



Newco®

Forged Steel Valves
Technical Data



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PREFACE

The procedures included in this book are to be performed in conjunction with the requirements and recommendations outlined in API Specifications. Any repairs to the equipment covered by this book should be done by an authorized Newmans service representative. Newmans will not be responsible for loss or expense resulting from any failure of equipment or any damage to any property or death or injury to any person resulting in whole or in part from repairs performed by anyone other than authorized Newmans personnel. Such unauthorized repairs shall also serve to terminate any contractual or other warranty, if any, on the equipment and may also result in equipment no longer meeting applicable requirements.

File copies of this manual are maintained. Revisions and/or additions will be made as deemed necessary by Newmans. The drawings in this book are not drawn to scale, but the dimensions shown are accurate.

This book covers Newmans products.

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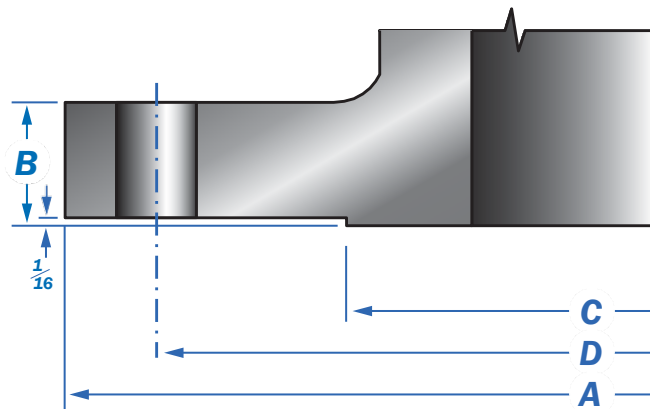
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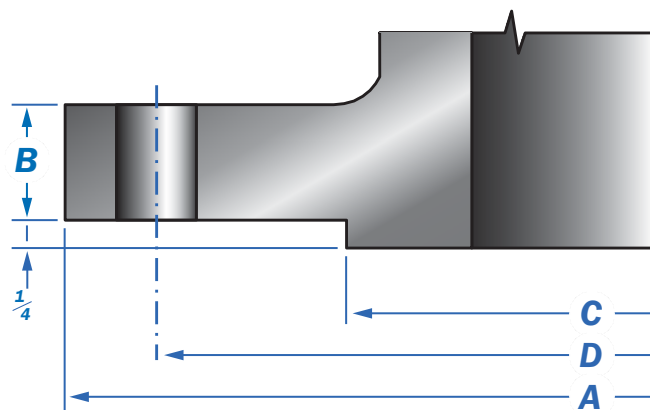
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FLANGE DIMENSIONS - ASME B16.5

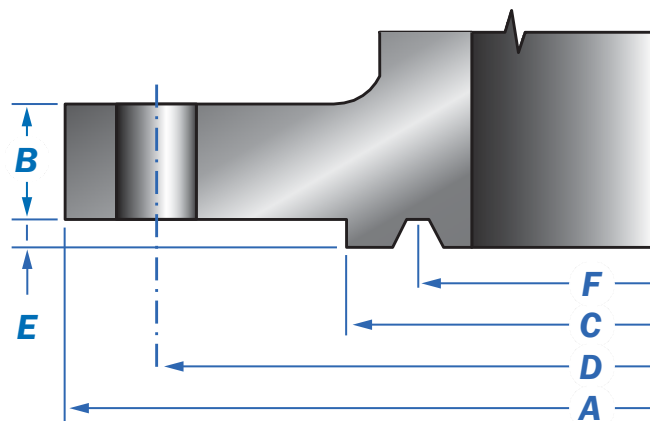
Raised Face Class 150 and 300



Raised Face Class 600 to 2500



RTJ Class 600 to 2500



Flange Dimensions in Inches										
Class 150										
Size In. mm	A	B	C	D	Ring Joint Facing			Ring No.	Bolt Holes	
					C	F	E		Size	No.
1/2	3.5	0.44	1.38	2.38	-	-	-	-	0.62	4
15	89	11.58	34.9	60.3	-	-	-	-	16	
3/4	3.88	0.5	1.69	2.75	-	-	-	-	0.62	4
20	98	13	42.9	69	-	-	-	-	16	
1	4.25	0.55	2	3.12	-	-	-	-	0.62	4
25	108	14.5	50.8	79.4	-	-	-	-	16	
1-1/4	4.62	0.62	2.5	3.5	-	-	-	-	0.62	4
32	117	16	68.5	88.9	-	-	-	-	16	
1-1/2	5	0.69	2.88	3.88	-	-	-	-	0.62	4
40	127	17.5	73	98.4	-	-	-	-	16	
2	6	0.75	3.62	4.75	-	-	-	-	0.75	4
50	152	19.5	92.1	120.6	-	-	-	-	19	

Flange Dimensions in Inches										
Class 300										
Size In. mm	A	B	C	D	Ring Joint Facing			Ring No.	Bolt Holes	
					C	F	E		Size	No.
1/2	3.75	0.56	1.38	2.62	-	-	-	-	0.62	4
15	95	14.5	34.9	66.7	-	-	-	-	16	
3/4	4.62	0.62	1.69	3.25	-	-	-	-	0.75	4
20	117	16	42.9	82.5	-	-	-	-	19	
1	4.88	0.69	2	3.5	-	-	-	-	0.75	4
25	124	17.5	50.8	88.9	-	-	-	-	19	
1-1/4	5.25	0.75	2.5	3.88	-	-	-	-	0.75	4
32	133	19.5	68.5	98.4	-	-	-	-	19	
1-1/2	6.12	0.81	2.88	4.5	-	-	-	-	0.88	4
40	156	21	73	114.3	-	-	-	-	22.5	
2	6.5	0.88	3.62	5	-	-	-	-	0.75	8
50	165	22.5	92.1	127	-	-	-	-	19	

Flange Dimensions in Inches										
Class 600										
Size In.	A	B	C	D	Ring Joint Facing			Ring No.	Bolt Holes	
mm					C	F	E		Size	No.
1/2	3.75	0.56	1.38	2.62	2	1.34	0.22	R 11	0.62	4
15	95	14.5	34.9	66.7	51	34.14	5.6		16	
3/4	4.62	0.62	1.69	3.25	2.5	1.68	0.25	R 13	0.75	4
20	117	16	42.9	82.5	63.5	42.88	6.3		19	
1	4.88	0.69	2	3.5	2.75	2	0.25	R 16	0.75	4
25	124	17.5	50.8	88.9	70	50.8	6.3		19	
1-1/4	5.25	0.81	2.5	3.88	3.12	2.38	0.25	R 18	0.75	4
32	133	21	63.5	98.4	79.5	60.32	6.3		19	
1-1/2	6.12	0.88	2.88	4.5	3.56	2.69	0.25	R 20	0.88	4
40	156	22.5	73	114.3	90.5	68.28	6.3		22.5	
2	6.5	1	3.62	5	4.25	3.25	0.31	R 23	0.75	8
50	165	25.5	92.1	127	108	82.55	79		19	

Flange Dimensions in Inches										
Class 1500										
Size In.	A	B	C	D	Ring Joint Facing			Ring No.	Bolt Holes	
mm					C	F	E		Size	No.
1/2	4.75	0.88	1.38	3.25	2.38	1.56	0.25	R 12	0.88	4
15	121	22.5	34.9	82.5	60.5	39.67	6.3		22.5	
3/4	5.12	1	1.69	3.5	2.62	1.75	0.25	R 14	0.88	4
20	130	22.5	42.9	88.9	66.5	44.45	6.3		22.5	
1	5.88	1.12	2	4	2.81	2	0.25	R 16	1	4
25	149	29	50.8	101.6	71.5	50.8	6.3		25.5	
1-1/4	6.25	1.12	2.5	4.38	3.19	2.37	0.25	R 18	1	4
32	159	29	63.5	111.1	81	60.32	6.3		25.5	
1-1/2	7	1.25	2.88	4.88	3.62	2.68	0.25	R 20	1.12	4
40	178	32	73	123.8	92	68.28	6.3		28.5	
2	8.5	1.5	3.62	6.5	4.88	3.75	0.31	R 24	1	8
50	216	38.5	92.1	165.1	124	95.25	7.9		25.5	

Flange Dimensions in Inches										
Class 2500										
Size In.	A	B	C	D	Ring Joint Facing			Ring No.	Bolt Holes	
					C	F	E		Size	No.
1/2	5.25	1.19	1.38	3.5	2.56	1.68	0.25	R 13	0.88	4
15	133.5	30.5	34.9	88.9	65	42.88	6.3		22.5	
3/4	5.5	1.25	1.69	3.75	2.88	2	0.25	R 16	0.88	4
20	139.5	32	42.9	95.3	73.2	50.8	6.3		22.5	
1	6.25	1.38	2	4.25	3.25	2.37	0.25	R 18	1	4
25	159	35	50.8	108	82.5	60.32	6.3		25.5	
1-1/4	7.25	1.5	2.5	5.12	4	2.84	0.31	R 21	1.12	4
32	184	38.5	63.5	130.2	101.6	72.24	7.9		28.5	
1-1/2	8	1.75	2.88	5.75	4.5	3.25	0.31	R 23	1.25	4
40	203	44.5	73	146.1	114.3	82.55	7.9		32	
2	9.25	2	3.62	6.75	5.25	4	0.31	R 26	1.12	8
50	235	51	92.1	171.5	133.4	101.6	7.9		28.5	

PRESSURE TEMPERATURE RATINGS - ASME B16.34 - 2017 (STANDARD)

Class 150																		
°F / PSI	-20 to 100	200	300	400	500	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
A105*	285	260	230	200	170	140	125	110	95	80	65	50	35	20	-	-	-	-
LF2	285	260	230	200	170	140	125	110	95	80	-	-	-	-	-	-	-	-
F11+	290	260	230	200	170	140	125	110	95	80	65	50	35	20	20**	20**	-	-
F22+	290	260	230	200	170	140	125	110	95	80	65	50	35	20	20**	20**	-	-
F5	290	260	230	200	170	140	125	110	95	80	65	50	35	20	20**	20**	20**	15**
F9	290	260	230	200	170	140	125	110	95	80	65	50	35	20	20**	20**	20**	20**
F91	290	260	230	200	170	140	125	110	95	80	65	50	35	20	20**	20**	20**	20**

Class 300																		
°F / PSI	-20 to 100	200	300	400	500	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
A105*	740	680	655	635	605	570	550	530	505	410	320	230	135	85	-	-	-	-
LF2	740	680	655	635	605	570	550	530	505	410	-	-	-	-	-	-	-	-
F11+	750	750	720	695	665	605	590	570	530	510	485	450	320	215	145	95	65	40
F22+	750	750	730	705	665	605	590	570	530	510	485	450	385	265	175	110	70	40
F5	750	735	700	670	645	605	590	570	530	510	485	375	275	200	145	95	60	35
F9	750	750	730	705	665	605	590	570	530	510	4185	450	375	255	170	115	75	50
F91	750	750	730	705	665	605	590	570	530	510	485	450	385	365	360	300	225	145

Class 600																		
°F / PSI	-20 to 100	200	300	400	500	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
A105*	1480	1360	1310	1265	1205	1135	1100	1060	1015	825	640	460	275	170	-	-	-	-
LF2	1480	1360	1310	1265	1205	1135	1100	1060	1015	825	-	-	-	-	-	-	-	-
F11+	1500	1500	1445	1385	1330	1210	1175	1135	1065	1015	975	900	640	430	290	190	130	80
F22+	1500	1500	1455	1410	1330	1210	1175	1135	1065	1015	975	900	755	535	350	220	135	80
F5	1500	1470	1400	1335	1290	1210	1175	1135	1065	1015	975	745	550	400	290	190	125	70
F9	1500	1500	1455	1410	1330	1210	1175	1135	1065	1015	975	900	755	505	345	225	150	105
F91	1500	1500	1455	1410	1330	1210	1175	1135	1065	1015	975	900	775	725	720	605	445	290

Class 800																		
°F / PSI	-20 to 100	200	300	400	500	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
A105*	1975	1810	1745	1690	1610	1515	1465	1415	1350	1100	850	615	365	225	-	-	-	-
LF2	1975	1810	1745	1690	1610	1515	1465	1415	1350	1100	-	-	-	-	-	-	-	-
F11+	2000	2000	1925	1850	1775	1615	1570	1515	1420	1355	1300	1200	850	575	385	255	175	110
F22+	2000	2000	1940	1880	1775	1615	1570	1515	1420	1355	1300	1200	1025	710	465	295	180	110
F5	2000	1965	1865	1780	1725	1615	1570	1515	1420	1355	1300	995	735	530	385	255	165	95
F9	2000	2000	1940	1880	1775	1615	1570	1515	1420	1355	1300	1200	1005	675	460	300	200	140
F91	2000	2000	1945	1880	1775	1615	1570	1515	1420	1355	1300	1200	1035	970	960	805	595	385

