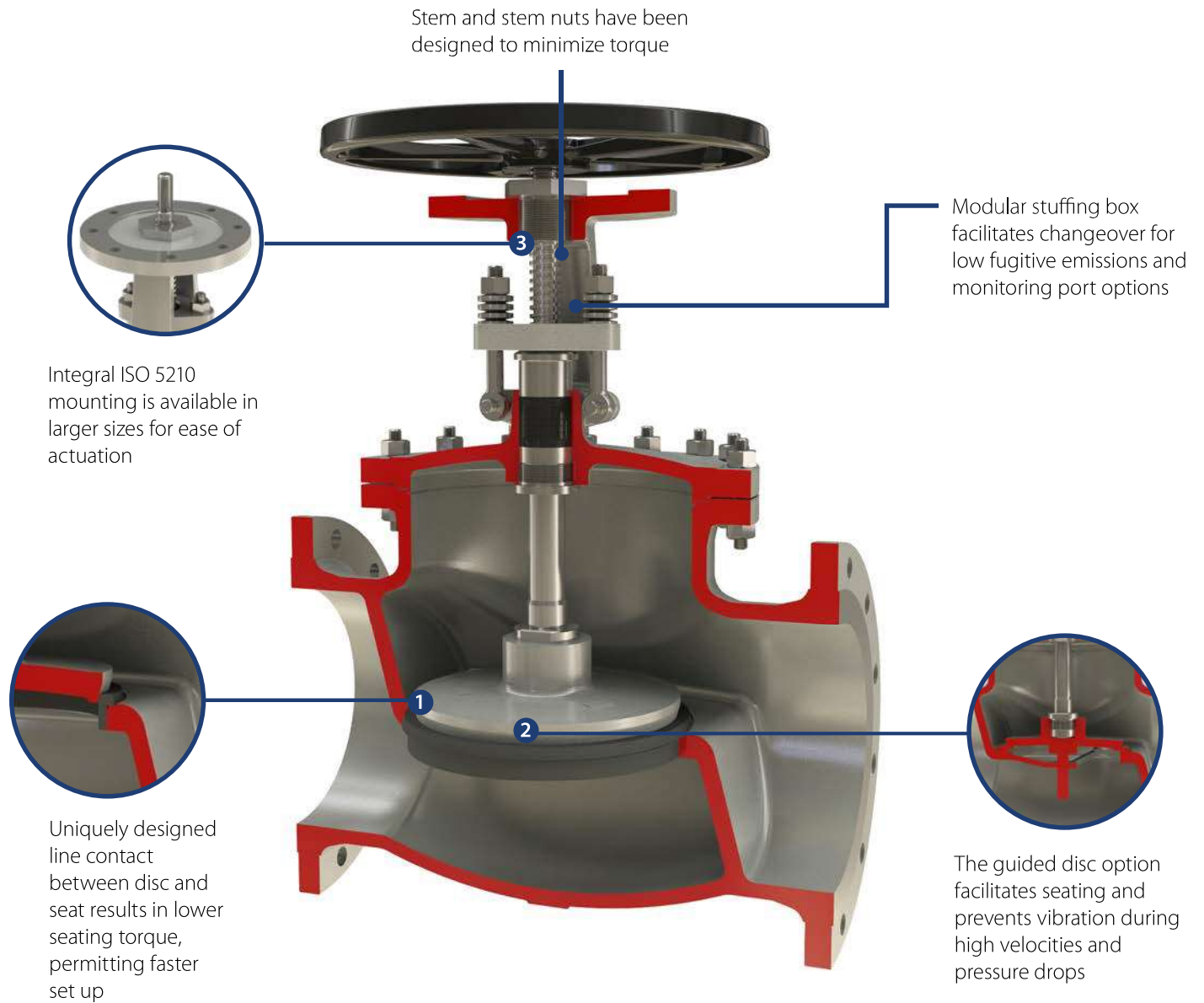




Key Features Globe Valve

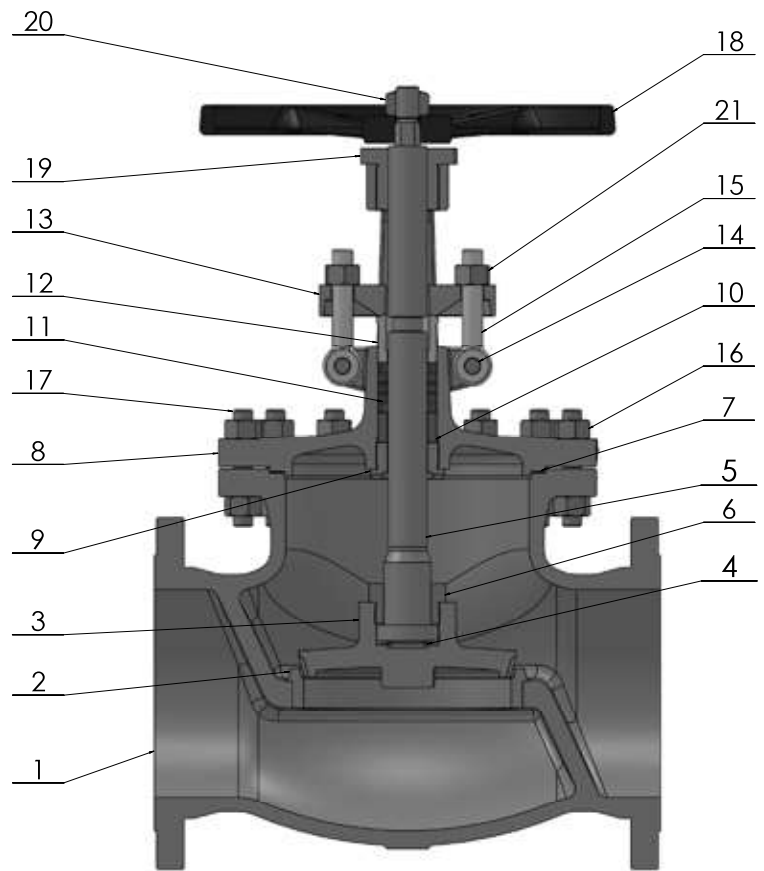




Globe Valve Materials of Construction

Item	Description	Carbon Steel
1	Body	ASTM A216. WCB
2	Seat Ring	A105 w/AWS 5.13 CrCo or WCB w/AWS 5.13 CrCo
3	Disc	ASTM A216. GR WCB. w/AWS 5.9 ER 410
4	Thrust Plate	ASTM A216. WCB
5	Stem	ASTM 182. F6a
6	Disc Nut	ASTM A276. T410
7	Gasket	Class 150: Spiral Wound SS Class 300: Sprial Wound SS Class 600: Ring Type
8	Bonnet	ASTM A216, WCB
9	Backseat	ASTM A276, T410
10	Packing Spacer	ASTM A276, T410
11	Packing	Graphite: 2 braided; 3 Die-Formed
12	Gland	ASTM A276, T410
13	Gland Flange	ASTM A216, WCB
14	Pin	Zinc Plated Steel
15	Eye Bolt	ASTM A307 Gr. A or Gr. B, Zinc Plt.
16	Nut	ASTM A194, 2H
17	Stud	ASTM A193, B7
18	Handwheel	Carbon Steel/Ductile Iron
19	Yoke Sleeve	ASTM A439, Gr. D2
20	Handwheel Nut	ASTM A194, 2H
21	Eyebolt Nut	ASTM A196 Gr. 24

Figure B1- Class 150
Figure B3- Class 300
Figure B6- Class 600



Standard construction WCB-Trim 8.
Other options are available per Materials of construction on page 14.



Globe Valve Dimensions and Weights

CLASS 150, 300 & 600

