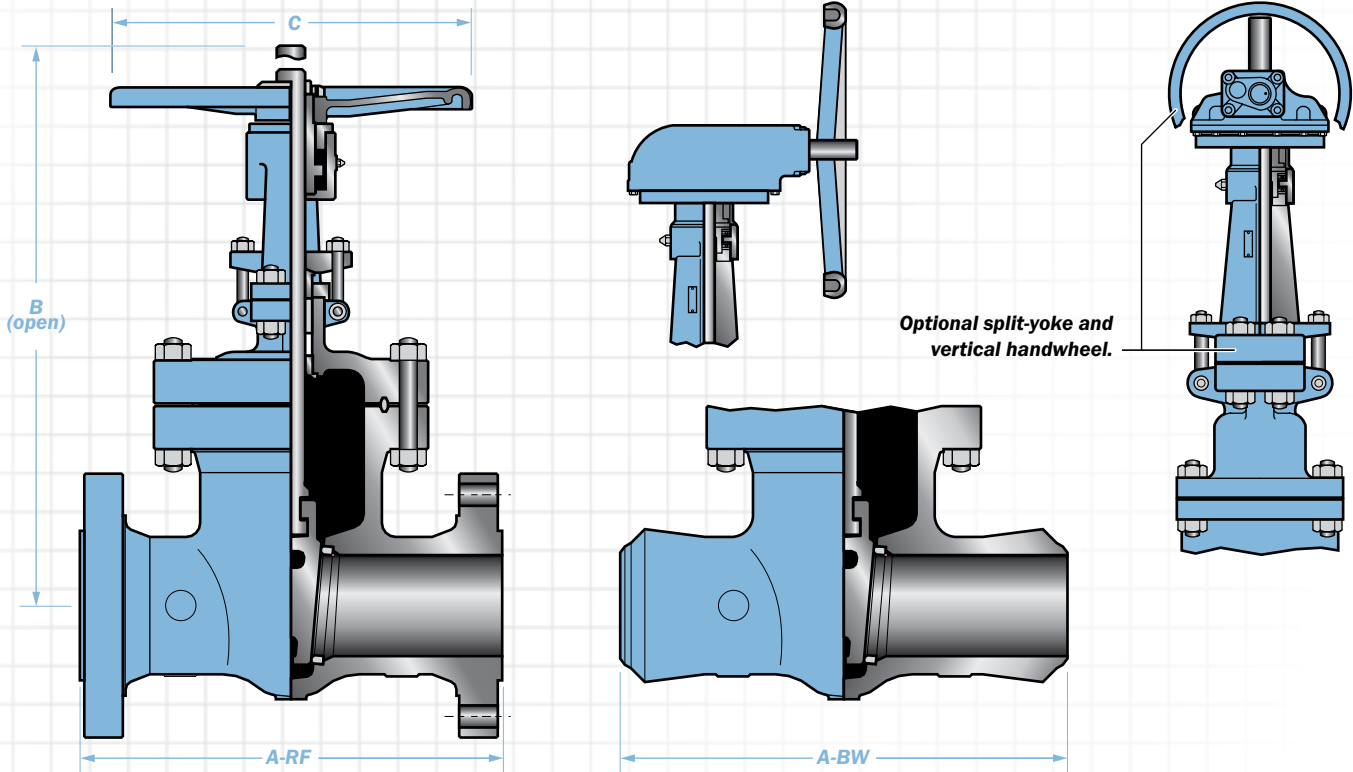
Valve Design: ASME B16.34/API 600

Flange Dimensions: ASME B16.5, B16.47 (Series A)

Face-to-Face Dimensions: ASME B16.10

Tested in Accordance with: API 598

Recommended Spare Parts*



Typical Bill of Materials (See page 5 for available materials.)

Component	CB2	CB3	CB4/2	Component	CB2	CB3	CB4/2
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Seat Rings	ASTM A105/HF			Gland Bolt Pins	ASTM A36		
Wedge 2" - 3"	ASTM A276-410	ASTM A216-WCB/HF	ASTM A351-CF8M/A276-316	Gland Bolts	ASTM A307-B		
Wedge 4" & larger	ASTM A216-WCB w/13% Chrome	ASTM A216-WCB/HF	ASTM A276-316	Gland Nuts	ASTM A194-2H		
Stem	ASTM A182-F6a		ASTM A182-316	Nameplate	Stainless Steel 304		
Yoke & Bonnet	ASTM A216-WCB			Nameplate Rivets	Stainless Steel - Commercial		
*Bonnet Gasket	Soft Steel Ring Joint			Grease Fitting	Carbon Steel - Commercial		
Bonnet Nuts	ASTM A194-2H		ASTM A194-2HM	Stem Nut	ASTM A439-D2		
Bonnet Studs	ASTM A193-B7		ASTM A193-B7M	Yoke Bushing	ASTM A536 (65-45-12)		
Back Seat Bushing	ASTM A276-410		ASTM A276-316	Handwheel	ASTM A536 (65-45-12)		
*Packing	Graphite w/Braided Carbon Fiber End Rings			Handwheel Nut	ASTM A536 (65-45-12)		
Gland	ASTM A276-410		ASTM A276-316	Set Screw	ASTM A193-B6		
				Spacer Ring	ASTM A276-410		

Class 1500

Size	nps	2	2.5	3	4	6	8	10	12
	dn	50	65	75	100	150	200	250	300
A-RF	in	14.5	16.5	18.5	21.5	27.8	32.75	39.0	44.5
	mm	368	419	470	546	706	832	991	1130
A-BW	in	14.5	16.5	18.5	21.5	27.8	32.75	39.0	44.5
	mm	368	419	470	546	706	832	991	1130
A-RTJ	in	14.62	16.62	18.62	21.62	28.0	33.13	39.38	45.12
	mm	371	422	473	549	711	841	1000	1146
B	in	21.7	26.0	28.5	32.6	39.3	48.1	66.5	82.3
	mm	551	660	724	828	998	1223	1688	2090
C	in	11.8	11.8	15.75	19.6	23.6	30.0	30.0	35.0
	mm	300	300	400	500	600	760	760	889
RF	lbs	128	163	209	423	978	1625	4412	8414
Wt.	kg	58	74	95	192	445	739	2001	3816
BW	lbs	106	137	174	352	870	1650	3541	7080
Wt.	kg	48	62	79	160	395	750	1606	3211

Note: Dimensions: Inches/Millimeters - Weights: Pounds/Kilograms. Larger sizes available on request. Dimensions are subject to change without notice.