



Forged Steel Bolted & Welded Bonnet Gate Valves

Manufactured by Newmans™

Sizes: 1/4" thru 3" • Pressure Class: 150 thru 4500



Typical Newco Forged Steel Bolted & Welded Bonnet Gate Valve Expanded View

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

2. Handwheel: The handwheel cycles the valve.

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

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

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

6. Bonnet Bolts: The bonnet bolts secure the bonnet to the body.

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

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

9. Body: Newco forged steel bodies provide low resistance flow and optimum strength and performance.

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

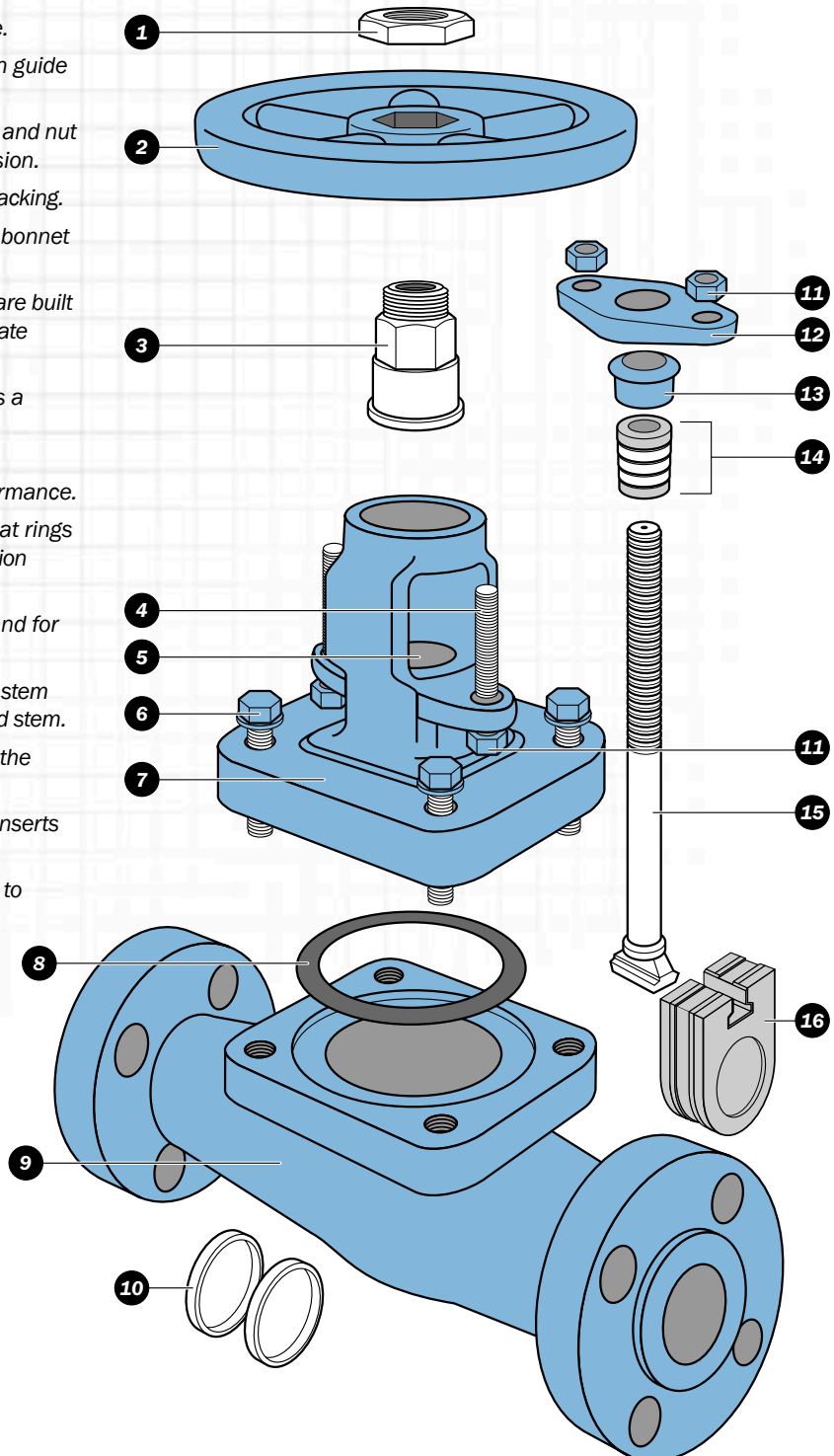
12. Gland Flange: Applies pressure to the gland for accurate packing adjustments.

