Newmans®

The Reliable Source

NEWCO - Forged Steel Valves

Gates • Globes • Swing Checks • Lift Checks

Product Line Technical Data

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Manufacturer of

Newco® COOPER® OIC® QuadroSphere® Trinity®

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Newmans History

Newco Valves, L.P., a Texas limited partnership, dba Newmans, and its wholly owned subsidiary, Newmans Valves, LTD, manufactures, markets and sells Gate, Globe, Check, Ball, and Triple Offset valves ranging in sizes from 1/4" thru 120" ANSI Class 125 thru 4500 lbs. The valves are manufactured to ASME, API, and MSS specifications from Carbon (cast and forged), Stainless (cast and forged including Duplex and Super Duplex products), and other alloys (low alloy steels, Inconel, Hastelloy, and noble alloys). "Newco", "OIC", and "Cooper Valves" brand name valves are used in various applications from low pressure processes to specialty applications within the refining, petrochemical, power, pulp and paper, and marine industries. The companies provide both standard product and special designs for their focused industries.

Newmans, L.P., also offers value added services including modifications or actuations and installation of by-passes, bore changes and gear operators for its valves. Some of these modifications include various trim changes covering stems, packing and gaskets, new bolting or changes in the flange surface. In addition, Company operations include marketing, product design, quality control, vendor qualification and value-added services for its product lines.

Timeline

1936: *The Company's primary focus was wholesale plumbing and field salvage.*

1946: *The Company was incorporated under the Newmans name. At that time the focus was changed to the PVF industry until acquired by the Jordan Group in 1989.*

1976: *Newmans opened its Canadian branch under the name of Newmans Valve Limited.*

1984: *Precision Actuation Services (PAS) was opened to perform valve modification and actuation services.*

1996: *Precision Castparts Corporation (PCC) acquired Newmans. The business operated as part of the PCC Flow Technologies Division.*

1997: *In March, Newmans acquired "OIC" and added this trade mark to its business.*

2003: *On December 26th the business was purchased by the current group of partners that included the original owners of Newmans.*

2005: *In June, Newco Valves, L.P., purchased the operations of Cooper Valves from Dresser, Inc., and added specialty alloys and materials to its valve products line.*

2006: *Newmans opened its Shanghai, China office for service to the Far East market, direct shipments globally and service to the Far East for global project management.*

2007: *Completed two foundry operations, two process centers, and one ball valve facility in the China. Newmans also opened Bergamo, Italy office.*

2008: *Opened Atlanta, GA branch and a sales office in Chicago, Ill. Newmans formed a manufacturing joint venture for the Trinity Series Triple Offset valves 3" to 120" - 150 to 600 class.*

2009: *Opened Stafford, TX Corporate Office and Projects branch and stocking warehouse. Acquired Australian companies Keamy Engineering and The Valve Connection.*

Over the years Newmans has established an excellent reputation for providing a broad product offering from world wide sources at competitive prices and a high level of quality and customer service. The company maintains seven (7) stocking warehouse locations in North America, one (1) in Shanghai, China, and one (1) in Melbourne, Australia. Newmans also has sales offices in Chicago, Ill., Bergamo, Italy, and Queensland, Australia.

Newmans services its markets through a network of distributors and direct sales personnel. The Companies utilize the Info Commerce@Work (C@W) information system. Commerce@Work is a fully integrated system allowing all Newmans' facilities to operate in an integrated and efficient manner.

Mission Statement

It is our goal to be known and respected in the Industry as "The Reliable Valve Source" for our extensive knowledge and superior service. Measured by keeping our word, we will deliver quality products on time at a fair value.

We achieve the above dealing with integrity in an open and flexible environment allowing people access to valuable information to make good and timely decisions. We believe that all this can be accomplished yielding great rewards for all involved while maintaining a balance in life.

Company Profile

Newmans is recognized as a global valve manufacturing company providing product to the market on a world-wide basis. The NEWCO, OIC and COOPER trademarks are recognized and respected the world over for their high quality and ability to meet the industry's most exacting standards. Newmans manufactures and markets one of the industry's broadest product lines suitable for most applications and market segments. Newmans is fully committed to engineering excellence and product innovation supported by a highly qualified technical engineering staff. Superior customer service is backed by the inventories of finished valves shipped daily from the six divisions located strategically throughout North America.

Product Technology

Newmans manufactures Gate, Globe, Check, Stop Check, Tilting Disc, Floating Ball, Trunnion Ball, QuadroSphere™ Ball, and Trinity Series Triple Offset valves in a full range of materials, valve styles, and pressure classes. Cast carbon steel and low-alloys, forged valves, cast iron and ductile iron valves are manufactured under the NEWCO trademark. 300 series stainless steel and Alloy 20 are produced and marketed under the OIC trademark. Other exotic alloys are manufactured under the Cooper trademark.

Newmans manufactures and stocks valves in sizes from 1/4" to 120" in diameter and in pressure classes from 125 to 4500 lbs. Larger sizes are available on request.

Newmans facilities operate under ISO 9001-2000 & 14001-2004 series registration. All valves are compliant to the industry standards of API, ASTM, and ASME. Inspection and testing is maintained throughout the manufacturing process to verify compliance to these standards as well as any specific customer requirements.

Customer service is further enhanced by complete modification and actuation capabilities. This capability allows Newmans to provide rapid deliveries of special valve requirements to meet the customer's delivery needs.

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.

Products & Services

VALVES

NEWCO

- Full Line of Gate, Globe, & Check Valves in Forged & Cast Steel
- Floating Ball Valves
- Trunnion Mounted 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
- Field and Shop Installation Services
- Table Stands, Extension Systems, and Brackets

Valve Modification

- By Passes, Bore Changes, Mounting Plates, Stem Extensions, Limit Switches, Trim Changes, etc.

AUTOMATION

Valve & Damper Actuation

- Capabilities and Support for all Actuators including: **Limitorque, Rotork, Auma, EIM, Bettis, Automax, Fisher, Miller, and Hanna**
- Electric, Hydraulic, and Pneumatic Automation
- New Applications and Field Retrofits
- Multi-turn, Quarter-turn, and Linear

Automation Site Services

- Experienced Field Technicians
- Commissioning and Repair Services
- Actuator Installation, Setting, Calibration, Start-up
- Automation and Control Surveys

Automation Shop Services

- Experienced Shop Technicians
- Special Wiring Diagrams and Control Schematic
- Complete Automated Valve Assemblies
- Shop Acuator Repairs on **Limitorque, Rotork, Auma, & EIM**

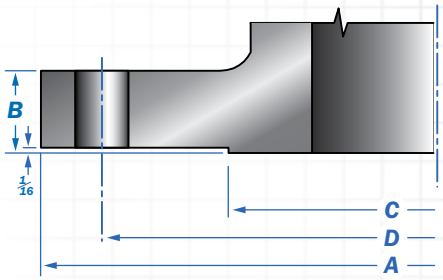
Controls & Digital Communications

- Pneumatic and Hydraulic Services
- Solenoid and Speed Control Valves; Limit Switches
- Two-wire Integration, Field Bus, ModBus, ProfiBus, DeviceNet, EtherNet, Serial Communications, Network Control Systems

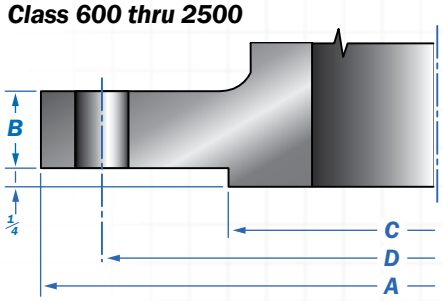
Specialists in Electric and Pneumatic Actuation - Authorized Limitorque Distributor and Service Center

Flange Dimensions - ASME B16.5

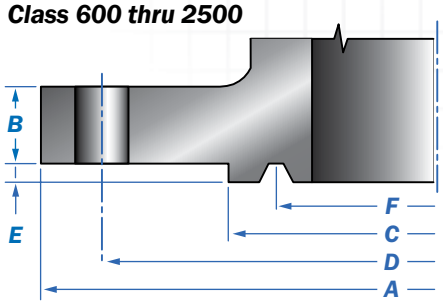
Raised Face
Class 150 & 300



Raised Face
Class 600 thru 2500



RTJ
Class 600 thru 2500



Flange Dimensions in Inches

Class	Size in. / mm	A	B	C	D	Ring Joint Facing C	Ring Joint Facing F	Ring Joint Facing E	Ring No.	Bolt Holes Size	Bolt Holes No.
150	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	
300	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	
600	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	
1500	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	
2500	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 - 2004 (standard)

	°F / PSI	-20 to 100	200	300	400	500	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
Class 150	A105*	285	260	230	200	170	140	125	110	95	80	65	50	35	20	-	-	-	-
	LF2*	290	260	230	200	170	140	125	110	95	80	65	50	35	20	-	-	-	-
	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**	20**
	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	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	320	230	135	85	-	-	-	-
	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	500	485	450	385	265	175	110	70	40
	F5	750	750	730	705	665	605	590	570	530	510	485	375	275	200	145	100	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	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	640	460	275	170	-	-	-	-
	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	A105*	1974	1810	1747	1689	1609	1515	1467	1414	1352	1098	850	613	365	227	-	-	-	-
	LF2*	1974	1810	1747	1689	1609	1515	1467	1414	1352	1098	850	613	365	227	-	-	-	-
	F11+	2000	2000	1925	1849	1774	1614	1569	1515	1419	1355	1298	1200	850	577	383	257	173	110
	F22+	2000	2000	1942	1880	1774	1614	1569	1515	1419	1355	1298	1200	1025	712	467	293	182	110
	F5	2000	1964	1876	1782	1724	1614	1569	1515	1419	1355	1298	995	733	530	383	257	165	93
	F9	2000	2000	1942	1880	1774	1614	1569	1515	1419	1355	1298	1200	1005	675	458	302	200	138
	F91	2000	2000	1942	1880	1774	1614	1569	1515	1419	1355	1298	1200	1032	968	960	805	595	383
Class 900	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	955	690	410	255	-	-	-	-
	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	A105*	3705	3395	3270	3170	3015	2840	2745	2665	2535	2055	1595	1150	685	430	-	-	-	-
	LF2*	3705	3395	3270	3170	3015	2840	2745	2665	2535	2055	1595	1150	685	430	-	-	-	-
	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	A105*	4173	3824	3684	3571	3397	3199	3093	2999	2857	2316	1796	1295	772	484	-	-	-	-
	LF2*	4173	3824	3684	3571	3397	3199	3093	2999	2857	2316	1796	1295	772	484	-	-	-	-
	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	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	2655	1915	1145	715	-	-	-	-
	F11+	6250	6250	6015	5775	5540	5040	5905	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	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	2847	2054	1227	766	-	-	-	-
	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	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	4785	3455	2055	1285	-	-	-	-
	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. + 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.*

Pressure Temperature Ratings - ASME B16.34 - 2004 (metric)

	°C / BAR	-29 to 38	100	150	200	250	300	350	375	400	425	450	475	500	538	575	600	625	650
Class 150	A105*	19.6	17.7	15.8	13.8	12.1	10.2	8.4	7.4	6.5	5.5	4.6	3.7	2.8	1.4	-	-	-	-
	LF2*	19.6	17.7	15.8	13.8	12.1	10.2	8.4	7.4	6.5	5.5	4.6	3.7	2.8	1.4	-	-	-	-
	F11+	19.8	17.7	15.8	13.8	12.1	10.2	8.4	7.4	6.5	5.5	4.6	3.7	2.8	1.4	1.4**	1.4**	1.4**	1.1**
	F22+	19.8	17.7	15.8	13.8	12.1	10.2	8.4	7.4	6.5	5.5	4.6	3.7	2.8	1.4	1.4**	1.4**	1.4**	1.1**
	F5	20.0	17.7	15.8	13.8	12.1	10.2	8.4	7.4	6.5	5.5	4.6	3.7	2.8	1.4	1.4**	1.4**	1.4**	0.9**
	F9	20.0	17.7	15.8	13.8	12.1	10.2	8.4	7.4	6.5	5.5	4.6	3.7	2.8	1.4	1.4**	1.4**	1.4**	1.4**
	F91	20.0	17.7	15.8	13.8	12.1	10.2	8.4	7.4	6.5	5.5	4.6	3.7	2.8	1.4	1.4**	1.4**	1.4**	1.4**
Class 300	A105*	51.1	46.6	45.1	43.8	41.9	39.8	37.6	36.4	34.7	28.8	23.0	17.4	11.8	5.9	-	-	-	-
	LF2*	51.1	46.6	45.1	43.8	41.9	39.8	37.6	36.4	34.7	28.8	23.0	17.4	11.8	5.9	-	-	-	-
	F11+	51.7	51.5	49.7	48.0	46.3	42.9	40.3	38.9	36.5	35.2	33.7	31.7	25.7	14.9	8.8	6.1	4.3	2.8
	F22+	51.7	51.5	50.3	48.6	46.3	42.9	40.3	38.9	36.5	35.2	33.7	31.7	28.2	18.4	10.5	6.9	4.5	2.8
	F5	51.7	51.5	50.3	48.6	46.3	42.9	40.3	38.9	36.5	35.2	33.7	27.9	21.4	13.7	8.9	6.2	4.0	2.4
	F9	51.7	51.5	50.3	48.6	46.3	42.9	40.3	38.9	36.5	35.2	33.7	31.7	28.2	17.5	10.5	7.2	5.0	3.5
	F91	51.7	51.5	50.3	48.6	46.3	42.9	40.3	38.9	36.5	35.2	33.7	31.7	28.2	25.2	24.0	19.5	14.6	9.9
Class 600	A105*	102.1	93.2	90.2	87.6	83.9	79.6	75.1	72.7	69.4	57.5	46.0	34.9	23.5	11.8	-	-	-	-
	LF2*	102.1	93.2	90.2	87.6	83.9	79.6	75.1	72.7	69.4	57.5	46.0	34.9	23.5	11.8	-	-	-	-
	F11+	103.4	103.0	99.5	95.9	92.7	85.7	80.4	77.6	73.3	70.0	67.7	63.4	51.5	29.8	17.6	12.2	8.5	5.7
	F22+	103.4	103.0	100.3	97.2	92.7	85.7	80.4	77.6	73.3	70.0	67.7	63.4	56.5	36.9	21.1	13.8	8.9	5.7
	F5	103.4	103.0	100.3	97.2	92.7	85.7	80.4	77.6	73.3	70.0	67.7	55.7	42.8	27.4	17.8	12.5	8.0	4.7
	F9	103.4	103.0	100.3	97.2	92.7	85.7	80.4	77.6	73.3	70.0	67.7	63.4	56.5	35.0	20.9	14.4	9.9	7.1
	F91	103.4	103.0	100.3	97.2	92.7	85.7	80.4	77.6	73.3	70.0	67.7	63.4	56.5	50.0	47.9	39.0	29.2	19.9
Class 800	A105*	136.0	124.7	120.4	116.3	110.8	104.4	101.1	97.4	93.1	75.7	58.6	42.3	25.2	15.6	-	-	-	-
	LF2*	136.0	124.7	120.4	116.3	110.8	104.4	101.1	97.4	93.1	75.7	58.6	42.3	25.2	15.6	-	-	-	-
	F11+	137.8	137.8	132.6	127.4	122.2	111.2	108.1	104.4	97.7	93.4	89.5	82.7	58.6	39.7	26.4	17.7	11.9	7.6
	F22+	137.8	137.8	133.8	129.5	122.2	111.2	108.1	104.4	97.7	93.4	89.5	82.7	70.6	49.0	32.2	20.2	12.5	7.6
	F5	137.8	135.3	128.6	122.8	118.8	111.2	108.1	104.4	97.7	93.4	89.5	68.6	50.5	36.5	26.4	17.7	11.4	6.4
	F9	137.8	137.8	133.8	129.5	122.2	111.2	108.1	104.4	97.7	93.4	89.5	82.7	69.3	46.5	31.6	20.8	13.8	9.5
	F91	137.8	137.8	133.8	129.5	122.2	111.2	108.1	104.4	97.7	93.4	89.5	82.7	71.1	66.7	66.2	55.5	41.0	26.4
Class 900	A105*	153.2	139.8	135.2	131.4	125.8	119.5	112.7	109.1	104.2	86.3	69.0	52.3	35.3	17.7	-	-	-	-
	LF2*	153.2	139.8	135.2	131.4	125.8	119.5	112.7	109.1	104.2	86.3	69.0	52.3	35.3	17.7	-	-	-	-
	F11+	155.1	154.4	149.2	143.9	139.0	128.6	120.7	116.5	109.8	105.1	101.4	95.1	77.2	44.7	26.4	18.3	12.8	8.5
	F22+	155.1	154.6	150.6	145.8	139.0	128.6	120.7	116.5	109.8	105.1	101.4	95.1	84.7	55.3	31.6	20.7	13.4	8.5
	F5	155.1	154.6	150.6	145.8	139.0	128.6	120.7	116.5	109.8	105.1	101.4	83.6	64.1	41.1	26.7	18.7	12.0	7.1
	F9	155.1	154.6	150.6	145.8	139.0	128.6	120.7	116.5	109.8	105.1	101.4	95.1	84.7	52.5	31.4	21.5	14.9	10.6
	F91	155.1	154.6	150.6	145.8	139.0	128.6	120.7	116.5	109.8	105.1	101.4	95.1	84.7	75.2	71.8	58.5	43.8	29.8
Class 1500	A105*	255.3	233.0	225.4	219.0	209.7	199.1	187.8	181.8	173.6	143.8	115.0	87.2	58.8	29.5	-	-	-	-
	LF2*	255.3	233.0	225.4	219.0	209.7	199.1	187.8	181.8	173.6	143.8	115.0	87.2	58.8	29.5	-	-	-	-
	F11+	258.6	257.4	248.7	239.8	231.8	214.4	201.1	194.1	183.1	175.1	169.0	158.2	128.6	74.5	44.0	30.5	21.3	14.2
	F22+	258.6	257.6	250.8	243.4	231.8	214.4	201.1	194.1	183.1	175.1	169.0	158.2	140.9	92.2	52.6	34.4	22.3	14.2
	F5	258.6	257.6	250.8	243.4	231.8	214.4	201.1	194.1	183.1	175.1	169.0	139.3	106.9	68.6	44.4	31.2	20.0	11.8
	F9	258.6	257.6	250.8	243.4	231.8	214.4	201.1	194.1	183.1	175.1	169.0	158.2	140.9	87.5	52.3	35.9	24.8	17.7
	F91	258.6	257.6	250.8	243.4	231.8	214.4	201.1	194.1	183.1	175.1	169.0	158.2	140.9	125.5	119.7	97.5	73.0	49.6
Class 1690	A105*	287.5	263.5	253.8	246.0	234.0	220.4	213.1	206.7	196.9	159.6	123.8	89.2	53.2	33.4	-	-	-	-
	LF2*	287.5	263.5	253.8	246.0	234.0	220.4	213.1	206.7	196.9	159.6	123.8	89.2	53.2	33.4	-	-	-	-
	F11+	291.1	291.1	280.2	269.0	258.1	234.8	28.3	220.4	206.4	197.1	189.0	174.3	123.8	83.8	55.9	37.3	25.3	16.0
	F22+	291.1	291.1	282.6	274.0	258.1	234.8	228.3	220.4	206.4	197.1	189.0	174.3	149.9	103.7	67.9	42.7	26.7	16.0
	F5	291.1	285.7	271.4	259.6	250.8	234.8	228.3	220.4	206.4	197.1	189.0	145.1	106.4	77.2	55.9	37.3	24.0	13.2
	F9	291.1	291.1	282.6	274.0	258.1	234.8	228.3	220.4	206.4	197.1	189.0	174.3	146.4	98.6	66.4	43.9	29.2	19.9
	F91	291.1	291.1	282.6	274.0	258.1	234.8	228.3	220.4	206.4	197.1	189.0	174.3	149.9	141.2	139.7	117.2	86.5	55.9
Class 2500	A105*	425.5	388.3	375.6	365.0	349.5	331.8	313.0	303.1	289.3	239.7	191.7	145.3	97.9	49.2	-	-	-	-
	LF2*	425.5	388.3	375.6	365.0	349.5	331.8	313.0	303.1	289.3	239.7	191.7	145.3	97.9	49.2	-	-	-	-
	F11+	430.9	429.0	414.5	399.6	386.2	357.1	335.3	323.2	304.9	291.6	281.8	263.9	214.4	124.1	73.4	50.9	35.5	23.6
	F22+	430.9	429.4	418.2	405.4	386.2	357.1	335.3	323.2	304.9	291.6	281.8	263.9	235.0	153.7	87.7	57.4	37.2	23.6
	F5	430.9	429.4	418.2	405.4	386.2	357.1	335.3	323.2	304.9	291.6	281.8	232.1	178.2	114.3	74.0	51.9	33.3	19.7
	F9	430.9	429.4	418.2	405.4	386.2	357.1	335.3	323.2	304.9	291.6	281.8	263.9	235.0	145.8	87.1	59.8	41.4	29.5
	F91	430.9	429.4	418.2	405.4	386.2	357.1	335.3	323.2	304.9	291.6	281.8	263.9	235.0	208.9	199.5	162.5	121.7	82.7
Class 2680	A105*	455.7	417.7	402.6	390.0	371.1	349.4	337.9	326.8	312.4	253.3	196.1	141.5	84.5	52.8	-	-	-	-
	LF2*	455.7	417.7	402.6	390.0	371.1	349.4	337.9	326.8	312.4	253.3	196.1	141.5	84.5	52.8	-	-	-	-
	F11+	461.6	461.6	444.3	426.6	409.1	372.2	362.3	349.4	327.2	312.4	299.9	276.6	196.1	132.9	88.6	59.1	40.2	25.4
	F22+	461.6	461.6	448.3	434.3	409.1	372.2	362.3	349.4	327.2	312.4	299.9	276.6	237.8	164.7	107.5	67.6	42.1	25.4
	F5	461.6	453.1	430.6	411.4	397.7	372.2	362.3	349.4	327.2	312.4	299.9	230.1	168.8	122.3	88.6	59.1	38.0	21.1
	F9	461.6	461.6	448.3	434.3	409.1	372.2	362.3	349.4	327.2	312.4	299.9	276.6	232.3	156.2	105.6	69.8	46.5	31.7
	F91	461.6	461.6	448.3	434.3	409.1	372.2	362.3	349.4	327.2	312.4	299.9	276.6	237.8	223.8	221.6	185.7	137.0	88.6
Class 4500	A105*	765.9	699.0	676.1	657.0	629.1	597.3	563.5	545.5	520.8	431.5	345.1	261.5	176.3	88.6	-	-	-	-
	LF2*	765.9	699.0	676.1	657.0	629.1	597.3	563.5	545.5	520.8	431.5	345.1	261.5	176.3	88.6	-	-	-	-
	F11+	775.7	772.2	746.2	719.4	694.8	642.6	603.3	581.8	548.5	524.7	507.0	474.8	385.9	223.4	132.0	91.6	63.9	42.6
	F22+	775.7	773.0	752.8	729.8	694.8	642.6	603.3	581.8	548.5	524.7	507.0	474.8	423.0	276.6	157.9	103.3	66.9	42.6
	F5	775.7	773.0	752.8	729.8	694.8	642.6	603.3	581.8	548.5	524.7	507.0	417.8	320.7	205.7	133.3	93.5	59.9	35.5
	F9	775.7	773.0	752.8	729.8	694.8	642.6	603.3	581.8	548.5	524.7	507.0	474.8	423.0	262.4	156.8	107.7	74.5	53.2
	F91	775.7	773.0	752.8	729.8	694.8	642.6	603.3	581.8	548.5	524.7	507.0	474.8	423.0	375.8	359.1	292.5	219.1	148.9

