

Newco®

Cast Steel Bolted Bonnet Angle Stop Check Valves

Manufactured by Newmans™

Sizes: 2" thru 12" • Pressure Class: 150 thru 600



Typical Newco Cast Steel Bolted Bonnet Angle Stop Check 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. Disc: Newmans 1-piece disc is machined to the tightest tolerances to ensure trouble free shutoff and cycling.

6. Disc Nut: The disc nut serves as a mechanical guide acting on the stem to ensure proper alignment of the disc to the seat.

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. Handwheel: The handwheel cycles the valve.

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

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

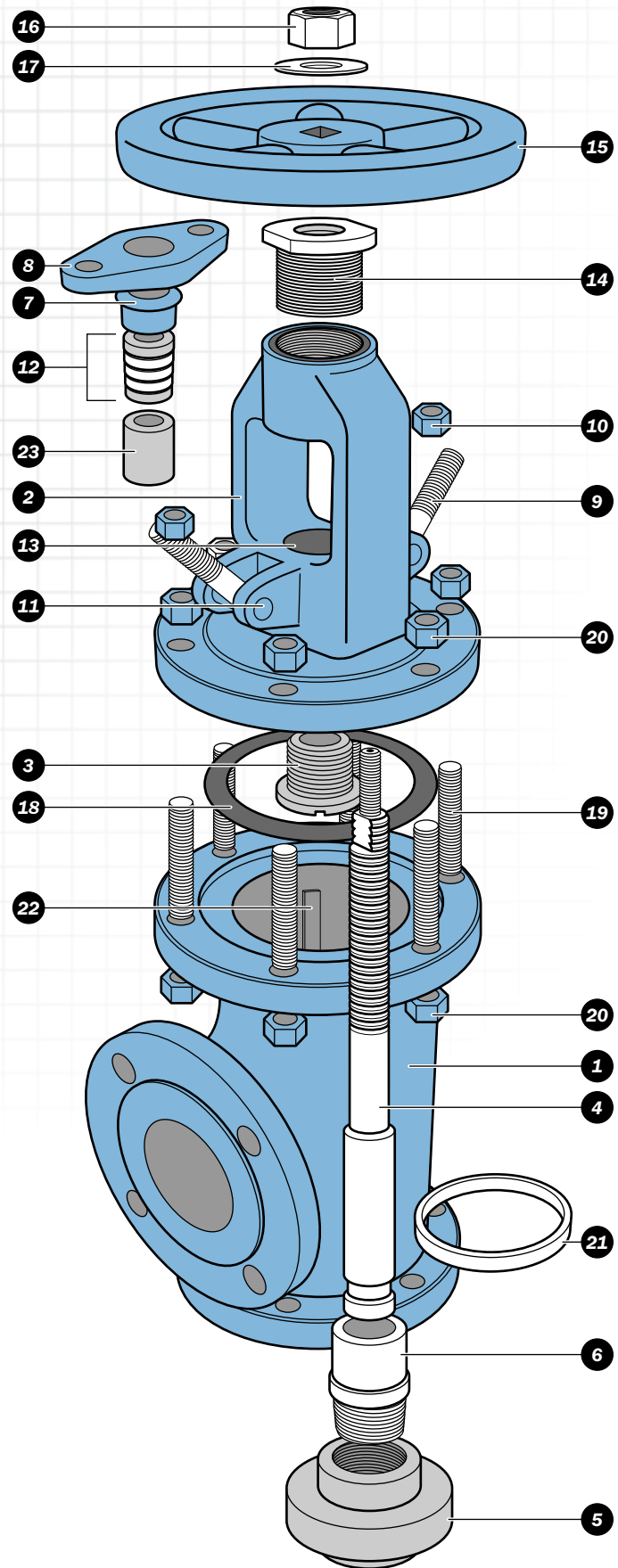
18. Bonnet Gasket: The bonnet gasket creates a leakproof seal between the bonnet and body.

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

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

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

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



Cast Steel Bolted Bonnet Angle Stop Checks

Styles: CB2, CB3, & CB4/2

Class: 150 - Sizes: 2" thru 12"