Valve NB in (mm)	Pressure Class	L		H (Open)	H (Close)	M	Weight (lbs.)		Valve NB in (mm)	Pressure Class	L		H (Open)	H (Close)	M	Weight (lbs.)	
		FE	WE				FE	WE			FE	WE					
2" (50)	150	8	8	16	15	8	50	45	10" (250)	150	24.5	24.5	29	25	GO	505	453
	300	10.5	10.5	16	15	8	57	49		300	24.5	24.5	36	31.4	23.6	825	720
	600	11.5	11.5	16.7	15.7	8	93	80		600	31	31	45	41	GO	1610	1340
2.5" (65)	150	8.5	8.5	16.5	15.5	8	71	54	12" (300)	150	27.5	27.5	34	28.5	GO	724	643
	300	11.5	11.5	18	16.5	8	86	72		300	28	28	41.4	36	23.6	1184	1015
	600	13	13	19.3	18	10	130	107		600	33	33	56	50	GO	2264	1966
3" (80)	150	9.5	9.5	18	17	10	88	74	14" (350)	150	31	31	40.6	36.7	GO	1115	990
	300	12.5	12.5	18	16.5	10	107	88		300	33	33	47.4	41.7	GO	1739	1485
	600	14	14	21	20	10	185	164									
4" (100)	150	11.5	11.5	22	20.5	10	133	116	16" (400)	150	36	36	43.6	38.4	GO	1399	1250
	300	14	14	23	21	10	178	146		300	34	34	59	51	GO	2386	2113
	600	17	17	26	24.5	16	311	256									
6" (150)	150	16	16	22	21	14	196	172	18" (450)	150	38.5	38.5	45	39	GO	1724	1584
	300	17.5	17.5	28	25	18	350	299		300	38.5	38.5	60.4	54	GO	3105	2740
	600	22	22	33	30.6	20	728	618									
8" (200)	150	19.5	19.5	27	23	16	330	295									
	300	22	22	31	27	20	561	488									
	600	26	26	39	36	26	1269	1114									

