



Swing Check Valves

Sizes: 2" thru 24" **Class:** 150 thru 1500

Swing Check valves yield minimal restriction to low velocity environments and are ideal for preventing pipeline back flow in unidirectional flow applications in horizontal flow piping.

Note: Please consult Newmans Engineering Department for upward (vertical) flow applications.

Tilting Disc Check Valves

Sizes: 2" thru 24" **Class:** 150 thru 300 (See Pressure Seal thru 2500)

Tilting Disc Check valves yield minimal restriction to low velocity environments and are ideal for preventing pipeline back flow in unidirectional flow applications in horizontal flow piping. The Tilting Disc design helps to minimize the slamming of the disc when back-flow occurs.

Note: Please consult Newmans Engineering Department for upward (vertical) flow applications.



Stop Check Valves

Sizes: 2" thru 18" **Class:** 150 thru 1500

Stop Check valves are designed much the same as Globe Valves, except there is no mechanical connection (Split Lock Ring) between the stem and disc. They are designed to give check valve protection in the event of fluid back flow, and are commonly used to prevent flow from a header fed by multiple sources when there is a loss in pressure in one of the sources. Stop checks must be installed with line pressure under the disc so only boiler pressure can raise the disc. Stop Checks must be installed horizontally.

Angle Stop Check Valves

Sizes: 2" thru 12" **Class:** 150 thru 600

Angle Stop Check valves are designed much the same as Angle Globe Valves, except there is no mechanical connection (Split Lock Ring) between the stem and disc. They are designed to give check valve protection in the event of fluid back flow, and are commonly used to prevent flow from a header fed by multiple sources when there is a loss in pressure in one of the sources. Stop checks must be installed with line pressure under the disc so only boiler pressure can raise the disc.



Newmans' Complete Product Range

Brand	Type	Size	Class	Ends	Available Material**
Newco	Cast Carbon	* 2" to 48"	150 - 2500	RF, RTJ, BW	WCB, LCC
Newco	Cast Alloy	2" to 24"	150 - 2500	RF, RTJ, BW	C5, WC6, WC9, C12, C12A
Newco	Forged Carbon	1/4" to 3"	150 - 4500	FLGD, THRD, SW	A105N, LF2
Newco	Forged Alloy	1/4" to 2"	150 - 4500	FLGD, THRD, SW	F5, F9, F11, F22, F91, F51
Newco	Forged Stainless	1/4" to 2"	150 - 4500	FLGD, THRD, SW	304/L, 316/L, 317/L, 321, 347, A20
Newco	Pressure Seal	2" to 24"	600 - 4500	RF, RTJ, BW	Cast - all grades
Newco	Trunnion Ball & QuadroSphere	2" to 36"	150 - 2500	RF, BW	A105, LF2, F316, F51
Newco	Floating Ball	1/2" to 18"	150 - 600	RF	WCB, LCC, CF8M
Newco	Trinity Triple Offset	3" to 120"	150 - 600	WFR, LUG, FLGD, BW	WCB, 316, Monel, Hastelloy, NiAlBr
OIC	Cast Stainless	1/2" to 24"	150 - 2500	RF, RTJ, BW	304/L, 316/L, 317/L, 321, 347/H, A20
OIC	Forged Stainless	1/4" to 2"	150 - 4500	FLGD, THRD, SW	304/L, 316/L, 317/L, 321, 347, A20
Cooper	Cast Alloy	1/4" to 24"	150 - 1500	FLGD, THRD, SW, BW	Monel, Inconel, Hastelloy, Titanium, Zirconium, Duplex
Cooper	Forged Alloy	1/4" to 3"	800 - 1500	FLGD, THRD, SW, BW	Monel, Inconel, Hastelloy, Titanium, Zirconium, Duplex
Cooper	Ball Valves	1/4" to 3"	1500 PSI	THRD, SW, BW	Monel, Inconel, Hastelloy, Titanium, Zirconium, Duplex
Cooper	Ball Valves	1/2" to 12"	150 - 900 PSI	FLGD	Monel, Inconel, Hastelloy, Titanium, Zirconium, Duplex

