

Newco[®]

Cast Steel Bolted Bonnet Globe Valves

Manufactured by Newmans™

Sizes: 2" thru 14" • Pressure Class: 150 thru 1500



Typical Newco Cast Steel Bolted Bonnet Globe Valve Expanded View

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

2. Bonnet: Newco bonnet assemblies are built to the same standards as the bodies.

3. 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.

4. Stem: The stem inserts vertically into the disc.

5. Lock Groove: The lock groove receives the split lock ring which allows the disc nut to lift the disc during cycling.

6. Split Ring: The split ring allows the disc nut to lift the disc during cycling.

7. Disc: Newmans plug type disc is machined to the tightest tolerances to ensure trouble free shutoff and cycling.

8. Disc Nut: The disc nut, in conjunction with the split lock ring, secures the disc to the stem.

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

10. Gland Flange: Applies pressure to the gland for accurate packing compression.

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

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

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

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

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

17. Handwheel: The handwheel cycles the valve.

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

19. Handwheel Washer: The washer helps to prevent loosening or distributes pressure evenly.

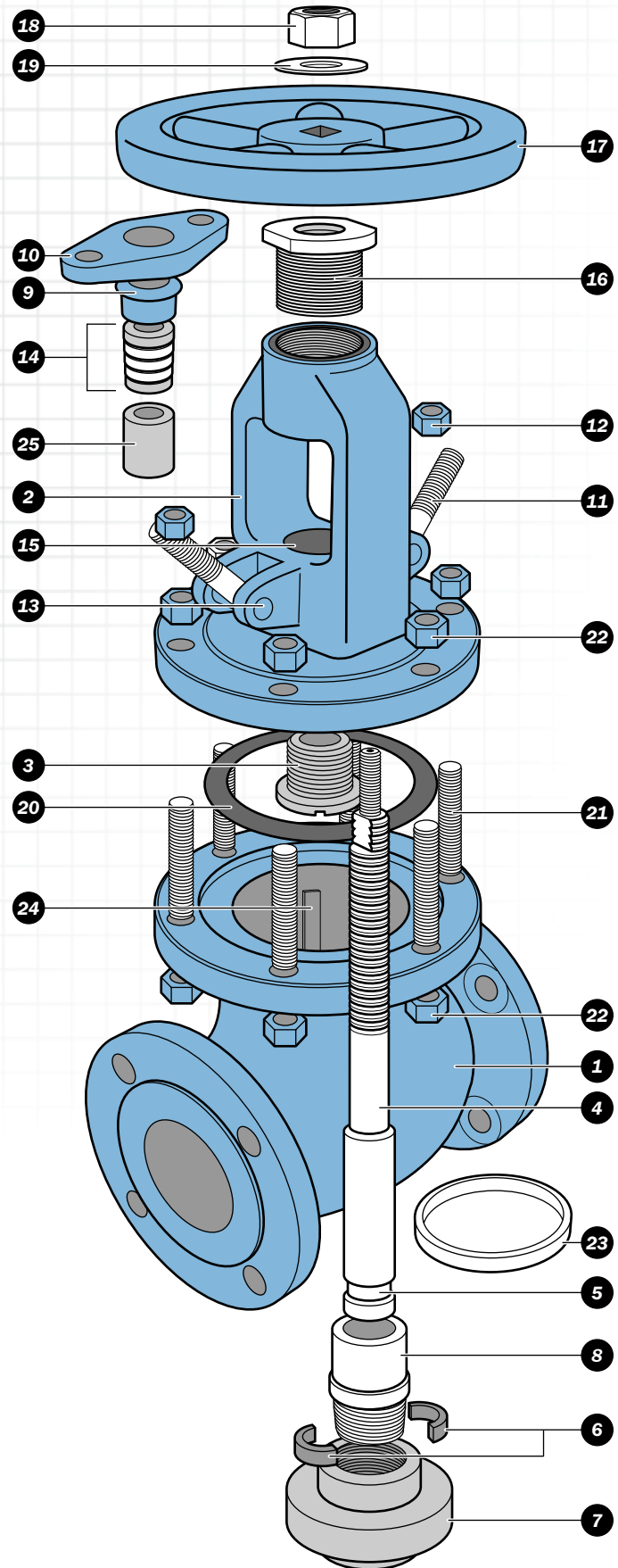
20. Bonnet Gasket: The bonnet gasket creates a leakproof seal between the bonnet and body.