Pressure Class Range: 150 thru 600

Design and Manufacturing Standards

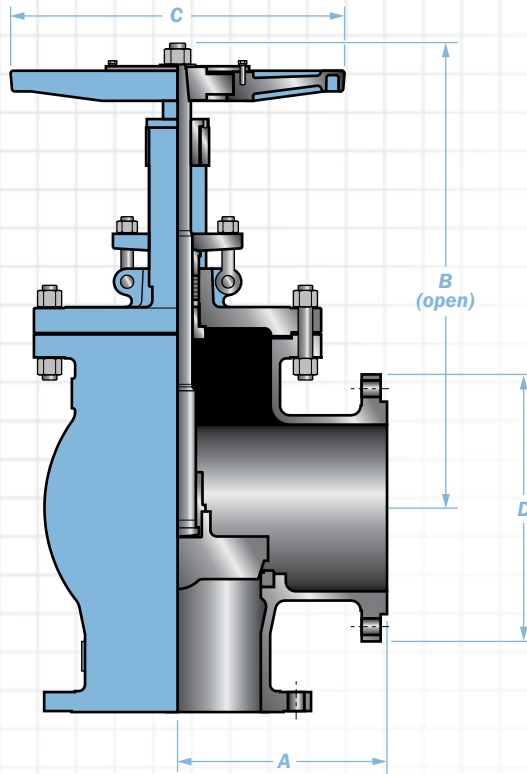
Valve Design: ASME B16.34/API 600

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 GR.WCB			Packing	Graphite w/Braided Carbon Fiber End Rings		
Seat Ring	ASTM A105/HF			Gland Bolt Pins	ASTM A36		
Disc 2" thru 4"	ASTM A276-410	ASTM A216-WCB/ HF	ASTM A276-316	Gland Bolts	ASTM 193-B7	ASTM A193-B7M	
Disc 5" and larger	ASTM A216-WCB/ 13% Chrome		ASTM A216- WCB/316	Gland	ASTM A276-410	ASTM A276-316	
Disc Nut	ASTM A276-410		ASTM A276-316	Gland Flange	ASTM A216-WCB		
Stem	ASTM A276-410		ASTM A276-316	Gland Nuts	ASTM A194-2H	ASTM A194-2HM	
*Bonnet Gasket	Spiral Wound 316 Stainless Steel/Graphite			Stem Nut	ASTM A439-D2		
Bonnet	ASTM A216-WCB			Split Ring	ASTM A276-410		
Bonnet Studs	ASTM 193-B7	ASTM A193-B7M		Handwheel Washer	ASTM A36		
Bonnet Nuts	ASTM A194-2H	ASTM A194-2HM		Handwheel Nut	ASTM A36		
Back Seat Bushing	ASTM A276-410	ASTM A276-316		Handwheel	ASTM A539 Type (65-45-12)		
				Spacer Ring	ASTM A276-410	ASTM A276-316	

Class 150

Size	nps dn	2	3	4	6	8	10	12
		50	75	100	150	200	250	300
A	in	4.0	4.75	5.75	8.0	9.75	12.25	13.75
	mm	107	121	146	203	248	311	349
B	in	15.2	16.9	20.4	21.8	27.4	31	37.8
	mm	386	429	518	554	696	787	960
C	in	8	10	12	15	18	22	24
	mm	203	254	305	381	457	559	610
D	in	6	7.5	9	11	13.5	16	19
	mm	152	191	229	279	343	406	483
RF	lbs	57	84	141	234	399	611	794
Wt.	kg	26	38	64	106	181	278	361

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

Cast Steel Bolted Bonnet Angle Stop Checks

Styles: CB2, CB3, & CB4/2

Class: 300 - Sizes: 2" thru 12"