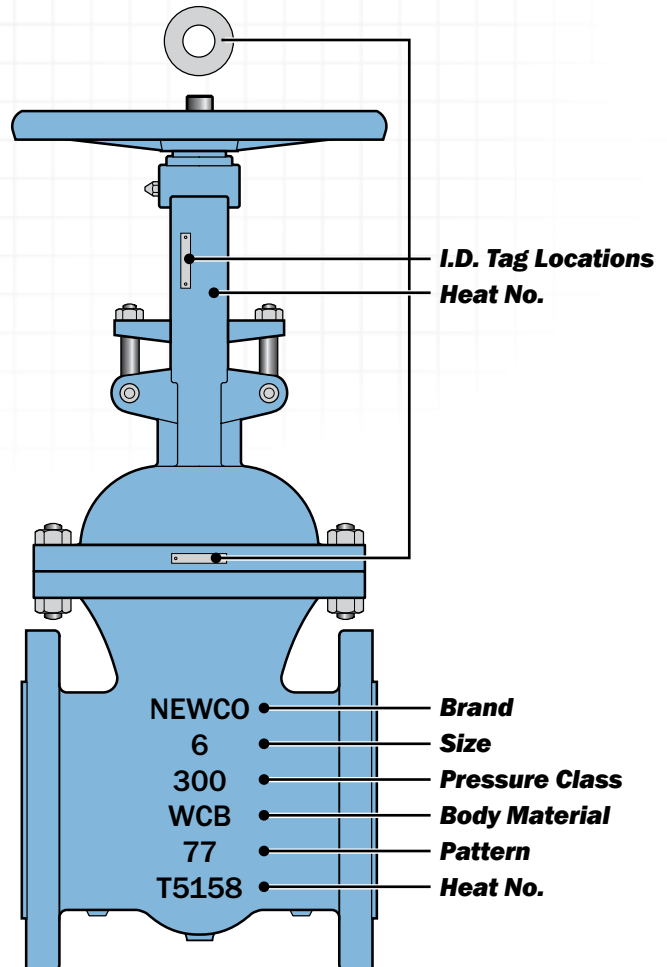
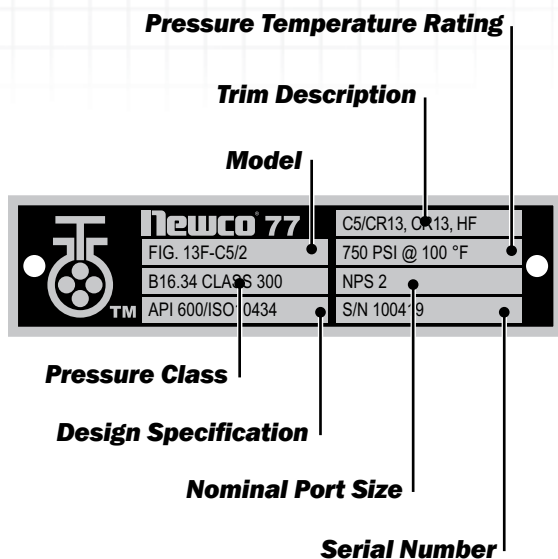
*Larger sizes available upon request. **Other materials available upon request.

Valve & I.D. Tag Overview

The identification tag displays all construction and tracking data regarding the respective valve on which it is attached. Below is a general overview of the identification tag components.

I.D. Tags are located in 1 of the 3 following areas:

- yoke
- body/bonnet flange
- under the handwheel nut



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 MRO103 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 C₀C_rA
- *** = 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)

Body/Bonnet Materials

Newco cast steel valves are available in stock in a wide range of body/bonnet materials and optional trim materials. Listed below are some of the more popular materials. Additional materials are available. Please contact Newmans or your local distributor for details.

Newco Material Designation	Common Description	ASTM Specs.	Body/Bonnet Material Service Limitations *
CB	Carbon Steel	A216	Non-corrosive service water, oil, & gases at temperatures between -20° F & +800° F
LCC	Low Temp Carbon	A352	Low temperature service between -50° F & +650° F
WC6	1.25% Chrome & .5% Moly	A217	Non-corrosive service water, oil, & gases at temperatures between -20° F & +1100° F
WC9	2.25% Chrome & 1% Moly	A217	Non-corrosive service water, oil, & gases at temperatures between -20° F & +1100° F
C5	5% Chrome & .5% Moly	A217	Corrosive, non-corrosive, or erosive service at temperatures between -20° F & +1200° F
C12	9% Chrome & 1% Moly	A217	Corrosive, non-corrosive, or erosive service at temperatures between -20° F & +1200° F
C12A	9% Chrome, 1% Moly, & V	A217	Corrosive, non-corrosive, or erosive service at temperatures between -20° F & +1200° F
C8M	Cast 316	A351	Corrosive, cryogenic or high temperature service between -450° F & +1200° F
A20	Alloy 20	A351	Corrosive service at temperatures between -20° F & +300° F

* Limitations are per 2004 Edition of ASME B16.34.