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

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

24. Disc Guide: The disc guides provide a stable track for keeping the disc aligned with the seat during cycling.

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



Cast Steel Bolted Bonnet Globes

Styles: CB2, CB3, & CB4/2

Class: 150 - Sizes: 2" thru 14"

Pressure Class Range: 150 thru 1500

Design and Manufacturing Standards

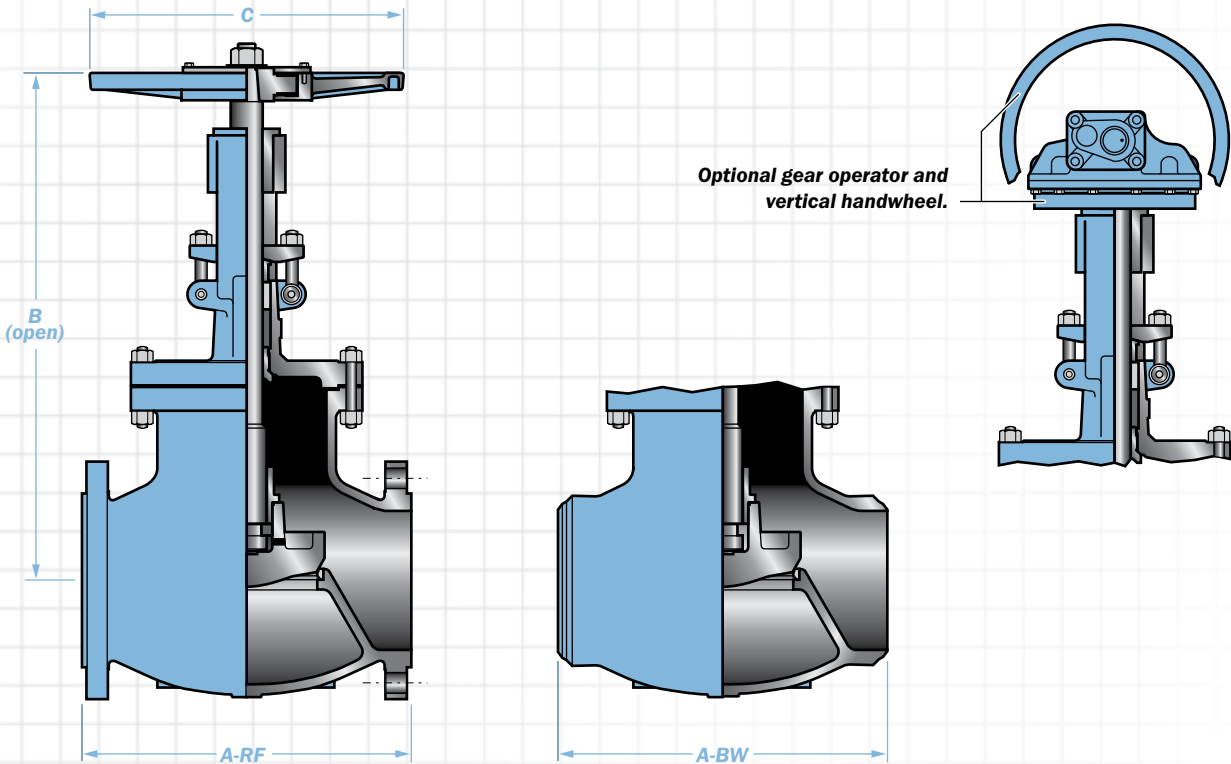
Valve Design: ASME B16.34/API 600

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 Bolt Pins	ASTM A36		
Disc 2" thru 4"	ASTM A276-410	ASTM A216-WCB/ HF	ASTM A276-316	Gland Nuts	ASTM A194-2H	ASTM A194-2HM	
Disc 5" and larger	ASTM A216-WCB/ 13% Chrome		ASTM A216- WCB/316	Gland Bolts	ASTM A307-B		
Stem	ASTM A276-410		ASTM A276-316	Seat Ring	ASTM A105/HF **		
Bonnet	ASTM A216-WCB			Split Ring	ASTM A276-410		
*Bonnet Gasket	Spiral Wound 316 Stainless Steel/Graphite			Nameplate	ASTM A666-304		
Bonnet Nuts	ASTM A194-2H	ASTM A194-2HM		Nameplate Rivets	Commercial		
Bonnet Studs	ASTM 193-B7	ASTM A193-B7M		Disc Nut	ASTM A276-410	ASTM A276-316	
Back Seat Bushing	ASTM A276-410	ASTM A276-316		Stem Nut	ASTM A439-D2		