Class 900																		
°F / PSI	-20 to 100	200	300	400	500	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
A105*	2220	2035	1965	1900	1810	1705	1650	1590	1520	1235	955	690	410	255	-	-	-	-
LF2	2220	2035	1965	1900	1810	1705	1650	1590	1520	1235	-	-	-	-	-	-	-	-
F11+	2250	2250	2165	2080	1995	1815	1765	1705	1595	1525	1460	1350	955	650	430	290	195	125
F22+	2250	2250	2185	2115	1995	1815	1765	1705	1595	1525	1460	1350	1160	800	525	330	205	125
F5	2250	2210	2100	2005	1940	1815	1765	1705	1595	1525	1460	1120	825	595	430	290	185	105
F9	2250	2250	2185	2115	1995	1815	1765	1705	1595	1525	1460	1350	1130	760	515	340	225	155
F91	2250	2250	2185	2115	1995	1815	1765	1705	1595	1525	1460	1350	1160	1090	1080	905	670	430

Class 1500																		
°F / PSI	-20 to 100	200	300	400	500	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
A105*	3705	3395	3270	3170	3015	2840	2745	2655	2535	2055	1595	1150	685	430	-	-	-	-
LF2	3705	3395	3270	3170	3015	2840	2745	2655	2535	2055	-	-	-	-	-	-	-	-
F11+	3750	3750	3610	3465	3325	3025	2940	2840	2660	2540	2435	2245	1595	1080	720	480	325	205
F22+	3750	3750	3640	3530	3325	3025	2940	2840	2660	2540	2435	2245	1930	1335	875	550	345	205
F5	3750	3680	3495	3345	3230	3025	2940	2840	2660	2540	2435	1870	1370	995	720	480	310	170
F9	3750	3750	3640	3530	3325	3025	2940	2840	2660	2540	2435	2245	1885	1270	855	565	375	255
F91	3750	3750	3640	3530	3325	3025	2940	2840	2660	2540	2435	2245	1930	1820	1800	1510	1115	720

Class 1690																		
°F / PSI	-20 to 100	200	300	400	500	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
A105*	4173	3824	3684	3571	3397	3199	3093	2991	2857	2316	1796	1295	772	484	-	-	-	-
LF2	4173	3824	3684	3571	3397	3199	3093	2991	2857	2316	-	-	-	-	-	-	-	-
F11+	4225	4225	4067	3904	3746	3408	3313	3199	2996	2861	2744	2530	1796	1217	811	541	367	232
F22+	4225	4225	4102	3977	3746	3408	3313	3199	2996	2861	2744	2530	2175	1505	985	619	388	232
F5	4225	4146	3939	3768	3639	3408	3313	3199	2996	2861	2744	2107	1544	1120	811	541	349	192
F9	4225	4225	4102	3977	3746	3408	3313	3199	2996	2861	2744	2530	2124	1431	964	637	423	288
F91	4225	4225	4102	3977	3746	3408	3313	3199	2996	2861	2744	2530	2175	2050	2028	1701	1256	811

Class 2500																		
°F / PSI	-20 to 100	200	300	400	500	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
A105*	6170	5655	5450	5280	5025	4730	4575	4425	4230	3430	2655	1915	1145	715	-	-	-	-
LF2	6170	5655	5450	5280	5025	4730	4575	4425	4230	3430	-	-	-	-	-	-	-	-
F11+	6250	6250	6015	5775	5540	5040	4905	4730	4430	4230	4060	3745	2655	1800	1200	800	545	345
F22+	6250	6250	6070	5880	5540	5040	4905	4730	4430	4230	4060	3745	3220	2230	1455	915	570	345
F5	6250	6135	5830	5570	5385	5040	4905	4730	4430	4230	4060	3115	2285	1655	1200	800	515	285
F9	6250	6250	6070	5880	5540	5040	4905	4730	4430	4230	4060	3745	3145	2115	1430	945	630	430
F91	6250	6250	6070	5880	5540	5040	4905	4730	4430	4230	4060	3745	3220	3030	3000	2515	1855	1200

Class 2680																		
°F / PSI	-20 to 100	200	300	400	500	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
A105*	6615	6063	5843	5660	5386	5071	4905	4743	4534	3677	2847	2054	1227	766	-	-	-	-
LF2	6615	6063	5843	5660	5386	5071	4905	4743	4534	3677	-	-	-	-	-	-	-	-
F11+	6700	6700	6448	6191	5938	5403	5258	5071	4749	4534	4352	4015	2847	1930	1286	858	584	369
F22+	6700	6700	6507	6303	5938	5403	5258	5071	4749	4534	4352	4015	3452	2390	1560	981	611	369
F5	6700	6576	6249	5971	5772	5403	5258	5071	4749	4534	4352	3339	2450	1775	1286	858	552	306
F9	6700	6700	6507	6303	5938	5403	5258	5071	4749	4534	4352	4015	3371	2267	1533	1013	675	461
F91	6700	6700	6507	6303	5938	5403	5258	5071	4749	4534	4352	4015	3452	3248	3216	2696	1989	1286

Class 4500																		
°F / PSI	-20 to 100	200	300	400	500	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
A105*	11110	10185	9815	9505	9040	8515	8240	7960	7610	6170	4785	3455	2055	1285	-	-	-	-
LF2	11110	10185	9815	9505	9040	8515	8240	7960	7610	6170	-	-	-	-	-	-	-	-
F11+	11250	11250	10830	10400	9965	9070	8825	8515	7970	7610	7305	6740	4785	3240	2160	1440	975	615
F22+	11250	11250	10925	10585	9965	9070	8825	8515	7970	7610	7305	6740	5795	4010	2625	1645	1030	615
F5	11250	11040	10490	10030	9690	9070	8825	8515	7970	7610	7305	5605	4115	2985	2160	1440	925	515
F9	11250	11250	10925	10585	9965	9070	8825	8515	7970	7610	7305	6740	5655	3805	2570	1695	1130	770
F91	11250	11250	10925	10586	9965	9070	8825	8515	7970	7610	7305	6740	5795	5450	5400	4525	3345	2160

* Not recommended for prolonged use above 800° F. Only killed steel shall be used above 850° F

+ Not recommended for prolonged use above 1100° 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.

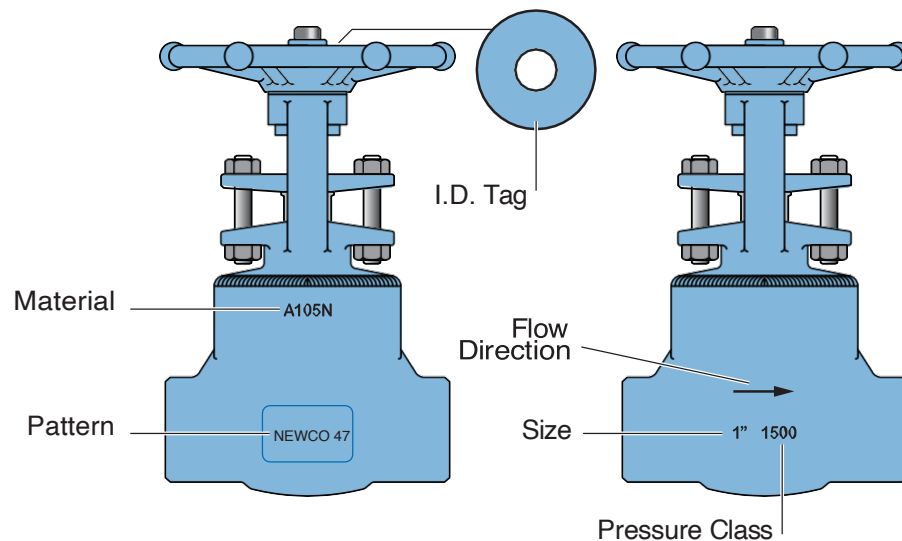
OVERVIEW

Valve and I.D. Tag Overview

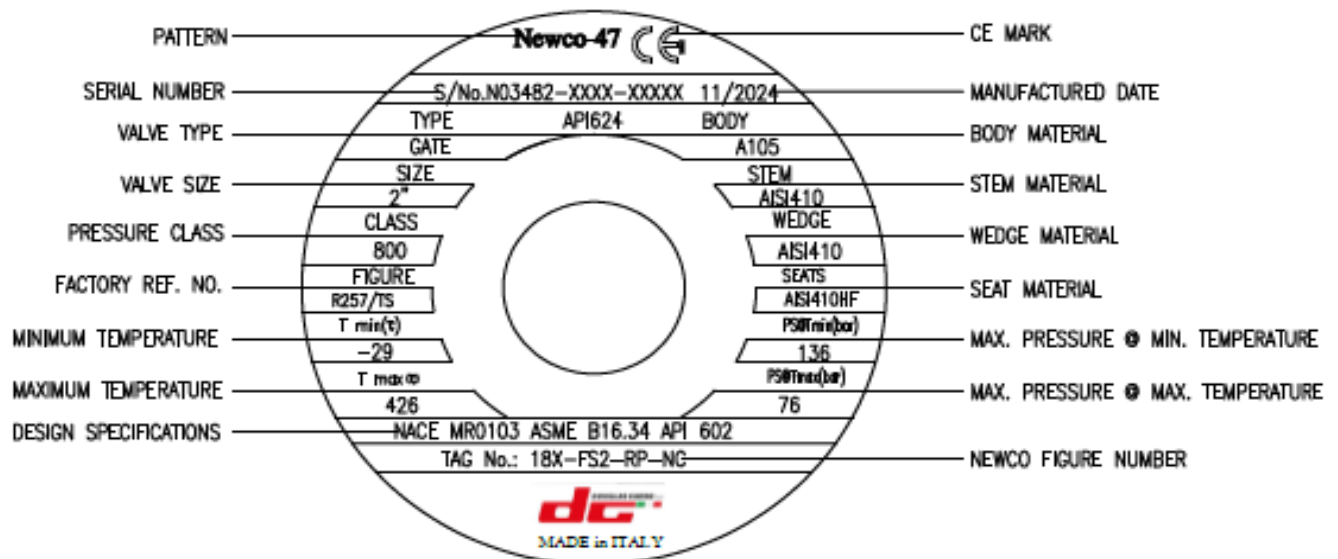
The identification tag displays all construction and tracking data regarding the respective valve on which it is attached. Below is a general overview of the identification tag components.

I.D. tags are located under the handwheel nut.

Globe and check valves will have a flow direction arrow on body for proper installation.



Newmans NEWCO 47 I.D. Tag



Body/Bonnet Materials

Newmans NEWCO® forged 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*
FS	Carbon Steel	A105	Non-corrosive service water, oil and gases at temperatures between -20° F and +800° F.
LF2	Low Temp. Carbon	A350	Low temperature service between -50° F and +800° F.
F11	1.25% Chrome and .5% Moly	A182	Non-corrosive service water, oil and gases at temperatures between -20° F and +1100° F.
F22	2.25% Chrome and 1% Moly	A182	Non-corrosive service water, oil and gases at temperatures between -20° F and +1100° F.
F5	5% Chrome and .5% Moly	A182	Corrosive, non-corrosive or erosive service at temperatures between -20° F and +1200° F.
F9	9% Chrome and 1% Moly	A182	Corrosive, non-corrosive or erosive service at temperatures between -20° F and +1200° F.
F91	9% Chrome, 1% Moly and V	A182	Corrosive, non-corrosive or erosive service at temperatures between -20° F and +1200° F.
F316	316	A182	Corrosive, cryogenic or high temperature service between -450° F and +1200° F.

* Limitations are per 2017 Edition of ASME B16.34.

Trim Materials

The following are Newmans NEWCO standard trim designations:

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 and general service to 700° F. Oil and oil vapor to 900° F.
2	Half Stellite	8	HF	CR 13	CR 13	CR 13	Steam, gas and 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.
9	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, etc. in gate and globe valves and the swing check disc nut.