** Not recommended for prolonged use above 425° C. + Not recommended for prolonged use above 600° C. ** For weld end valves only. Flanged end ratings terminate at 538° C.*
***Note:** Packing, gasket, or bolting may limit temperature. Please advise service temperature if above 538° C. Ratings from ASME B16.34 standard class valves. Special class weld end valves to ASME B16.34 are available on special order.*

“Reliable” is not just a word.

In the pre-dawn hours of Saturday, September 13th our corporate headquarters in Houston, Texas took a direct hit from Hurricane Ike. The entire upper Texas Gulf coast was shut down in the wake of this storm... leaving homes and businesses in the dark. Newmans was prepared! Our modern Disaster Recovery Plan was in place - globally!

Our reputation as the Reliable Source was put to the test. Even though our Houston operation was momentarily crippled, seven of our eight locations, with 75% of our $100 million inventory, were able to network seamlessly to maintain the consistent high quality service to which our customers have been accustomed.

In the wake of the storm, Newmans proved once again that we are indeed **The Reliable Source!**

Newmans offers a complete line of valves in a full range of materials, sizes, styles, and pressure classes with complete actuation capabilities in sizes 1/4” thru 120” in classes ANSI 125 thru 4500 lbs.

For product details, visit our web site @ www.newmansvalve.com.

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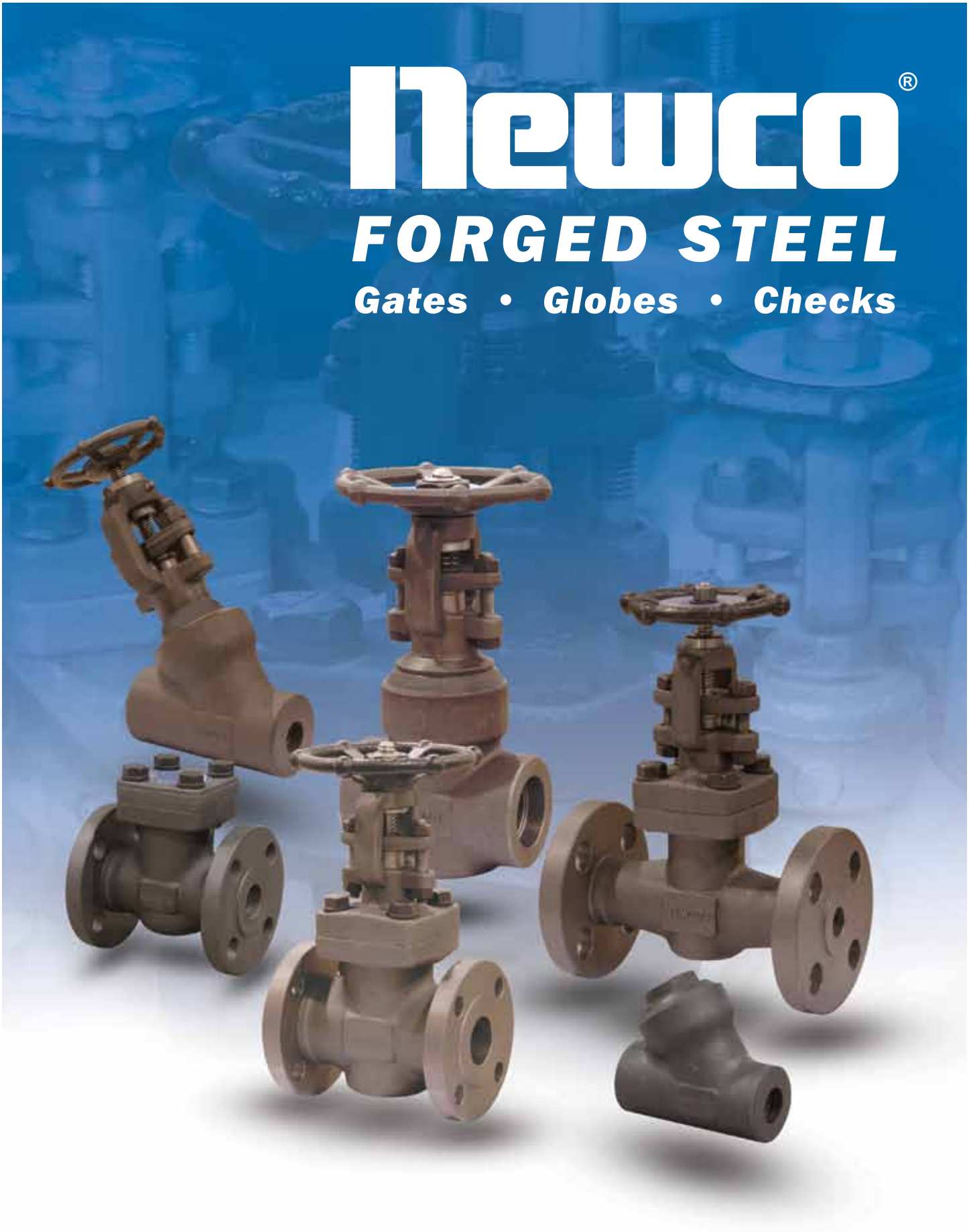


Rev: 052109

Newco Forged Steel Valves Product Applications

The sole purpose of a valve is to regulate flow throughout a fluid processing/transport system whether it is starting, stopping, throttling, or simply controlling flow rate. Gate, Globe, Angle Globe, Swing and Lift Check valve configurations are designed to perform different functions within a fluid system. This section is designed to help you determine which Newmans valve will best address your application(s).

Threaded, Socket Weld, & Butt Weld End Gate Valves

Sizes: *1/4" thru 3"* ***Class:*** *800 thru 4500*

Gate Valves are ideal for bidirectional, full flow and tight seal shut-off. Due to the flow characteristics of the wedge-to-seat design, gate valves should be operated in the full-open or full-close position. Gate valves are utilized in applications where minimum pressure drop is necessary.

Flanged End Gate Valves

Sizes: *1/2" thru 2"* ***Class:*** *150 thru 2500*

Newmans' Flanged Gate Valves are suited to bi-directional flow. They are ideal for on - off duties where tight shut-off is required. Many of our designs feature inegral body forging. Newmans offers flanged gate valves for wide service conditions.

Extended Body Gate Valves

Sizes: *1/2" thru 2"* ***Class:*** *800 thru 1500*

These valves are available in a variety of connections. Extended Body Valves have a welded or threaded connection and are used for pressure vessels and header lines for vents, drains or takeoff lines and instrumentation .

Threaded, Socket Weld, & Butt Weld End Globe Valves

Sizes: *1/4" thru 2"* ***Class:*** *800 thru 4500*

Globe Valves are ideal for unidirectional, controlled flow. The flow characteristic of a Globe valve is repeatable, consistent, and easy to control at any open position, which makes the design suitable for throttling applications.

Flanged End Globe Valves

Sizes: *1/2" thru 2"* ***Class:*** *150 thru 2500*

Flanged End Globe Valves offer flow characteristics that are repeatable, consistent, and easy to control at any open position. This makes them ideal for unidirectional, controlled flow and suitable for throttling applications.

Threaded, Socket Weld, & Butt Weld End Swing & Lift Check Valves

Sizes: *1/4" thru 2"* ***Class:*** *800 thru 4500*

Swing and Lift Check valves are available for a variety of services, and where high pressure application is needed. Quality manufacturing ensures that the valve will prevent flow reversal. Newmans offers swing, piston, and ball configurations for these valves.

Flanged End Swing & Lift Check Valves

Sizes: *1/2" thru 2"* ***Class:*** *150 thru 1500*

Newco Flanged End Swing and Lift Check Valves are designed for use in mulitple applications. These valves are ideal for applications where flow characteristics of fluids require pressure control.

Threaded, Socket Weld, & Butt Weld Y-Pattern Globe Valves

Sizes: *1/2" thru 2"* ***Class:*** *800 thru 4500*

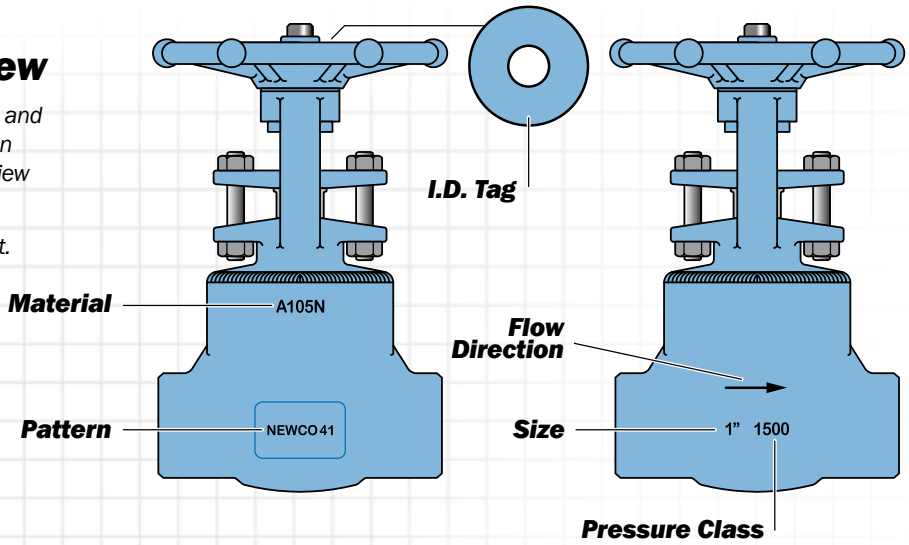
Y-Pattern Globe Valves are designed much the same as Angle Globe Valves. They are designed for a variety of service conditions and are used commonly for high pressure applications.

Valve & I.D. Tag Overview

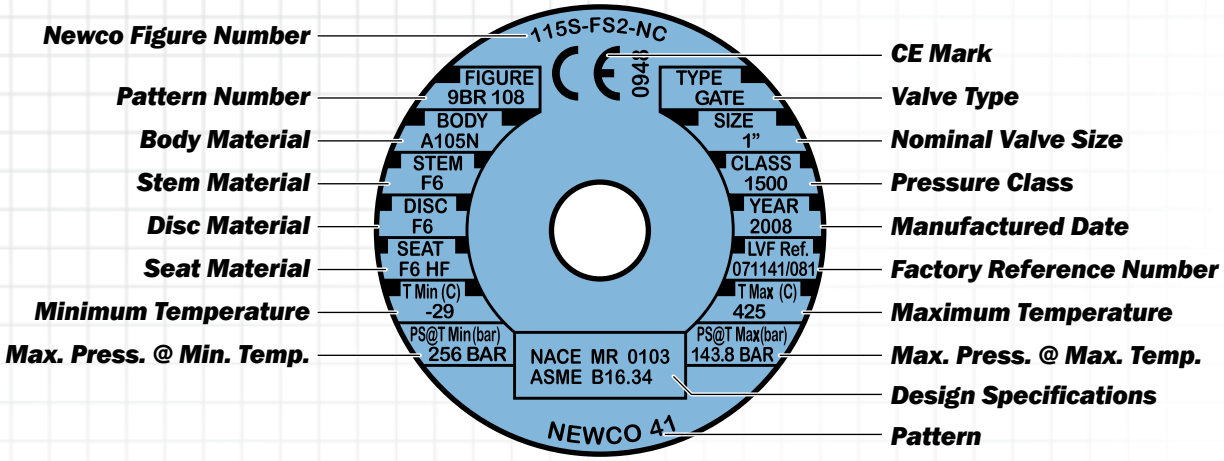
The identification tag displays all construction and tracking data regarding the respective valve on which it is attached. Below is a general overview of the identification tag components.

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

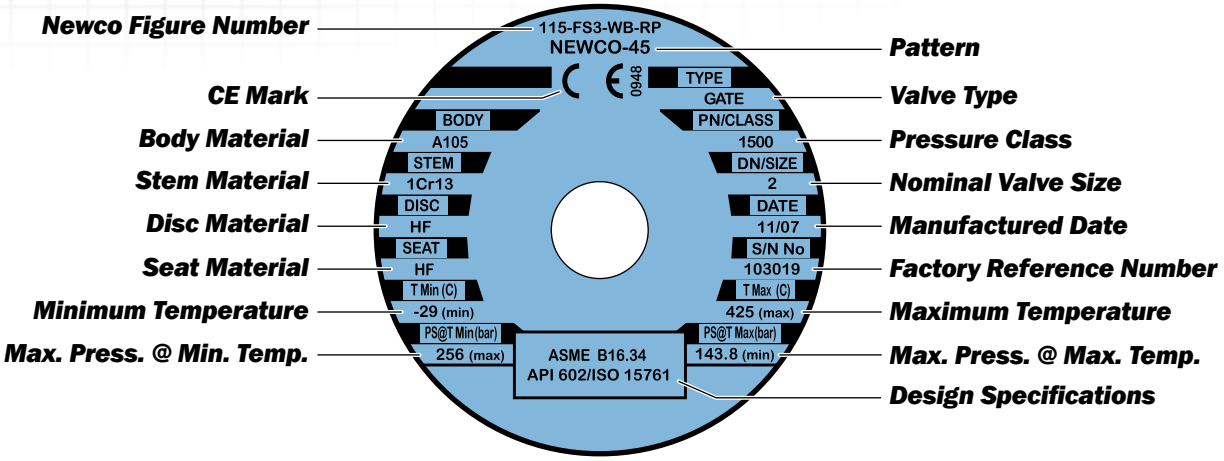
Globe and Check Valves will have a flow direction arrow on body for proper installation.