*Packing	Graphite w/Braided Carbon Fiber End Rings			Handwheel Washer	ASTM A36		
Gland	ASTM A276-410	ASTM A276-316		Handwheel Nut	ASTM A36		
Gland Flange	ASTM A276-WCB			Handwheel	ASTM A536 (65-45-12)		
				Spacer Ring	N/A		

Class 150

Size	nps	2	2.5	3	4	5	6	8	10	12	14
A-RF	dn	50	65	75	100	125	150	200	250	300	350
	in	8.0	8.5	9.5	11.5	14.0	16.0	19.5	24.5	27.5	31.0
A-BW	mm	203	216	241	292	356	406	495	622	699	787
	in	8.0	8.5	9.5	11.5	14.0	16.0	19.5	24.5	27.5	31.0
B	mm	14.9	15.8	16.6	19.9	21.8	22.4	26.5	30.6	34.8	41.4
	in	378	401	422	505	554	569	673	777	884	1052
C	mm	8.0	10.0	10.0	12.0	14.0	16.0	18.0	22.0	24.0	25.2
	in	203	254	254	305	356	406	457	559	610	640
RF Wt.	lbs	51	73	93	137	192	243	419	507	948	1276
	kg	23	33	42	62	87	110	190	276	476	625
BW Wt.	lbs	51	73	93	137	192	243	419	507	948	1276
	kg	23	33	42	62	87	110	190	276	476	625

Note: Dimensions: Inches/Millimeters - Weights: Pounds/Kilograms. Larger sizes available on request. Dimensions are subject to change without notice.
** Integral seat w/HF for sizes 2" to 4".
Rev: 111809

Cast Steel Bolted Bonnet Globes

Styles: CB2, CB3, & CB4/2

Class: 300 - Sizes: 2" thru 14"