Trim Materials

The following are Newco's standard trim designations.

Newco Trim Number	Common Name	API 600 Trim No.	Seat Ring Facing (1)	Wedge or Disc Facing (1)	Stem	Other Trim Parts (2)	Service Limitations
1	13 Chrome	1	CR 13	CR 13	CR 13	CR 13	Non-corrosive applications. Steam, gas, & general service to 700° F. Oil & oil vapor to 900° F
2	Half Stellite	8	HF	CR 13	CR 13	CR 13	Steam, gas, & general service to 1000° F. Standard trim for gate valves
3	Full Stellite	5	HF	HF	CR 13	CR 13	Premium trim service to 1200° F. Excellent for high pressure water and steam service
4	316	10	316	316	316	316	Corrosive services to 850° F. Low temperature service standard for 316 SS valves
4/2	316/Half Stellite	12	HF	316	316	316	
4/3	316/Full Stellite	16	HF	HF	316	316	
5	Monel	9	NiCu	NiCu	NiCu	NiCu	Corrosive services to 750° F
5/2	Monel/Half Stellite	11	HF	NiCu	NiCu	NiCu	
5/3	Monel/Full Stellite	-	HF	HF	NiCu	NiCu	
6	Alloy 20	13	A20	A20	A20	A20	Corrosive services to 300° F
7	Bronze	-	BRZ	BRZ	BRZ	BRZ	Water, gas, or low pressure steam to 450° F
A7	Aluminum Bronze	-	AL BRZ	AL BRZ	AL BRZ	AL BRZ	
8	Iron	-	Iron	Iron	STL	Iron or STL	
X	Special	Special	Special	Special	Special	Special	Customer to specify

(1) Facing is defined as the seating surface of a seat ring and wedge/disc

(2) Other trim parts are defined as small internal parts that are normally in contact with the service fluid. This includes the stem, backseat bushing in gate and globe valves and the swing check disc nut

Sour Gas Service Materials

Newco cast steel valves may be furnished with body and trim materials in compliance with NACE MR-01-75 specifications. The standard valve is WCB with double tempered trim 2 and Class II bolting. Other materials, trim and bolting are available. To order the configuration you require, please specify the appropriate figure number and suffix designation as shown on Page 5.

Newco Features and Benefits

- Certifications
- International Organization for Standardization (ISO)
- Traceability
- Fugitive Emissions Tested
- API-598 Tested
- Major End-user Approved
- Multiple North American Locations
- Extensive Engineering Capabilities
- Excellent Customer Service
- Warranty
- Onsite Non-destructive Testing
- Field Services for Start-up
- Inhouse Automation Capabilities

Pressure Temperature Ratings - ASME B16.34 - 2004

Class 150							
Temperature °F	WCB*	LCC	WC6	WC9	C5	C12	C12A
-20 to 100	285	290	290	290	290	290	290
200	260	260	260	260	260	260	260
300	230	230	230	230	230	230	230
400	200	200	200	200	200	200	200
500	170	170	170	170	170	170	170
600	140	140	140	140	140	140	140
650	125	125	125	125	125	125	125
700	110	-	110	110	110	110	110
750	95	-	95	95	95	95	95
800	80	-	80	80	80	80	80
850	65	-	65	65	65	65	65
900	50	-	50	50	50	50	50
950	35	-	35	35	35	35	35
1000	20	-	20	20	20	20	20
1050	-	-	20**	20**	20**	20**	20
1100	-	-	20**	20**	20**	20**	20
1150	-	-	-	-	20**	20**	20
1200	-	-	-	-	20**	20**	20