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

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

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

16. Wedge: Newmans solid wedge is machined to the tightest tolerances to ensure trouble free shutoff and cycling.



How to Order All Newco Products

Note: OIC and Cooper "How to Order" information can be found in their respective catalogs.

Figure Number

The figure number shown below identifies specific valve configuration details of Newco valves such as valve type, pressure class, end connections, body/bonnet & trim materials, and special features.

Please specify end connections, body materials, and trims not listed below.

When placing an order, please refer to the respective product section of the catalog for size availability. A detailed description must be included with any special orders.

Type

- 1 = Gate, OS&Y
- 2 = Globe/Globe Stop Check, OS&Y
- 3 = Swing/Tilting Disc Check
- 4 = Piston Check
- 5 = Ball
- 6 = Gate, NRS
- 7 = Angle/Angle Stop Check, OS&Y

Pressure Class

- 1 = 150
- 2 = 125
- 3 = 300
- 6 = 600
- 8 = 800
- 9 = 900
- 15 = 1500
- 16 = 1690
- 25 = 2500
- 26 = 2680
- 45 = 4500

End Connections

- F = Flanged
- J = RTJ
- S = Socket Weld
- T = Threaded
- W = Butt Weld
- X = Threaded x Socket Weld

Trim Material

API Trim =

- 1 = CR13 1, 4, 8A
- 2 = CR13/HF** 8
- 3 = CR13/FHF** 5
- 4 = 316 10
- 4/2 = 316/HF** 12
- 4/3 = 316/FHF** 16
- 5 = NI Cu (Monel***) 9
- 5/2 = Monel/HF** 11
- 6 = Alloy 20 13
- 7 = Bronze N/A
- A7 = Aluminum Bronze N/A
- 8 = Iron N/A
- 9 = Special (Customer to Specify)

Suffix Letters

- BP = By Pass
- BS = Bellows Seal
- CL = Chlorine Service
- CR = Cryogenic Service
- CW = Chain Wheel
- EB = Extended Body
- FP = Full Port
- FS = Fire Safe
- GI = Grease Injection
- GO = Gear Operated
- HB = Horizontal Ball Check
- HP = Horizontal Piston Check
- HO = Hydraulic Operator
- INT = Integral Flanged
- LD = Locking Device
- LL = Locking Loop
- LV = Live Load Packing
- MO = Motor Operated
- NC = NACE MR0103 Compliant
- OL = Outside Weight & Lever
- OX = Oxygen Service
- PO = Pneumatic Operator
- PS = Pressure Seal Bonnet
- PT = PTFE Seats
- QS = QuadroSphere
- RP = Regular Port
- SC = Stop Check
- SL = Spring Loading
- SPL = Special (Customer to specify)
- TD = Tilting Disc Check
- TF = Teflon* Insert
- TM = Trunnion Mounted
- VP = Vertical Ball Check
- VL = Vertical Lift Check
- VP = V-Port Disc
- VT = Viton* Insert
- WB = Welded Bonnet
- Y = Y Pattern
- * = Viton and Teflon are registered trademarks of DuPont Company
- **HF= Hardfaced - AWS 5.13 Class C₀C₀A
- *** = Monel is a registered trademark of International Nickel Company