Pressure Class Range: 150 thru 1500

Design and Manufacturing Standards

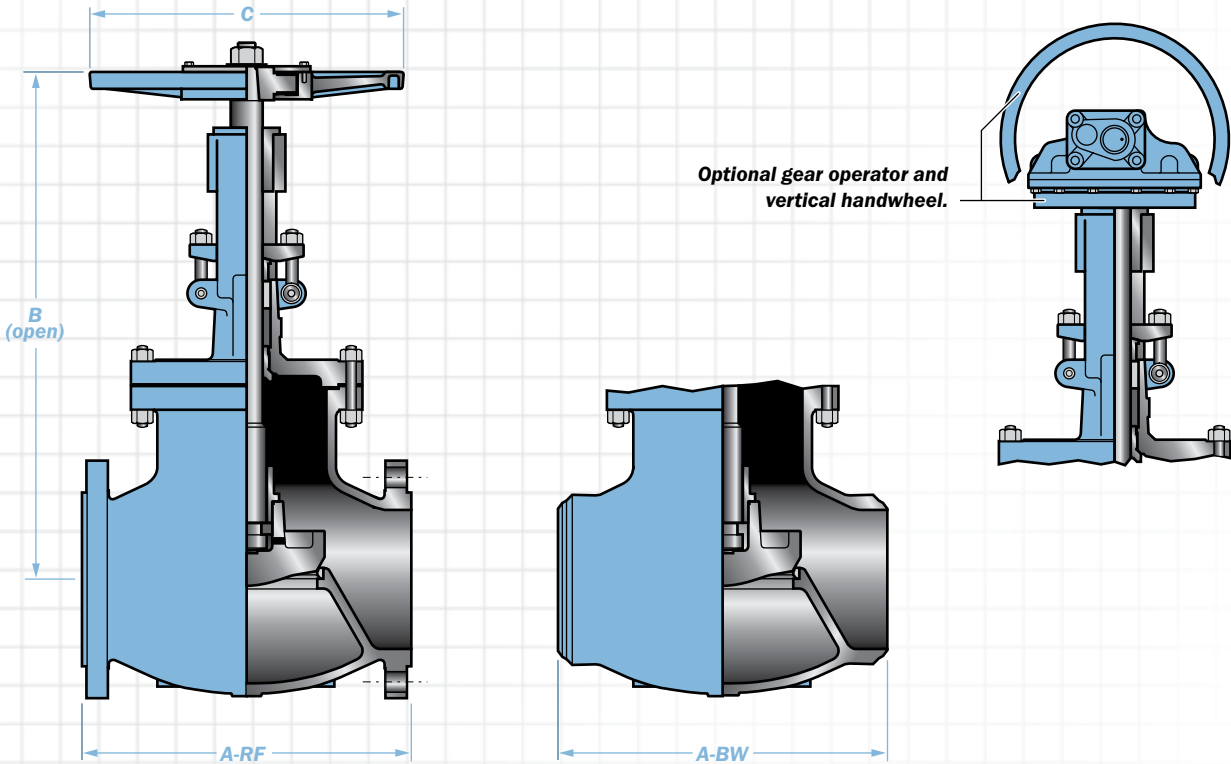
Valve Design: ASME B16.34/API 600

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

Face-to-Face Dimensions: ASME B16.10

Tested in Accordance with: API 598 & API RP591

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 Bolt Pins	ASTM A36		
Disc 2" thru 4"	ASTM A276-410	ASTM A216-WCB/ HF	ASTM A276-316	Gland Nuts	ASTM A194-2H	ASTM A194-2HM	
Disc 5" and larger	ASTM A216-WCB/ 13% Chrome		ASTM A216- WCB/316	Gland Bolts	ASTM A307-B	ASTM A193-B7M	
Stem	ASTM A276-410		ASTM A276-316	Seat Ring	ASTM A105/HF**		
Bonnet	ASTM A216-WCB			Split Ring	ASTM A276-410		
*Bonnet Gasket	Spiral Wound 316 Stainless Steel/Graphite			Nameplate	ASTM A666-304		
Bonnet Nuts	ASTM A194-2H	ASTM A194-2HM		Nameplate Rivets	Commercial		
Bonnet Studs	ASTM 193-B7	ASTM A193-B7M		Disc Nut	ASTM A276-410	ASTM A276-316	
Back Seat Bushing	ASTM A276-410	ASTM A276-316		Stem Nut	ASTM A439-D2		
*Packing	Graphite W/Braided Carbon Fiber End Rings			Handwheel Washer	ASTM A36		
Gland	ASTM A276-410	ASTM A276-316		Handwheel Nut	ASTM A36		
Gland Flange	ASTM A276-WCB			Handwheel	ASTM A536 (65-45-12)		
				Spacer Ring	ASTM A276-410		

Class 300

Size	nps	2	2.5	3	4	5	6	8	10	12	14
A-RF	in	10.5	11.5	12.5	14.0	15.75	17.5	22.0	24.5	28.0	33.0
	mm	267	292	318	357	400	445	559	622	711	838
A-BW	in	10.5	11.5	12.5	14.0	15.75	17.5	22.0	24.5	28.0	33.0
	mm	267	292	318	357	400	445	559	622	711	838
B	in	16.9	17.8	19.2	23.0	27.4	30.6	36.2	40.8	47.3	54.3
	mm	429	452	488	584	696	777	919	1036	1201	1379
C	in	10.0	10.0	12.0	14.0	14.0	18.0	24.0	24.0	27.0	28.3
	mm	254	254	305	356	406	457	610	610	686	720
RF	lbs	75.0	100.0	130.0	203.0	294.0	421.0	715	1015	1500	2446
Wt.	kg	34	45	59	92	134	191	325	461	682	1112
BW	lbs	55	79	101	163	242	355	566	770	1218	1996
Wt.	kg	25	36	46	74	110	161	257	350	554	907

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

** Integral seat w/HF for sizes 2" to 4".

Rev: 111809

Cast Steel Bolted Bonnet Globes

Styles: CB2, CB3, & CB4/2

Class: 600 - Sizes: 2" thru 8"