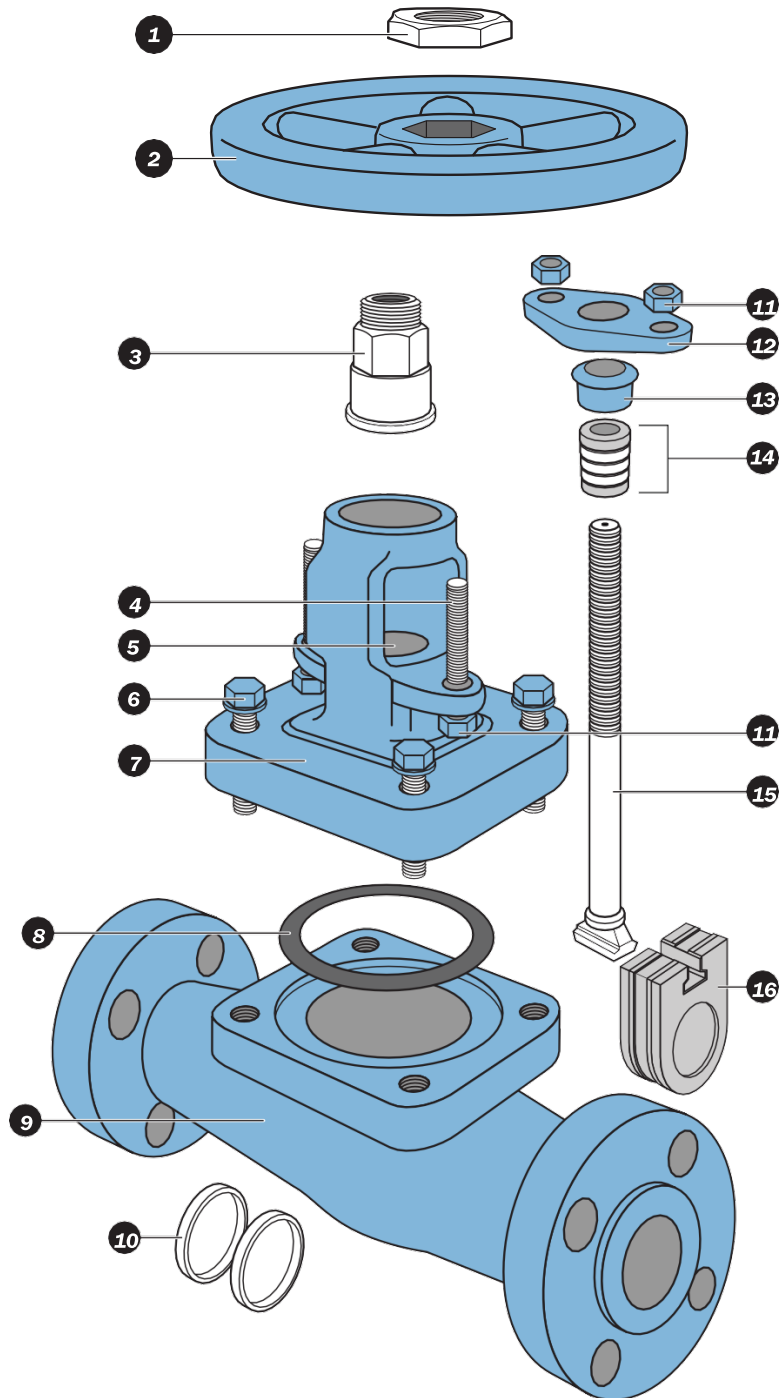
Features and Benefits

- Material Test Reports
- International Organization for Standardization (ISO)
- Traceability
- Fugitive Emissions Tested
- API-598 Tested
- Major End-user Approved
- Ship from North American Locations
- Extensive Engineering Capabilities
- Excellent Customer Service
- Warranty
- Field Services for Start-up

I. FORGED STEEL BOLTED AND WELDED BONNET GATE VALVES

SIZES: 1/4" TO 2" (6MM TO 50MM) • PRESSURE CLASS: 150 TO 4500

Newmans Typical NEWCO Forged Steel Bolted and 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 and Nuts: The gland bolts and nuts allow 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 and Bonnet: The 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: Newmans 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: The gland flange applies pressure to the gland for accurate packing adjustments.
13. Gland: The 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: The solid wedge is machined to the tightest tolerances to ensure trouble free shutoff and cycling.

FORGED STEEL BOLTED AND WELDED BONNET GATES
THREADED, SOCKET WELD AND BUTTWELD ENDS CONVENTIONAL PORT
CLASS 800 TO 4500
SIZES: 1/4" TO 2" (6MM TO 50MM)

Design and Manufacturing Standards

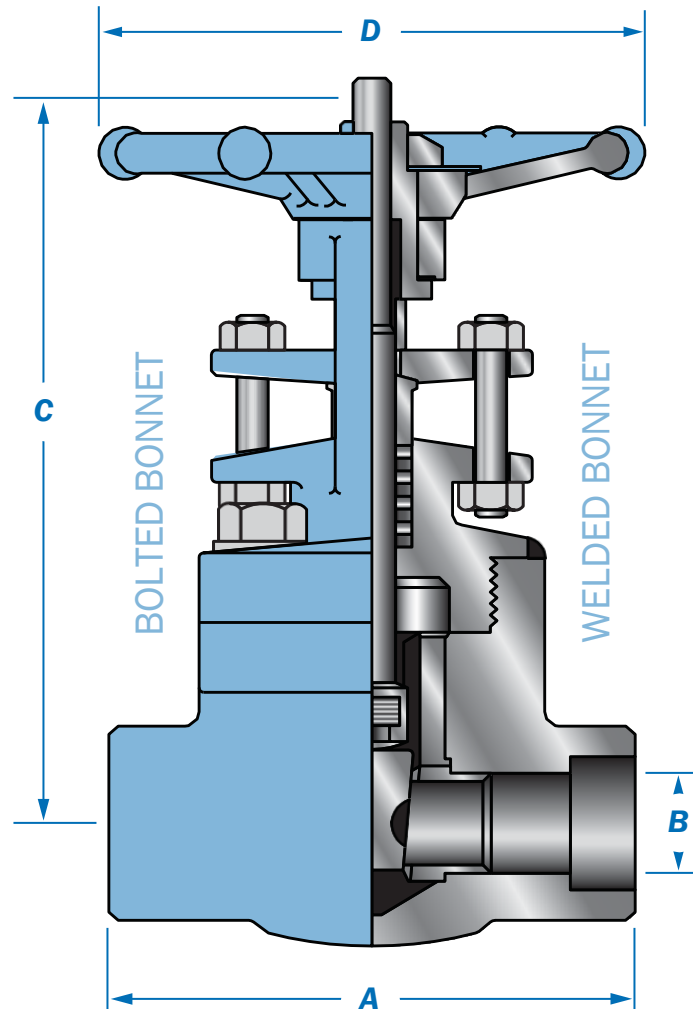
Valve Design: API 602

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

Socket Welding and Threaded: ASME B16.11

Tested in Accordance With: API 598

Recommended Spare Parts*



**Class 800 to 4500
Bolted and Welded Bonnet Gates**

SIZE	Class 800 WB					Class 800 BB				
	A	B	C	D	Wt.	A	B	C	D	Wt.
NPS	in	in	in	in	lb	in	in	in	in	lb
DN	mm	mm	mm	mm	kg	mm	mm	mm	mm	kg
1/4	3.15	0.33	5.91	3.54	3.3	3.15	0.33	5.63	3.54	4.0
6	80	8.5	150	90	1.5	80	8.5	143	90	1.8
3/8	3.15	0.39	5.91	3.54	3.3	3.15	0.39	5.71	3.54	4.0
9	80	10	150	90	1.5	80	10	145	90	1.8
1/2	3.15	0.39	5.91	3.54	3.3	3.15	0.39	5.71	3.54	4.0
15	80	10	150	90	1.5	80	10	145	90	1.8
3/4	3.54	0.55	6.18	3.54	3.7	3.54	0.55	6.14	3.54	4.6
20	90	14	157	90	1.7	90	14	156	90	2.1
1	4.33	0.71	7.40	3.94	6.2	4.33	0.71	7.32	3.94	7.3
25	110	18	188	100	2.8	110	18	186	100	3.3
1-1/4	5.00	0.94	8.66	4.72	9.7	5.00	0.94	8.50	4.72	11.4
32	127	24	220	120	4.4	127	24	216	120	5.2
1-1/2	5.00	1.22	9.76	5.51	12.3	5.00	1.22	10.04	5.51	15.4
40	127	31	248	140	5.6	127	31	255	140	7.0
2	5.12	1.44	10.79	5.51	16.7	5.12	1.44	10.75	5.51	20.0
50	130	36.5	274	140	7.6	130	36.5	273	140	9.1

SIZE	Class 1500 WB					Class 1500 BB				
	A	B	C	D	Wt.	A	B	C	D	Wt.
NPS	in	in	in	in	lb	in	in	in	in	lb
DN	mm	mm	mm	mm	kg	mm	mm	mm	mm	kg
1/4	3.54	0.33	6.69	3.54	4.8	3.54	0.33	6.42	3.54	5.1
6	90	8.5	170	90	2.2	90	8.5	163	90	2.3
3/8	3.54	0.33	6.69	3.54	4.8	3.54	0.33	6.42	3.54	5.1
9	90	8.5	170	90	2.2	90	8.5	163	90	2.3
1/2	3.54	0.39	6.69	3.54	4.8	3.54	0.39	6.42	3.54	5.1
15	90	10	170	90	2.2	90	10	163	90	2.3
3/4	4.33	0.55	7.20	3.94	7.3	4.33	0.55	7.09	3.94	8.1
20	110	14	183	100	3.3	110	14	180	100	3.7
1	5.00	0.71	8.62	4.72	11.0	5.00	0.71	8.35	4.72	11.9
25	127	18	219	120	5.0	127	18	212	120	5.4
1-1/4	5.00	0.94	9.72	5.51	14.1	5.00	0.94	9.65	5.51	16.3
32	127	24	247	140	6.4	127	24	245	140	7.4
1-1/2	5.12	1.22	10.79	5.51	19.1	5.12	1.22	10.47	5.51	21.1
40	130	31	274	140	8.7	130	31	266	140	9.6
2	5.91	1.44	13.03	7.87	29.9	5.91	1.44	12.52	7.87	33.2
50	150	36.5	331	200	13.6	150	36.5	318	200	15.1

SIZE	Class 2500 WB					Class 2500 BB				
	A	B	C	D	Wt.	A	B	C	D	Wt.
NPS	in	in	in	in	lb	in	in	in	in	lb
DN	mm	mm	mm	mm	kg	mm	mm	mm	mm	kg
1/2	4.33	0.39	7.80	5.51	5.7	4.33	0.48	8.35	5.51	13.4
15	110	10	198	140	2.6	110	12	212	140	6.1
3/4	5.00	0.55	8.85	7.87	8.8	4.53	0.55	10.08	7.87	19.1
20	127	14	225	200	4.0	115	14	256	200	8.7
1	5.00	0.71	9.57	7.87	13.0	5.12	0.71	10.71	7.87	22.4
25	127	18	243	200	5.9	130	18	272	200	10.2
1-1/2	5.91	1.22	15.24	10.24	22.0	8.27	1.22	16.18	10.24	60.3
40	150	31	387	260	10.0	210	31	411	260	27.4
2	9.45	1.44	15.87	13.78	63.8	9.45	1.44	16.61	13.78	79.6
50	240	36.5	403	350	29.0	240	36.5	422	350	36.2

SIZE	Class 4500 WB					Class 4500 BB				
	A	B	C	D	Wt.	A	B	C	D	Wt.
NPS	in	in	in	in	lb	in	in	in	in	lb
DN	mm	mm	mm	mm	kg	mm	mm	mm	mm	kg
1/2	5.00	0.31	9.21	6.89	9.0	5.00	0.31	9.21	6.89	9.0
15	127	8	234	175	4.1	127	8	234	175	4.1
3/4	5.00	0.43	10.20	7.87	13.6	5.00	0.43	10.20	7.87	13.6
20	127	11	259	200	6.2	127	11	259	200	6.2
1	5.12	0.59	12.72	10.24	26.0	5.12	0.59	12.72	10.24	26.0
25	130	15	323	260	11.8	130	15	323	260	11.8
1-1/2	9.45	0.98	16.97	13.78	61.6	9.45	0.98	16.97	13.78	61.6
40	240	25	431	350	28.0	240	25	431	350	28.0
2	9.45	1.18	19.13	13.78	92.4	9.45	1.18	19.13	13.78	92.4
50	240	30.0	486	350	42.0	240	30.0	486	350	42.0

Typical Bill Materials

Component	Material	ASTM Spec
Body	Carbon Steel	A105N
Bonnet	Carbon Steel	A105N
* Packing	Die Formed Graphite w/Braided Graphite End Rings	
* Gasket	Spiral Wound Stainless Steel 316 SS w/Graphite Soft Steel Ring Joint (Class 2500 & 4500)	
Stem	Stainless Steel	AISI 410
Wedge	Stainless Steel	AISI 410
Seat Rings	Stainless Steel	AISI 410 + Stellite Face
Bonnet Bolt	Alloy Steel	A193 B7M
Handwheel Nut	Carbon Steel	Commercial
Nameplate	Aluminum	Commercial
Handwheel	Carbon Steel	A105N
Yoke Sleeve	Stainless Steel	AISI 416
Gland Nuts	Carbon Steel	A194 2H
Gland Flange	Carbon Steel	A105N
Gland Studs	Stainless Steel	AISI 410
Packing Gland	Stainless Steel	AISI 316

Note: Dimensions: Inches/Millimeters Weights: Pounds/Kilograms.