NEWCO 41 I.D. Tag



NEWCO 45 I.D. Tag



Body/Bonnet Materials

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, & gases at temperatures between -20° F & +800° F
LF2	Low Temp Carbon	A350	Low temperature service between -50° F & +800° F
F11	1.25% Chrome & .5% Moly	A182	Non-corrosive service water, oil, & gases at temperatures between -20° F & +1100° F
F22	2.25% Chrome & 1% Moly	A182	Non-corrosive service water, oil, & gases at temperatures between -20° F & +1100° F
F5	5% Chrome & .5% Moly	A182	Corrosive, non-corrosive, or erosive service at temperatures between -20° F & +1200° F
F9	9% Chrome & 1% Moly	A182	Corrosive, non-corrosive, or erosive service at temperatures between -20° F & +1200° F
F91	9% Chrome, 1% Moly, & V	A182	Corrosive, non-corrosive, or erosive service at temperatures between -20° F & +1200° F
F316	316	A182	Corrosive, cryogenic or high temperature service between -450° F & +1200° 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
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, etc. in gate and globe valves and the swing check disc nut

Newco Features and Benefits

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

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

Fig. 18T-FS2__

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)	

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 C_OC_RA
*** = Monel is a registered trademark of International Nickel Company

Newco®

Forged Steel Bolted & Welded Bonnet Gate Valves

Manufactured by Newmans™

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

Rev: 052109

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.*

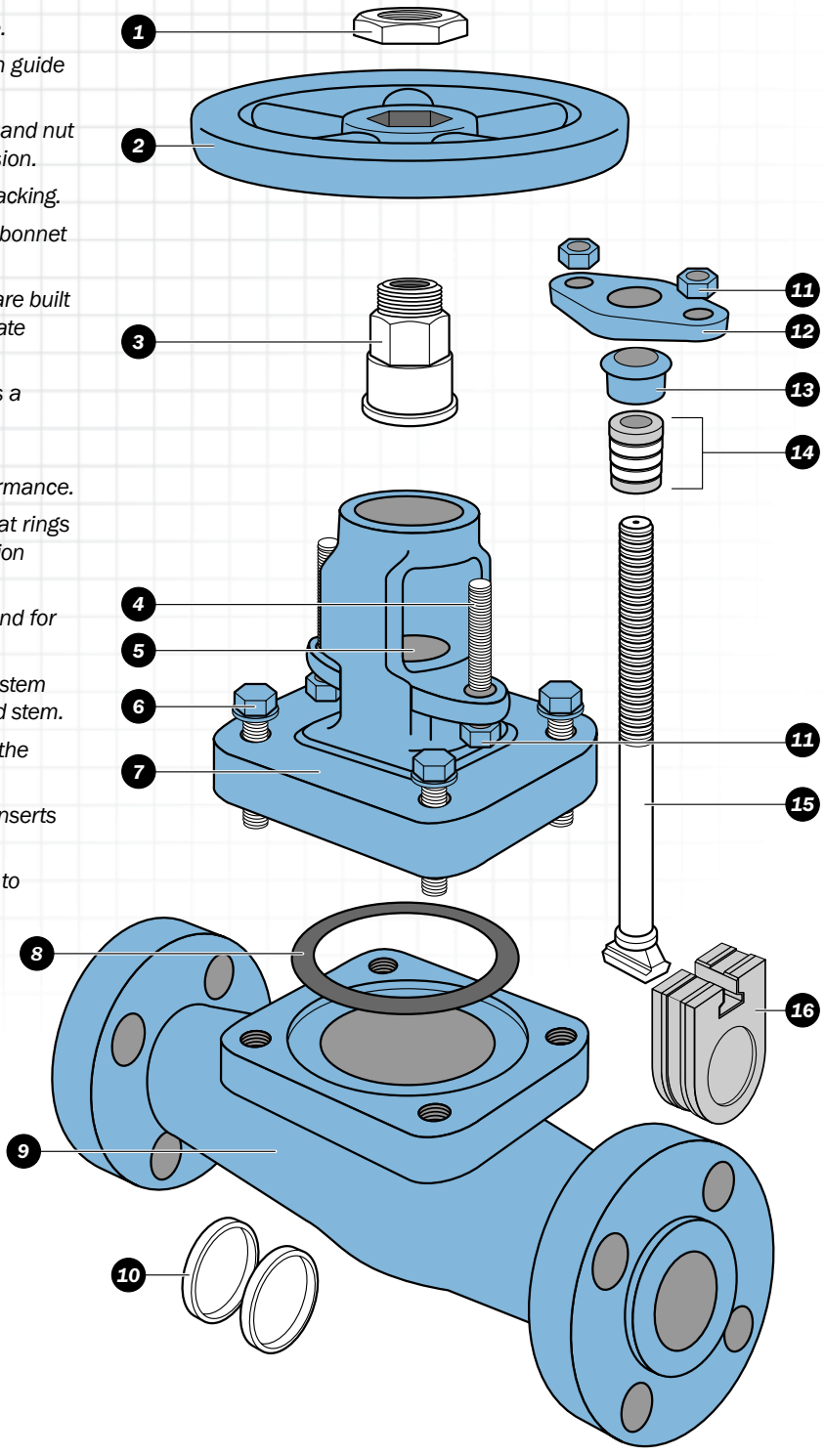
12. Gland Flange: *Applies pressure to the gland for accurate packing adjustments.*

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.*

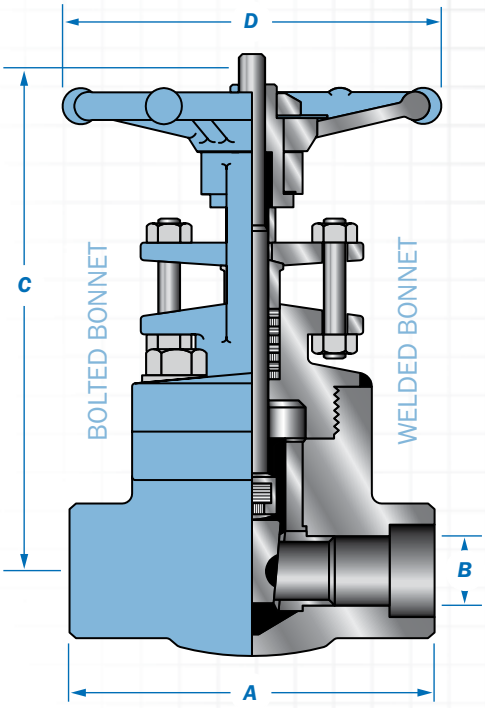
15. Stem: *The stem is precision machined and inserts into the horizontal channel in the disc.*

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



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.		A		B		C		D		Wt.	
	41	45	41	45	41	45	41	45	41	45	41	45	41	45	41	45	41	45	41	45
1/4	3.1		0.31		5.7		3.1		3.5		3.1		0.31		5.7		3.1		3.9	
6	80		8		145		80		1.6		80		8		145		80		1.8	
3/8	3.1		0.39		5.7		3.1		3.5		3.1		0.39		5.7		3.1		3.9	
9	80		10		145		80		1.6		80		10		145		80		1.8	
1/2	3.2	3.1	0.39	0.39	5.7	4.9	3.2	3.3	3.2	3.1	3.2	3.1	0.39	0.39	5.7	4.9	3.2	3.3	3.9	3.1
15	80	78.7	10	10	145	124.5	80	83.8	1.6	1.4	80	78.7	10	10	145	124.5	80	83.8	1.8	1.4
3/4	3.5	3.6	0.55	0.55	6.1	5.2	3.2	3.3	4.4	3.7	3.5	3.6	0.55	0.55	6.1	5.2	3.2	3.3	4.6	3.7
20	90	91.4	14	14	155	132.1	80	83.8	2	1.7	90	91.4	14	14	155	132.1	80	83.8	2.1	1.7
1	4.3	4.4	0.71	0.71	7.3	6.7	3.9	4.7	7.1	6.6	4.3	4.4	0.71	0.71	7.3	6.7	3.9	4.7	7.9	6.6
25	110	111.8	18	18	185	170.2	100	119.4	3.2	3	110	111.8	18	18	185	170.2	100	119.4	3.6	3
1-1/4	5.0	4.7	0.95	0.95	8.6	7.6	4.7	5.9	10.7	11	5.0	4.7	0.95	0.95	8.6	7.6	4.7	5.9	11.2	11
32	127	119.4	24	24	218	193	120	149.9	4.8	5	127	119.4	24	24	218	193	120	149.9	5.3	5
1-1/2	5.0	4.7	1.22	1.22	10.0	8.3	5.5	5.9	14.3	12.3	5.0	4.7	1.22	1.22	10.0	8.3	5.5	5.9	15.4	12.3
40	127	119.4	30	30	255	210.8	140	149.9	6.5	5.6	127	119.4	30	30	255	210.8	140	149.9	7.5	5.6
2	5.1	5.5	1.44	1.44	10.9	9.3	5.5	6.7	18.7	20.3	5.1	5.5	1.44	1.44	10.9	9.3	5.5	6.7	20.0	20.3
50	130	139.7	36.5	36.5	277	236.2	140	170.2	8.5	9.2	130	139.7	36.5	36.5	277	236.2	140	170.2	9.8	9.2
3	-		-		-		-		-		7.3		2.13		15.5		11.3		56	
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.		A		B		C		D		Wt.	
	41	45	41	45	41	45	41	45	41	45	41	45	41	45	41	45	41	45	41	45
1/2	3.5	4.4	0.39	0.55	6.07	7.8	3.2	4.9	5.0	9	3.5	4.4	0.39	0.55	6.07	7.8	3.2	4.9	5.5	9
15	90	111.8	10	13.97	152	198.1	80	124.5	2.2	4.1	90	111.8	10	139.7	152	198.1	80	124.5	2.5	4.1
3/4	4.3	4.4	0.55	0.55	7.1	7.8	3.9	4.9	8.4	9.5	4.3	4.4	0.55	0.55	7.1	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	110	111.8	14	139.7	180	198.1	100	124.5	3.8	4.3
1	4.7	4.5	0.75	0.71	8.6	8.6	4.7	6.2	12.6	13.5	4.7	4.5	0.75	0.71	8.6	8.6	4.7	6.2	11.9	13.5
25	120	114.3	18	18.03	218	218.4	120	157.5	5.2	6.1	120	114.3	18	18.03	218	218.4	120	157.5	5.4	6.1
1-1/4	5.1	4.7	0.95	0.95	9.8	9.3	5.5	6.2	14.6	19.2	5.1	4.7	0.95	0.95	9.9	9.3	5.5	6.2	17.6	19.2
32	130	119.4	24	24.13	250	236.2	140	157.5	7.5	8.7	130	119.4	24	24.13	252	236.2	140	157.5	8	8.7
1-1/2	5.1	5.5	1.16	1.14	10.8	10.8	5.5	7	22.0	26.9	5.1	5.5	1.16	1.14	10.8	10.8	5.5	7	22.4	26.9
40	130	139.7	29	28.95	275	274.3	140	177.8	10	12.2	130	139.7	29	28.95	275	274.3	170	177.8	10	12.2
2	5.9	6.4	1.44	1.44	12.6	12.6	6.7	7.9	33.0	39	5.9	6.4	1.44	1.44	12.6	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	150	162.6	37	36.57	320	320.0	170	200.7	15	17.7

Size in. / mm	Class 2500 WB										Class 2500 BB									
	A		B		C		D		Wt.		A		B		C		D		Wt.	
	41	45	41	45	41	45	41	45	41	45	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	4.3	5.9	0.39	0.39	8.3	9.5	3.9	6.3	12.1	27.1
15	110	149.9	10	9.9	175	241.3	100	160	3.5	12.3	110	149.9	9.9	9.9	210	241.3	100	160	5.5	12.3
3/4	4.7	5.9	0.55	0.55	8.3	9.5	4.7	6.3	12.1	26.6	4.7	5.9	0.55	0.55	10.0	9.5	4.7	6.3	18.7	26.6
20	120	149.9	14	13.97	210	241.3	120	160	5.5	12.1	120	149.9	13.97	13.97	255	241.3	120	160	8.5	12.1
1	5.1	6.7	0.75	0.71	9.4	10.8	5.5	7.1	16.5	26	5.1	6.7	0.75	0.71	10.4	10.8	5.5	7.1	22.4	26
25	130	170.2	18	18.03	240	274.3	140	180.3	7.5	11.8	130	170.2	19.05	18.03	265	274.3	140	180.3	10.2	11.8
1-1/4	5.1	8.7	0.95	0.95	11.0	13.1	6.7	7.8	22	46	8.3	8.7	0.95	0.95	14.4	13.1	6.7	7.8	57.2	46
32	130	220.9	24	24.13	280	332.7	170	198.1	10	20.9	210	220.9	24.13	24.13	365	332.7	170	198.1	26	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	8.3	8.7	1.16	1.14	14.8	13.1	6.7	7.8	57.2	60.5
40	210	220.9	29	28.95	310	332.7	170	198.1	16	27.5	210	220.9	29.46	28.95	375	332.7	170	198.1	26	27.5
2	9.4	9.8	1.44	1.44	14	16.8	10.2	11.8	55	117.3	9.4	9.8	1.44	1.44	15.4	16.8	10.2	11.8	81.4	117.3
50	240	248.9	36.5	36.57	355	426.7	260	299.7	25	53.3	240	248.9	36.57	36.57	390	426.7	260	299.7	37	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

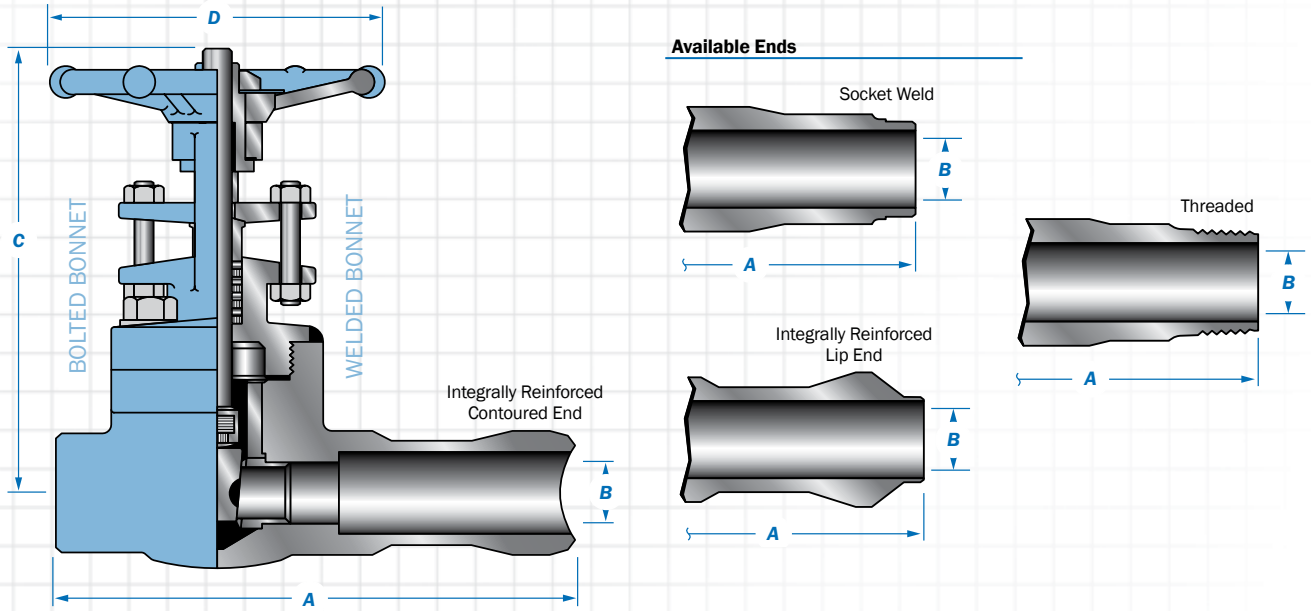
Note: *Dimensions: Inches/Millimeters - Weights: Pounds/Kilograms. Dimensions are subject to change without notice.*

Rev: 072109

www.NewmansValve.com
Toll Free: 800.231.3505

Forged Steel Extended Body Gates
Bolted & Welded Bonnet
Conventional Port
Class 800 thru 1500
Sizes: 1/2" thru 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*



Class 800 & 1500 Extended Body - Bolted & Welded Bonnet Gate

Size	Class 800 IR Contoured End					Class 800 IR - Lip End					Class 800 Threaded					Class 800 Socket Weld				
in.	A	B	C	D	Wt.	A	B	C	D	Wt.	A	B	C	D	Wt.	A	B	C	D	Wt.
mm	41 45	41 45	41 45	41 45	41 45	41 45	41 45	41 45	41 45	41 45	41 45	41 45	41 45	41 45	41 45	41 45	41 45	41 45	41 45	41 45
1/2	8.6	0.39	5.9	3.2	6	8.6	0.39	5.9	3.2	6	5.6	0.39	6.4	3.1	5.7	5.6	0.39	6.4	3.1	5.7
15	207	9.9	150	81	3	207	9.9	150	81	3	141.5	10	162	80	2.6	141.5	10	162	80	2.6
3/4	8.6	0.55	6.1	3.2	7	8.6	0.55	6.1	3.2	7	5.8	0.55	7.3	3.9	6.4	5.8	0.55	7.3	3.9	6.4
20	218	13.9	155	81	3	218	13.9	155	81	3	146.5	14	185	100	2.9	146.5	14	185	100	2.9
1	9.6	0.71	7.3	3.9	10	9.6	0.71	7.3	3.9	10	6.5	0.7	7.6	3.9	9.5	6.5	0.7	7.6	3.9	9.5
25	245	18	185	99	5	245	18	185	99	5	166	18	192	100	4.3	166	18	192	100	4.3
1-1/2	10.4	1.14	10.2	5.5	19	10.4	1.14	10.2	5.5	19	7.5	1.14	10	5.5	19.4	7.5	1.14	10	5.5	19.4
40	263	28.9	259	140	9	263	28.9	259	140	9	191	29	255	140	8.8	191	29	255	140	8.8
2	11.4	1.44	10.8	5.5	29	11.4	1.44	10.8	5.5	29	8.5	1.44	10.7	6.7	28.6	8.5	1.44	10.7	6.7	28.6
50	289	36.6	274	140	13	289	36.6	274	140	13	216	36.5	273	170	13	216	36.5	273	170	13
Size	**Class 1500 Re-Out-Forced**					**Class 1500 Re-In Forced**					**Class 1500 Threaded**					**Class 1500 Socket Weld**				
in.	A	B	C	D	Wt.	A	B	C	D	Wt.	A	B	C	D	Wt.	A	B	C	D	Wt.
mm	41 45	41 45	41 45	41 45	41 45	41 45	41 45	41 45	41 45	41 45	41 45	41 45	41 45	41 45	41 45	41 45	41 45	41 45	41 45	41 45
1/2	8.6	0.39	5.4	3.2	6	8.6	0.39	5.4	3.2	6	5.7	0.39	6.5	3.2	6.4	5.7	0.39	6.5	3.2	6.4
15	218	9.9	138	80	3	218	9.9	138	80	3	146	10	165	80	2.9	146	10	165	80	2.9
3/4	9.6	0.55	6.3	3.9	10	9.6	0.55	6.3	3.9	10	6.5	0.55	7.1	3.9	9.5	6.5	0.55	7.1	3.9	9.5
20	245	13.9	161	100	5	245	13.9	161	100	5	166	14	180	100	4.3	166	14	180	100	4.3
1	10.4	0.75	8.6	4.7	15	10.4	0.75	8.6	4.7	15	7.5	0.7	9.4	5.5	19.4	7.5	0.7	9.4	5.5	19.4
25	264	19	218	120	7	264	19	218	120	7	191	18	240	140	8.8	191	18	240	140	8.8
1-1/2	10.5	1.16	9.4	5.5	25	10.5	1.16	9.4	5.5	25	8.5	1.14	10.6	6.7	29.7	8.5	1.14	10.6	6.7	29.7
40	267	29.5	238	140	11	267	29.5	238	140	11	216	29	270	170	13.5	216	29	270	170	13.5
2	12.8	1.44	10.9	6.7	35	12.8	1.44	10.9	6.7	35	9.8	1.44	12.6	10.2	41.1	9.8	1.44	12.6	10.2	41.1
50	325	36.6	276	170	16	325	36.6	276	170	16	250	36.5	320	260	18.7	250	36.5	320	260	18.7