Pressure Class Range: 150 thru 1500

Design and Manufacturing Standards

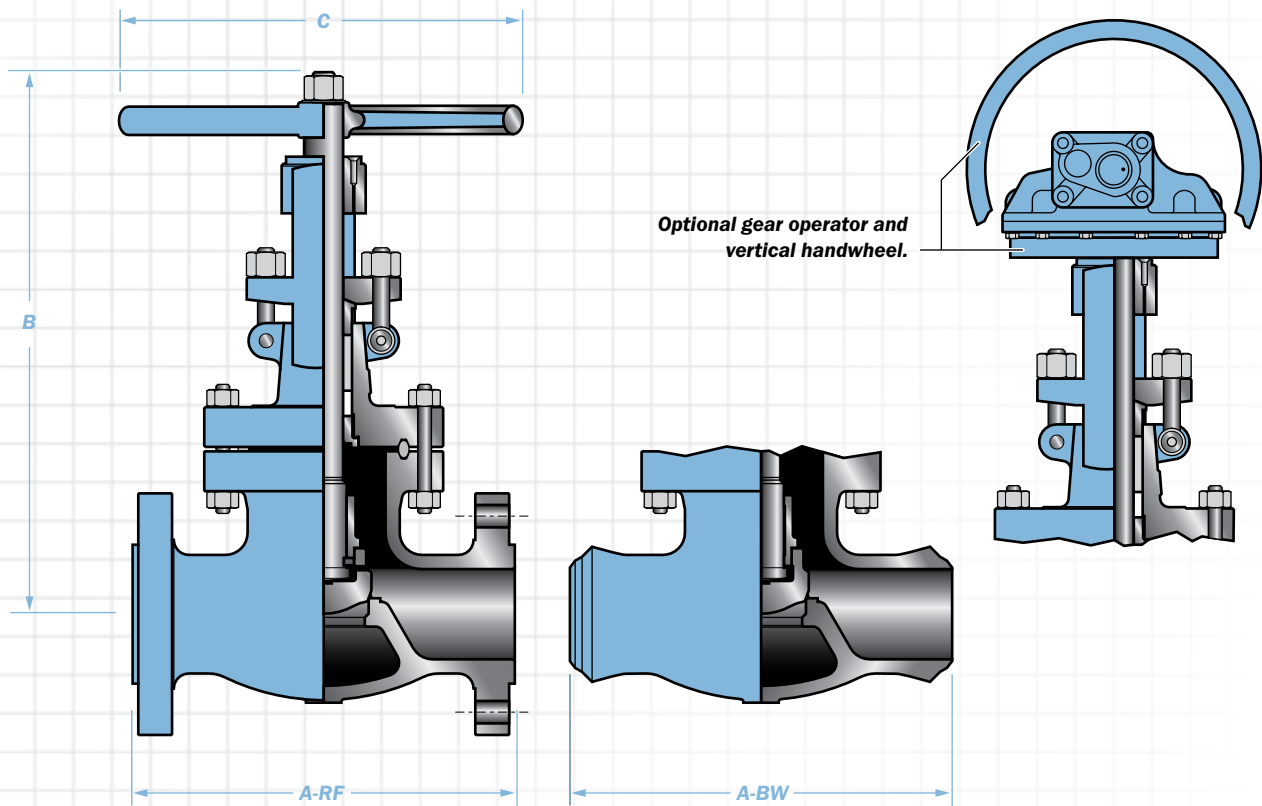
Valve Design: ASME B16.34/API 600

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

Face-to-Face Dimensions: ASME B16.10

Tested in Accordance with: API 598 & API RP591

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 Bolt Pins	ASTM A36		
Disc 2" thru 4"	ASTM A276-410	ASTM A216-WCB/ HF	ASTM A276-316	Gland Nuts	ASTM A194-2H	ASTM A194-2HM	
Disc 5" and larger	ASTM A216-WCB/ 13% Chrome		ASTM A216- WCB/316	Gland Bolts	ASTM A307-B		
Stem	ASTM A276-410		ASTM A276-316	Seat Ring	Integral ASTM A216-WCB/HF		
Bonnet	ASTM A216-WCB			Split Ring	ASTM A276-410		
*Bonnet Gasket	Soft Steel Ring Joint			Nameplate	ASTM A666-304		
Bonnet Nuts	ASTM A194-2H	ASTM A194-2HM		Nameplate Rivets	Commercial		
Bonnet Studs	ASTM 193-B7	ASTM A193-B7M		Disc Nut	ASTM A276-410	ASTM A276-316	
Back Seat Bushing	ASTM A276-410	ASTM A276-316		Stem Nut	ASTM A439-D2		
*Packing	Graphite W/Braided Carbon Fiber End Rings			Handwheel Washer	ASTM A36		
Gland	ASTM A276-410	ASTM A276-316		Handwheel Nut	ASTM A36		
Gland Flange	ASTM A276-WCB			Handwheel	ASTM A536 (65-45-12)		
				Spacer Ring	ASTM A276-410		