Larger sizes available on request.

Dimensions are subject to change without notice.

FORGED STEEL EXTENDED BODY GATES BOLTED AND WELDED BONNET CONVENTIONAL PORT CLASS 800 SIZES: 1/2" TO 2"

Design and Manufacturing Standards

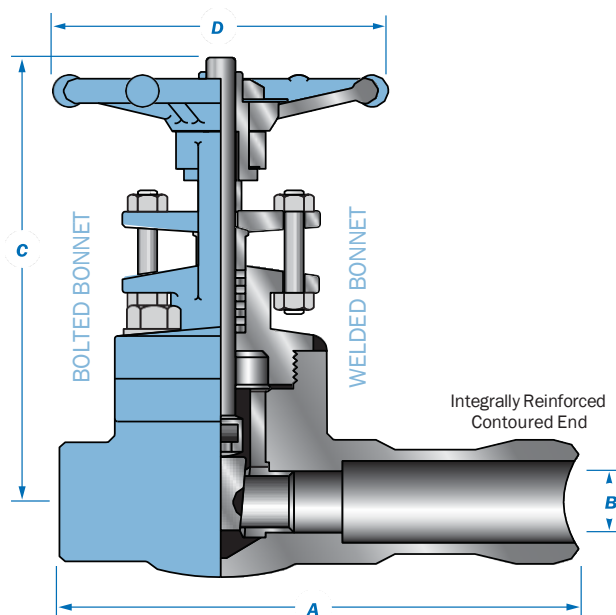
Valve Design: API 602

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

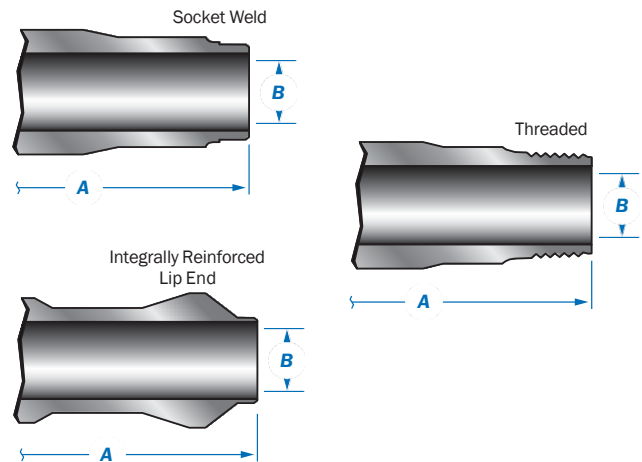
Socket Welding: ASME B16.11

Tested in Accordance With: API 598

Recommended Spare Parts*



Available Ends



Class 800 Extended Body Bolted and Welded Bonnet Gate										
SIZE	Class 800 BB Thread or Socket Weld End					Class 800 WB Thread or Socket Weld End				
	A	B	C	D	Wt.	A	B	C	D	Wt.
NPS	in	in	in	in	lb	in	in	in	in	lb
DN	mm	mm	mm	mm	kg	mm	mm	mm	mm	kg
1/2	5.71	0.39	6.46	3.54	5.3	5.71	0.39	5.91	3.54	3.5
15	145	10	164	90	2.4	145	10	150	90	1.6
3/4	6.30	0.55	6.65	3.54	6.0	6.30	0.55	6.18	3.54	4.9
20	160	14	169	90	2.7	160	14	157	90	2.2
1	7.48	0.71	7.64	3.94	9.5	7.48	0.71	7.40	3.94	7.1
25	190	18	194	100	4.3	190	18	188	100	3.2
1-1/2	8.82	1.22	10.27	5.51	19.4	8.82	1.22	9.76	5.51	15.9
40	224	31	261	140	8.8	224	31	248	140	7.2
2	9.45	1.44	10.87	5.51	25.8	9.45	1.44	10.75	5.51	18.3
50	240	36.5	276	140	11.7	240	36.5	273	140	8.3

SIZE	Class 800 BB IR Contoured or Lip End					Class 800 WB IR Contoured or Lip End				
	A	B	C	D	Wt.	A	B	C	D	Wt.
NPS	in	in	in	in	lb	in	in	in	in	lb
DN	mm	mm	mm	mm	kg	mm	mm	mm	mm	kg
1/2	8.19	0.39	5.90	3.54	5.5	8.19	0.39	5.90	3.54	4.8
15	208	10	150	90	2.5	208	10	150	90	2.2
3/4	8.58	0.55	6.14	3.54	6.2	8.58	0.55	6.18	3.54	5.5
20	218	14	156	90	2.8	218	14	157	90	2.5
1	9.60	0.71	7.32	3.94	11.0	9.60	0.71	7.40	3.94	10.3
25	244	18	186	100	5.0	244	18	188	100	4.7
1-1/2	10.35	1.22	10.04	5.51	21.6	10.35	1.22	9.76	5.51	19.8
40	263	31	255	140	9.8	263	31	248	140	9.0
2	10.55	1.44	10.75	5.51	29.7	10.55	1.44	10.79	5.51	27.9
50	268	36.5	273	140	13.5	274	36.5	274	140	12.7

Typical Bill of Materials

Component	Material	ASTM Spec
Body	Carbon Steel	A105N
Bonnet	Carbon Steel	A105N
* Packing	Die Formed Graphite w/Braided Graphite End Rings	
* Gasket	Spiral Wound 316 SS w/Graphite	
Stem	Stainless Steel	AISI 410
Wedge	Stainless Steel	AISI 410
Seat Rings	Stainless Steel	AISI 410 + Stellite Face
Bonnet Bolt	Alloy Steel	A193 B7
Handwheel Nut	Carbon Steel	Commercial
Nameplate	Aluminum	Commercial
Handwheel	Carbon Steel	A105N
Yoke Sleeve	Stainless Steel	AISI 416
Gland Nuts	Carbon Steel	A194 2H
Gland Flange	Carbon Steel	A105N
Gland Studs	Stainless Steel	AISI 410
Packing Gland	Stainless Steel	AISI 316

Note: Dimensions: Inches/Millimeters Weights: Pounds/Kilograms.

Larger sizes available on request.

Dimensions are subject to change without notice.

FORGED STEEL FLANGED END GATES
BOLTED AND WELDED BONNET CONVENTIONAL PORT
CLASS 150 TO 1500
SIZES: 1/2" TO 2" (15MM TO 50MM)
(1/4" AND 3/8" AVAILABLE UPON REQUEST)

Design and Manufacturing Standards

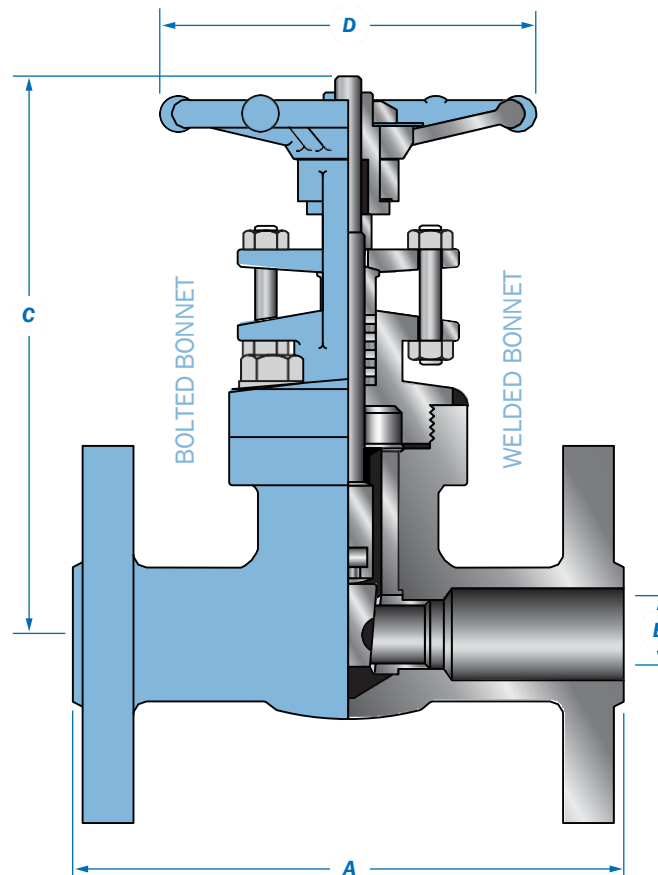
Valve Design: API 602

Flange Dimensions: ASME B16.5

Face to Face Dimensions: ASME B16.10

Tested in Accordance With: API 598

Recommended Spare Parts*



**Class 150 to 1500
Bolted and Welded Bonnet Flanged Gates**

SIZE	Class 150 BB and WB					Class 300 BB and WB				
	A	B	C	D	Wt.	A	B	C	D	Wt.
NPS	in	in	in	in	lb	in	in	in	in	lb
DN	mm	mm	mm	mm	kg	mm	mm	mm	mm	kg
1/2	4.25	0.39	7.05	3.54	7.0	5.50	0.39	5.71	3.54	8.4
15	108	10	179	90	3.2	140	10	145	90	3.8
3/4	4.63	0.55	7.32	3.54	9.0	6.00	0.55	6.14	3.54	11.9
20	118	14	186	90	4.1	152	14	156	90	5.4
1	5.00	0.71	8.19	3.94	12.8	6.50	0.71	7.32	3.94	14.3
25	127	18	208	100	5.8	165	18	186	100	6.5
1-1/2	6.50	1.22	10.04	5.51	22.0	7.50	1.22	10.04	5.51	28.6
40	165	31	255	140	10.0	191	31	255	140	13.1
2	7.00	1.44	10.75	5.51	28.8	8.50	1.44	10.75	5.51	38.1
50	178	36.5	273	140	13.1	216	36.5	273	140	17.3

SIZE	Class 600 BB and WB					Class 1500 BB and WB				
	A	B	C	D	Wt.	A	B	C	D	Wt.
NPS	in	in	in	in	lb	in	in	in	in	lb
DN	mm	mm	mm	mm	kg	mm	mm	mm	mm	kg
1/2	6.50	0.39	5.71	3.54	7.7	8.50	0.45	8.35	4.72	21.3
15	165	10	145	90	3.5	216	12	212	120	9.7
3/4	7.50	0.55	6.14	3.54	12.8	9.00	0.59	10.08	6.89	34.1
20	191	14	156	90	5.8	229	15	256	175	15.5
1	8.50	0.71	7.32	3.94	16.3	10.00	0.77	10.71	6.89	38.5
25	216	18	186	100	7.4	254	20	272	175	17.5
1-1/2	9.50	1.22	10.04	5.51	31.5	12.00	1.26	16.18	10.24	84.7
40	241	31	255	140	14.3	305	32	411	260	38.5
2	11.50	1.44	10.75	5.51	41.4	14.50	1.57	16.62	10.24	123.2
50	292	36.5	273	140	18.8	368	40.0	422	260	56.0

Typical Bill of Materials

Component	Material	ASTM Spec
Body	Carbon Steel	A105N
Bonnet	Carbon Steel	A105N
* Packing	Die Formed Graphite w/Braided Graphite End Rings	
* Gasket	Spiral Wound 316 SS w/Graphite	
Stem	Stainless Steel	AISI 410
Disc	Stainless Steel	AISI 410
Seat Rings	Stainless Steel	AISI 410 + Stellite Face
Bonnet Bolt	Alloy Steel	A193 B7
Washer	Carbon Steel	Commercial
Handwheel Nut	Carbon Steel	Commercial
Nameplate	Aluminum	Commercial
Handwheel	Carbon Steel	A105N
Yoke Sleeve	Stainless Steel	AISI 416
Gland Nuts	Carbon Steel	A194 2H
Gland Flange	Carbon Steel	A105N
Gland Studs	Stainless Steel	AISI 410
Packing Gland	Stainless Steel	AISI 316

Note: Dimensions: Inches/Millimeters Weights: Pounds/Kilograms.