Pressure Class Range: 150 thru 600

Design and Manufacturing Standards

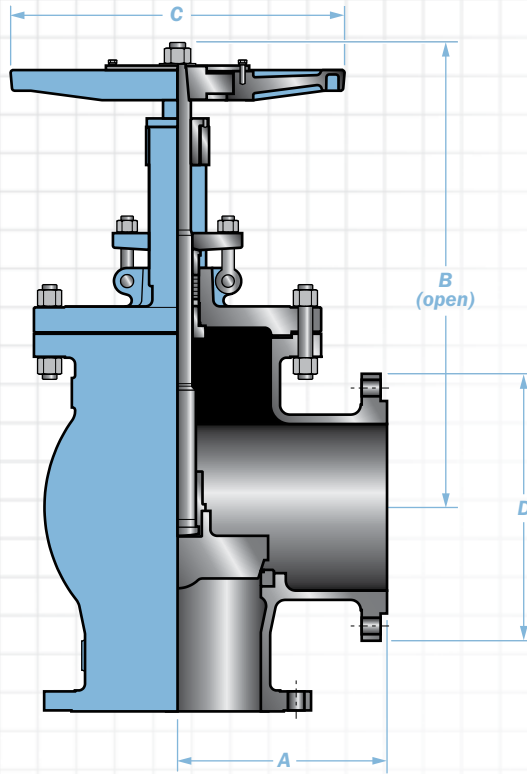
Valve Design: ASME B16.34/API 600

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 GR.WCB			Packing	Graphite w/Braided Carbon Fiber End Rings		
Seat Ring	ASTM A105/HF			Gland Bolt Pins	ASTM A36		
Disc 2" thru 4"	ASTM A276-410	ASTM A216-WCB/ HF	ASTM A276-316	Gland Bolts	ASTM 193-B7	ASTM A193-B7M	
Disc 5" and larger	ASTM A216-WCB/ 13% Chrome		ASTM A216- WCB/316	Gland	ASTM A276-410	ASTM A276-316	
Disc Nut	ASTM A276-410		ASTM A276-316	Gland Flange	ASTM A216-WCB		
Stem	ASTM A276-410		ASTM A276-316	Gland Nuts	ASTM A194-2H	ASTM A194-2HM	
*Bonnet Gasket	Spiral Wound 316 Stainless Steel/Graphite			Stem Nut	ASTM A439-D2		
Bonnet	ASTM A216-WCB			Split Ring	ASTM A276-410		
Bonnet Studs	ASTM 193-B7	ASTM A193-B7M		Handwheel Washer	ASTM A36		
Bonnet Nuts	ASTM A194-2H	ASTM A194-2HM		Handwheel Nut	ASTM A36		
Back Seat Bushing	ASTM A276-410	ASTM A276-316		Handwheel	ASTM A539 Type (65-45-12)		
				Spacer Ring	ASTM A276-410	ASTM A276-316	

Class 300

Size	nps dn	2	3	4	6	8	10	12
		50	75	100	150	200	250	300
A	in	5.25	6.25	7	8.75	11	12.25	14
	mm	133	159	178	222	279	311	356
B	in	15	16.9	21.7	28	30.7	37.5	41.6
	mm	381	429	551	711	780	953	1049
C	in	10	12	14	17	24	24	27
	mm	254	305	356	432	610	610	686
D	in	6.5	8.25	10	12.5	15	17.5	20.5
	mm	165	210	254	318	381	445	521
RF Wt.	lbs	68	108	198	392	560	934	1288
	kg	31	49	90	178	255	425	586

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

Cast Steel Bolted Bonnet Angle Stop Checks

Styles: CB2, CB3, & CB4/2

Class: 600 - Sizes: 2" thru 8"

Pressure Class Range: 150 thru 600

Design and Manufacturing Standards

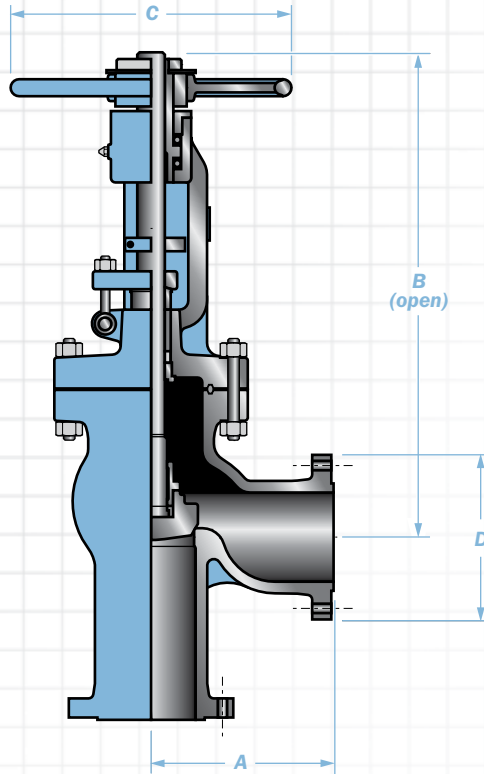
Valve Design: ASME B16.34/API 600

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 GR.WCB			Packing	Graphite w/Braided Carbon Fiber End Rings		
Seat Ring	ASTM A105/HF			Gland Bolt Pins	ASTM A36		
Disc 2" thru 4"	ASTM A276-410	ASTM A216-WCB/ HF	ASTM A276-316	Gland Bolts	ASTM 193-B7	ASTM A193-B7M	
Disc 5" and larger	ASTM A216-WCB/ 13% Chrome		ASTM A216- WCB/316	Gland	ASTM A276-410	ASTM A276-316	
Disc Nut	ASTM A276-410		ASTM A276-316	Gland Flange	ASTM A216-WCB		
Stem	ASTM A276-410		ASTM A276-316	Gland Nuts	ASTM A194-2H	ASTM A194-2HM	
*Bonnet Gasket	Spiral Wound 316 Stainless Steel/Graphite			Stem Nut	ASTM A439-D2		
Bonnet	ASTM A216-WCB			Split Ring	ASTM A276-410		
Bonnet Studs	ASTM 193-B7	ASTM A193-B7M		Handwheel Washer	ASTM A36		
Bonnet Nuts	ASTM A194-2H	ASTM A194-2HM		Handwheel Nut	ASTM A36		
Back Seat Bushing	ASTM A276-410	ASTM A276-316		Handwheel	ASTM A539 Type (65-45-12)		
				Spacer Ring	ASTM A276-410	ASTM A276-316	

Class 600

Size	nps	2	2.5	3	4	6	8
	dn	50	75	100	150	200	250
A	in	5.75	6.5	7.0	8.5	11.0	13.0
	mm	146	165	178	216	279	330
B	in	18.9	20.9	19.8	22.2	28.2	38.5
	mm	480	531	503	564	716	978
C	in	8.8	9.8	11.0	14.0	17.7	24.8
	mm	224	249	279	356	450	630
D	in	6.5	7.5	8.3	9.0	14.0	16.5
	mm	165	191	211	229	356	419
RF	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.