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.*

Rev: 072109

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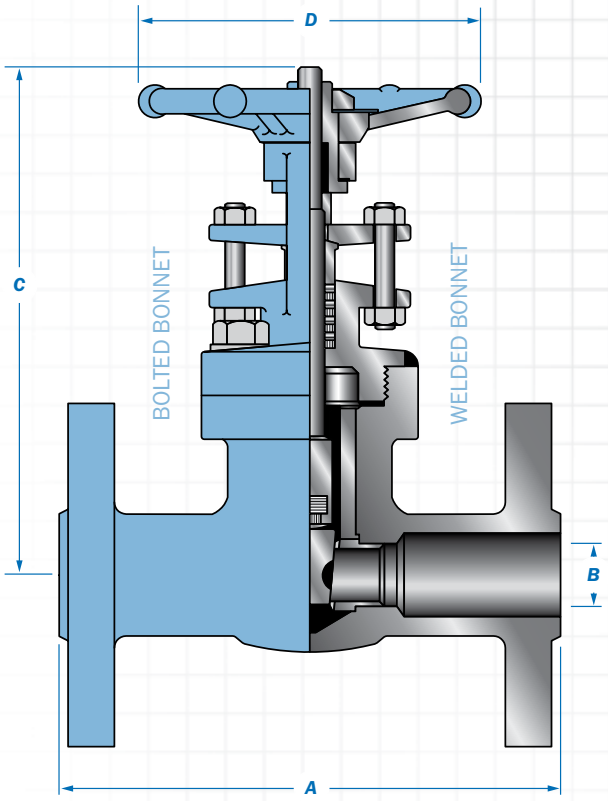
Forged Steel Flanged End Gates
Bolted & Welded Bonnet
Conventional Port
Class 150 thru 1500
Sizes: 1/2" thru 2" (1/4" & 3/8" available upon request)

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 thru 1500
Bolted & Welded Bonnet Flanged Gates

Size in. / mm	A		B		C		D		Wt.	
	41	45	41	45	41	45	41	45	41	45
Class 150 BB & WB										
1/2	4.3		0.39	0.39	6.8	4.9	3.2		6.8	6.6
15	108		10	10	173	125	80		3.1	3
3/4	4.6		0.55	0.55	7.1	5.2	3.2		8.6	7.7
20	118		14	14	180	132	80		4	3.5
1	5.0		0.71	0.71	8.1	6.7	4.0		12.1	12.1
25	127		18	18	205	170	100		5.7	5.5
1-1/4	5.5		0.94	0.95	9.3	7.6	4.8		18.1	15
32	140		24	24	235	193	120		8.2	6.8
1-1/2	6.5		1.22	1.14	10.2	8.3	5.5		23.4	22.9
40	165		30	29	260	211	140		10.5	10.4
2	7.0		1.44	1.44	11.7	9.3	5.5		32.0	31.7
50	178		37	37	296	236	170		15.4	14.4
Class 300 BB & WB										
1/2	5.5		0.39	0.39	6.9	4.9	3.2		7.3	7.9
15	140		10	10	174	125	80		4	3.6
3/4	6.0		0.55	0.55	7.1	5.2	3.2		10.8	10.8
20	153		14	14	180	132	80		5.4	4.9
1	6.5		0.71	0.71	8.1	6.7	3.9		14.7	15.4
25	165		18	18	205	170	100		6.5	7
1-1/4	7.0		0.94	0.95	10.2	7.6	4.7		21.1	20.7
32	178		24	24	260	193	140		12.5	9.4
1-1/2	7.5		1.22	1.14	10.4	8.3	5.5		29.5	29.3
40	191		30	29	265	211	140		13	13.3
2	8.5		1.44	1.44	11.7	9.3	6.7		35.9	39.6
50	216		37	37	296	236	170		17.5	18
Class 600 BB & WB										
1/2	6.5		0.39	0.39	5.7	4.9	3.2		7.7	9.2
15	165		10	10	145	125	80		4.2	4.2
3/4	7.5		0.55	0.55	6.1	5.2	3.2		11.7	12.8
20	191		14	14	155	132	80		5.6	5.8
1	8.5		0.71	0.71	7.3	6.7	4.0		15.7	19.4
25	216		18	18	185	170	100		7.2	8.8
1-1/4	9.0		1.14	0.95	9.8	7.6	5.5		30.9	26.6
32	229		29	24	248	193	140		14.5	12.1
1-1/2	9.5		1.22	1.14	9.8	8.3	5.5		30.9	34.3
40	241		30	29	248	211	140		14.5	15.6
2	11.5		1.44	1.44	10.7	9.3	5.6		40.8	34.3
50	292		37	37	273	236	170		18	19.5
Class 1500 BB & WB										
1/2	8.5		0.55	0.55	8.3	7.8	3.9		22	9
15	216		14	14	210	198	100		10	4
3/4	9		0.71	0.55	10.0	7.8	4.7		33	9.5
20	229		18	14	255	198	120		15	4.3
1	10		0.94	0.71	10.8	8.6	5.5		37.4	13.5
25	254		24	18	275	218	140		17	6
1-1/4	-		-	0.95	-	9.3	-		-	19.2
32	-		-	24	-	236	-		-	8.7
1-1/2	12		1.44	1.14	15	10.8	6.8		77	26.9
40	305		36.5	29	380	274	172		35	12
2	14.5		1.57	1.44	15.3	12.6	10.2		121	39
50	368		40	37	388	320	260		55	17.7

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

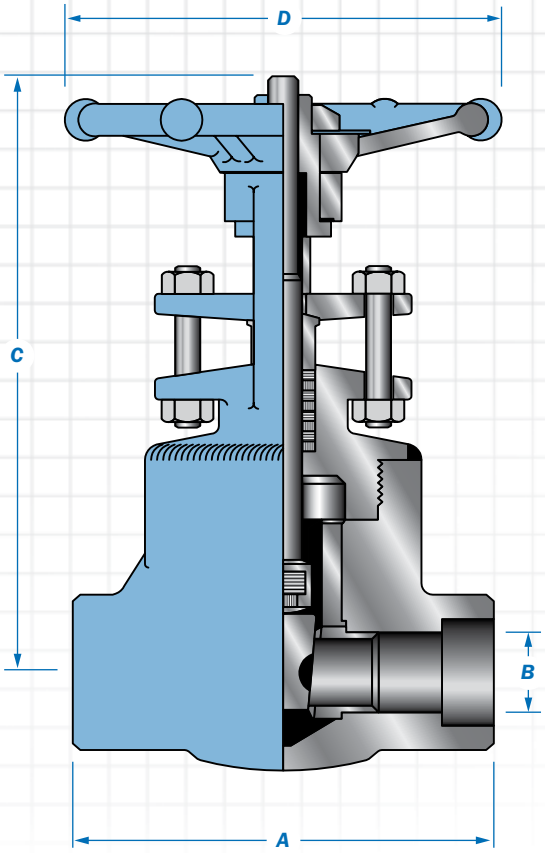
Component	Material	ASTM Spec
Body	Carbon Steel	A105N
Bonnet	Carbon Steel	A105N
* Packing	Graphite W/Braided Carbon Fiber End Rings	
* Gasket	Stainless Steel 316 Graphite	
Stem	Stainless Steel	A479-410
Wedge	Stainless Steel	13 Chrome
Seat Rings	Stainless Steel	A479-410
Bonnet Bolt	Alloy Steel	A193 B7
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	A479-316

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

Forged Steel High Pressure Welded Bonnet Gate Conventional Port

Class 4500
Sizes: 1/2" thru 2"

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 4500 Welded Bonnet Gate

Size	A	B	C	D	Wt.
1/2	4.7	0.47	10.4	5.5	17.6
15	120	12	265	140	8
3/4	5.1	0.47	10.4	5.5	19.8
20	130	12	265	140	9
1	5.1	0.47	10.4	6.7	19.8
25	130	12	265	170	9
1-1/4	8.3	0.63	12.4	6.7	31.9
32	210	16	315	170	14.5
1-1/2	8.3	0.63	12.4	10.2	33
40	210	16	315	260	15
2	9.4	0.83	15.4	10.2	41.8
50	240	21	390	260	19

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

Component	Material	ASTM Spec
Body	Carbon Steel	A105N
Bonnet	Carbon Steel	A105N
* Packing	Graphite W/Braided Carbon Fiber End Rings	
* Gasket	Stainless Steel 316 Graphite	
Stem	Stainless Steel	A479-410
Wedge	Stainless Steel	13 Chrome
Seat Rings	Stainless Steel	A479-410
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	A479-316

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

Rev: 072109

Newco®

Forged Steel Bolted & Welded Bonnet Globe Valves

Manufactured by Newmans™

Sizes: 1/2” thru 2” • Pressure Class: 150 thru 4500

Rev: 052109

Typical Newco Forged Steel Bolted & 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 & Nuts: *The gland bolt and nut allows for easy adjustments for packing compression.*

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

6. 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: *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: *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.*

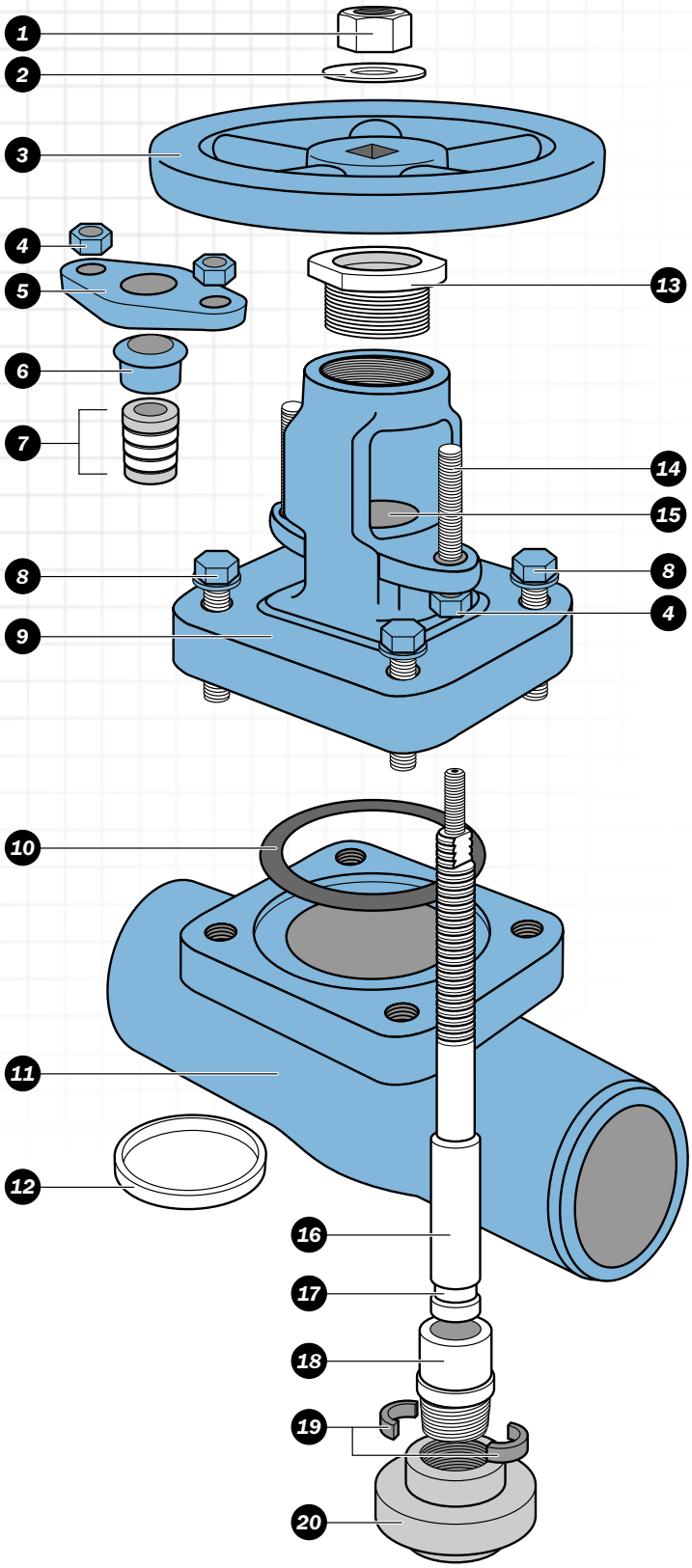
16. Stem: *The stem inserts vertically into the disc.*

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.*

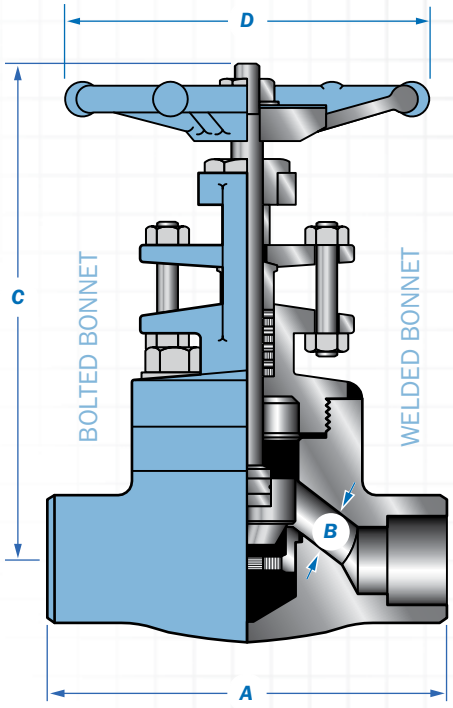
19. Split Ring: *The split ring allows the disc nut to lift the disc during cycling.*

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



Forged Steel Bolted & Welded Bonnet Globes
Threaded, Socket Weld & Buttweld Ends
Conventional Port
Class 800 thru 2500
Sizes: 1/2" thru 2" *(1/4" & 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 thru 1500
Bolted & Welded Bonnet Globes

Size	Class 800 WB										Class 800 BB									
in.	A		B		C		D		Wt.		A		B		C		D		Wt.	
mm	41	45	41	45	41	45	41	45	41	45	41	45	41	45	41	45	41	45	41	45
1/2	3.2	3.1	0.35		6.3	5.2	3.2	3.3	4	2.9	3.2	3.1	0.35		6.3	5.2	3.2	3.3	4	2.9
15	80	78.7	9		160	132.1	80	83.8	1.8	1.3	80	78.7	9		160	132.1	80	83.8	1.8	1.3
3/4	3.5	3.6	0.49		6.7	5.4	3.2	3.3	4.4	3.7	3.5	3.6	0.49		6.7	5.4	3.2	3.3	4.4	3.7
20	90	91.4	12.5		170	137.2	80	83.8	2	1.7	90	91.4	12.5		170	137.2	80	83.8	2	1.7
1	4.3	4.4	0.68		7.9	7	3.9	4.7	7.3	6.4	4.3	4.4	0.68		7.9	7	3.9	4.7	7.3	6.4
25	110	111.8	17.5		200	177.8	100	119.4	3.3	2.9	110	111.8	17.5		200	177.8	100	119.4	3.3	2.9
1-1/4	5	4.7	0.88		9.3	8.3	4.7	5.9	11.9	15.9	5	4.7	0.88		9.3	8.3	4.7	5.9	11.9	15.9
32	127	119.4	22.5		235	210.8	120	149.9	5.4	7.2	127	119.4	22.5		235	210.8	120	149.9	5.4	7.2
1-1/2	6.1	6	1.14		9.3	8.4	5.5	5.9	17.4	14.9	6.1	6	1.14		9.3	8.4	5.5	5.9	17.4	14.9
40	155	152.4	29		270	213.4	140	149.9	7.9	6.8	155	152.4	29		270	213.4	140	149.9	7.9	6.8
2	6.7	6.8	1.37		11.4	10.3	6.7	6.7	23.8	23.4	6.7	6.8	1.37		11.4	10.3	6.7	6.7	23.8	23.4
50	170	172.7	35		290	261.6	170	170.2	10.8	10.6	170	172.7	35		290	261.6	170	170.2	10.8	10.6