Class 300							
Temperature °F	WCB*	LCC	WC6	WC9	C5	C12	C12A
-20 to 100	740	750	750	750	750	750	750
200	680	750	750	750	750	750	750
300	655	730	720	730	730	730	730
400	635	705	695	705	705	705	705
500	605	665	665	665	665	665	665
600	570	605	605	605	605	605	605
650	550	590	590	590	590	590	590
700	530	-	570	570	570	570	570
750	505	-	530	530	530	530	530
800	410	-	510	500	510	510	510
850	320	-	485	485	485	485	485
900	230	-	450	450	375	450	450
950	135	-	320	385	275	375	385
1000	85	-	215	265	200	255	365
1050	-	-	145	175	145	170	360
1100	-	-	95	110	100	115	300
1150	-	-	65	70	60	75	225
1200	-	-	40	40	35	50	145

Class 600							
Temperature °F	WCB*	LCC	WC6	WC9	C5	C12	C12A
-20 to 100	1480	1500	1500	1500	1500	1500	1500
200	1360	1500	1500	1500	1500	1500	1500
300	1310	1455	1445	1455	1455	1455	1455
400	1265	1405	1385	1410	1410	1410	1410
500	1205	1330	1330	1330	1330	1330	1330
600	1135	1210	1210	1210	1210	1210	1210
650	1100	1175	1175	1175	1175	1175	1175
700	1060	-	1135	1135	1135	1135	1135
750	1015	-	1065	1065	1065	1065	1065
800	825	-	1015	1015	1015	1015	1015
850	640	-	975	975	975	975	975
900	460	-	900	900	745	900	900
950	275	-	640	755	550	755	775
1000	170	-	430	535	400	505	725
1050	-	-	290	350	290	345	720
1100	-	-	190	220	200	225	605
1150	-	-	130	135	125	150	445
1200	-	-	80	80	70	105	290

Class 900							
Temperature °F	WCB*	LCC	WC6	WC9	C5	C12	C12A
-20 to 100	2220	2250	2250	2250	2250	2250	2250
200	2035	2250	2250	2250	2250	2250	2250
300	1965	2185	2165	2185	2185	2185	2185
400	1900	2110	2080	2115	2115	2115	2115
500	1810	1995	1995	1995	1995	1995	1995
600	1705	1815	1815	1815	1815	1815	1815
650	1650	1765	1765	1765	1765	1765	1765
700	1590	-	1705	1705	1705	1705	1705
750	1520	-	1595	1595	1595	1595	1595
800	1235	-	1525	1525	1525	1525	1525
850	955	-	1460	1460	1460	1460	1460
900	690	-	1350	1350	1120	1350	1350
950	410	-	955	1160	825	1130	1160
1000	255	-	650	805	595	760	1090
1050	-	-	430	525	430	515	1080
1100	-	-	290	330	300	340	905
1150	-	-	195	205	185	225	670
1200	-	-	125	125	105	155	430

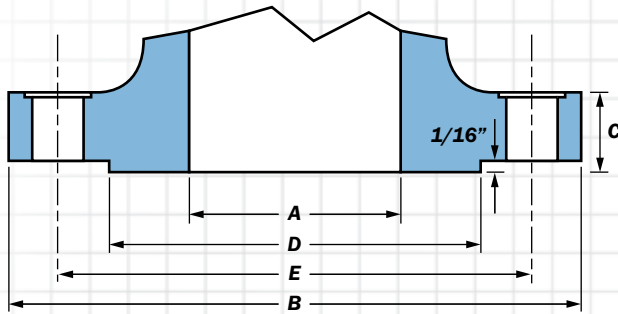
Class 1500							
Temperature °F	WCB*	LCC	WC6	WC9	C5	C12	C12A
-20 to 100	3705	3750	3750	3750	3750	3750	3750
200	3395	3750	3750	3750	3750	3750	3750
300	3270	3640	3610	3640	3640	3640	3640
400	3170	3520	3465	3530	3530	3530	3530
500	3015	3325	3325	3325	3325	3325	3325
600	2840	3025	3025	3025	3025	3025	3025
650	2745	2940	2940	2940	2940	2940	2940
700	2665	-	2840	2840	2840	2840	2840
750	2535	-	2660	2660	2660	2660	2660
800	2055	-	2540	2540	2540	2540	2540
850	1595	-	2435	2435	2435	2435	2435
900	1150	-	2245	2245	1870	2245	2245
950	685	-	1595	1930	1370	1885	1930
1000	430	-	1080	1335	995	1270	1820
1050	-	-	720	875	720	855	1800
1100	-	-	480	550	495	565	1510
1150	-	-	325	345	310	375	1115
1200	-	-	205	205	170	255	720