Fig. 11F-CB2__

Body/Bonnet Material

- A20 = ASTM A351, CN7M = Cast Alloy 20
- CB = ASTM A216, WCB = Cast Carbon Steel
- CC = ASTM A216, WCC = Cast Carbon Steel
- C5 = ASTM A217, C5 = Cast Alloy Steel (5% Chrome, .5% Moly)
- C6 = ASTM A217, WC6 = Cast Alloy Steel (1.25% Chrome, .5% Moly)
- C9 = ASTM A217, WC9 = Cast Alloy Steel (2.25% Chrome, 1% Moly)
- C12 = ASTM A217, C12 = Cast Alloy Steel (9% Chrome, 1% Moly)
- 12A = ASTM A217, C12A = Cast Alloy Steel (9% Chrome, 1% Moly, V)
- CF3 = ASTM A351, CF3 = Cast Stainless Steel
- C3M = ASTM A351, CF3M = Cast 316L Stainless Steel
- CF8 = ASTM A351, CF8 = Cast 304 Stainless Steel
- C7L = ASTM A351, CG3M = Cast 317L Stainless Steel
- C8M = ASTM A351, CF8M = Cast 316 Stainless Steel
- C8C = ASTM A351, CF8C = Cast 347 Stainless Steel
- CT = ASTM A351, CG8M = Cast 317 Stainless Steel
- DI = ASTM A395 = Cast Ductile Iron
- FS = ASTM A105 = Forged Carbon Steel
- F3M = ASTM A182, F316L = Forged 316 Stainless Steel
- F5 = ASTM A182, F5 = Forged Alloy Steel (5% Chrome, .5% Moly)
- F7 = ASTM A182, 317 = Forged 317 Stainless Steel
- F7L = ASTM A182, F317L = Forged 317L Stainless Steel
- F11 = ASTM A182, F11 = Forged Alloy Steel (1.25% Chrome, .5% Moly)
- F22 = ASTM A182, F22 = Forged Alloy Steel (2.25% Chrome, 1% Moly)
- F9 = ASTM A182, F9 = Forged Alloy Steel (9% Chrome, 1% Moly)
- F91 = ASTM A182, F91 = Forged Alloy Steel (9% Chrome, 1% Moly, V)
- F8 = ASTM A182, F304 = Forged 304 Stainless Steel
- F8M = ASTM A182, F316 = Forged 316 Stainless Steel
- F8C = ASTM A182, F321 = Forged 321 Stainless Steel
- IB = ASTM A126, CLB = Cast Iron
- LCC = ASTM A352, LCC = Cast Low Temperature Carbon Steel
- LF2 = ASTM A350, LF2 = Forged Low Temperature Carbon Steel
- MO = ASTM A414, M35 = Cast NI Cu (Monel***)
- SPL = Special (Customer to specify)

Forged Steel Bolted & Welded Bonnet Gates Threaded, Socket Weld & Buttweld Ends Conventional Port Class 800 thru 2500 Sizes: 1/4" thru 3"