Size	Class 1500 WB										Class 1500 BB									
in.	A		B		C		D		Wt.		A		B		C		D		Wt.	
mm	41	45	41	45	41	45	41	45	41	45	41	45	41	45	41	45	41	45	41	45
1/2	3.5	4.4	0.35	0.39	6.5	8.1	3.2	4.9	4.2	4.4	3.5	4.4	0.35	0.39	6.5	8.1	3.2	4.9	4.4	4.4
15	90	111.8	9	9.9	165	205.7	80	124.5	1.9	2	90	111.8	9	9.9	165	205.7	80	124.5	2	2
3/4	4.3	4.4	0.43	0.51	7.7	8.1	4.7	4.9	7	8.4	4.3	4.4	0.43	0.51	7.7	8.1	4.7	4.9	7.3	8.4
20	110	111.8	11	12.95	195	205.7	120	124.5	3.2	3.8	110	111.8	11	12.95	195	205.7	120	124.5	3.3	3.8
1	4.7	5.1	0.57	0.66	9.3	9.4	5.5	6.2	12.1	9.3	4.7	5.1	0.57	0.66	9.1	9.4	5.5	6.2	12.1	9.3
25	120	129.5	14.5	16.76	235	238.8	140	157.5	5.5	4.2	120	129.5	14.5	16.76	230	238.8	140	157.5	5.5	4.2
1-1/4	5.1	5.9	0.75	0.9	10.4	10.2	5.5	6.2	17.6	17.6	5.1	5.9	0.75	0.9	10.2	10.2	5.5	6.2	19.8	17.6
32	130	149.9	19	22.86	265	259.1	140	157.5	8	8	130	149.9	19	22.86	260	259.1	140	157.5	9	8
1-1/2	6.7	6.8	1.06	1.18	11	11.4	6.7	6.2	24.2	29.1	6.7	6.8	1.06	1.18	11.2	11.4	6.7	6.2	26.4	29.1
40	170	172.7	27	29.97	280	289.6	170	157.5	11	13.2	170	172.7	27	29.97	285	289.6	170	157.5	12	13.2
2	8.3	8.7	1.22	1.49	13.2	13.3	6.7	7.1	39.6	37	8.3	8.7	1.22	1.49	13	13.3	6.7	7.1	39.6	37
50	210	220.9	31	37.85	335	337.8	170	180.3	18	16.8	210	220.9	31	37.85	330	337.8	170	180.3	18	16.8

Size	Class 2500 WB										Class 2500 BB									
in.	A		B		C		D		Wt.		A		B		C		D		Wt.	
mm	41	45	41	45	41	45	41	45	41	45	41	45	41	45	41	45	41	45	41	45
1/2	4.3		0.43		7.7		4.7		8.6		4.3		0.43		10.6		4.7		11	
15	110		11		195		120		3.9		110		11		270		120		5	
3/4	4.7		0.55		8.9		5.5		14.1		4.7		0.55		10.8		5.5		17.6	
20	120		14		225		140		6.4		120		14		275		140		8	
1	5.1		0.75		10		5.5		19.9		5.1		0.75		11.4		5.5		23.5	
25	130		19		255		140		9		130		19		290		140		10.7	
1-1/4	8.3		0.94		12.8		6.7		44		8.3		0.94		15.4		6.7		52.8	
32	210		24		325		170		20		210		24		390		170		24	
1-1/2	8.3		1.1		13		6.7		48.4		8.3		1.1		16.3		10.2		70.4	
40	210		28		330		170		22		210		28		415		260		32	
2	9.5		1.42		14.6		10.2		61.6		9.5		1.42		16.7		10.2		81.4	
50	240		36		370		260		28		240		36		425		260		37	

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	Commercial
***Gasket**	Stainless Steel 316 Graphite		**Yoke Sleeve**	Stainless Steel	AISI 416
Stem	Stainless Steel	A479-410	**Gland Nuts**	Carbon Steel	A194 2H
Disc	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	AISI 416
Washer	Carbon Steel	Commercial			

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

Rev: 072109

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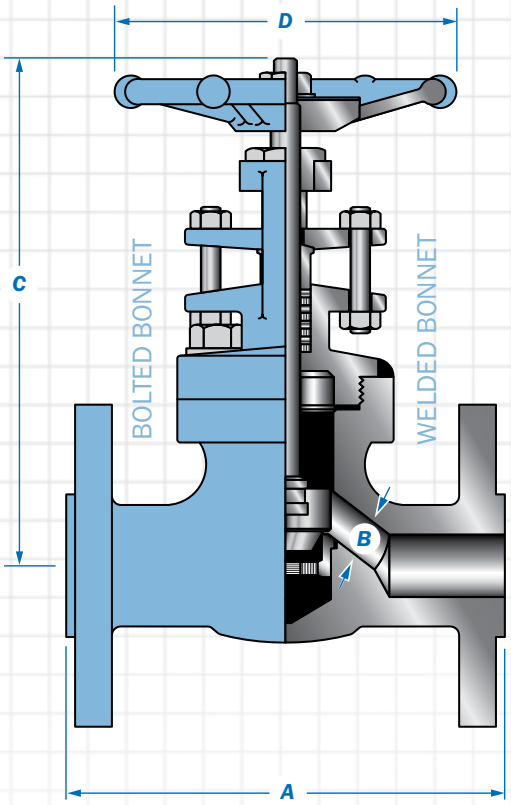
Toll Free: 800.231.3505

Forged Steel Flanged End Globes
Bolted & Welded Bonnet
Conventional Port
Class 150 thru 1500
Sizes: 1/2" thru 2" *(1/4" & 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 thru 1500
Bolted & Welded Bonnet Flanged Globes

Size in. / mm	A		B		C		D		Wt.	
	41	45	41	45	41	45	41	45	41	45
Class 150 BB & WB										
1/2	4.25		0.35	0.39	7.3	6.8	3.1		7	9.9
15	108		9	9.9	185	173	80		3.1	4.5
3/4	4.63		0.47	0.39	7.6	7.0	3.1		8	15.2
20	118		12.5	9.9	192	178	80		4	6.9
1	5.00		0.67	0.69	8.7	8.3	4.0		17	21.6
25	127		17.5	17.5	220	211	100		5.7	9.8
1-1/2	6.50		1.10	1.18	10.4	9.2	5.5		25	42.9
40	165		29	30	265	234	140		10.6	19.5
2	8.00		1.34	1.46	12.2	10.4	6.7		35	61.6
50	203		35	37.1	310	264	170		15.4	28
Class 300 BB & WB										
1/2	6.00		0.35	0.39	6.3	6.26	3.1		8	10.6
15	152.5		9	9.9	160	159	80		3.5	4.8
3/4	7.00		0.47	0.39	6.6	6.26	3.1		11	16.9
20	178		12.5	9.9	168	159	80		4.8	7.7
1	8.00		0.67	0.69	7.9	7.6	4.0		15	24.2
25	203		17.5	17.5	200	193	100		7.2	11
1-1/2	9.00		1.10	1.18	10.6	9.2	5.5		30	46.6
40	229		29	30	268	234	140		14.5	21.2
2	10.5		1.34	1.46	11.4	10.4	6.7		40	71.7
50	267		35	37.1	290	264	170		18	32.6
Class 600 BB & WB										
1/2	6.50		0.35	0.39	6.3	6.26	3.1		8.2	12.3
15	165		9	9.9	160	159	80		3.7	5.6
3/4	7.50		0.47	0.39	6.6	6.26	3.1		11.7	17.2
20	190.5		12.5	9.9	168	159	80		5.3	7.8
1	8.50		0.67	0.69	7.9	7.6	4.0		18.1	27.5
25	216		17.5	17.5	200	193	100		8.2	12.5
1-1/2	9.51		1.10	1.18	10.6	8.7	5.5		33.1	51.7
40	241.5		29	30	268	221	140		15	23.5
2	11.5		1.34	1.46	11.4	10.4	6.7		47.4	85.4
50	292		35	37.1	290	264	170		21.5	38.8
Class 1500 BB & WB										
1/2	8.5		.43	0.5	8.86	8.1	4.72	3.93	22.0	17.6
15	216		11	13	225	207	120	100	10.0	8.0
3/4	9.0		.57	0.7	10.63	9.4	5.51	4.92	33.0	29.0
20	229		14.5	18	270	240	140	125	15.0	13.2
1	10.0		.75	0.9	11.22	10.2	5.51	6.29	37.4	38.3
25	254		19	24	285	258	140	160	17.0	17.4
1-1/4	11.0		-	1.1	-	11.4	-	6.29	-	42.0
32	279		-	29	-	290	-	160	-	19.0
1-1/2	12.0		1.22	1.4	15.75	13.3	6.69	7.08	79.2	54.0
40	305		31	36.5	400	337	170	180	36.0	24.5
2	14.5		1.48	1.8	16.54	14.0	10.24	9.45	121.0	68.2
50	368		37.5	46.5	420	354	260	240	55.0	31.0

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

Component	Material	ASTM Spec
Body	Carbon Steel	A105N
Bonnet	Carbon Steel	A105N
*** Packing**	Graphite W/Braided Carbon Fiber End Rings	
*** Gasket**	Stainless Steel 316 Graphite	
Stem	Stainless Steel	A479-410
Disc	Stainless Steel	13 Chrome
Seat Rings	Stainless Steel	A479-410
Bonnet Bolts	Alloy Steel	A193 B7
Washer	Carbon Steel	Commercial
Handwheel Nut	Carbon Steel	Commercial
Nameplate	Aluminum	Commercial
Handwheel	Carbon Steel	Commercial
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 416

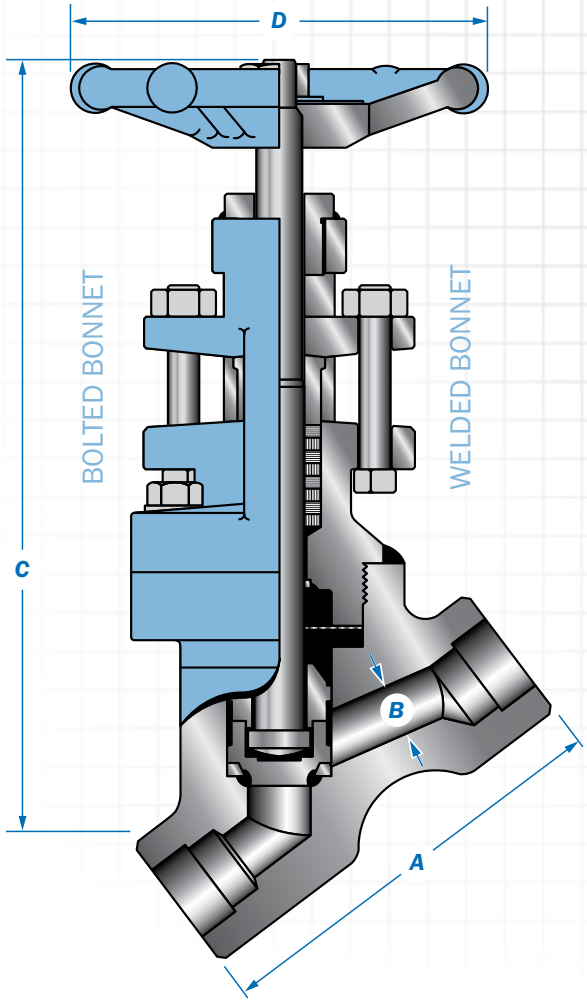
Note: *Dimensions: Inches/Millimeters - Weights: Pounds/Kilograms. Larger sizes available on request. Dimensions are subject to change without notice.*

Forged Steel Y-Pattern Bolted & Welded Bonnet Globe Conventional Port

Class 800 thru 2680

Sizes: 1/2" thru 2" (1/4" & 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
Bolted & Welded Bonnet Globe

Size	A	B	C	D	Wt.
1/2	3.6	0.39	7.5	3.7	4.4
15	92	10	190	95	2
3/4	3.6	0.51	7.5	3.7	4.4
20	92	13	190	95	2
1	4.4	0.69	9.3	4.3	9
25	111	17.5	235	110	4.1
1-1/4	6	0.94	11.2	5.5	19.8
32	152	24	286	140	9
1-1/2	6	1.22	11.2	5.5	19.8
40	152	31	286	140	9
2	6.8	1.46	12.8	6.7	30.4
50	172	37	325	200	13.8

Class 1500 & 1690
Welded Bonnet Globe

Size	A	B	C	D	Wt.
1/2	3.9	0.51	7.3	3.9	6.6
15	100	13	185	100	3
3/4	4.3	0.69	9.1	5.5	8.8
20	110	17.5	230	140	4
1	4.9	0.89	9.4	5.5	11
25	125	22.5	240	140	5
1-1/4	5.9	1.1	12	6.7	20.9
32	150	28	305	170	9.5
1-1/2	6.3	1.38	13.4	7.9	24.2
40	160	35	340	200	11
2	7.5	1.73	15.7	10.2	37.4
50	190	44	400	260	17

Class 2500 & 2680
Welded Bonnet Globe

Size	A	B	C	D	Wt.
1/2	3.9	0.47	9.1	4.7	8.8
15	100	12	230	120	4
3/4	4.9	0.59	9.4	5.5	11
20	125	15	240	140	5
1	6.3	0.79	12	6.7	20.9
25	160	20	305	170	9.5
1-1/4	6.3	0.98	12	6.7	23.1
32	160	25	305	170	10.5
1-1/2	7.5	1.22	13.6	7.9	37.4
40	190	31	345	200	17
2	8.3	1.49	15.7	10.2	50.6
50	210	38	400	260	23

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

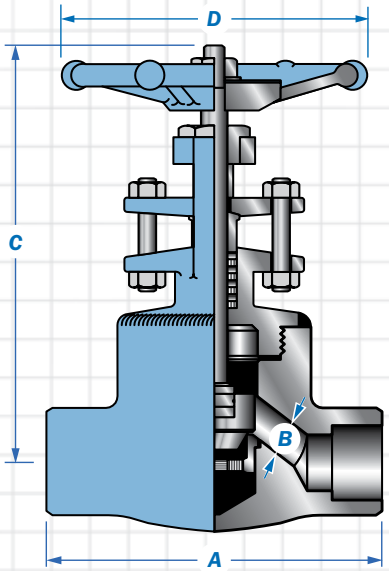
Component	Material	ASTM Spec	Component	Material	ASTM Spec
Body	Carbon Steel	A105N	Handwheel Nut	Carbon Steel	Commercial
Bonnet	Carbon Steel	A105N	Nameplate	Aluminum	Commercial
* Packing	Graphite W/Braided Carbon Fiber End Rings		Handwheel	Carbon Steel	Commercial
* Gasket	Stainless Steel 316 Graphite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

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

Rev: 072109

Forged Steel High Pressure Welded Bonnet Globe Conventional Port
Class 4500
Sizes: 1/2" thru 2"

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*

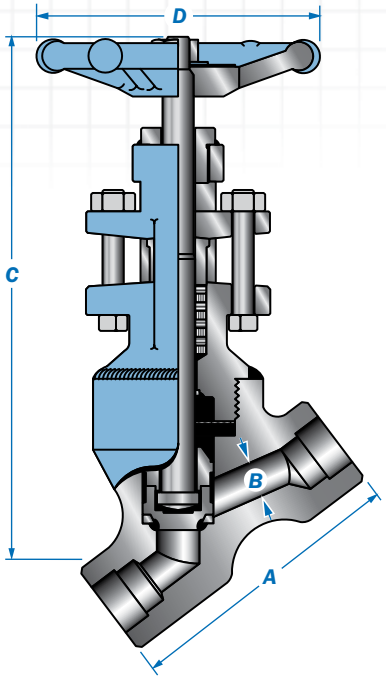


Class 4500
Welded Bonnet Globe

Size	A	B	C	D	Wt.
1/2	4.7	0.31	8.9	4.7	17.6
15	120	8	228	120	8
3/4	6.1	0.47	10.8	5.5	4
20	155	12	275	140	11
1	6.1	0.59	11	5.5	41.8
25	155	15	280	140	19
1-1/4	8.3	0.79	16.1	10.2	50.6
32	210	20	410	260	23
1-1/2	8.3	0.98	16.1	10.2	50.6
40	210	25	410	260	23
2	9.4	1.1	16.5	10.2	50.6
50	240	28	420	260	23

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	Commercial
* Gasket	Stainless Steel 316 Graphite		Yoke Sleeve	Stainless Steel	AISI 416
Stem	Stainless Steel	A479-410	Gland Nuts	Carbon Steel	A194 2H
Disc	Stainless Steel	13 Chrome	Gland Flange	Carbon Steel	A105N
Seat Rings	Stainless Steel	A479-410	Gland Studs	Stainless Steel	AISI 410
Bonnet Bolts	Alloy Steel	A193 B7	Packing Gland	Stainless Steel	AISI 416
Washer	Carbon Steel	Commercial			



Class 4500
Welded Bonnet Y-Pattern Globe

Size	A	B	C	D	Wt.
1/2	4.9	0.31	9.4	5.5	12.1
15	125	8	240	140	5.5
3/4	6.3	0.43	11.2	6.7	22
20	160	11	285	170	10
1	7.5	0.59	12.6	7.9	37.4
25	190	15	320	200	17
1-1/4	7.5	0.71	12.6	7.9	37.4
32	190	18	320	200	17
1-1/2	8.3	0.79	12.6	10.2	41.8
40	210	20	360	260	19
2	11	0.98	17.7	14.6	52.8
50	280	25	450	370	24