Class 600

Size	nps	2	2.5	3	4	6	8
	dn	50	65	75	100	150	200
A-RF	in	11.5	13.0	14.0	17.0	22.0	26.0
	mm	292	325	256	435	559	660
A-BW	in	11.5	13.0	14.0	17.0	22.0	26.0
	mm	292	325	256	435	559	660
B	in	18.4	20.0	24.4	29.0	37.9	44.7
	mm	467	508	620	737	963	1135
C	in	10.0	10.0	14.0	18.0	24.0	24.0
	mm	254	254	356	457	610	610
RF	lbs	90	130	170	313	778	1245
Wt.	kg	41	59	77	142	354	566
BW	lbs	79	110	141	256	640	961
Wt.	kg	36	50	64	116	291	437

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

Cast Steel Bolted Bonnet Globes

Styles: CB2, CB3, & CB4/2

Class: 900 - Sizes: 2" thru 8"

Pressure Class Range: 150 thru 1500

Design and Manufacturing Standards

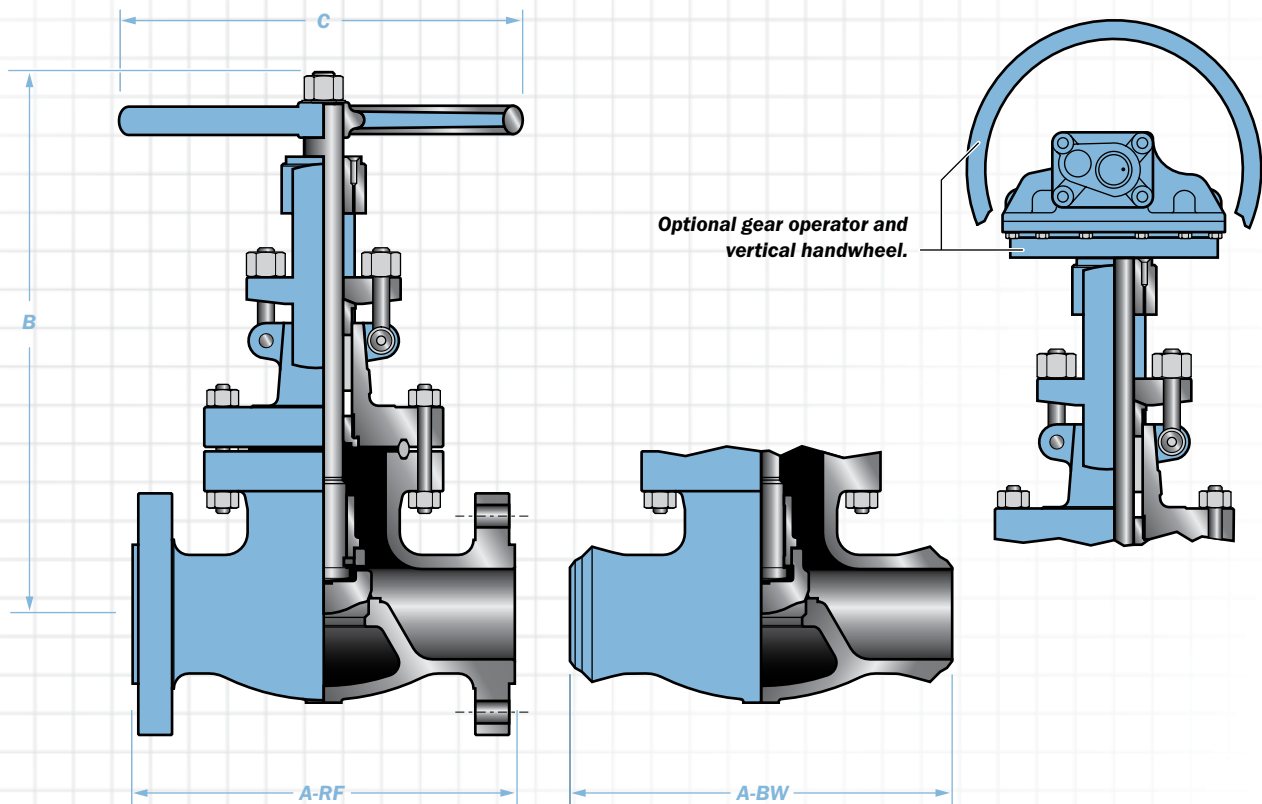
Valve Design: ASME B16.34/API 600

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 Bolt Pins	ASTM A36		
Disc 2" thru 4"	ASTM A276-410	ASTM A216-WCB/ HF	ASTM A276-316	Gland Nuts	ASTM A194-2H	ASTM A194-2HM	
Disc 5" and larger	ASTM A216-WCB/ 13% Chrome		ASTM A216- WCB/316	Gland Bolts	ASTM A307-B		
Stem	ASTM A276-410		ASTM A276-316	Seat Ring	Integral ASTM A216-WCB/HF		