Design and Manufacturing Standards

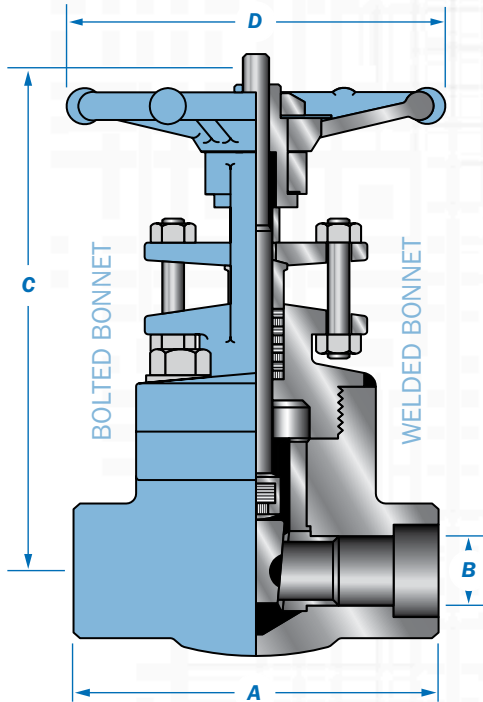
Valve Design: API 602

Pipe Threads, General Purpose, Inch: ASME B1.20.1

Socket Welding & Threaded: ASME B16.11

Tested in Accordance with: API 598

Recommended Spare Parts*



Class 800 thru 2500 Bolted & Welded Bonnet Gates

Size in. mm	Class 800 WB					Class 800 BB				
	A		B		C		D		Wt.	
	41	45	41	45	41	45	41	45	41	45
1/4	3.1		0.31		5.7		3.1		3.5	
6	80		8		145		80		1.6	
3/8	3.1		0.39		5.7		3.1		3.5	
9	80		10		145		80		1.6	
1/2	3.2	3.1	0.39	0.39	5.2	4.9	3.2	3.1	3.2	3.1
15	80	78.7	10	10	145	124.5	80	83.8	1.6	1.4
3/4	3.5	3.6	0.55	0.55	5.4	5.2	3.2	3.3	4.4	3.7
20	90	91.4	14	14	155	132.1	80	83.8	2	1.7
1	4.3	4.4	0.71	0.71	6.3	6.7	3.9	4.7	7.1	6.6
25	110	111.8	18	18	185	170.2	100	119.4	3.2	3
1-1/4	5.0	4.7	0.95	0.95	7.4	7.6	4.7	5.9	10.7	11
32	127	119.4	24	24	218	193	120	149.9	4.8	5
1-1/2	5.0	4.7	1.22	1.22	8.4	8.3	5.5	5.9	14.3	12.3
40	127	119.4	30	30	255	210.8	140	149.9	6.5	5.6
2	5.1	5.5	1.44	1.44	8.9	9.3	5.5	6.7	18.7	20.3
50	130	139.7	36.5	36.5	277	236.2	140	170.2	8.5	9.2
3	-	-	-	-	-	-	-	-	7.3	2.13
75	-	-	-	-	-	-	-	-	184.2	53.98
										393.7
										285.8
										25.5
Size in. mm	Class 1500 WB					Class 1500 BB				
	A		B		C		D		Wt.	
	41	45	41	45	41	45	41	45	41	45
1/2	3.5	4.4	0.39	0.55	5.4	7.8	3.2	4.9	5.0	9
15	90	111.8	10	13.97	152	198.1	80	124.5	2.2	4.1
3/4	4.3	4.4	0.55	0.55	6.4	7.8	3.9	4.9	8.4	9.5
20	110	111.8	14	13.97	180	198.1	100	124.5	3.6	4.3
1	4.7	4.5	0.75	0.71	7.5	8.6	4.7	6.2	12.6	13.5
25	120	114.3	18	18.03	218	218.4	120	157.5	5.2	6.1
1-1/4	5.1	4.7	0.95	0.95	8.3	9.3	5.5	6.2	14.6	19.2
32	130	119.4	24	24.13	250	236.2	140	157.5	7.5	8.7
1-1/2	5.1	5.5	1.16	1.14	9	10.8	5.5	7	22.0	26.9
40	130	139.7	29	28.95	275	274.3	140	177.8	10	12.2
2	5.9	6.4	1.44	1.44	10.2	12.6	6.7	7.9	33.0	39
50	150	162.6	36.5	36.57	320	320.0	170	200.7	14.5	17.7
Size in. mm	Class 2500 WB					Class 2500 BB				
	A		B		C		D		Wt.	
	41	45	41	45	41	45	41	45	41	45
1/2	4.3	5.9	0.39	0.39	6.9	9.5	3.9	6.3	7.7	27.1
15	110	149.9	10	9.9	175	241.3	100	160	3.5	12.3
3/4	4.7	5.9	0.55	0.55	8.3	9.5	4.7	6.3	12.1	26.6
20	120	149.9	14	13.97	210	241.3	120	160	5.5	12.1
1	5.1	6.7	0.75	0.71	9.4	10.8	5.5	7.1	16.5	26
25	130	170.2	18	18.03	240	274.3	140	180.3	7.5	11.8
1-1/4	5.1	8.7	0.95	0.95	11.0	13.1	6.7	7.8	22	46
32	130	220.9	24	24.13	280	332.7	170	198.1	10	20.9
1-1/2	8.3	8.7	1.16	1.14	12.2	13.1	6.7	7.8	35.2	60.5
40	210	220.9	29	28.95	310	332.7	170	198.1	16	27.5
2	9.4	9.8	1.44	1.44	14	16.8	10.2	11.8	55	117.3
50	240	248.9	36.5	36.57	355	426.7	260	299.7	25	53.3

Typical Bill of Materials (See page 12 for available materials.)

Component	Material	ASTM Spec	Component	Material	ASTM Spec
Body	Carbon Steel	A105N	Handwheel Nut	Carbon Steel	Commercial
Bonnet	Carbon Steel	A105N	Nameplate	Aluminum	Commercial
* Packing	Graphite W/Braided Carbon Fiber End Rings		Handwheel	Carbon Steel	A105N
* Gasket	Stainless Steel 316 Graphite		Yoke Sleeve	Stainless Steel	AISI 416
Stem	Stainless Steel	A479-410	Gland Nuts	Carbon Steel	A194 2H
Wedge	Stainless Steel	13 Chrome	Gland Flange	Carbon Steel	A105N
Seat Rings	Stainless Steel	A479-410	Gland Studs	Stainless Steel	AISI 410
Bonnet Bolt	Alloy Steel	A193 B7	Packing Gland	Stainless Steel	A479-316

Note: Dimensions: Inches/Millimeters - Weights: Pounds/Kilograms. Dimensions are subject to change without notice.

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