FE: Flanged End Valve
 WE: Butt-weld End Valve
 H (open): Valve center to Stem top in Valve open condition
 H (close): Valve center to Stem top in Valve close condition
 L: Face to Face dimension
 M: Handwheel Diameter
 GO: Gear Operator

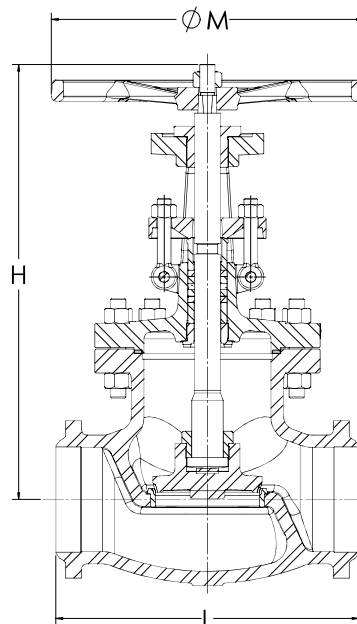
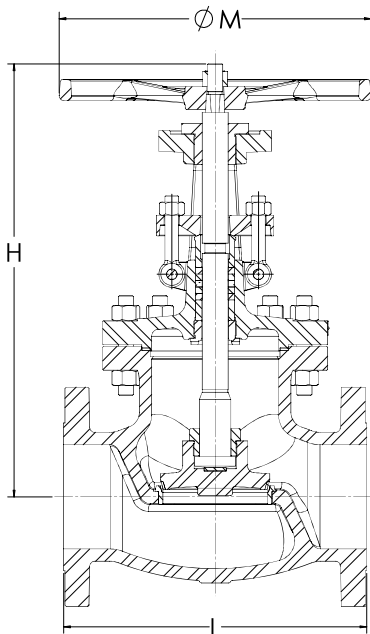


Figure B1- Class 150
 Figure B3- Class 300
 Figure B6- Class 600



Globe & Swing Check Valve Cv and Torque

Globe Valves - Cv

Size	Class 150		Class 300		Class 600	
	Cv	Kv	Cv	Kv	Cv	Kv
2	47	41	47	41	47	41
2.5	75	65	75	65	75	65
3	111	96	111	96	111	96
4	206	178	206	178	206	178
6	479	415	479	415	479	415
8	873	756	873	756	873	756
10	1419	1227	1419	1227	1353	1170
12	2046	1770	1650	1427	1960	1695
14	2491	2155	2490	2154	NA	NA
16	3435	2971	3435	2971	NA	NA
18	4402	3808	4268	3692	NA	NA

Globe Valves - Torque

Size (in.)	Pressure Class	Differential Pressure (psi)	Stem Diameter (in)	Stem Travel (in)	Torque (ft-lbs)
2	150	325	0.875	0.9	12
	300	825	0.875	0.9	25
	600	1650	0.875	0.9	46
2.5	150	325	0.875	1	17
	300	825	0.875	1.5	37
	600	1650	1	1.3	81
3	150	325	1	1.2	27
	300	825	1	1.3	60
	600	1650	1.25	1.2	138
4	150	325	1.25	1.4	53
	300	825	1.25	1.9	124
	600	1650	1.25	1.5	239
6	150	325	1.25	1.6	110
	300	825	1.5	3.2	327
	600	1650	1.875	2.5	772
8	150	325	1.5	3.2	232
	300	825	1.75	3.9	649
	600	1650	2.5	3.3	1762
10	150	325	1.5	3.8	357
	300	825	2.25	4.5	1308
	600	1650	3.25	3.9	3603
12	150	325	1.75	5.5	577
	300	825	2.75	5.3	2214
	600	1650	3.5	5.8	5534
14	150	325	1.875	3.9	742
	300	825	2.875	5.6	3019
16	150	325	2.25	5.2	1201
	300	825	3.5	7.9	4670
18	150	325	2.5	6.1	1669
	300	825	4	6.3	6469