Bonnet	ASTM A216-WCB			Split Ring	ASTM A276-410		
*Bonnet Gasket	Soft Steel Ring Joint			Nameplate	ASTM A666-304		
Bonnet Nuts	ASTM A194-2H	ASTM A194-2HM		Nameplate Rivets	Commercial		
Bonnet Studs	ASTM 193-B7	ASTM A193-B7M		Disc Nut	ASTM A276-410	ASTM A276-316	
Back Seat Bushing	ASTM A276-410	ASTM A276-316		Stem Nut	ASTM A439-D2		
*Packing	Graphite W/Braided Carbon Fiber End Rings			Handwheel Washer	ASTM A36		
Gland	ASTM A276-410	ASTM A276-316		Handwheel Nut	ASTM A36		
Gland Flange	ASTM A276-WCB			Handwheel	ASTM A536 (65-45-12)		
				Spacer Ring	ASTM A276-410		

Class 900

Size	nps	2	3	4	6	8
	dn	50	75	100	150	200
A-RF	in	14.5	15.0	18.0	24.0	29.0
	mm	368	381	457	610	737
A-BW	in	14.5	15.0	18.0	24.0	29.0
	mm	368	381	457	610	737
B	in	22.6	26.0	30.6	39.6	60.1
	mm	574	660	777	1006	1527
C	in	13.8	17.7	17.7	22.0	28.3
	mm	350	450	450	560	720
RF Wt.	lbs	198	335	440	1675	2090
	kg	90	152	200	761	950
BW Wt.	lbs	176	297	376	1144	1634
	kg	80	135	171	520	743

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

Cast Steel Bolted Bonnet Globes

Styles: CB2, CB3, & CB4/2

Class: 1500 - Sizes: 2" thru 6"