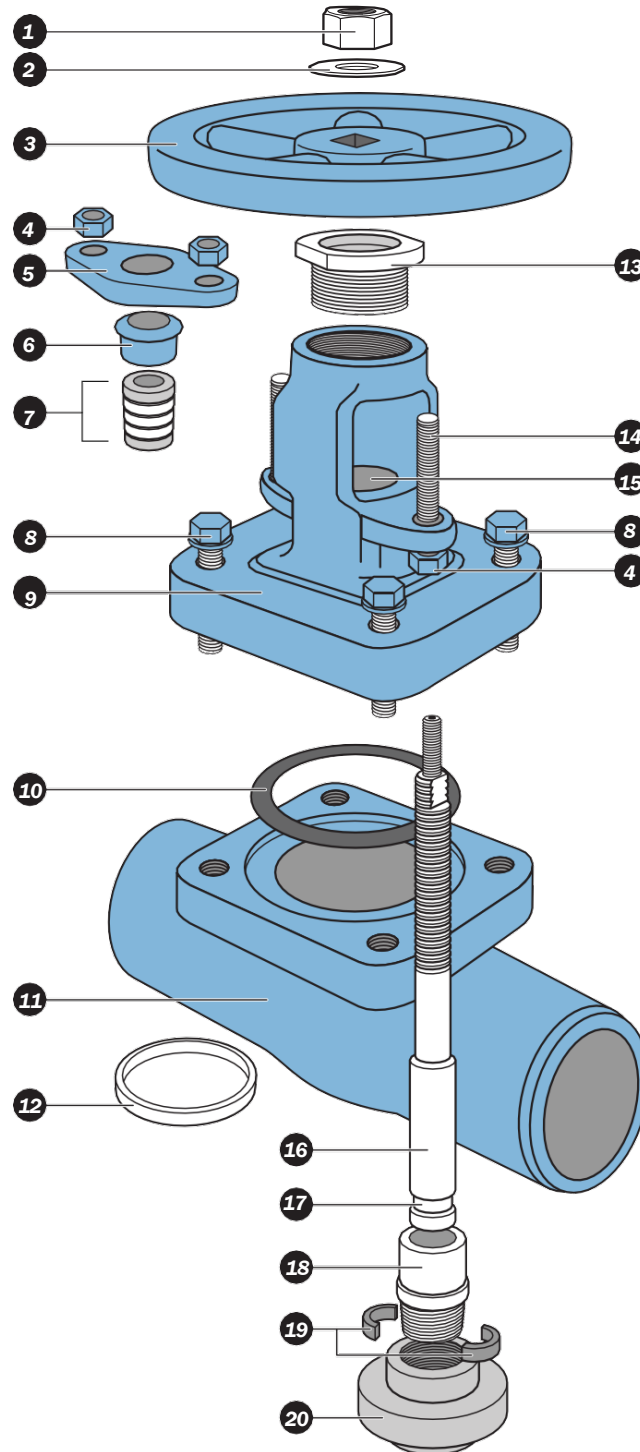
Larger sizes available on request.

Dimensions are subject to change without notice.

II. FORGED STEEL BOLTED AND WELDED BONNET GLOBE VALVES

SIZES: 1/2" TO 2" (15MM TO 50MM) • PRESSURE CLASS: 150 TO 4500

Newmans Typical NEWCO Forged Steel Bolted and Welded Bonnet Globe Valve Expanded View



1. Handwheel Nut: The handwheel nut secures the handwheel to the bonnet assembly.
2. Handwheel Washer: The washer helps to prevent loosening.
3. Handwheel: The handwheel cycles the valve.
4. & 14. Gland Bolts and Nuts: The gland bolts and nuts allow for easy adjustments for packing compression.
5. Gland Flange: The gland flange applies pressure to the gland for accurate packing compression.
6. Gland: The gland compresses the packing to create a stem seal above the back seat between the bonnet and stem.
7. Packing: The packing creates a seal above the back seat between the bonnet and stem.
8. Bonnet Bolts: The bonnet bolts secure the bonnet to the body.
9. Bonnet: Newmans NEWCO bonnet assemblies are built to the same standards as the bodies.
10. Bonnet Gasket: The bonnet gasket creates a leakproof seal between the bonnet and body.
11. Body: Newmans NEWCO forged steel bodies provide low resistance flow and optimum strength and performance
12. Seat Ring: To ensure a stable shutoff, the seat ring is aligned into the valve, then precision ground for optimal seating.
13. Stem Nut: The stem nut provides a precision guide for proper stem alignment.
15. Stuffing Box: The stuffing box contains the packing.
16. Stem: The stem inserts vertically into the disc.
17. Lock Groove: The lock groove receives the split lock ring which allows the disc nut to lift the disc during cycling.
18. Disc Nut: The disc nut, in conjunction with the split lock ring, secures the disc to the stem.
19. Split Ring: The split ring allows the disc nut to lift the disc during cycling.
20. Disc: Newmans NEWCO plug type disc is machined to the tightest tolerances to ensure trouble-free shutoff and cycling.

**FORGED STEEL BOLTED AND WELDED BONNET GLOBES
THREADED, SOCKET WELD AND BUTTWELD ENDS CONVENTIONAL PORT
CLASS 800 TO 4500
SIZES: 1/2" TO 2" (15MM TO 50MM)
(1/4" AND 3/8" AVAILABLE UPON REQUEST)**

Design and Manufacturing Standards

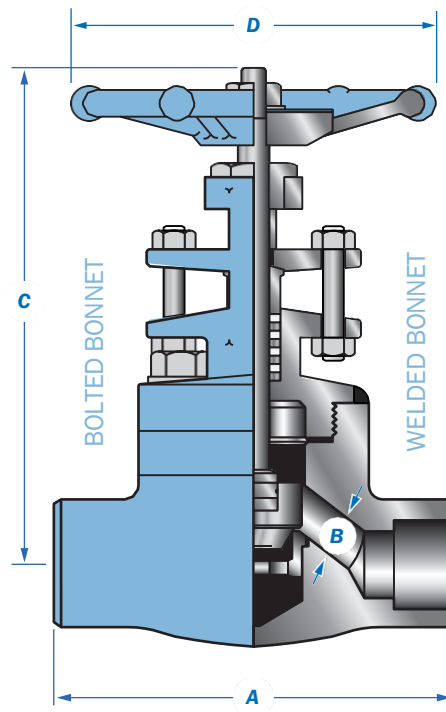
Valve Design: API 602

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

Socket Welding: ASME B16.11

Tested in Accordance With: API 598

Recommended Spare Parts*



**Class 800 to 4500
Bolted and Welded Bonnet Globes**

SIZE	Class 800 WB					Class 800 BB				
	A	B	C	D	Wt.	A	B	C	D	Wt.
NPS	in	in	in	in	lb	in	in	in	in	lb
DN	mm	mm	mm	mm	kg	mm	mm	mm	mm	kg
1/2	3.15	0.35	6.02	3.54	3.1	3.15	0.35	5.98	3.54	3.7
15	80	9.0	153	90	1.4	80	9.0	152	90	1.7
3/4	3.54	0.49	6.22	3.54	3.5	3.54	0.49	6.26	3.54	4.4
20	90	12.5	158	90	1.6	90	12.5	159	90	2.0
1	4.33	0.69	7.05	3.94	6.6	4.33	0.69	7.17	3.94	7.0
25	110	17.5	179	100	3.0	110	17.5	182	100	3.2
1-1/2	6.10	1.10	9.84	5.51	15.0	6.10	1.10	11.14	5.51	17.2
40	155	28.0	250	140	6.8	155	28.0	283	140	7.8
2	6.69	1.26	10.79	5.51	20.7	6.69	1.26	12.05	5.51	23.3
50	170	32.0	274	140	9.4	170	32.0	306	140	10.6

SIZE	Class 1500 WB					Class 1500 BB				
	A	B	C	D	Wt.	A	B	C	D	Wt.
NPS	in	in	in	in	lb	in	in	in	in	lb
DN	mm	mm	mm	mm	kg	mm	mm	mm	mm	kg
1/2	3.54	0.39	6.97	3.54	4.6	3.54	0.39	6.65	3.54	5.3
15	90	10.0	177	90	2.1	90	10.0	169	90	2.4
3/4	4.33	0.53	7.28	3.94	7.5	4.33	0.53	7.13	3.94	8.1
20	110	13.5	185	100	3.4	110	13.5	181	100	3.7
1	5.00	0.71	8.43	4.72	11.9	5.00	0.71	8.27	4.72	12.1
25	127	18.0	214	120	5.4	127	18.0	210	120	5.5
1-1/2	6.69	1.14	10.63	5.51	23.1	6.69	1.14	10.04	5.51	25.1
40	170	29.0	270	140	10.5	170	29.0	255	140	11.4
2	8.27	1.38	12.99	7.87	36.3	8.27	1.38	12.09	7.87	37.0
50	210	35.0	330	200	16.5	210	35.0	307	200	16.8

SIZE	Class 2500 WB					Class 2500 BB				
	A	B	C	D	Wt.	A	B	C	D	Wt.
NPS	in	in	in	in	lb	in	in	in	in	lb
DN	mm	mm	mm	mm	kg	mm	mm	mm	mm	kg
1/2	4.33	0.39	8.22	5.51	5.5	4.33	0.39	8.58	5.51	13.0
15	110	10	209	140	2.5	110	10	218	140	5.8
3/4	4.53	0.51	9.37	7.87	9.0	4.53	0.51	10.24	7.87	18.3
20	115	13	238	200	4.1	115	13	260	200	8.3
1	5.12	0.71	10.11	7.87	13.6	5.12	0.71	10.55	7.87	21.3
25	130	18	257	200	6.2	130	18	268	200	9.7
1-1/2	8.27	0.98	15.20	10.24	26.0	8.27	0.98	16.81	10.24	59.0
40	210	25	386	260	11.8	210	25	427	260	26.8
2	9.45	1.33	16.02	13.78	61.6	9.45	1.33	17.05	13.78	77.7
50	240	34.0	407	350	28.0	240	34.0	433	350	35.3

SIZE	Class 4500 WB					Class 4500 BB				
	A	B	C	D	Wt.	A	B	C	D	Wt.
NPS	in	in	in	in	lb	in	in	in	in	lb
DN	mm	mm	mm	mm	kg	mm	mm	mm	mm	kg
1/2	5.00	0.28	9.84	6.89	17.0	5.00	0.28	9.84	6.89	17.0
15	127	7	250	175	7.7	127	7	250	175	7.7
3/4	5.12	0.43	10.87	7.87	24.3	5.12	0.43	10.87	7.87	24.3
20	130	11	276	200	11.0	130	11	276	200	11.0
1	8.27	0.55	14.00	10.24	49.6	8.27	0.55	14.00	10.24	49.6
25	210	14	355	260	22.5	210	14	355	260	22.5
1-1/2	9.45	0.98	17.09	13.78	66.8	9.45	0.98	17.09	13.78	66.8
40	240	25	434	350	30.3	240	25	434	350	30.3
2	9.45	1.18	18.27	13.78	98.6	9.45	1.18	18.27	13.78	98.6
50	240	30.0	464	350	44.7	240	30.0	464	350	44.7

Typical Bill Materials

Component	Material	ASTM Spec
Body	Carbon Steel	A105N
Bonnet	Carbon Steel	A105N
* Packing	Die Formed Graphite w/Braided Graphite End Rings	
* Gasket	Spiral Wound Stainless Steel 316 w/Graphite Soft Steel Ring Joint (Class 2500 & 4500)	
Stem	Stainless Steel	AISI 410
Disc	Stainless Steel	AISI 410
Seat Rings	Stainless Steel	AISI 410 + Stellite Face
Bonnet Bolt	Alloy Steel	A193 B7
Washer	Carbon Steel	Commercial
Handwheel Nut	Carbon Steel	Commercial
Nameplate	Aluminum	Commercial
Handwheel	Carbon Steel	A105N
Yoke Sleeve	Stainless Steel	AISI 416
Gland Nuts	Carbon Steel	A194 2H
Gland Flange	Carbon Steel	A105N
Gland Studs	Stainless Steel	AISI 410
Packing Gland	Stainless Steel	AISI 316

Note: Dimensions: Inches/Millimeters Weights: Pounds/Kilograms.