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

Newco®

Forged Steel Bolted & Welded Bonnet Check Valves

Manufactured by Newmans™

Sizes: 1/2” thru 2” • Pressure Class: 150 thru 1500

Rev: 052109

Typical Newco Forged Steel Bolted Check Valve Expanded View

1. Body: *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.*

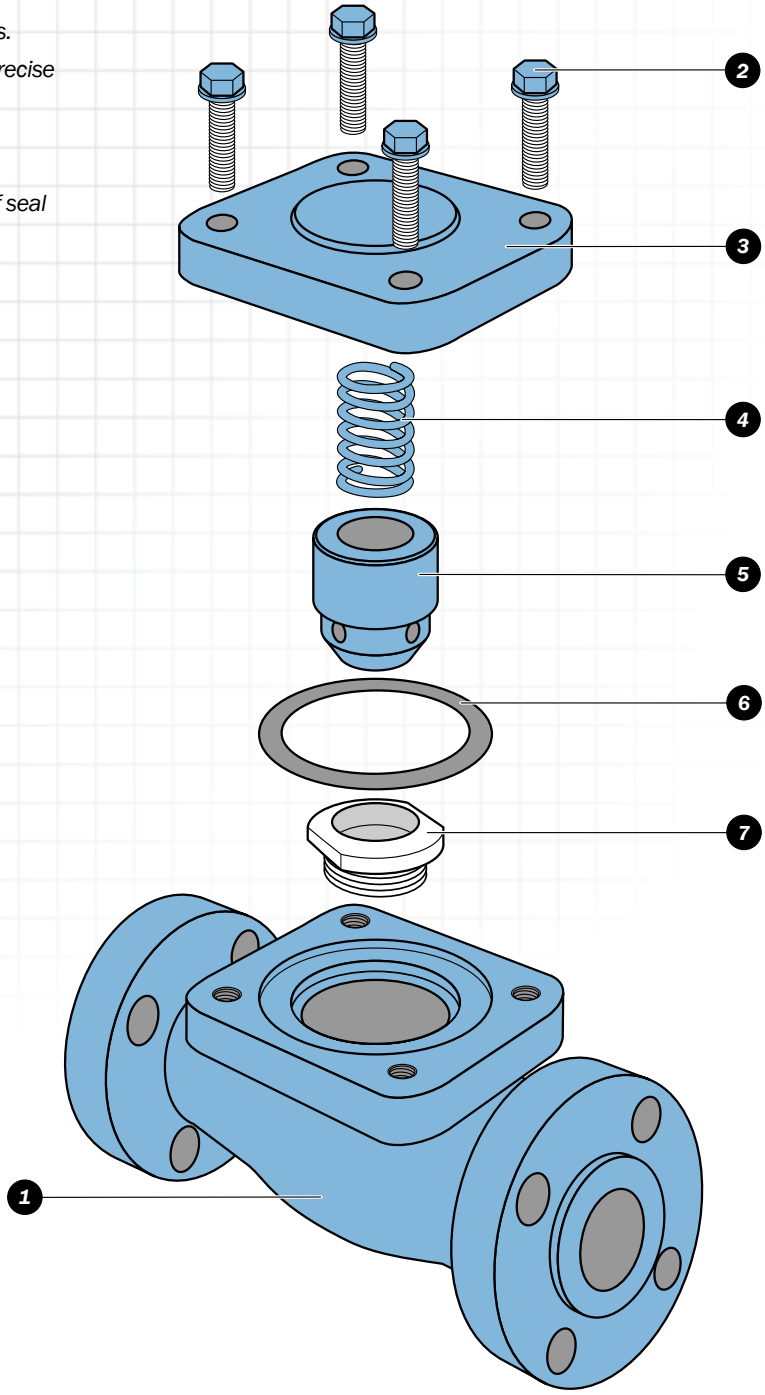
3. Cover: *The cover allows access to internal components.*

4. Spring: *The spring is precision made and loaded for precise pressures.*

5. Piston: *Newmans piston is machined to the tightest tolerances to ensure trouble free shutoff and cycling.*

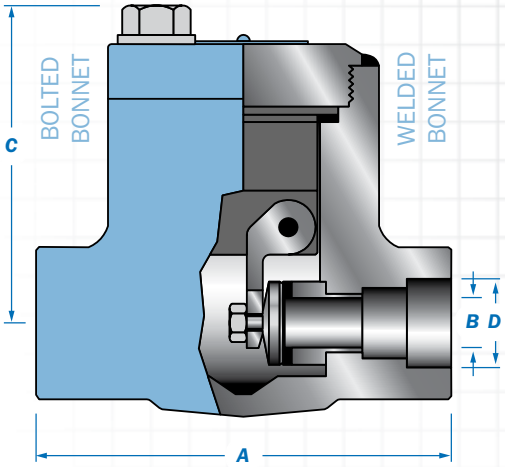
6. Cover Gasket: *The cover gasket creates a leak-proof seal between the bonnet and the body.*

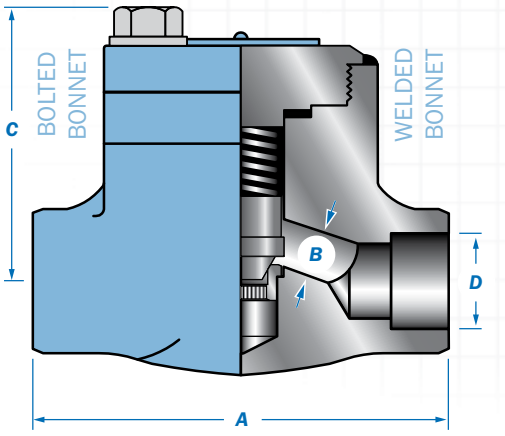
7. Seat: *The seat ensures a stable shutoff. The seat is precision ground for optimal seating.*



Forged Steel Lift & Swing Checks
Bolted & Welded Cover
Conventional Port
Class 800 thru 1500
Sizes: 1/2" thru 2" (1/4" & 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 thru 1500
Bolted & Welded Bonnet Lift & Swing Check

Size	Class 800 BB Lift										Class 800 BB Swing									
	A		B		C		D		Wt.		A		B		C		D		Wt.	
in.	41	45	41	45	41	45	41	45	41	45	41	45	41	45	41	45	41	45	41	45
1/2	3.2	3.1	0.35	0.39	1.9	1.9	0.85		2.4	2.1	3.2	3.1	0.35	0.39	1.9	1.6	0.85		2.4	2.1
mm	80	78.7	9	9.9	49	49	21.6		1.1	1	80	78.7	9	9.9	49	40.6	21.6		1.1	1
3/4	3.5	3.6	0.49	0.54	2.2	2.1	1.07		4	2.6	3.5	3.6	0.49	0.55	2.2	1.8	1.07		4	2.5
20	90	91.4	12.5	13.9	55	53.3	27.2		1.8	1.2	90	91.4	12.5	13.9	55	45.7	27.2		1.8	1.1
1	4.3	4.4	0.68	0.69	2.8	2.7	1.33		5.7	4.3	4.3	4.4	0.68	0.71	2.8	2.3	1.33		5.7	3.9
25	110	111.8	17.5	17.5	70	68.6	33.8		2.6	2	110	111.8	17.5	18	70	58.4	33.8		2.6	1.8
1-1/4	5	4.7	0.88	0.9	3	3.3	1.67		7.9	11.5	5	4.7	0.88	0.95	3	3.3	1.67		7.9	10.6
32	127	119.4	22.5	22.9	77	83.8	42.4		3.6	5.2	127	119.4	22.5	24.1	77	83.8	42.4		3.6	4.8
1-1/2	6.1	6	1.14	1.18	4.1	3.7	1.92		12.1	9.9	5	4.7	1.14	1.14	4.1	3.1	1.92		12.1	8.8
40	155	152.4	29	29.9	105	94	48.8		5.5	4.5	127	119.4	29	29	105	78.7	48.8		5.5	4
2	6.7	6.8	1.38	1.45	4.7	4.4	2.41		18.5	17	5.1	5.5	1.44	1.44	4.7	3.7	2.41		19.6	13.2
50	170	172.7	35	36.8	120	111.8	61.2		8.4	7.7	130	139.7	36.6	36.6	119	94	61.2		8.9	6

Size	Class 800 WB Lift										Class 800 WB Swing									
	A		B		C		D		Wt.		A		B		C		D		Wt.	
in.	41	45	41	45	41	45	41	45	41	45	41	45	41	45	41	45	41	45	41	45
1/2	3.2	3.1	0.35	0.39	1.9	1.9	0.85		2	2.1	3.2	3.1	0.35	0.39	1.9	1.6	0.85		2	2.1
mm	80	78.7	9	9.9	49	49	21.6		0.9	1	80	78.7	9	9.9	49	40.6	21.6		0.9	1
3/4	3.5	3.6	0.49	0.54	2.2	2.1	1.07		2.6	2.6	3.5	3.6	0.49	0.55	2.2	1.8	1.07		2.6	2.5
20	90	91.4	12.5	13.9	56	53.3	27.2		1.2	1.2	90	91.4	12.5	13.9	56	45.7	27.2		1.2	1.1
1	4.3	4.4	0.68	0.69	2.7	2.7	1.33		4.6	4.3	4.3	4.4	0.68	0.71	2.7	2.3	1.33		4.6	3.9
25	110	111.8	17.5	17.5	69	68.6	33.8		2.1	2	110	111.8	17.5	18	69	58.4	33.8		2.1	1.8
1-1/4	5	4.7	0.88	0.9	3.2	3.3	1.67		7.5	11.5	5	4.7	0.88	0.95	3.2	3.3	1.67		7.5	10.6
32	127	119.4	22.5	22.9	80	83.8	42.4		3.4	5.2	127	119.4	22.5	24.1	80	83.8	42.4		3.4	4.8
1-1/2	6.1	6	1.14	1.18	3.7	3.7	1.92		11.7	9.9	5	4.7	1.14	1.14	3.7	3.1	1.92		11.7	8.8
40	155	152.4	29	29.9	95	94	48.8		5.3	4.5	127	119.4	29	29	95	78.7	48.8		5.3	4
2	6.7	6.8	1.38	1.45	4.1	4.4	2.41		17.2	17	5.1	5.5	1.38	1.44	4.1	3.7	2.41		17.2	13.2
50	170	172.7	35	36.8	105	111.8	61.2		7.8	7.7	130	139.7	35	36.6	105	94	61.2		7.8	6

Size	Class 1500 BB Lift										Class 1500 BB Swing									
	A		B		C		D		Wt.		A		B		C		D		Wt.	
in.	41	45	41	45	41	45	41	45	41	45	41	45	41	45	41	45	41	45	41	45
1/2	3.5	4.4	0.35	0.39	2.2	3.1	0.85		4.8	7.5	3.5	4.4	0.35	0.55	2.2	3.1	0.85		4.8	7.9
mm	90	111.8	9	9.9	55	78.7	21.6		2.2	3.4	90	111.8	9	13.97	55	78.7	21.6		2.2	3.6
3/4	4.3	4.4	0.43	0.51	2.8	3.1	1.07		6.8	10.6	4.3	4.4	0.43	0.55	2.8	3.1	1.07		6.8	9.5
20	110	111.8	11	12.95	70	78.7	27.2		3.1	4.8	110	111.8	11	13.97	70	78.7	27.2		3.1	4.3
1	4.7	5.1	0.57	0.66	3	3.8	1.33		9.2	15.2	4.7	4.5	0.57	0.71	3	3.8	1.33		9.2	23.5
25	120	129.5	14.5	16.76	77	96.5	33.8		4.2	6.9	120	114.3	14.5	18.03	77	96.5	33.8		4.2	10.7
1-1/4	5.1	-	0.74	-	4.1	-	1.67		12.8	-	5.1	-	0.74	-	4.1	-	1.67		12.8	-
32	130	-	19	-	105	-	42.4		5.8	-	130	-	19	-	105	-	42.4		5.8	-
1-1/2	6.7	6.8	1.06	1.18	4.5	4.7	1.92		20.7	19.4	5.1	5.5	1.06	1.14	4.5	4.7	1.92		20.7	27.7
40	170	172.7	27	29.97	115	119.4	48.8		9.4	8.8	130	139.7	27	28.95	115	119.4	48.8		9.4	12.6
2	8.3	8.7	1.22	1.49	5.7	5.5	2.41		26.6	27.1	8.3	6.4	1.22	1.44	5.7	5.5	2.41		26.6	34.1
50	210	220.9	31	37.85	145	139.7	61.2		12.1	12.3	210	162.6	31	36.57	145	139.7	61.2		12.1	15.5

Size	Class 1500 WB Lift										Class 1500 WB Swing									
	A		B		C		D		Wt.		A		B		C		D		Wt.	
in.	41	45	41	45	41	45	41	45	41	45	41	45	41	45	41	45	41	45	41	45
1/2	3.5	4.4	0.35	0.39	2.2	3.1	0.85		2.9	7.5	3.5	4.4	0.35	0.55	2.2	3.1	0.85		2.9	7.9
mm	90	111.8	9	9.9	55	78.7	21.6		1.3	3.4	90	111.8	9	13.97	55	78.7	21.6		1.3	3.6
3/4	4.3	4.4	0.43	0.51	2.8	3.1	1.07		5.5	10.6	4.3	4.4	0.43	0.55	2.8	3.1	1.07		5.5	9.5
20	110	111.8	11	12.95	70	78.7	27.2		2.5	4.8	110	111.8	11	13.97	70	78.7	27.2		2.5	4.3
1	4.7	5.1	0.57	0.66	3.2	3.8	1.33		8.4	15.2	4.7	4.5	0.57	0.71	3.2	3.8	1.33		8.4	23.5
25	120	129.5	14.5	16.76	80	96.5	33.8		3.8	6.9	120	114.3	14.5	18.03	80	96.5	33.8		3.8	10.7
1-1/4	5.1	-	0.74	-	3.5	-	1.67		12.1	-	5.1	-	0.74	-	3.5	-	1.67		12.1	-
32	130	-	19	-	90	-	42.4		5.5	-	130	-	19	-	90	-	42.4		5.5	-
1-1/2	6.7	6.8	1.06	1.18	3.9	4.7	1.92		18.3	19.4	5.1	5.5	1.06	1.14	3.9	4.7	1.92		18.3	27.7
40	170	172.7	27	29.97	100	119.4	48.8		8.3	8.8	130	139.7	27	28.95	100	119.4	48.8		8.3	12.6
2	8.3	8.7	1.22	1.49	4.5	5.5	2.41		24.2	27.1	8.3	6.4	1.22	1.44	4.5	5.5	2.41		24.2	34.1
50	210	220.9	31	37.85	115	139.7	61.2		11	12.3	210	162.6	31	36.57	115	139.7	61.2		11	15.5

Typical Bill of Materials

(See page 12 for available materials.)

Component	Material	ASTM Spec
Body	Carbon Steel	A105N
Seat Ring	Stainless Steel	A479-410
Piston	Stainless Steel	A479-410
Rivet	Brass	Commercial
Spring	Stainless Steel	A479-316
Nameplate	Aluminum	Commercial
* Gasket	Stainless Steel 316 W/Graphite Spiral Wound	
Cap	Carbon Steel	A105N
Cap Bolt	Alloy Steel	A193-B7

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

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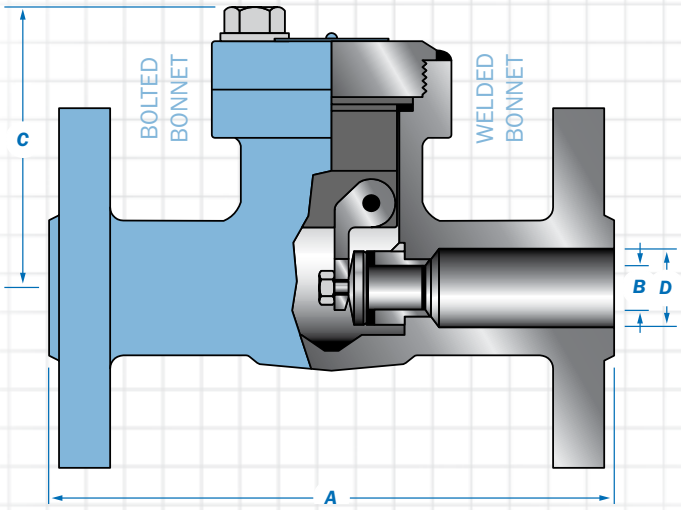
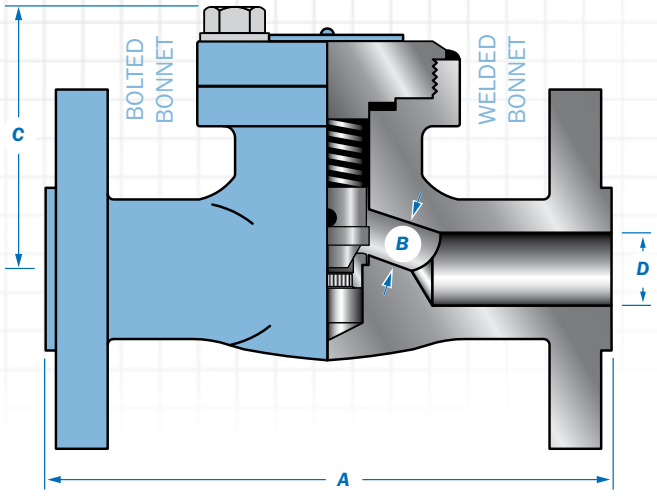
Forged Steel Lift & Swing Checks
Bolted & Welded Cover
Conventional Port
Class 150 thru 1500
Sizes: 1/2" thru 2" (1/4" & 3/8" available upon request)

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 thru 1500
Bolted & Welded Bonnet - Lift & Swing Check

Size in. / mm	Class 150											
	A		B (lift)		B (swing)		C		D		Wt.	
	41	45	41	45	41	45	41	45	41	45	41	45
1/2	4.3		0.35		0.4		2.8	1.6	0.5		6.2	
15	108		9		10		70	40.6	12.7		2.8	3.4
3/4	4.6		0.49		0.4		3.2	1.8	0.75		8.8	
20	118		12.5		10		80	45.7	19.1		4	4.4
1	5		0.68		0.7		3.6	2.3	1		11.7	
25	127		17.5		18		92	58.4	25.4		5.3	8.2
1-1/2	6.5		1.14		1.2		3.9	3.1	1.5		19.8	
40	165		29		29.5		100	78.7	38.1		9	12
2	8		1.37		1.4		5.5	3.7	2		33	
50	203		35		36.5		140	94	50.8		15	14.3

Size in. / mm	Class 300											
	A (lift)		A (swing)		B (lift)		B (swing)		C		D		Wt.	
	41	45	41	45	41	45	41	45	41	45	41	45	41	45
1/2	6		6		0.35		0.4		2	1.6	0.5		6.2	8.1
15	152.5		152.5		9		10		50	40.6	12.7		2.8	3.7
3/4	7		7		0.49		0.6		2.2	1.8	0.75		10.3	10.6
20	178		178		12.5		14		55	45.7	19.1		4.7	4.8
1	8		8.5		0.68		0.7		2.8	2.3	1		12.5	19.4
25	203		216		17.5		18		70	58.4	25.4		5.7	8.8
1-1/2	9		9.5		1.14		1.2		3.9	3.1	1.5		26	30.1
40	229		241		29		30		98	78.7	38.1		11.8	13.7
2	10.5		10.5		1.37		1.4		4.3	3.7	2		37.4	39.2
50	267		267		35		36.5		110	94	50.8		17	17.8

Size in. / mm	Class 600											
	A		B (lift)		B (swing)		C		D		Wt.	
	41	45	41	45	41	45	41	45	41	45	41	45
1/2	6.5		0.35		0.4		2	1.6	0.5		6.4	8.8
15	165		9		10		50	40.6	12.7		2.9	4
3/4	7.5		0.49		0.6		2.2	1.8	0.75		10.6	12.8
20	191		12.5		14		55	45.7	19.1		4.8	5.8
1	8.5		0.68		0.7		2.8	2.3	1		21.3	20.9
25	216		17.5		18		70	58.4	25.4		9.7	9.5
1-1/2	9.5		1.14		1.2		3.9	3.1	1.5		26.4	34.3
40	241		29		30		98	78.7	38.1		12	15.6
2	11.5		1.37		1.4		4.3	3.7	2		38.1	53.9
50	292		35		36.5		110	94	50.8		17.3	24.5