Pressure Class Range: 150 thru 1500

Design and Manufacturing Standards

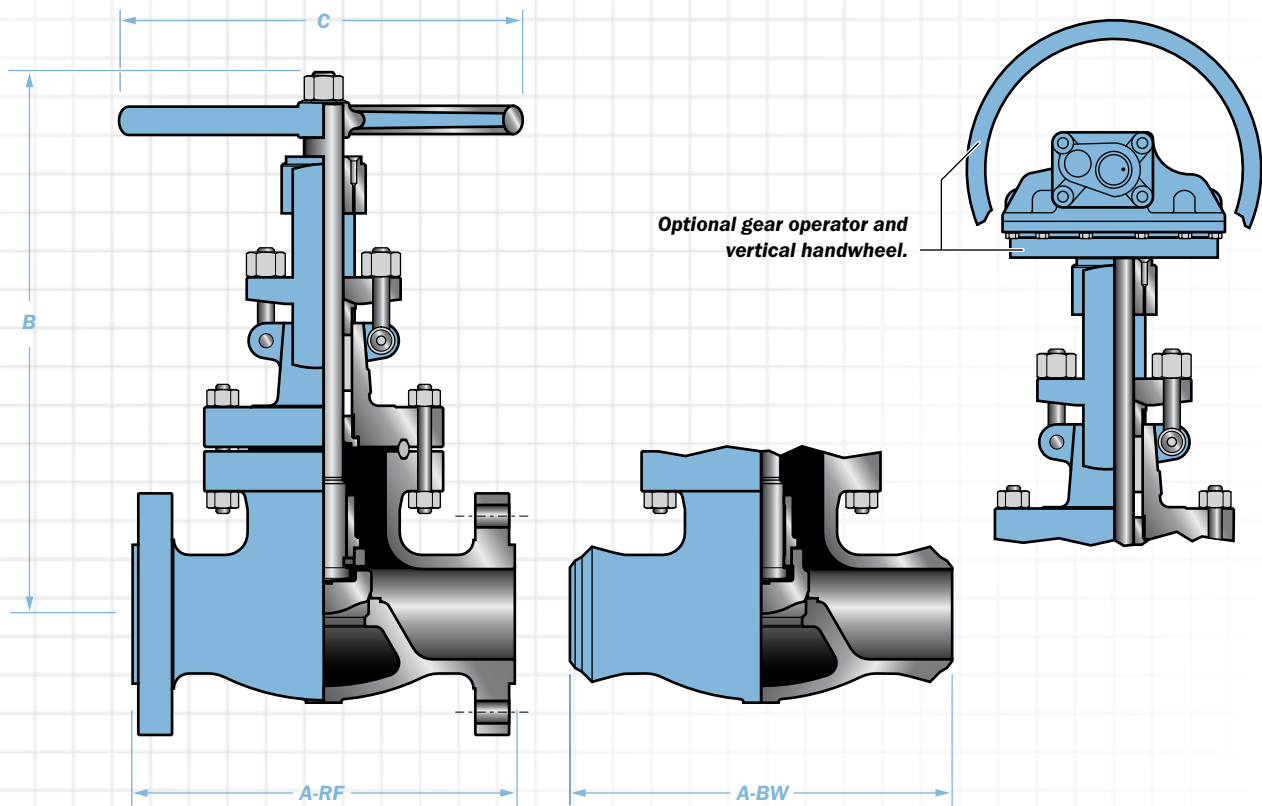
Valve Design: ASME B16.34/API 600

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 Bolt Pins	ASTM A36		
Disc 2" thru 4"	ASTM A276-410	ASTM A216-WCB/ HF	ASTM A276-316	Gland Nuts	ASTM A194-2H	ASTM A194-2HM	
Disc 5" and larger	ASTM A216-WCB/ 13% Chrome		ASTM A216- WCB/316	Gland Bolts	ASTM A307-B	ASTM A193-B7M	
Stem	ASTM A276-410		ASTM A276-316	Seat Ring	Integral ASTM A216-WCB/HF		
Bonnet	ASTM A216-WCB			Split Ring	ASTM A276-410		
*Bonnet Gasket	Soft Steel Ring Joint			Nameplate	ASTM A666-304		
Bonnet Nuts	ASTM A194-2H	ASTM A194-2HM		Nameplate Rivets	Commercial		
Bonnet Studs	ASTM 193-B7	ASTM A193-B7M		Disc Nut	ASTM A276-410	ASTM A276-316	
Back Seat Bushing	ASTM A276-410	ASTM A276-316		Stem Nut	ASTM A439-D2		
*Packing	Graphite W/Braided Carbon Fiber End Rings			Handwheel Washer	ASTM A36		
Gland	ASTM A276-410	ASTM A276-316		Handwheel Nut	ASTM A36		
Gland Flange	ASTM A276-WCB			Handwheel	ASTM A536 (65-45-12)		
				Spacer Ring	ASTM A276-410		

Class 1500

Size	nps	2	3	4	6
A-RF	in	14.5	18.5	21.5	27.75
	mm	368	470	546	705
A-BW	in	14.5	18.5	21.5	27.75
	mm	368	470	546	705
B	in	19.6	25.6	30.8	36.5
	mm	498	650	782	927
C	in	13.8	17.7	19.7	25.2
	mm	350	450	500	640
RF	lbs	209	551	959	1191
Wt.	kg	95	250	436	541
BW	lbs	143	460	830	996
Wt.	kg	65	209	377	453

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