Larger sizes available on request.

Dimensions are subject to change without notice.

FORGED STEEL FLANGED END GLOBES
BOLTED AND WELDED BONNET CONVENTIONAL PORT
CLASS 150 TO 1500
SIZES: 1/2" TO 2" (15MM TO 50MM)
(1/4" AND 3/8" AVAILABLE UPON REQUEST)

Design and Manufacturing Standards

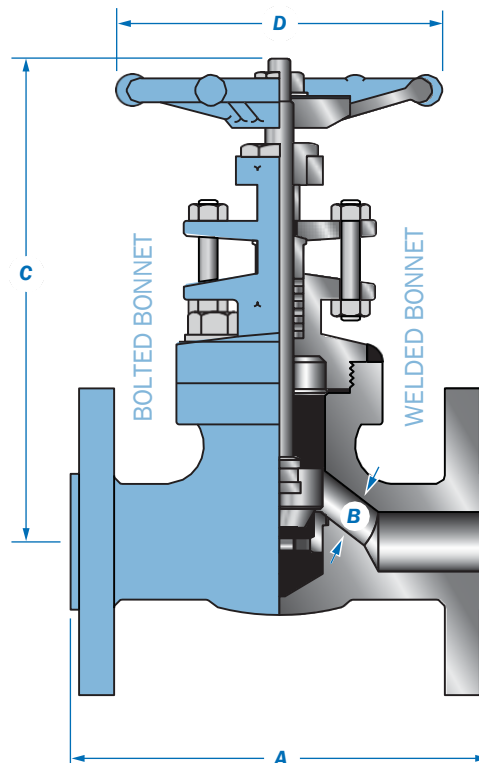
Valve Design: API 602

Flange Dimensions: ASME B16.5

Face to Face Dimensions: ASME B16.10

Tested in Accordance With: API 598

Recommended Spare Parts*



Class 150 to 1500 Bolted and Welded Bonnet Flanged Globe										
SIZE	Class 150 BB and WB					Class 300 BB and WB				
	A	B	C	D	Wt.	A	B	C	D	Wt.
NPS	in	in	in	in	lb	in	in	in	in	lb
DN	mm	mm	mm	mm	kg	mm	mm	mm	mm	kg
1/2	4.25	0.35	7.32	3.54	7.0	6.00	0.35	6.00	3.54	7.5
15	108	9	186	90	3.2	152	9	152	90	3.4
3/4	4.63	0.49	7.44	3.54	9.0	7.00	0.49	6.26	3.54	10.6
20	118	13	189	90	4.1	178	13	159	90	4.8
1	5.00	0.69	8.00	3.94	12.5	8.00	0.69	7.17	3.94	15.4
25	127	18	203	100	5.7	203	18	182	100	7.0
1-1/2	6.50	1.10	11.14	5.51	23.3	9.00	1.10	11.14	5.51	31.2
40	165	28	283	140	10.6	229	28	283	140	14.2
2	8.00	1.26	12.36	5.51	33.9	10.50	1.26	12.05	5.51	38.3
50	203	32.0	314	140	15.4	267	32.0	306	140	17.4

SIZE	Class 600 BB and WB					Class 1500 BB and WB				
	A	B	C	D	Wt.	A	B	C	D	Wt.
NPS	in	in	in	in	lb	in	in	in	in	lb
DN	mm	mm	mm	mm	kg	mm	mm	mm	mm	kg
1/2	6.50	0.35	6.00	3.54	7.9	8.50	0.43	8.58	4.72	20.7
15	165	9	152	90	3.6	216	11	218	120	9.4
3/4	7.50	0.49	6.26	3.54	11.2	9.00	0.57	10.79	6.89	33.4
20	191	13	159	90	5.1	229	15	274	175	15.2
1	8.50	0.69	7.17	3.94	17.2	10.00	0.75	11.26	6.89	38.1
25	216	18	182	100	7.8	254	19	286	175	17.3
1-1/2	9.50	1.10	11.14	5.51	31.2	12.00	1.22	16.81	10.24	83.4
40	241	28	283	140	14.2	305	31	427	260	37.9
2	11.50	1.26	12.05	5.51	42.7	14.50	1.48	17.05	10.24	121.4
50	292	32.0	306	140	19.4	368	37.5	433	260	55.2

Typical Bill Materials

Component	Material	ASTM Spec
Body	Carbon Steel	A105N
Bonnet	Carbon Steel	A105N
* Packing	Die Formed Graphite w/Braided Graphite End Rings	
* Gasket	Spiral Wound 316 SS w/Graphite	
Stem	Stainless Steel	AISI 410
Disc	Stainless Steel	AISI 410
Seat Rings	Stainless Steel	AISI 410 + Stellite Face
Bonnet Bolt	Alloy Steel	A193 B7
Washer	Carbon Steel	Commercial
Handwheel Nut	Carbon Steel	Commercial
Nameplate	Aluminum	Commercial
Handwheel	Carbon Steel	A105N
Yoke Sleeve	Stainless Steel	AISI 416
Gland Nuts	Carbon Steel	A194 2H
Gland Flange	Carbon Steel	A105N
Gland Studs	Stainless Steel	AISI 410
Packing Gland	Stainless Steel	AISI 316

Note: Dimensions: Inches/Millimeters Weights: Pounds/Kilograms.

Larger sizes available on request.

Dimensions are subject to change without notice.

**FORGED STEEL Y-PATTERN WELDED BONNET GLOBE
CLASS 800 TO 4500
SIZES: 1/2" TO 2" (15MM TO 50MM)
(1/4" AND 3/8" AVAILABLE UPON REQUEST)**

Design and Manufacturing Standards

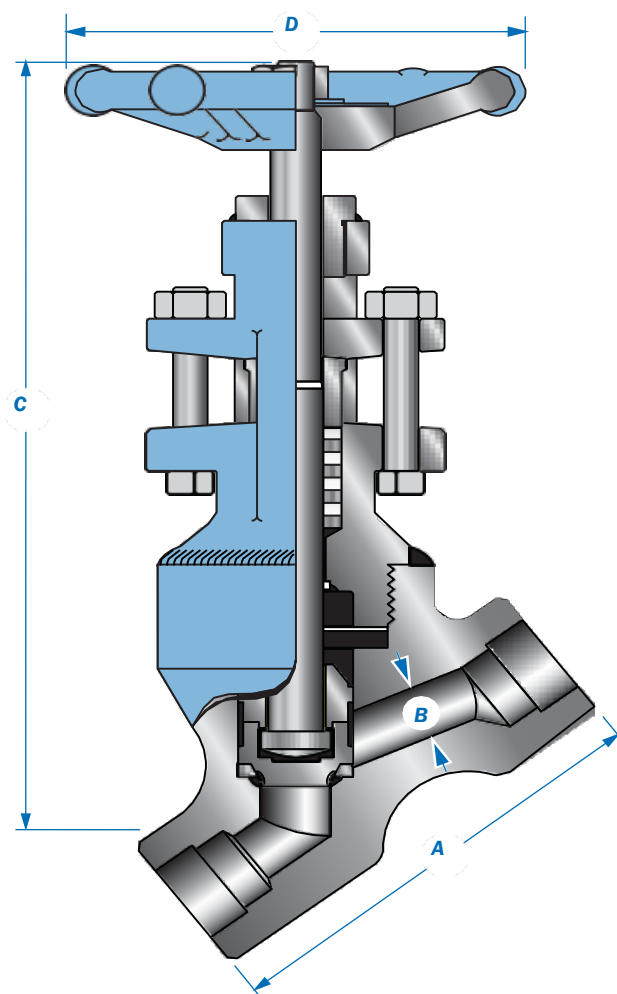
Valve Design: ASME B16.34

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

Socket Welding: ASME B16.11

Tested in Accordance With: API 598

Recommended Spare Parts*



**Class 800 to 4500
Welded Bonnet Y-pattern Globes**

SIZE	Class 800					Class 1500 and 1690				
	A	B	C	D	Wt.	A	B	C	D	Wt.
NPS	in	in	in	in	lb	in	in	in	in	lb
DN	mm	mm	mm	mm	kg	mm	mm	mm	mm	kg
1/2	3.15	0.47	6.38	3.54	5.3	3.94	0.47	7.32	3.94	6.6
15	80	12.0	162	90	2.4	100	12.0	186	100	3.0
3/4	3.94	0.71	7.60	3.94	7.1	4.33	0.63	8.66	4.72	8.8
20	100	18.0	193	100	3.2	110	16.0	220	120	4.0
1	4.33	0.87	9.17	4.72	8.8	4.72	0.79	9.02	5.51	15.4
25	110	22.5	233	120	4.0	120	20.0	229	140	7.0
1-1/2	6.30	1.38	12.24	7.87	22.0	7.48	1.26	13.70	8.86	33.1
40	160	35.0	311	200	10.0	190	32.0	348	225	15.0
2	7.48	1.77	14.17	7.87	35.2	7.48	1.69	15.31	9.84	42.0
50	190	45.0	360	200	16.0	190	43.0	389	250	19.0

SIZE	Class 2500 and 2680					Class 4500				
	A	B	C	D	Wt.	A	B	C	D	Wt.
NPS	in	in	in	in	lb	in	in	in	in	lb
DN	mm	mm	mm	mm	kg	mm	mm	mm	mm	kg
1/2	4.33	0.39	8.54	5.51	8.8	4.72	0.28	9.57	6.89	15.4
15	110	10.0	217	140	4.0	120	7.0	243	175	7.0
3/4	4.72	0.51	10.87	7.87	15.4	6.30	0.43	12.68	7.87	18.5
20	120	13.0	276	200	7.0	160	11.0	322	200	8.4
1	4.72	0.71	10.87	7.87	17.6	7.48	0.55	14.88	10.24	32.2
25	120	18.0	276	200	8.0	190	14.0	378	260	14.6
1-1/2	7.48	1.10	15.27	9.84	39.7	8.27	0.98	17.79	13.78	50.7
40	190	28.0	388	250	18.0	210	25.0	452	350	23.0
2	8.27	1.38	17.32	13.78	53.0	9.05	1.18	20.47	13.78	92.6
50	210	35.0	440	350	24.0	230	30.0	520	350	42.0

Typical Bill of Materials

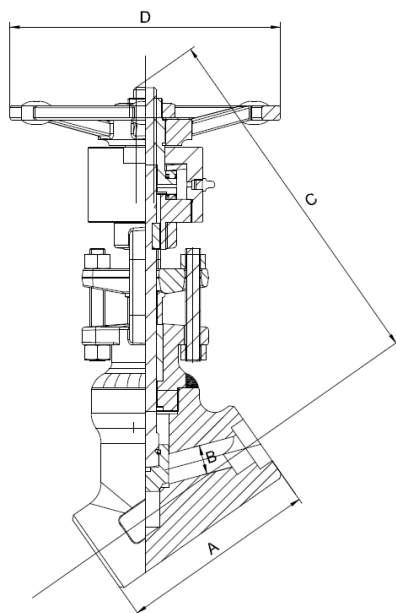
Component	Material	ASTM Spec
Body	Carbon Steel	A105N + integral Stellite seat
Bonnet	Carbon Steel	A105N
* Packing	Die Formed Graphite w/Braided Graphite End Rings	
* Gasket	Spiral Wound Stainless Steel 316 W/Graphite	
Stem	Stainless Steel	AISI 410
Disc	Stainless Steel	AISI 410
Bonnet Bolt	Alloy Steel	A193 B7
Washer	Carbon Steel	Commercial
Handwheel Nut	Carbon Steel	Commercial
Nameplate	Aluminum	Commercial
Handwheel	Carbon Steel	A105
Yoke Sleeve	Stainless Steel	AISI 416
Gland Nuts	Carbon Steel	A194 2H
Gland Flange	Carbon Steel	A105N
Gland Studs	Stainless Steel	AISI 410
Packing Gland	Stainless Steel	AISI 316

Note: Dimensions: Inches/Millimeters Weights: Pounds/Kilograms.

Larger sizes available on request.

Dimensions are subject to change without notice.