Class 2500							
Temperature °F	WCB*	LCC	WC6	WC9	C5	C12	C12A
-20 to 100	6170	6250	6250	6250	6250	6250	6250
200	5655	6250	6250	6250	6250	6250	6250
300	5450	6070	6015	6070	6070	6070	6070
400	5280	5865	5775	5880	5880	5880	5880
500	5025	5540	5540	5540	5540	5540	5540
600	4730	5040	5040	5040	5040	5040	5040
650	4575	4905	4905	4905	4905	4905	4905
700	4425	-	4730	4730	4730	4730	4730
750	4230	-	4430	4430	4430	4430	4430
800	3430	-	4230	4230	4230	4230	4230
850	2655	-	4060	4060	4060	4060	4060
900	1915	-	3745	3745	3115	3745	3745
950	1145	-	2655	3220	2285	3145	3220
1000	715	-	1800	2230	1655	2115	3030
1050	-	-	1200	1455	1200	1430	3000
1100	-	-	800	915	830	945	2515
1150	-	-	545	570	515	630	1855
1200	-	-	345	345	285	430	1200

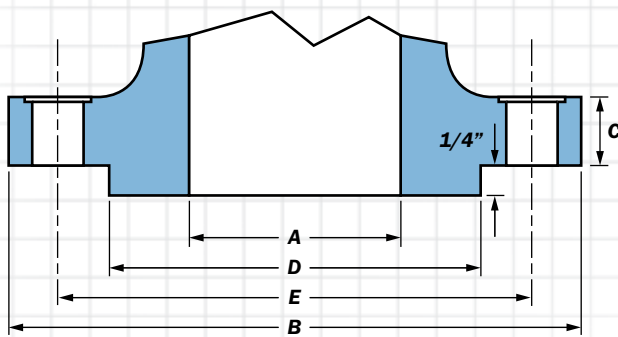
* Not recommended for prolonged use above 800° F. ** For weld end valves only. Flanged end ratings terminate at 1000° F. Note: Packing, gasket, or bolting may limit temperature. Please advise service temperature if above 1000° F. Ratings from ASME B16.34 standard class valves. Special class weld end valves to ASME B16.34 are available on special order.

Flange Dimensions - ASME B16.5

Class 150 & 300



Class 600 thru 2500



Standards: NPS 24 and smaller in all classes conform to ASME B16.5. NPS 30 and larger conform to ASME B16.47 (Series A).

Facing: End flanges are regularly furnished with a raised face having a serrated finish per MSS SP-6. The thickness of the flange dimension (C) includes the raised face for Class 150 and 300. For Class 600 thru 2500, the flange dimension (C) does not include the 1/4" raised face.

Bolt Holes: Bolt holes are 1/8" larger than the bolt diameter. Bolt holes are drilled to straddle the center line.

Flange Dimensions in Inches									
Class	Size	A	B	C	D	E	Stud Bolts		Hole Dia.
							No.	Dia.	
150	2	2.00	6.00	0.75	3.62	4.75	4	0.63	0.75
	2.5	2.50	7.00	0.88	4.12	5.50	4	0.63	0.75
	3	3.00	7.50	0.94	5.00	6.00	4	0.63	0.75
	4	4.00	9.00	0.94	6.19	7.50	8	0.63	0.75
	5	5.00	10.00	0.94	7.31	8.50	8	0.75	0.88
	6	6.00	11.00	1.00	8.50	9.50	8	0.75	0.88
	8	8.00	13.50	1.12	10.62	11.75	8	0.75	0.88
	10	10.00	16.00	1.19	12.75	14.25	12	0.88	1.00
	12	12.00	19.00	1.25	15.00	17.00	12	0.88	1.00
	14	13.25	21.00	1.38	16.25	18.75	12	1.00	1.13
	16	15.25	23.50	1.44	18.50	21.25	16	1.00	1.13
	18	17.25	25.00	1.56	21.00	22.75	16	1.125	1.25
	20	19.25	27.50	1.69	23.00	25.00	20	1.125	1.25
	24	23.25	32.00	1.88	27.25	29.50	20	1.25	1.38
	30	29.25	38.75	2.94	33.75	36.00	28	1.25	1.38
	36	35.06	46.00	3.56	40.25	42.75	32	1.50	1.63
42	40.87	53.00	3.81	47.00	49.50	36	1.50	1.63	
48	46.00	59.50	4.25	53.50	56.00	44	1.50	1.63	

