

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.

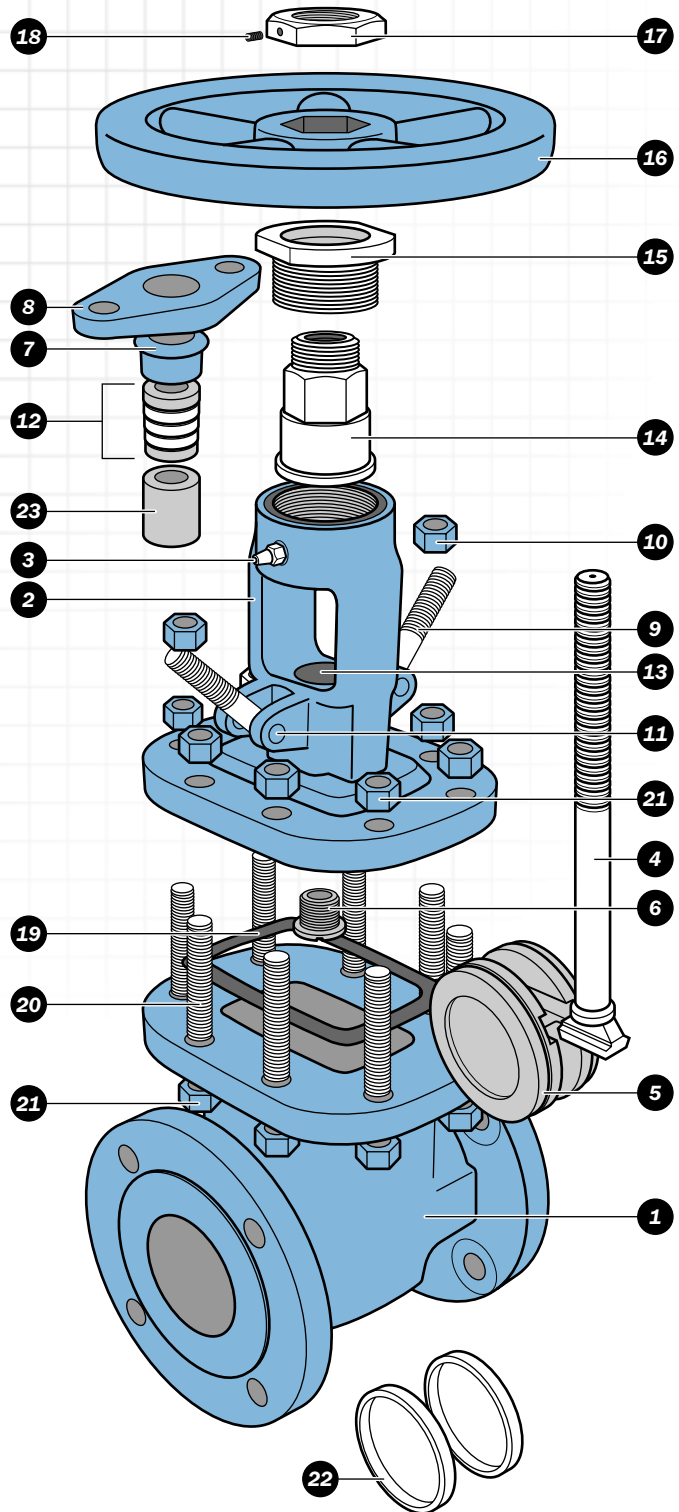
18. Set Screw: The set screw prevents handwheel nut loosening.