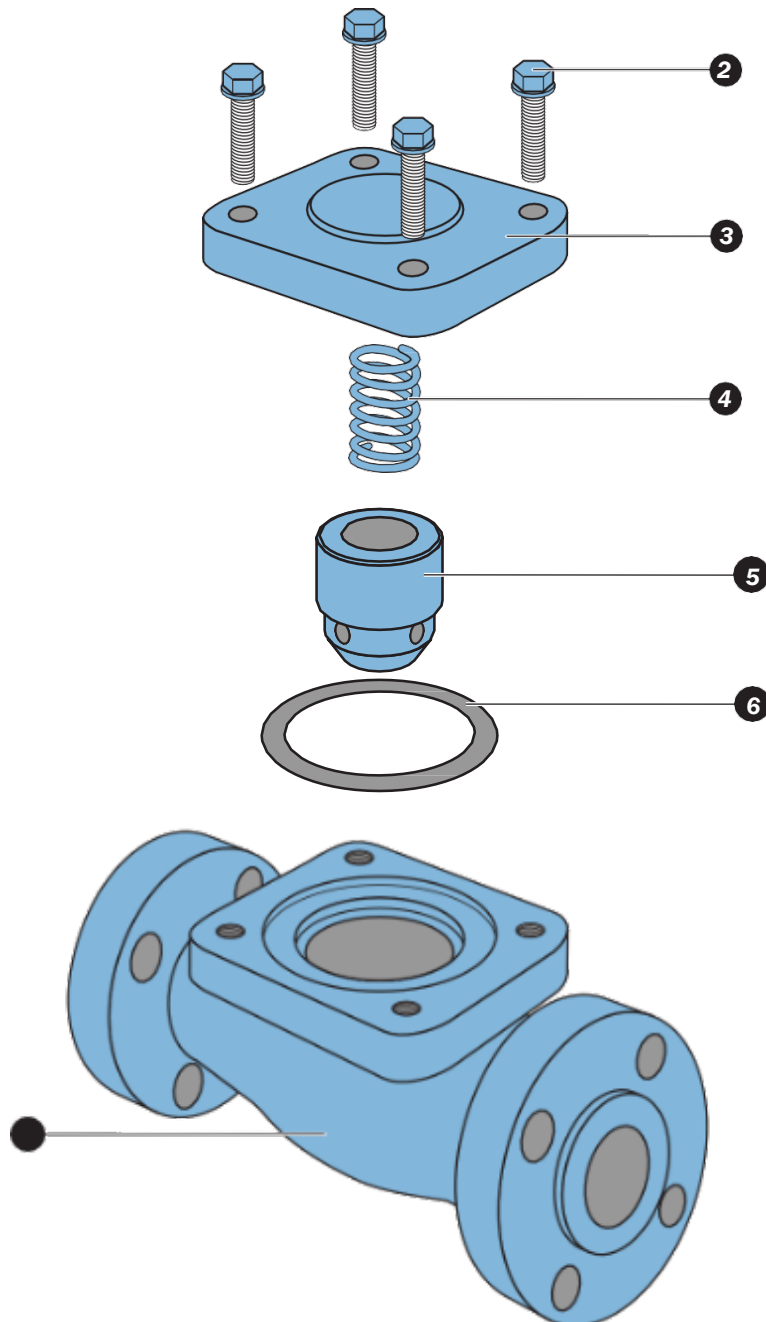
Size $\frac{3}{4}$ " & larger, class 1500 & up forged alloy steel Y-pattern globe valves have thermal expansion collar top design.



III. FORGED STEEL BOLTED AND WELDED BONNET CHECK VALVES

SIZES: 1/2" TO 2" (15MM TO 50MM) • PRESSURE CLASS: 150 TO 4500

Newmans Typical NEWCO Forged Steel Bolted Check Valve Expanded View



1. Body: Newmans NEWCO forged steel bodies provide low resistance flow and optimum strength and performance.
2. Cover Studs: The cover studs secure the bonnet to the body.
3. Cover: The cover allows access to internal components.
4. Spring: The spring is precision made and loaded for precise pressures.
5. Piston: Newmans NEWCO piston is machined to the tightest tolerances to ensure trouble free shutoff and cycling.
6. Cover Gasket: The cover gasket creates a leak-proof seal between the bonnet and the body.

**FORGED STEEL BOLTED AND WELDED COVER LIFT AND SWING CHECKS
THREADED, SOCKET WELD AND BUTTWELD ENDS
CONVENTIONAL PORT CLASS 800 TO 4500
SIZES: 1/2" TO 2" (15MM TO 50MM)
(1/4" AND 3/8" AVAILABLE UPON REQUEST)**

Design and Manufacturing Standards

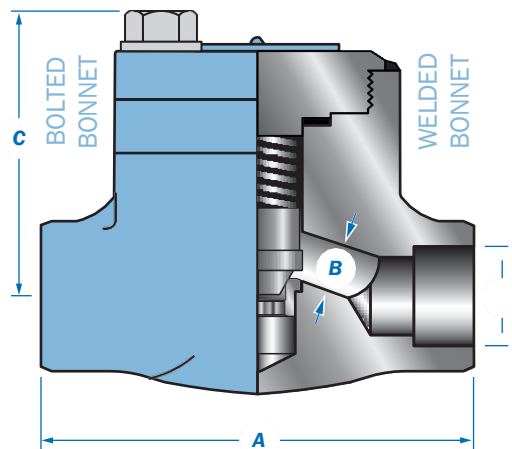
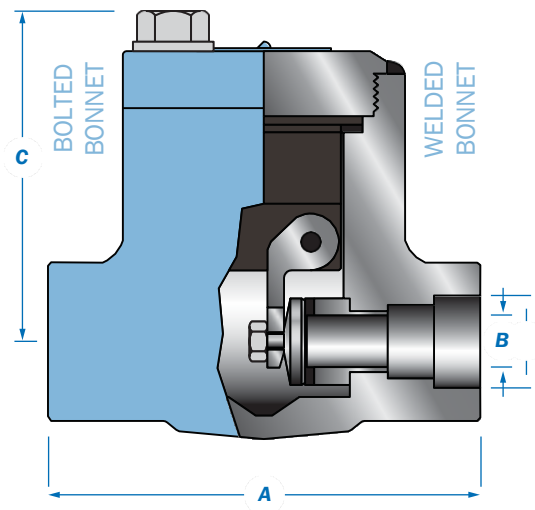
Valve Design: API 602

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

Socket Welding: ASME B16.11

Tested in Accordance With: API 598

Recommended Spare Parts*



Class 800 to 1500 Bolted and Welded Bonnet - Lift and Swing Check								
SIZE	Class 800 BB Lift and Swing Check				Class 800 WB Lift and Swing Check			
	A	B	C	Wt.	A	B	C	Wt.
NPS	in	in	in	lb	in	in	in	lb
DN	mm	mm	mm	kg	mm	mm	mm	kg
1/2	3.15	0.35	1.97	2.4	3.15	0.35	1.89	1.8
15	80	9.0	50	1.1	80	9.0	48	0.8
3/4	3.54	0.49	2.20	4.0	3.54	0.49	2.01	2.4
20	90	12.5	56	1.8	90	12.5	51	1.1
1	4.33	0.69	2.91	5.7	4.33	0.69	2.48	4.4
25	110	17.5	74	2.6	110	17.5	63	2.0
1-1/2	6.10	1.10	3.94	12.1	6.10	1.10	3.39	10.8
40	155	28.0	100	5.5	155	28.0	86	4.9
2	6.69	1.26	4.29	18.5	6.69	1.26	3.90	16.1
50	170	32.0	109	8.4	170	32.0	99	7.3

SIZE	Class 1500 BB				Class 1500 WB			
	A	B	C	Wt.	A	B	C	Wt.
NPS	in	in	in	lb	in	in	in	lb
DN	mm	mm	mm	kg	mm	mm	mm	kg
1/2	3.54	0.39	2.20	4.8	3.54	0.39	1.97	3.1
15	90	10.0	56	2.2	90	10.0	50	1.4
3/4	4.33	0.53	2.91	6.6	4.33	0.53	2.20	5.1
20	110	13.5	74	3.0	110	13.5	56	2.3
1	5.00	0.71	3.11	9.0	5.00	0.71	2.64	8.4
25	127	18.0	79	4.1	127	18.0	67	3.8
1-1/2	6.69	1.14	4.29	20.7	6.69	1.14	3.90	18.3
40	170	29.0	109	9.4	170	29.0	99	8.3
2	8.27	1.38	5.31	29.3	8.27	1.38	4.76	29.5
50	210	35.0	135	13.3	210	35.0	121	13.4

Class 2500 to 4500 Bolted and Welded Bonnet - Lift and Swing Check								
SIZE	Class 2500 BB Lift and Swing Check				Class 2500 WB Lift and Swing Check			
	A	B	C	Wt.	A	B	C	Wt.
NPS	in	in	in	lb	in	in	in	lb
DN	mm	mm	mm	kg	mm	mm	mm	kg
1/2	4.33	0.39	3.66	8.8	4.33	0.39	2.36	4.4
15	110	10.0	93	4.0	110	10.0	60	2.0
3/4	4.53	0.51	4.29	13.6	5.00	0.51	2.80	7.0
20	115	13.0	109	6.2	127	13.0	71	3.2
1	5.12	0.71	4.80	15.8	6.10	0.71	3.35	10.6
25	130	18.0	122	7.2	155	18.0	85	4.8
1-1/2	8.27	0.98	6.22	42.7	8.27	0.98	4.72	21.1
40	210	25.0	158	19.4	210	25.0	120	9.6
2	9.45	1.33	6.73	53.9	9.45	1.33	5.12	35.2
50	240	34.0	171	24.5	240	34.0	130	16.0

SIZE	Class 4500 BB				Class 4500 WB			
	A	B	C	Wt.	A	B	C	Wt.
NPS	in	in	in	lb	in	in	in	lb
DN	mm	mm	mm	kg	mm	mm	mm	kg
1/2	5.00	0.28	2.95	7.0	5.00	0.28	2.95	7.0
15	127	7.0	75	3.2	127	7.0	75	3.2
3/4	6.10	0.43	3.54	10.6	6.10	0.43	3.54	10.6
20	155	11.0	90	4.8	155	11.0	90	4.8
1	6.69	0.59	4.92	17.6	6.69	0.59	4.92	17.6
25	170	15.0	125	8.0	170	15.0	125	8.0
1-1/2	9.45	0.98	5.71	35.2	9.45	0.98	5.71	35.2
40	240	25.0	145	16.0	240	25.0	145	16.0
2	9.45	1.33	5.51	57.2	9.45	1.33	5.51	57.2
50	240	30.0	140	26.0	240	30.0	140	26.0

Typical Bill Materials

Component	Material	ASTM Spec
Body (Integral Stellite Seat)	Carbon Steel	A105N + Stellite Gr. 6
Piston	Stainless Steel	AISI 410
Spring	Stainless Steel	AISI 316
Nameplate	Aluminum	Commercial
* Gasket	Spiral Wound Stainless Steel 316 W/Graphite Soft Steel Ring Joint (Class 2500 & 4500)	
Cap	Carbon Steel	A105N
Cap Bolt	Alloy Steel	A193-B7M

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

**FORGED STEEL FLANGED END LIFT AND SWING CHECKS
BOLTED AND WELDED COVER CONVENTIONAL PORT
CLASS 150 TO 1500
SIZES: 1/2" TO 2" (15MM TO 50MM)
(1/4" AND 3/8" AVAILABLE UPON REQUEST)**

Design and Manufacturing Standards

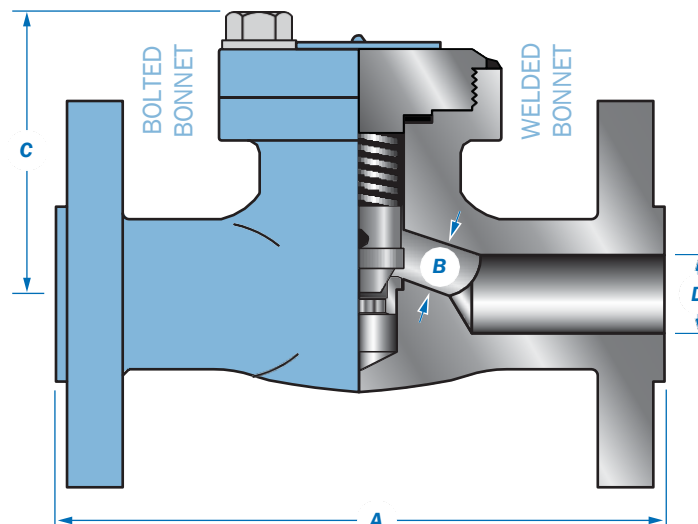
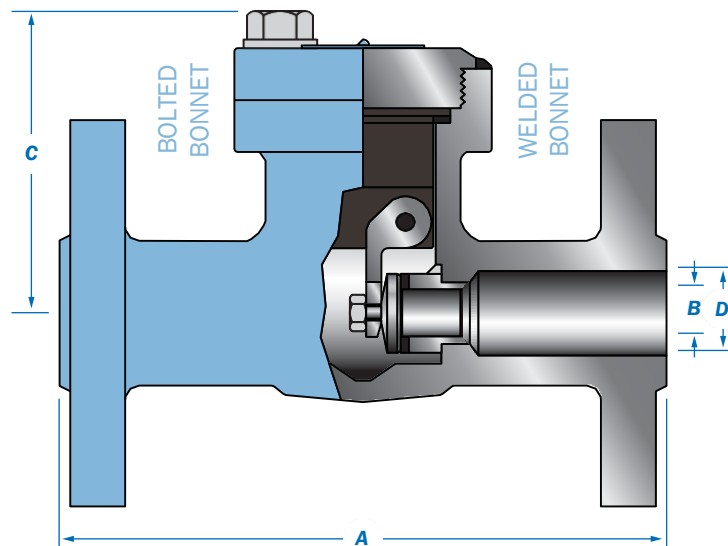
Valve Design: ASME B16.34