Flange Dimensions in Inches										
Class	Size	A	B	C	D	E	Stud Bolts		Hole Dia.	
							No.	Dia.		
300	2	2.00	6.50	0.88	3.62	5.00	8	0.63	0.75	
	2.5	2.50	7.50	1.00	4.12	5.88	8	0.75	0.88	
	3	3.00	8.25	1.12	5.00	6.62	8	0.75	0.88	
	4	4.00	10.00	1.25	6.19	7.88	8	0.75	0.88	
	5	5.00	11.00	1.38	7.31	9.25	8	0.75	0.88	
	6	6.00	12.50	1.44	8.50	10.62	12	0.75	0.88	
	8	8.00	15.00	1.62	10.62	13.00	12	0.88	1.00	
	10	10.00	17.50	1.88	12.75	15.25	16	1.00	1.13	
	12	12.00	20.50	2.00	15.00	17.75	16	1.13	1.25	
	14	13.25	23.00	2.12	16.25	20.25	20	1.13	1.25	
	16	15.25	25.50	2.25	18.50	22.50	20	1.25	1.38	
	18	17.00	28.00	2.38	21.00	24.75	24	1.25	1.38	
	20	19.00	30.50	2.50	23.00	27.00	24	1.25	1.38	
	24	23.00	36.00	2.75	27.25	32.00	24	1.50	1.63	
	30	29.00	43.00	3.62	33.75	39.25	28	1.75	1.88	
	36	34.50	50.00	4.12	40.25	46.00	32	2.00	2.13	
600	2	2.00	6.50	1.00	3.62	5.00	8	0.63	0.75	
	2.5	2.50	7.50	1.12	4.12	5.88	8	0.75	0.88	
	3	3.00	8.25	1.25	5.00	6.62	8	0.75	0.88	
	4	4.00	10.75	1.50	6.19	8.50	8	0.88	1.00	
	5	5.00	13.00	1.75	7.31	10.50	8	1.00	1.13	
	6	6.00	14.00	1.88	8.50	11.50	12	1.00	1.13	
	8	7.88	16.50	2.19	10.62	13.75	12	1.13	1.25	
	10	9.75	20.00	2.50	12.75	17.00	16	1.25	1.38	
	12	11.75	22.00	2.62	15.00	19.25	20	1.25	1.38	
	14	12.88	23.75	2.75	16.25	20.75	20	1.38	1.50	
	16	14.75	27.00	3.00	18.50	23.75	20	1.50	1.63	
	18	16.50	29.25	3.25	21.00	25.75	20	1.63	1.75	
	20	18.25	32.00	3.50	23.00	28.50	24	1.63	1.75	
	24	22.00	37.00	4.00	27.25	33.00	24	1.88	2.00	
	30	27.37	44.50	4.50	33.75	40.25	28	2.00	2.13	
	36	32.87	51.75	4.88	40.25	47.00	28	2.50	2.63	
900	2	1.88	8.50	1.50	3.62	6.50	8	0.88	1.00	
	2.5	2.25	9.62	1.62	4.12	7.50	8	1.00	1.13	
	3	2.88	9.50	1.50	5.00	7.50	8	0.88	1.00	
	4	3.88	11.50	1.75	6.19	9.25	8	1.13	1.25	
	5	4.75	13.75	2.00	7.31	11.00	8	1.25	1.38	
	6	5.75	15.00	2.19	8.50	12.50	12	1.13	1.25	
	8	7.50	18.50	2.50	10.62	15.50	12	1.38	1.50	
	10	9.38	21.50	2.75	12.75	18.50	16	1.38	1.50	
	12	11.12	24.00	3.12	15.00	21.00	20	1.38	1.50	
	14	12.25	25.25	3.38	16.25	22.00	20	1.50	1.63	
	16	14.00	27.75	3.50	18.50	24.25	20	1.63	1.75	
	18	15.75	31.00	4.00	21.00	27.00	20	1.88	2.00	
	20	17.50	33.75	4.25	23.00	29.50	20	2.00	2.13	
	24	21.00	41.00	5.50	27.25	35.50	20	2.50	2.63	
	1500	2	1.88	8.50	1.50	3.62	6.50	8	0.88	1.00
		2.5	2.25	9.62	1.62	4.12	7.50	8	1.00	1.13
3		2.75	10.50	1.88	5.00	8.00	8	1.13	1.25	
4		3.62	12.25	2.12	6.19	9.50	8	1.25	1.38	
5		4.38	14.75	2.88	7.31	11.50	8	1.50	1.63	
6		5.38	15.50	3.25	8.50	12.50	12	1.38	1.50	
8		7.00	19.00	3.62	10.62	15.50	12	1.63	1.75	
10		8.75	23.00	4.25	12.75	19.00	12	1.88	2.00	
12		10.38	26.50	4.88	15.00	22.50	16	2.00	2.13	
14		11.38	29.50	5.25	16.25	25.00	16	2.25	2.38	
16		13.00	32.50	5.75	18.50	27.75	16	2.50	2.63	
18		14.62	36.00	6.38	21.00	30.50	16	2.75	2.88	
20		16.38	38.75	7.00	23.00	32.75	16	3.00	3.13	
24		19.62	46.00	8.00	27.25	39.00	16	3.50	3.63	
2500		2	1.50	9.25	2.00	3.62	6.75	8	1.00	1.13
		2.5	1.88	10.50	2.25	4.12	7.75	8	1.13	1.25
	3	2.25	12.00	2.62	5.00	9.00	8	1.25	1.38	
	4	2.88	14.00	3.00	6.19	10.75	8	1.50	1.63	
	5	3.62	16.50	3.62	7.31	12.75	8	1.75	1.88	
	6	4.38	19.00	4.25	8.50	14.50	8	2.00	2.13	
	8	5.75	21.75	5.00	10.62	17.25	12	2.00	2.13	
	10	7.25	26.50	6.50	12.75	21.75	12	2.50	2.63	
	12	8.62	30.00	7.25	15.00	24.38	12	2.75	2.88	