Swing Check Valve - Cv

Size	Class 150		Class 300		Class 600	
	Cv	Kv	Cv	Kv	Cv	Kv
2	123	107	123	107	122	106
2.5	197	170	197	170	197	170
3	291	252	291	252	291	252
4	538	465	538	465	538	465
6	1240	1073	1240	1073	1240	1073
8	2278	1970	2278	1970	2211	1912
10	3700	3201	3700	3201	3519	3044
12	5335	4615	5335	4615	5110	4421
14	6498	5621	6496	5620	6133	5305
16	8964	7754	8964	7754	8381	7250
18	11463	9916	11141	9637	10485	9070
20	14274	12348	13903	12027	12830	11099
24	21748	18813	21272	18401	19469	16842



Pressure / Temperature Range

The following pressure-temperature charts are derived from ASME B16.34 – 2013 Version. They will cover the most commonly used body and bonnet materials in the industry. All Crane Valves are designed to operate through the pressure and temperature ranges shown in these charts for a particular ASME Class Rating and ASTM Material.

ASTM A216 GR WCB

°F	STANDARD CLASS B16.34 - 2013						SPECIAL CLASS B16.34 - 2013					
	MAXIMUM NON-SHOCK WORKING PRESSURE, PSIG						MAXIMUM NON-SHOCK WORKING PRESSURE, PSIG					
	150	300	600	900	1500	2500	150	300	600	900	1500	2500
-20 to 100	285	740	1480	2220	3705	6170	290	750	1500	2250	3750	6250
200	260	680	1360	2035	3395	5655	290	750	1500	2250	3750	6250
300	230	655	1310	1965	3270	5450	285	740	1480	2220	3700	6170
400	200	635	1265	1900	3170	5280	280	735	1465	2200	3665	6105
500	170	605	1205	1810	3015	5025	280	735	1465	2200	3665	6105
600	140	570	1135	1705	2840	4730	280	735	1465	2200	3665	6105
650	125	550	1100	1650	2745	4575	275	715	1430	2145	3575	5960
700	110	530	1060	1590	2665	4425	265	690	1380	2075	3455	5760
750	95	505	1015	1520	2535	4230	245	635	1270	1905	3170	5285
800	80	410	825	1235	2055	3430	195	515	1030	1545	2570	4285

NOTE: Upon prolonged exposure to temperatures above 800°F (426°C), the carbide phase of steel may be converted to graphite. Permissible, but not recommended for prolonged use above 800°F (426°C).

ASTM A352 GR LCB

°F	STANDARD CLASS B16.34 - 2013						SPECIAL CLASS B16.34 - 2013					
	MAXIMUM NON-SHOCK WORKING PRESSURE, PSIG						MAXIMUM NON-SHOCK WORKING PRESSURE, PSIG					
	150	300	600	900	1500	2500	150	300	600	900	1500	2500
-20 to 100	265	695	1395	2090	3480	5805	290	695	1395	2090	3480	5805
200	255	660	1320	1980	3300	5505	290	695	1395	2090	3480	5805
300	230	640	1275	1915	3190	5315	290	695	1395	2090	3480	5805
400	200	615	1230	1845	3075	5125	290	695	1395	2090	3480	5805
500	170	585	1175	1760	2930	4885	290	695	1395	2090	3480	5805
600	140	550	1105	1655	2755	4595	290	695	1395	2090	3480	5805
650	125	535	1065	1600	2665	4440	290	695	1390	2080	3470	5780

NOTE: Not to be used over 650°F (343°C).

ASTM A352 GR LCC & LC3

°F	STANDARD CLASS B16.34 - 2013						SPECIAL CLASS B16.34 - 2013					
	MAXIMUM NON-SHOCK WORKING PRESSURE, PSIG						MAXIMUM NON-SHOCK WORKING PRESSURE, PSIG					
	150	300	600	900	1500	2500	150	300	600	900	1500	2500
-20 to 100	290	750	1500	2250	3750	6250	290	750	1500	2250	3750	6250
200	260	750	1500	2250	3750	6250	290	750	1500	2250	3750	6250
300	230	730	1455	2185	3640	6070	290	750	1500	2250	3750	6250
400	200	705	1405	2110	3520	5865	290	750	1500	2250	3750	6250
500	170	665	1330	1995	3325	5540	290	750	1500	2250	3750	6250
600	140	605	1210	1815	3025	5040	290	750	1500	2250	3750	6250
650	125	590	1175	1765	2940	4905	290	750	1500	2250	3750	6250

NOTE: Not to be used over 650°F (343°C).