Flange Dimensions: ASME B16.5

Face to Face Dimensions: ASME B16.10

Tested in Accordance With: API 598

Recommended Spare Parts*



**Class 150 to 1500
Bolted and Welded Bonnet Flanged Check**

SIZE	Class 150 BB and WB					Class 300 BB and WB				
	A	B	C	D	Wt.	A	B	C	D	Wt.
NPS	in	in	in	in	lb	in	in	in	in	lb
DN	mm	mm	mm	mm	kg	mm	mm	mm	mm	kg
1/2	4.25	0.35	3.07	0.50	5.7	6.00	0.35	2.20	0.50	7.1
15	108	9	78	12.7	2.6	152	9	56	12.7	3.2
3/4	4.63	0.49	3.23	0.75	8.4	7.00	0.51	2.83	0.75	11.2
20	118	13	82	19.1	3.8	178	13	72	19.1	5.1
1	5.00	0.67	3.62	1.00	11.2	8.00	0.67	3.62	1.00	15.7
25	127	17.0	92	25.4	5.1	203	17.0	92	25.4	7.1
1-1/2	6.50	1.10	4.41	1.50	21.2	9.00	1.10	4.41	1.50	30.8
40	165	28	112	38.1	9.6	229	28	112	38.1	14.0
2	8.00	1.38	5.51	2.00	33.0	10.50	1.38	5.51	2.00	44.8
50	203	35.0	140	50.8	14.9	267	35.0	140	50.8	20.3

SIZE	Class 600 BB and WB					Class 1500 BB and WB				
	A	B	C	D	Wt.	A	B	C	D	Wt.
NPS	in	in	in	in	lb	in	in	in	in	lb
DN	mm	mm	mm	mm	kg	mm	mm	mm	mm	kg
1/2	6.50	0.35	2.20	0.50	7.5	8.50	0.43	3.66	0.50	16.5
15	165	9	56	12.7	3.4	216	11	93	12.7	7.5
3/4	7.50	0.51	2.83	0.75	11.9	9.00	0.57	4.29	0.69	24.0
20	191	13	72	19.1	5.4	229	14.5	109	17.5	10.9
1	8.50	0.67	3.62	1.00	16.5	10.00	0.75	4.80	0.87	31.7
25	216	17.0	92	25.4	7.5	254	19	122	22.1	14.4
1-1/2	9.50	1.10	4.41	1.50	32.0	12.00	1.22	6.22	1.37	67.0
40	241	28	112	38.1	14.5	305	31	158	34.8	30.3
2	11.50	1.38	5.51	2.00	49.0	14.50	1.48	6.73	1.87	96.8
50	292	35.0	140	50.8	22.2	368	37.5	171	47.5	44.0

Typical Bill Materials

Component	Material	ASTM Spec
Body (Integral Stellite Seat)	Carbon Steel	A105N + Stellite Gr. 6
Piston	Stainless Steel	AISI 410
Spring	Stainless Steel	AISI 316
Nameplate	Aluminum	Commercial
* Gasket	Spiral Wound Stainless Steel 316 W/Graphite Soft Steel Ring Joint (Class 2500 & 4500)	
Cap	Carbon Steel	A105N
Cap Bolt	Alloy Steel	A193-B7M

Note: Dimensions: Inches/Millimeters Weights: Pounds/Kilograms.

Larger sizes available on request.

Dimensions are subject to change without notice.

IV. FORGED STEEL CV VALUES GATES, GLOBES, CHECKS

NEWCO Forged Steel Gate Valves Cv Values	NPS	150 - 600 Full Bore	150 - 600 Reduced Bore	800 Full Bore	800 Reduced Bore	1500 Full Bore	1500 Reduced Bore	2500 Full Bore
	1/2	11.9	6.0	12.2	6.2	9.0	8.8	8.2
	3/4	22.2	9.6	22.8	10.0	18.6	18.4	17.8
	1	43.2	25.2	44.0	25.8	34.8	34.0	32.0
	1-1/4	--	--	56.2	44.6	--	46.6	--
	1-1/2	89.8	67.8	98.8	68.7	58.6	56.6	57.4
	2	191.0	97.9	198.0	99.0	83.8	78.2	74.8

NEWCO Forged Steel Globe Valves Cv Values	NPS	150 - 600 Full Bore	150 - 600 Reduced Bore	800 Full Bore	800 Reduced Bore	1500 Full Bore	1500 Reduced Bore	2500 Full Bore
	1/2	3.5	1.5	3.0	1.6	3.4	3.2	2.8
	3/4	5.5	3.2	6.0	3.6	4.8	4.4	4.0
	1	9.5	6.2	11.2	7.4	7.2	6.8	6.4
	1-1/4	--	--	15.8	10.2	--	10.2	--
	1-1/2	21.0	19.0	18.4	16.2	19.6	18.0	17.2
	2	38.0	21.5	35.4	20.0	29.4	26.8	26.4

NEWCO Forged Steel Y- Pattern Globe Valves Cv Values	NPS	800	1500	1690	2500	2680
	1/2	4.3	5.4	5.4	2.9	2.9
	3/4	11.1	11.2	11.2	5.8	5.8
	1	13.8	14.8	14.8	12.1	12.1
	1-1/4	20.6	--	--	--	--
	1-1/2	37.0	35.0	35.0	27.0	27.0
	2	68.0	68.0	68.0	36.0	36.0

NEWCO Forged Steel Swing Check Valves Cv Values	NPS	150 - 600 Full Bore	150 - 600 Reduced Bore	800 Full Bore	800 Reduced Bore	1500 Full Bore	1500 Reduced Bore	2500 Full Bore
	1/2	6.0	3.2	6.2	3.4	4.6	4.4	4.0
	3/4	13.1	6.7	13.4	7.0	10.2	9.8	6.2
	1	18.2	13.7	19.0	14.2	17.6	17.2	11.2
	1-1/4	--	--	28.6	20.4	--	27.4	--
	1-1/2	56.5	29.6	57.4	30.2	56.4	52.0	48.4
	2	103.4	55.3	104.2	56.2	81.8	76.4	70.0

NEWCO Forged Steel Lift Check Valves Cv Values	NPS	150 - 600 Full Bore	150 - 600 Reduced Bore	800 Full Bore	800 Reduced Bore	1500 Full Bore	1500 Reduced Bore	2500 Full Bore
	1/2	2.4	1.0	2.6	1.2	2.8	2.6	2.4
	3/4	4.7	3.0	5.0	3.2	4.6	4.2	3.6
	1	11.5	5.4	12.0	5.8	6.2	6.0	5.8
	1-1/4	--	--	13.6	9.6	--	9.8	--
	1-1/2	15.3	12.2	16.0	13.0	19.4	17.8	15.8
	2	30.2	16.4	31.0	17.0	24.8	22.0	24.0

Table applies to both piston and ball check valves.

NEWCO Forged Steel Y- Pattern Lift Check Valves Cv Values	NPS	800	1500	2500
	1/2	4.0	4.0	4.0
	3/4	8.0	10.6	6.6
	1	11.8	17.0	10.2
	1-1/4	18.8	--	--
	1-1/2	36.0	45.4	32.0
	2	62.4	74.0	57.6

V. HOW TO ORDER ALL NEWMANS NEWCO PRODUCTS

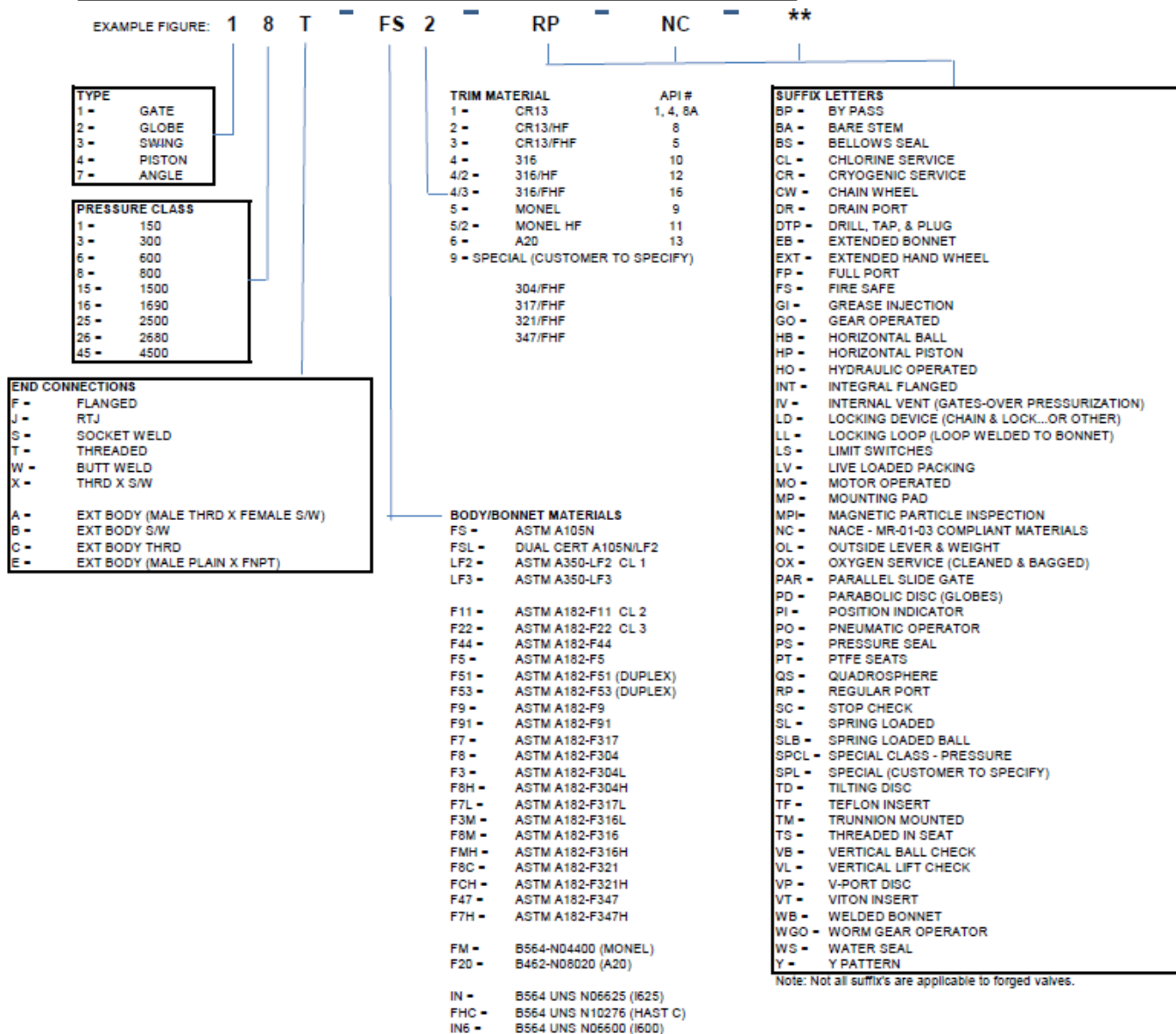
Figure Number

The figure number shown below identifies specific valve configuration details of Newmans NEWCO valves such as valve type, pressure class, end connections, body/bonnet and 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.

NEWCO FORGED FIGURE NUMBERING SYSTEM





**When you need a valve,
contact us first.**

Corporate Office

Call 24/7: (832)-944-5930

Email: sales@newmansvalves.com

More at www.newmansvalves.com