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

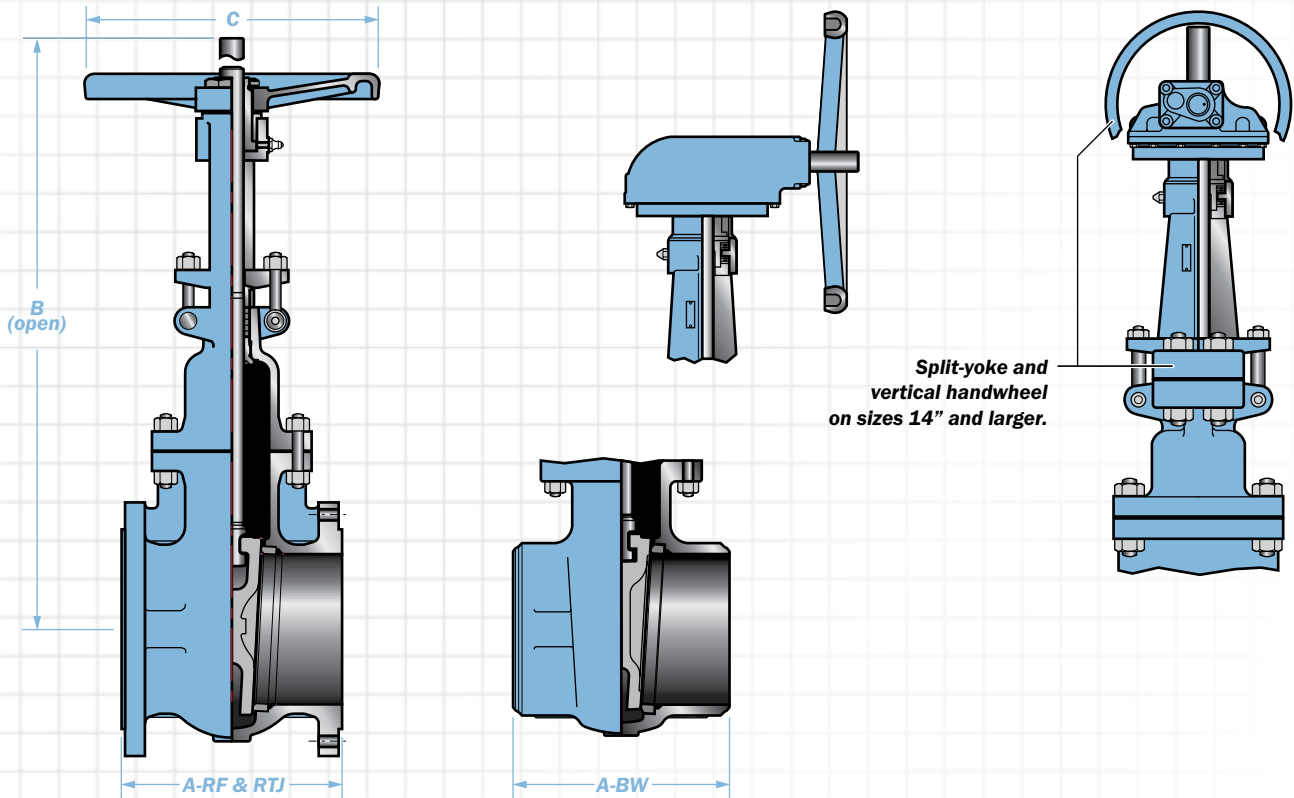
Valve Design: ASME B16.34/API 600

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*



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	Stainless Steel 304		
Yoke & Bonnet	ASTM A216-WCB			Nameplate Rivets	Stainless Steel - Commercial		
*Bonnet Gasket	Multilayered Corrugated 316 w/Graphite			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	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	13.0	14.0	16.0	18.0	20.0	18.1	18.1	18.1	18.1	21.3	24.0	31.8	31.5	35.4
	mm	203	203	203	254	330	357	406	457	508	460	460	460	460	541	610	808	800	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

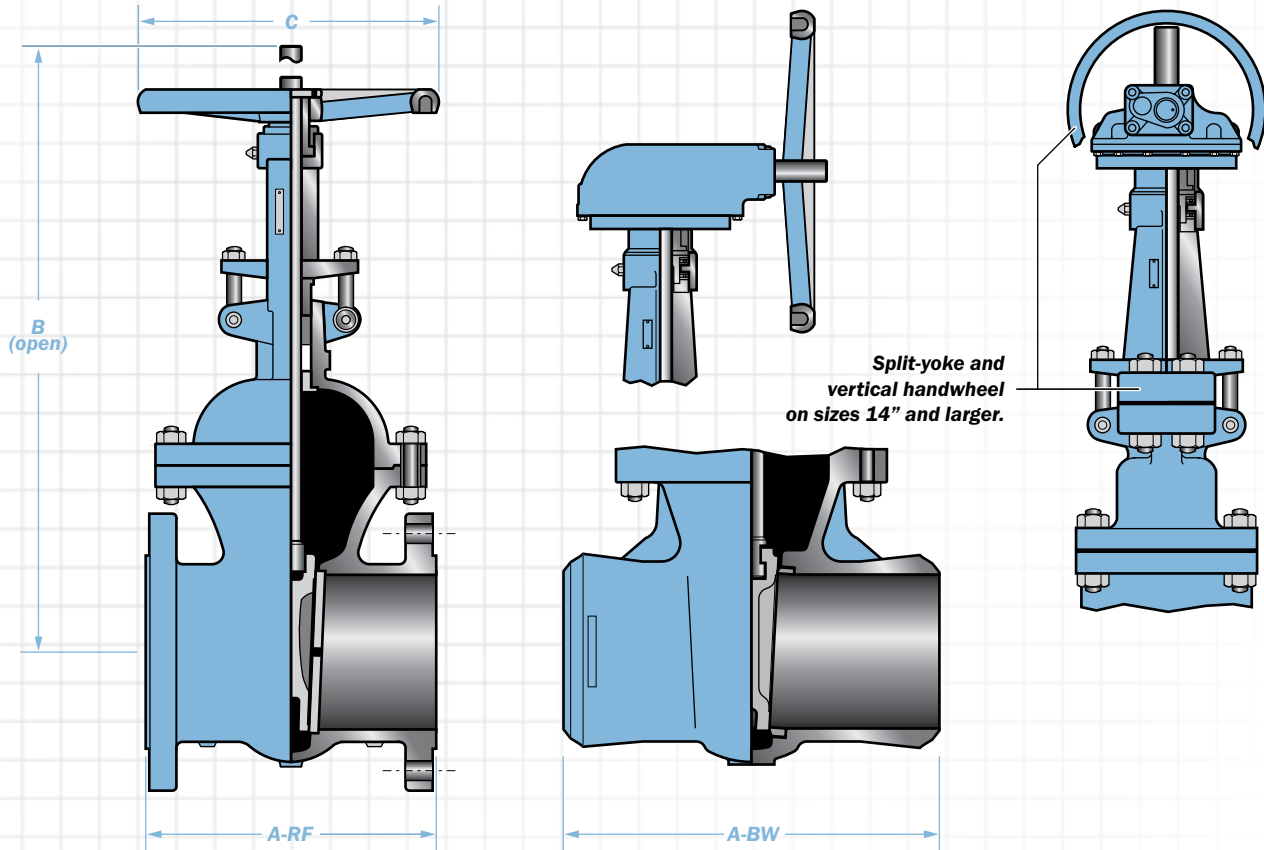
Valve Design: ASME B16.34/API 600

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

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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 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	15.0	16.0	18.0	20.0	22.0	18.1	18.1	21.3	21.3	24.0	31.9	30.0
	mm	203	254	254	305	381	406	457	508	559	460	460	451	541	610	810	760
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.