Size in. / mm	Class 1500											
	A		B (lift)		B (swing)		C		D		Wt.	
	41	45	41	45	41	45	41	45	41	45	41	45
1/2	8.5		0.43		0.6		3.5		0.5		16.7	
15	216		11		14		90		12.7		7.6	
3/4	9		0.57		0.7		4.1		0.69		23.8	
20	229		14.5		18		105		17.5		10.8	
1	10		0.74		0.9		4.7		0.87		31.9	
25	254		19		24		120		22.1		14.5	
1-1/2	12		1.22		1.4		6.3		1.37		68.2	
40	305		31		36		160		34.8		31	
2	14.5		1.48		1.6		6.7		1.87		94.6	
50	368		37.5		40		170		47.5		43	

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

Component	Material	ASTM Spec
Body	Carbon Steel	A105N
Seat Ring	Stainless Steel	A479-410
Piston	Stainless Steel	A479-410
Rivet	Brass	Commercial
Spring	Stainless Steel	A479-316
Nameplate	Aluminum	Commercial
* Gasket	Stainless Steel 316 W/Graphite Spiral Wound	
Cap	Carbon Steel	A105N
Cap Bolt	Alloy Steel	A193-B7

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

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Forged Steel Cv Values Gates, Globes, Checks

Newco Forged Steel Gate Valves Cv Values

NPS	150 - 800 Full Bore	150 - 800 Reduced Bore	1500 Full Bore	1500 Reduced Bore	2500 Full Bore
1/2	12	6	13	6	5
3/4	23	10	24	11	12
1	43	26	44	27	23
1-1/4	57	44	59	45	43
1-1/2	98	65	100	66	56
2	200	103	*	99	97

** 40mm = >155*

Newco Forged Steel Globe Valves Cv Values

NPS	150 - 800 Full Bore	150 - 800 Reduced Bore	1500 Full Bore	1500 Reduced Bore
1/2	3	2	3	2
3/4	6	4	6	3
1	12	6	12	6
1-1/4	15	10	–	–
1-1/2	21	18	20	16
2	38	22	24	20

Newco Forged Steel Y-Pattern Globe Valves Cv Values

NPS	800	1500	2500
1/2	5	5	3
3/4	11	11	6
1	14	15	12
1-1/4	–	–	–
1-1/2	37	35	27
2	68	68	36

Newco Forged Steel Swing Check Valves Cv Values

NPS	150 - 800 Full Bore	150 - 800 Reduced Bore	1500 Full Bore	1500 Reduced Bore
1/2	5	4	–	–
3/4	12	6	–	–
1	17	13	–	–
1-1/4	26	18	–	–
1-1/2	54	28	–	–
2	101	55	–	–

Newco Forged Steel Lift Check Valves Cv Values

NPS	150 - 800 Full Bore	150 - 800 Reduced Bore	1500 Full Bore	1500 Reduced Bore
1/2	3	1	3	2
3/4	5	3	6	3
1	11	6	11	5
1-1/4	–	–	–	–
1-1/2	18	15	19	11
2	32	18	22	19

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	4	3
3/4	11	11	6
1	13	14	12
1-1/4	–	–	–
1-1/2	36	34	27
2	67	67	36

Table Applies to Both Piston and Ball Check Valves

Limited Warranty

Newmans warrants to the original purchaser, for a period of one year from and after the date of delivery to the original customer, that its products will be free from defects in workmanship and materials, not caused or resulting from improper usage or application, improper installation, improper maintenance, repair modification or alterations.

In the event the original purchaser shall determine that a product purchased from Newmans shall be defective in workmanship or materials, the customer shall notify the Newmans Warranty Representative by telephone (713) 675-8631 within 24 hours from such determination, followed by written notice to such effect within 7 days therefrom, addressed to:

Newmans
1300 Gazin Street
Houston, Texas 77020

In the event Newmans shall determine that the product is defective as a result of factory workmanship, based upon such examination of the product which Newmans may deem appropriate, Newmans shall thereupon, at its sole option, (a) cause the defective product to be repaired, (b) replaced with a substantially identical product, or (c) accept the return of a defective product and refund the purchasing price to the original purchaser. Newmans shall bear all normal surface transportation costs to the original purchaser but shall in no event bear any installation, re-installation, engineering or other costs incurred in connection with repair or replacement.

Unless Newmans shall have provided engineering and/or suitability of application or installation services for a purchaser, for which a separate charge shall have been specifically identified and made, the selection, suitability, installation and fitness of all products sold by Newmans shall be deemed to have been determined exclusively by and within the sole discretion of the purchaser. Accordingly, Newmans disclaims any obligation, warranty or guarantee in any manner relating to or resulting from the selection, application, suitability, fitness or installation of its products.

The foregoing constitutes the sole obligation of Newmans with respect to defective products purchased from it and in no manner shall Newmans assume or be liable for any other expenses, incidental or consequential damages, losses, lost profits, down time or otherwise, whether directly or indirectly suffered, or in any other manner relating to or as the result of any defect or failure or any product that it may sell.

Except as otherwise provided herein, NEWMANS MAKES NO WARRANTIES OR REPRESENTATIONS, WHETHER EXPRESSED OR IMPLIED, OF ANY KIND WHATSOEVER WITH RESPECT TO GOODS AND PRODUCTS SOLD BY IT, INCLUDING WITHOUT LIMITATION, ANY WARRANTIES WITH RESPECT TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. NO PERSON IS AUTHORIZED TO GRANT OR EXTEND ANY WARRANTY OR REPRESENTATION ON BEHALF OF NEWMANS OTHER THAN AS SET FORTH HEREIN.

Industry Standards Typically Used in Valve Manufacturing

(For Reference Only)

ISO 9001: 2000
RWTUV approved Newmans for design, manufacture, sales, & service of industrial valves under certificate registration number #08-1016
ISO 14001: 2004
The Newmans/Yancheng Manufacturing Team has passed the TUV-USA ISO 14001-2004 Certification Audit. All facilities inclusive of two (2) Foundries (Lost Wax and Sand Cast), Ball Valve Factory, Final Processing Center and Warehouses 15 & 16.

American Petroleum Institute (API)

API RP 574 (1998) - Inspection practices for piping system components
API 589 (1998) - Fire test for evaluation of valve stem packing
API RP 591 (2003) - Process valve qualification procedure
API 594 (2004) - Check valves-flanged, lug, wafer & buttwelding
API 597 (1981) - Steel venturi gate valves, flanged, buttwelding ends
API 598 (2004) - Valve inspection & testing
API 599 (2002) - Metal plug valves - flanged, welding ends
API 601 (1988) - Metallic gaskets for raised-face pipe flanges & flanged connections (double-jacketed corrugated & spiral wound)
API 600 (2001) - Bolted bonnet steel gate valves for petroleum & natural as industries "ISO adoption from ISO 10434"
API 602 (2005) - Steel gate, globe, & check valves for sizes DN100 and smaller for the petroleum & natural gas industries
API 603 (2001) - Corrosion-resistant, bolted bonnet gate valves-flanged & buttweld ends
API 604 (1981) - Ductile iron gate valves, flanged ends
API 605 (1988) - Large-diameter carbon steel flanges (nominal pipe sizes 26" through 60", classes 75, 150, 300, 400, 600, & 900 (replaced by ANSI/ASME B16.47)
API 606 (1989) - Compact steel gate valves, extended body (included in API 602) fire test for soft-seated quarter-turn valves "ISO adoption from ISO 10497-5 2004"
API 607 (2005) - Fire test for soft-seated quarter-turn valves "ISO adoption from ISO 10497-5 2004"
API 608 (2002) - Metal ball valves, flanged, threaded, & welding ends
API 609 (2004) - Butterfly valves-double flanged, lug- & wafer-type
API RP 941 (2004) - Steel for hydrogen service at elevated temperatures & pressures in petroleum refineries & petrochemical plants
API RP 520 (2000), Part 1 - Sizing, selection & installation of pressure relieving devices in refineries
API RP 520 (2003), Part 2 - Sizing, selection & installation of pressure relieving devices in refineries devices in refineries
API Spec 6A (2005) - Specification for wellhead & christmas tree equipment
API Spec 6D (2005) - Specifications for pipeline valves
API Spec 14D (1994) - Specifications for wellhead surface safety valves & underwater safety valves for offshore service
API 5B (2004) - Threading, gauging thread inspection of coring, tubing, & line pipe threads
API 6AM (2003) - Material toughness
API 6FA (1999) - Fire test for valves
API 6FC (1999) - Fire test for valves with backseats
API 6FD (1995) - Specification for fire test for check valves
API Q1 (2003) - Specification for quality programs for the petroleum, petrochemical, & natural gas

American Society of Mechanical Engineers (ASME)

ASME Code (1997 addenda) - Boiler & pressure vessel code
ASME A13.1 (1996) - Scheme for the identification of piping systems
ASME B1.1 (2003) - Unified inch screw threads, UN, & UNR thread form
ASME B1.5 (1997) - ACME screw threads
ASME B1.7M (1984) - Nomenclature, definitions, & letter symbols for screw threads
ASME B1.8 (1988) - Stub ACME screw threads
ASME B1.12 (1987) - Class 5 interference - fit thread
ASME B1.20.1 (1983) - Pipe threads, general purpose, inch
ASME B1.20.3 (1976) - Dry-seal pipe threads, inch
ANSI/ASME B16.1 (1998) - Cast iron pipe flanges & flanged fittings
ANSI/ASME B16.5 (2003) - Pipe flanges & flanged fittings: NPS 1/2" through 24"
ASME B16.9 (2003) - Factory made wrought steel buttwelding fittings
ANSI/ASME B16.10 (2002) - Face-to-face & end-to-end dimensions of valves
ASME B16.11 (2001) - Forged fittings, socket welding & threaded
ASME B16.20 (1998) - Metallic gaskets for pipe flanges: ring joint spiral wound & jacketed
ASME B16.21 (2005) - Non-metallic flat gaskets for pipe flanges
ASME B16.25 (2003) - Buttwelding ends
ANSI/ASME B16.33 (2002) - Manually operated metallic gas valves for use in gas piping systems up to 125 PSI (sizes NPS 1/2" through 2")
ANSI/ASME B31.1 (2004) - Power piping
ANSI/ASME B31.3 (2004) - Process piping
ANSI/ASME B16.34 (2004) - Valves flanged, threaded & welding end
ANSI/ASME B16.36 (1996) - Orifice flanges
ANSI/ASME B16.38 (1985) - Large metallic valves for gas distribution (manually operated, NPS 2-1/2" through 12", 125 PSIG maximum)
ANSI/ASME B16.42 (1998) - Ductile iron pipe flanges & flanged fittings: classes 150 & 300
ANSI/ASME B16.47 (1996) - Large diameter steel flanges
ANSI B17.1 (1967, R' 89) - Keys & keyseats
ANSI B18.2.2 (1987) - Square & hex nuts
ASME B31.4 (2002) - Pipeline transportation systems for liquid hydrocarbons & other ammonia & alcohols
ANSI/ASME B31.8 (2003) - Gas transmission & distribution piping systems
ANSI/ASME B36.10 (2004) - Welded & seamless wrought steel pipe
ANSI/ASME B36.19 (2004) - Stainless steel pipe
ANSI FCI-2 (1991) - Control valve seat leakage

American Society Non-destructive Test (ASNT)

ASNT-TC-1A (1996) - Recommended practice no. SNT-TC-1A 1996

American Society for Testing and Materials (ASTM)

British Standards Institute (BS)

BS 1414 (1975, R' 91) - Gate, wedge & double disk valves: steel
BS 1868 (1975, R' 91) - Check valves: steel
BS 1873 (1975, R' 91) - Globe & check valves: steel
BS 2080 (1989) obsolete - Flanged & buttweld end steel valves
BS 5146 - (withdrawn) Replaced by BS 6755 p.1 steel valves testing (1986) & BS 6755 p.2 (1984)
BS 5152 (1974, R' 91) - Globe & check: cast iron
BS 5153 (1974, R' 91) - Check: cast iron
BS 5159 (1974, R' 91) - Ball: cast iron & carbon steel
BS 5160 (1974, R' 91) - Globe & check: steel
BS 5163 (1986, R' 91) - Gate, wedge & double disk: cast iron
BS 5351 (1986, R' 91) - Ball: steel
BS 5352 (1986, R' 91) - Globe & check: steel
BS 5418 - (withdrawn) Replaced by BS EN 19 (1992) marking: general purpose industrial
BS 5840 (1980, R' 91) - Valve mating details for actuator operation
BS 6364 (1984, R' 91) - Cryogenic
BS 6683 (1985, R' 91) - Guide: installation & use of valves
BS 6755: Part 1 (1986, R' 91) - Specification for production pressure testing requirements
BS 6755: Part 2 (1987) - Specification for fire type-testing requirements
BS EN 19 (1992) - Marking of general purpose industrial valves

Canadian Standards Association

B51-97 - Boiler, pressure vessel, & pressure piping code
Z245.15-96 - Steel valves
CAN3-z299.4-85 (reaffirmed 1997) - Quality assurance program - Category 4
CAN3-z299.3-85 (reaffirmed 1997) - Quality assurance program - Category 3

International Organization for Standardization

ISO 5211/1 (2001) - Industrial valves- part-turn actuator attachments
ISO 5211/2 (2001) - Part-turn valve actuator attachment-flange & coupling performance characteristics
ISO 5211/3 (2001) - Part-turn valve actuator attachment-dimensions of driving components
ISO 5752 (1982) - Metal valves for use in flanged pipe systems face-to-face & center-to-face dimensions
ISO 9000 (2005) - Quality management systems and fundamentals & vocabulary
ISO 10012-1 (1992) - Quality assurance requirements for measuring equipment

Manufacturers Standardization Society

SP-6 (2001) - Standard finishes for contact faces of pipe flanges & connecting-end flanges of valves & fittings
SP-9 (r2005) - Spot facing for bronze, iron & steel flanges
SP-25 (1998) - Standard marking system for valves, fittings, flanges & unions
SP-42 (2004) - Class 150 corrosion resistant gate, globe, angle, & check valves with flanged & buttweld ends
SP-44 (2001) - Steel pipeline flanges
SP-45 (2003) - Bypass & drain connections
SP-51 (2003) - Class 150/w corrosion resistant cast flanges & flanged fittings
SP-53 (2002) - Quality standard for steel castings & forgings for valves, flanges, & fittings & other piping components: magnetic particle exam method
SP-54 (2002) - Quality standard for steel castings for valves, flanges, & fittings and other piping components: radiographic examination method
SP-55 (2001) - Quality standard for steel castings for valves, flanges other piping components-visual method for evaluation of surface irregularities
SP-60 (2004) - Connecting flange joint between tapping sleeves & tapping valves
SP-61 (2003) - Pressure testing of steel valves
SP-65 (2004) - High pressure chemical industry flanges & threaded stubs for use with lens gaskets
SP-67 (2000A) - Butterfly valves
SP-69 (2003) - ANSI/MSS edition pipe hangers & supports, selection & application
SP-70 (1998) - Cast iron gate valves, flanged & threaded ends
SP-71 (1997) - Gray iron swing check valves, flanged & threaded ends
SP-72 (1999) - Ball valves with flanged or butt-welding ends for general service
SP-79 (2004) - Socket-welding reducer inserts
SP-81 (2001) - Stainless steel, bonnetless, flanged knife gate valves
SP-82 (1992) - Valve pressure testing methods
SP-84 (1990) - Valves - socket welding & threaded ends
SP-85 (2002) - Cast iron globe & angle valves, flanged & threaded ends
SP-86 (2002) - Guidelines for metric data in standards for valves, flanges, fittings & actuators
SP-88 (r2001) - Diaphragm valves
SP-91 (1992) - Guidelines for manual operation of valves
SP-92 (1999) - MSS valve user guide
SP-93 (r2004) - Quality standard for steel castings & forgings for valves, flanges & fittings & other piping components- liquid penetrant exam method
SP-94 (r2004) - Quality standard for ferritic & martensitic steel castings for valves, flanges, & fittings and others piping components - ultrasonic exam method
SP-96 (r2005) - Guidelines on terminology for valves & fittings
SP-98 (2001) - Protective coatings for the interior of valves, hydrants, & fittings
SP-99 (r2005) - Instrument valves
SP-101 (r2001) - Part-turn valve actuator attachment-flange and driving component dimensions & performance characteristics
SP-102 (r2001) - Multi-turn valve actuator attachment: flange and driving component dimensions & performance characteristics
SP-110 (1996) - Ball valves threaded, socket-welding, solder joint, grooved, & flared ends
SP-117 (2002) - Bellows seals for globe & gate valves
SP-118 (2002) - Compact steel globe and check valves-flanged, flangeless, threaded & welding ends (chemical & petroleum refinery service)
SP-120 (2002) - Flexible graphite packing system for rising stem steel valves (design requirements)
SP-121 (R2002) - Qualification testing methods for stem packing for rising stem steel valves

National Association of Corrosion Engineers (NACE)

MR0175 (2005) - Sulfide stress cracking resistant metallic materials for oil field equipment
MR0103 (2005) - Materials resistant to sulfide street cracking in corrosive petroleum refining environments

Terms & Conditions

Definitions

1) Supplier
"Supplier" refers to NEWCO Valves LP dba NEWMANS, a Texas (USA) limited partnership, and all of its affiliated or related entities, including, but not limited to, its parent, subsidiary, affiliated companies, their officers, directors, employees and agents, individually and collectively.

2) Customer
"Customer," refers to all of the following:
a) any party acting as agent for the Customer, the party ordering goods or services on behalf of himself, herself or itself and others;
b) the person signing Supplier's credit application, service order, bill of lading, delivery receipt or ticket;
c) the store, factory, warehouse, shipping company, accepting agent, contractor or subcontractor of the job site, store, warehouse, transportation company, accepting agent;
d) the person accepting and/or ordering Supplier's goods and services acknowledges that he or she has the actual and apparent agency authority to bind the Customer and owner of the property the product will improve, to the terms and conditions of this agreement, all of whom are included in the term "Customer"; and
e) the person paying the invoices of Supplier, signing Supplier's service orders, delivery tickets, bills of lading or other Supplier contracts, acknowledges that he or she is the agent of the Customer and/or any entity who is benefited by the Supplier's product, and that they are said person's agent.