Auxiliary Connection Locations (Bypasses, Drains, etc.)

By-Passes

By-passes serve two purposes. They are used in steam services as a means to warm the line before the main valve is opened. They are also used to balance the pressure on both sides of the main valve as an aid to reduce the torque required to open the main valve.

Newco cast steel valve can be furnished with all welded by-passes when specified. The standard by-pass configuration is the single valve by-pass attached to the side of the main valve with the stems of both valves parallel as shown below. Piping and the OS&Y globe by-pass valve have a pressure-temperature rating and corrosion resistance equal to exceeding that of the main valve.

When other by-pass configurations are required, a sketch or drawing must accompany the order.

Drains

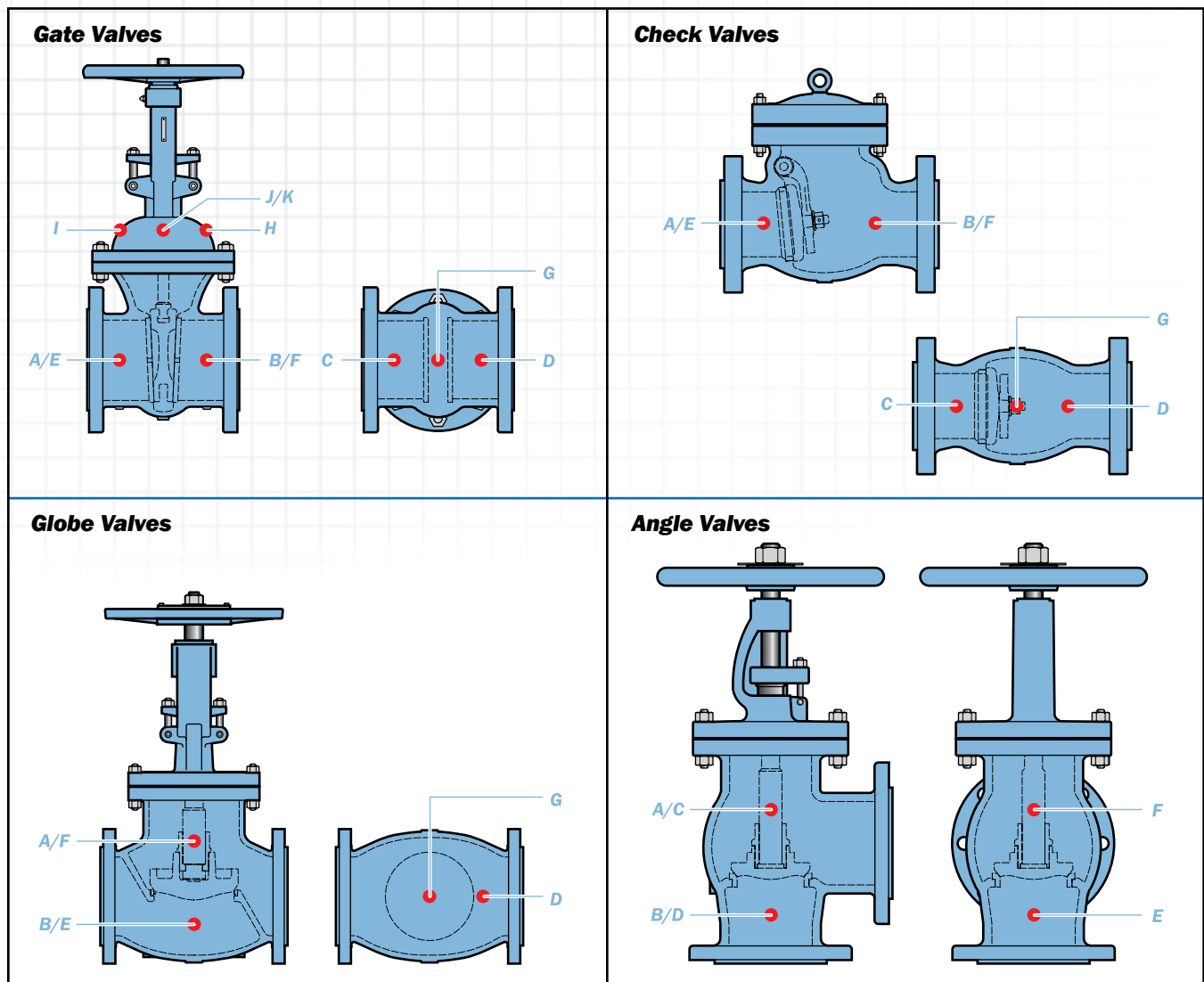
Newco cast steel valves can be furnished with drains at any of the locations shown. Standard drain connections consist of a drilled, tapped, and plugged hole at the location(s) specified. Other types of drains, including welding, or threaded nipples with or without shut-off valves, can also be furnished when specified.

Please refer to ASME B16.34 for exact auxiliary connection locations, sizes, and threading information.

Each letter in the illustration(s) below identify the possible hole locations for auxiliary connection(s). These illustrations are for reference purposes only.

Unless specified otherwise, auxiliary connection hole sizes shall be drilled and tapped as follows:

- 2" thru 4" utilizes a .50" hole
- 5" thru 8" utilizes a .75" hole
- 10" and larger utilizes a 1" hole



Products & Services

VALVES

NEWCO

- Full Line of Gate, Globe, and Check Valves in Forged Steel, and Cast Steel
- Trunnion Mounted Ball Valves
- Floating Ball Valves
- QuadroSphere® Trunnion Mounted Ball Valves

OIC

- Gate, Globe, and Check Valves in Stainless Steel

COOPER

- Gate, Globe, and Check Valves Flanged, Threaded, and Socket Weld in Cast and Forged Exotic Alloy, and Stainless Steel
- Flanged and 3-Piece Ball Valves in Exotic Alloy

Manual Operations

- Worm Gears, Spur Gears, Bevel Gears, and Reach Rods
- Table Stands, Extension Systems, and Brackets
- Field and Shop Installation Services

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- By Passes, Bore Changes, Mounting Plates, Stem Extensions, Limit Switches, Trim Changes, etc. (Inquire within)

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