3) Equipment
"Equipment" refers to any goods and service, item of supply or equipment or property ordered or purchased by Customer or the Customer's agent from Supplier or provided by Supplier, including, but not limited to: valves, pipe, fittings, product or general equipment, supplies, parts, materials, supplies and/or merchandise sold by Supplier or provided in connection with Supplier's provider capabilities or needed by Supplier to assist Supplier in the performance and delivery of its product to Customer, but "Equipment" excludes "Services" as defined below.

4) Services
"Service(s)" refers to all employees or agents furnished by Supplier as consultants and/or to perform any function, including the operation of equipment which performs any function, trucks or other merchandise necessary to perform any function when operated by Customer's employees or agents or the Supplier's employees or agents on Customer's job or to satisfy the Customer's order or orders.

5) Claims
"Claim(s)" refers to all of the following:
a) any liability of Supplier to Customer; b) loss of equipment, time, money, or profit of Supplier; and c) claim, demand, cause of action, proceeding, damage to person, damage to personal or real property, damage and penalty, including attorney's fees, costs and expenses.

6) Price Book, Price List, Manual, & Credit Application
Customer agrees to be bound by all relevant provisions of the following:
a) "Supplier's Price Book" and "Price Book" refer to the current book published by Supplier which may list the Supplier's contractual terms and conditions, lists prices for Equipment and Services offered by Supplier, including all amendments;
b) "Supplier's Manual," "Manual" and "Employee Manual" refer to any manual of Supplier governing, which may contain its contractual terms and conditions, the procedures for pricing Equipment and Services of Supplier, or the manner in which Supplier is to provide goods or services plus all amendments and updates. Customer agrees to be bound by such terms and conditions, procedures; and
c) "Supplier's Credit Application" and "Credit Application" refer to any application or request submitted by Customer to Supplier for the purpose of seeking the extension of credit by Supplier and which may contain the Supplier's terms and conditions all of which shall be binding on the Customer.

General Terms & Conditions

Customer acknowledges that it has reviewed and agrees to be bound by the above and following (Definitions, Terms and Conditions and all of the language contained herein and in related documents described elsewhere herein) whenever it or its employees, transportation and/or warehouse company, its customer or end user, and/or agent either: i) accepts the Equipment or Services of Supplier; or ii) signs a Credit Application, service order, delivery ticket, bill of lading or contract for goods or services; or iii) receives an invoice from Supplier and/or orders more Equipment or Services from Supplier.

1) Entire Contract
The Terms and Conditions herein, in the invoice, acknowledgement or acceptance of Customer's order, Price Book, Manual and Credit Application as defined above and elsewhere herein, the other documents aforementioned, all of which are incorporated herein by reference for all purposes, constitute the entire contract ("Contract") between the parties and may not be amended except in writing signed by Supplier's authorized representative.

2) Controlling Terms and Conditions
Equipment or Services furnished to Customer by Supplier or its agents will be controlled only by the Terms and Conditions contained herein and contained in the other documents of Supplier mentioned herein and these are the only terms and conditions to which these parties shall be bound. In the event that Customer writes any letters or uses any other document generated by Customer to order or accept Supplier's Equipment or Services, the Terms and Conditions contained herein shall control and this document does hereby serve as an objection thereto.

3) Failure of Any Party to Enforce
The failure of either party to enforce any provision hereof will not constitute a waiver or preclude subsequent enforcement thereof.

4) Invalidity of Any Term or Condition Contained Herein
No partial invalidity of this Contract will affect the remainder. In the event that any term or condition contained herein is found to be invalid, the parties agree that the remainder of Supplier's contract shall remain valid.

5) Jurisdiction and Venue; Construction of Terms and Conditions
The Parties hereto agree that the terms and conditions of Supplier's documents mentioned herein and the Terms and Conditions of this document shall be construed in accordance with the laws of the State of Texas or, if offshore, in accordance with General Maritime Law of the United States, without giving effect to respective conflicts of law principals, or Supplier at its exclusive option may choose the Jurisdiction to interpret the terms and conditions contained herein and in the other documents mentioned herein. In the event of litigation between Customer and Supplier, Customer hereby waives any claim it may have to any jurisdiction and venue other than that chosen by Supplier. Customer agrees that it is to perform its obligations herein in Houston, Harris County, Texas, non-exclusively to include payment. Canada: Whenever the facts of a particular contract would in the sole opinion of the Supplier be best litigated in Canada, the parties agree that Supplier can choose that jurisdiction and that Supplier can choose any venue it deems appropriate in Canada. All the other terms and conditions contained in this document shall then apply in Canada as if this agreement was in the United States of America.

6) Credit
Terms are cash in advance unless credit is approved in writing prior to the sale. If credit is approved, Customer must maintain credit satisfactory to Supplier. When Customer or its agent signs any of Supplier's documents in the process of ordering or receiving Equipment or Services from Supplier, it states for Supplier's reliance that it has the current ability to pay for the Equipment or Services ordered or accepted and it further agrees that Supplier reserves the right to require Customer to furnish security for performance of Customer's obligations. Payments shall be made in U.S. Dollars net 30 days at Supplier's address in Houston, Harris County, Texas. If credit terms are not met or Customer otherwise fails to follow the Terms and Conditions contained herein, in addition to its other legal rights, Supplier may and Customer hereby authorizes Supplier to: a) defer or cancel further shipments of Equipment or Services and/or otherwise decline to provide its product to Customer; b) enter upon any property or job site on which the Equipment of Supplier is located by taking any necessary action, including, but not limited to, opening gates, cutting locks, cutting chains; c) authorize any other company to remove its equipment from any location, to the extent needed for Supplier to be able to remove its equipment, and said company moving its equipment shall send its bill for the same to Customer or Supplier may pay said bill and include the same in its bill to Customer; d) take any action needed to remove its equipment from the job site; e) act as stated herein at the expense of Customer and Customer hereby indemnifies and holds harmless Supplier from any harm arising from said actions, including, but not limited to, environmental harm, harm to the real property and personal property and harm to the real and personal property of any third party; and f) charge Customer interest on any unpaid balance at the lesser of: i) eighteen percent (18%) per annum, or ii) the maximum rate permitted by applicable law.

7) Taxes
Customer shall be responsible for all customs fees, duties, and foreign, federal, state or local taxes (including, sales, use, excise or similar taxes and foreign withholding taxes).

8) Transportation
For Equipment sold, Customer may arrange shipment and will pay all crating, handling and shipping costs. Risk of loss passes to Customer at the time Customer and/or any carrier takes possession of the Equipment from Supplier. For Equipment sold where Customer does not timely furnish shipping instructions or requests that Supplier arrange shipment, such transportation shall be in a commercially reasonable manner at Customer's risk and invoiced to Customer at current freight rates, plus all handling incurred, or at the prevailing mileage rate for any vehicles used by Supplier's personnel. Risk of loss will then pass to Customer at the time the Equipment leaves Supplier's premises, warehouse or store. All claims for shortages, damages, corrections or deductions must be made in writing within 10 days from receipt of goods and if shipper fails to comply, it waives its right to make a claim.

9) Consequential and Incidental Damages
Supplier will not be responsible for consequential or incidental damages of any kind, which shall include, but not be limited to, loss of profits, use or business opportunity, damages for failure to meet deadlines, pollution damage and/or wreck or debris removal expense and Customer holds harmless and indemnifies Supplier from all harm arising from any claims made against Supplier from out of any of these things.

10) Force Majeure
Supplier will not be liable for any damages, including special and consequential damages, as stated above, caused by events of force majeure or any other occurrences beyond Supplier's reasonable control subject to all of the limitations contained herein. In such event, the time for performance will be extended automatically for such reasonable time as is necessary to permit performance hereof.

11) Disclaimer Of All Warranties Except Those Specifically Granted Herein Supplier hereby disclaims all warranties except those specifically granted and states as follows:
a) Supplier makes no warranties of any kind regarding its equipment and/or services;
b) technical information and any assistance in equipment installation or technical or engineering information concerning equipment or services provided by Supplier will be advisory only, at Customer's sole cost and on an "as is" basis;
c) no warranty is given with respect to such services or information and Supplier will not be liable for any claims arising from its furnishing or Customer's use of such assistance or information;
d) Supplier specifically disclaims all implied warranties, the warranty of merchantability, warranty of fitness for a particular purpose and any warranty that the equipment or service provided by Supplier will actually accomplish the goal(s) desired by Customer. Supplier grants to Customer only a limited warranty as follows: Supplier grants only to Customer only a 1-year warranty on material and workmanship on its new products commencing at date of shipment.

12) Insurance
The parties agree that the indemnities provided by Customer to Supplier herein shall be supported either by available insurance or that Customer shall voluntarily become self-insured, in whole or part and upon request of Supplier prove that Customer is good for the loss and that Customer is sufficiently self insured. In addition, Customer shall, at its expense, maintain adequate insurance to fully protect any Equipment or Services or personnel supplied by Supplier and shall supply to Supplier, upon request, satisfactory evidence of sufficient insurance coverage to protect Supplier, Supplier's property, Supplier's personnel and Supplier's liability.

13) Prices
All Supplier's, terms, conditions, prices, rates and charges are subject to change without notice.

14) Assignment
Customer may not assign any rights or obligations hereunder, without Supplier's prior written consent.

15) Amendment of Indemnities to Conform to Law
The indemnities provided by Customer herein shall be limited to the extent necessary for compliance with applicable state and federal laws.

16) Termination/Cancellation
Unless provided otherwise in writing herein, Customer cannot terminate or cancel any order once Supplier has accepted the order. No termination shall relieve Customer of any liability incurred and Customer's obligations shall survive such termination, including all hold harmless and all indemnities and all warranties & non-warranties contained herein which are made expressly for the benefit of Supplier.
- *a) Termination Policy: No goods or products supplied pursuant hereto maybe returned without Supplier's written permission. Supplier assumes no responsibility without Supplier's written permission. All returns shall be made freight prepaid. Supplier will charge to Customer a 25% Restocking Charge upon the return of goods by Customer.*
- *b) Special Orders: A special order is an order for any product of Supplier or which comes from Supplier's sources which is non standard requiring separate/additional manufacturing, engineering, modification, tooling and machining. If Supplier agrees in writing that a Special Order can be terminated, Special Orders cannot be cancelled unless Customer agrees in writing to pay for all work including engineering completed up to the time of cancellation.*

17) Default
If Customer ever defaults on or breaches any Term or Condition contained herein or in any other document of Supplier mentioned above, all charges for all Equipment and Services provided by Supplier for Customer's benefit shall automatically accelerate and shall immediately become due and payable, notwithstanding any other provision which would afford Customer, under normal circumstances, any stated amount of time in which to pay for said charges. In addition, all discounts which may have been offered to Customer shall automatically and immediately be revoked and become fully due and owing with no action or notice from Supplier, notwithstanding any other provision to the contrary. If Customer ever disputes any charges of Supplier, Customer shall tender to Supplier all amounts for all charges which are not disputed by Customer. Customer hereby indemnifies and holds Supplier harmless for and agrees to reimburse Supplier for all costs of collections, including, but not limited to, actual attorney's fees and costs incurred in connection with the collection of past due amounts and defending against any counterclaims. Notwithstanding any other provision in this document or any other document or check, Customer agrees that all payments received by Supplier on Customer's account may be applied first to all outstanding interest and then to the oldest amounts owed by Customer to Supplier, and this provision is not waived by Supplier by accepting any check from Customer containing contrary language.

18) Customer Holds Harmless and Indemnifies Supplier
Customer shall hold harmless, defend, indemnify, release and hold Supplier harmless from and against any and all claims by Customer, Customer's customer, owner, or any other person or entity against Supplier of every kind or character, whatsoever, whether such claims are based on theories of contract law, tort law, or otherwise, direct or indirect, including incidental, special and consequential damages caused by Supplier arising out of delivery, pick-up, repair, use or operation of equipment or services relating to execution, completion or termination of this contract or on account of bodily injury or death or property damage, destruction or economic loss (including , but not limited to release of radioactive materials, contamination or damage to real property or personal property, land, buildings, vehicles, or property rights) because of purchase, delivery, installation, possession, operation, use, condition or return of goods, people, services and/or equipment used, purchased, or used during the term of this contract, or on account of infringement of any patent, design, copyright, or trade name or mark, whether by Supplier, Customer or otherwise, irrespective of whether Supplier was concurrently negligent or at fault for any such claims where the damage, injury or death was caused by the sole or partial negligence of Supplier.

19) Inspection
Customer's acceptance of delivery and signature of its representative on any delivery tickets or other Supplier documents is conclusive evidence that Customer found the Equipment to be suitable for its needs and in good condition and that the signor was the agent for Customer or Customer's Customer, building or land owner, contractor, sub contractor and operator. Customer also has a duty to inspect Equipment prior to use and to notify Supplier immediately of any defects and before use of the Supplier's product. SALE TERMS: The following are in addition to and a part of all other Terms and Conditions provided for herein.

20) Limited Liability/Disclaimer
- *a) Supplier does warrant Equipment sold by Supplier to Customer to be free from defects in material or workmanship.*
- *b) In the event that a court finds that Supplier is liable for any breach of contract or any breach of warranty, Supplier's liability for said breach is expressly limited to the repair or replacement, at its sole option, of any Equipment which proves to be defective during any period declared by the court to be a period of warranty. All such Equipment shall be repaired or replaced F.O.B. Supplier's plant, warehouse, store or premises.*
- *c) In the event that a court finds that Supplier has an obligation to repair or replace equipment, said repair or replacement constitutes agreed and liquidated damages for any breach of Supplier's actual or court-declared warranty.*
- *d) The remedies stated above for any such breach thereof, shall be in lieu of all other warranties, express or implied, including all other warranties for merchantability or fitness for any particular purpose which Supplier has specifically disclaimed herein, and in lieu of liability for Supplier's negligence or fault and Customer's rights and remedies under the texas deceptive trade practices consumer protection act (chapter 17, texas business and commerce code).*

21) Prices
- *a) Prices for standard equipment will be the sales price shown on Supplier's current product sales price list ("Price List") or Price Book, F.O.B. Supplier's plant, warehouse, district stock points, or premises.*
- *b) Requests for quotations for nonstandard Equipment should be sent to the appropriate Supplier office. Quoted prices are valid for 30 days after the date of the quotation, unless otherwise noted on the quotation or unless canceled by Supplier prior to Customer's acceptance.*
- *c) Cost of additional labor, materials or outside services for modification of such procedures or specifications requested by Customer will be charged to Customer at Supplier's prevailing rate.*
- *d) Services required to install Equipment will be based on the prevailing rates at the time of installation.*

22) Delivery/Disclaimer
- *a) Supplier will use its best efforts to have Equipment ready for shipment, subject to receipt of all necessary Customer information, including approved drawings. HOWEVER, SUPPLIER ASSUMES NO LIABILITY FOR DAMAGES INCURRED AS A RESULT OF ITS LATE DELIVERY OF EQUIPMENT, SUPPLIES, PRODUCT, PERSONAL PROPERTY, REGARDLESS OF CAUSE.*
- *b) Title and risk of loss will pass to Customer upon delivery of Equipment, F.O.B. Supplier's plant, warehouse or premises.*
- *c) If unable to deliver, Supplier may charge Customer its customary storage rates and Customer will maintain all-risk property insurance on Equipment, at its replacement value. Supplier will not be liable for deterioration of Equipment, personal property, product resulting from atmospheric conditions, acts of God, or other events regardless of whether they are within Supplier's reasonable control while in Supplier's possession or in transit to Customer's destination or location.*

Service Terms

The following are in addition to and a part of all other Terms and Conditions provided for herein.

1) Limited Liability/Disclaimer
- *a) Supplier will use its best efforts to ensure that all personnel furnished are competent and that Equipment, supplies, personal property or product furnished is in good condition; however, Customer agrees that the Equipment and personnel come without warranty or guarantee of any kind whatsoever except as provided herein.*
- *b) Supplier's personnel will attempt to perform the work requested by Customer; however, because of the nature of the work to be accomplished and because of the unpredictable conditions which always exist, such results as required by Customer or Customer's Customer cannot be and are not guaranteed or warranted and Customer agrees that Supplier makes no warranties of any kind and that Supplier does not guarantee any particular result as from furnishing people, goods, product, personal property, equipment or services.*
- *c) Supplier reserves the right not to do work if, in its sole discretion, job conditions render such action inadvisable for any reason or unsafe for any reason.*
- *d) Customer agrees that any employee(s) furnished by Supplier shall not be responsible for any final decision made on any job. Rather, Customer shall retain complete control and supervision of the job, building site, project and performance of operations in and about the job site.*
- *e) Customer shall pay Supplier for Equipment and Services regardless of whether the desired results are achieved without any deduction or offset of any kind, irrespective of any Claims which Customer may assert or allege against Supplier or any Supplier and/or manufacturer of Equipment and/or Services, at the rates indicated in the Customer's document, manual, delivery documents or Price Book in effect at the time of delivery.*
- *f) Customer will be invoiced at the sales rate or service rates in effect at the beginning of the invoice period.*
- *g) Supplier makes no warranty or representation of any kind, express or implied, as to the quality, performance or function of its people, as to the design, operation, condition or quality of the material or workmanship of equipment or performance of equipment delivered to Customer, it being agreed that all such risks as between Supplier and Customer are to be borne by Customer, regardless of whether such equipment is operated under Supplier's supervision, and all equipment, services and people are accepted by Customer "as is" except as provided elsewhere herein. Customers desiring different standards than those contained herein should, at Customer's expense, obtain an inspection of goods, services, equipment and people prior to use and the benefits of any and all implied warranties of Supplier are hereby waived by Customer except as elsewhere provided herein.*

2) Charges
All charges are on a daily basis for a 24-hour day or any part stated therein.
- *a) Services*
  - *i) all Services are on a daily or hourly basis, subject to any minimum charge, all of which are specified by Supplier in Supplier's documents mentioned herein;*
  - *ii) charges begin when each Service person departs Supplier's store location where said person or Equipment is based and the charges shall continue until returned to that store;*
  - *iii) Customer shall furnish quarters and meals for Supplier's personnel or reimburse Supplier for reasonable living expenses incurred at the prevailing rate from the time each Service person leaves the Supplier's location until return to Supplier's location;*
  - *iv) if personnel and/or Equipment are dispatched at Customer's request, but are later canceled, Customer will be invoiced for a "dead call" as provided in the Price Book or other Supplier documents mentioned herein.*
- *b) Standby Charges: Standby rates may be applied under conditions specified in the Price Book.*

3) Trade Discount
Trade discounts, if any, apply only to Equipment, goods, or services which are paid for within 30 days of the invoice date. In the event payment is not timely made, with time being deemed to be of the absolute essence, all discounts granted are automatically revoked and reversed on Customer's account and are fully due and owing.

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