* "Special Class" applies to weld-end valves only and requires NDE testing in accordance with ASME B16.34 - 2013.



Pressure / Temperature Range

ASTM A217 GR WC6

°F	STANDARD CLASS B16.34 - 2013						SPECIAL CLASS B16.34 - 2013					
	MAXIMUM NON-SHOCK WORKING PRESSURE, PSIG						MAXIMUM NON-SHOCK WORKING PRESSURE, PSIG					
	150	300	600	900	1500	2500	150	300	600	900	1500	2500
-20 to 100	290	750	1500	2250	3750	6250	290	750	1500	2250	3750	6250
200	260	750	1500	2250	3750	6250	290	750	1500	2250	3750	6250
300	230	720	1445	2165	3610	6015	290	750	1500	2250	3750	6250
400	200	695	1385	2080	3465	5775	290	750	1500	2250	3750	6250
500	170	665	1330	1995	3325	5540	290	750	1500	2250	3750	6250
600	140	605	1210	1815	3025	5040	290	750	1500	2250	3750	6250
650	125	590	1175	1765	2940	4905	290	750	1500	2250	3750	6250
700	110	570	1135	1705	2840	4730	280	735	1465	2200	3665	6110
750	95	530	1065	1595	2660	4430	280	730	1460	2185	3645	6070
800	80	510	1015	1525	2540	4230	275	720	1440	2160	3600	6000
850	65	485	975	1460	2435	4060	260	680	1355	2030	3385	5645
900	50	450	900	1350	2245	3745	225	585	1175	1760	2935	4895
950	35	320	640	955	1595	2655	155	400	795	1195	1995	3320
1000	20	215	430	650	1080	1800	105	270	540	810	1350	2250
1050	20(a)	145	290	430	720	1200	70	180	360	540	900	1500
1100	20(a)	95	190	290	480	800	45	120	240	360	600	1000

NOTE: Use normalized and tempered material only. Not to be used over 1100°F (593°C). The deliberate addition of any element not listed in ASTM A217, Table 1 is prohibited, except that Ca and Mg may be added for deoxidation.

(a) Flanged end valve ratings terminate at 1000°F (537°C).

ASTM A217 GR WC9

°F	STANDARD CLASS B16.34 - 2013						SPECIAL CLASS B16.34 - 2013					
	MAXIMUM NON-SHOCK WORKING PRESSURE, PSIG						MAXIMUM NON-SHOCK WORKING PRESSURE, PSIG					
	150	300	600	900	1500	2500	150	300	600	900	1500	2500
-20 to 100	290	750	1500	2250	3750	6250	290	750	1500	2250	3750	6250
200	260	750	1500	2250	3750	6250	290	750	1500	2250	3750	6250
300	230	730	1455	2185	3640	6070	285	740	1480	2220	3695	6160
400	200	705	1410	2115	3530	5880	280	730	1455	2185	3640	6065
500	170	665	1330	1995	3325	5540	280	725	1450	2175	3620	6035
600	140	605	1210	1815	3025	5040	275	720	1440	2165	3605	6010
650	125	590	1175	1765	2940	4905	275	715	1430	2145	3580	5965
700	110	570	1135	1705	2840	4730	270	705	1415	2120	3535	5895
750	95	530	1065	1595	2660	4430	270	705	1415	2120	3535	5895
800	80	510	1015	1525	2540	4230	270	705	1415	2120	3535	5895
850	65	485	975	1460	2435	4060	260	680	1355	2030	3385	5645
900	50	450	900	1350	2245	3745	230	600	1200	1800	3000	5000
950	35	385	755	1160	1930	3220	180	470	945	1415	2360	3930
1000	20	265	535	800	1335	2230	130	335	670	1005	1670	2785
1050	20(a)	175	350	525	875	1455	85	220	435	655	1095	1820
1100	20(a)	110	220	330	550	915	55	135	275	410	685	1145

NOTE: Use normalized and tempered material only. Not to be used over 1100°F (593°C). The deliberate addition of any element not listed in ASTM A217, Table 1 is prohibited, except that Ca and Mg may be added for deoxidation.

(a) Flanged end valve ratings terminate at 1000°F (537°C).



Pressure / Temperature Range

ASTM A217 GR C5

°F	STANDARD CLASS B16.34 - 2013						SPECIAL CLASS B16.34 - 2013					
	MAXIMUM NON-SHOCK WORKING PRESSURE, PSIG						MAXIMUM NON-SHOCK WORKING PRESSURE, PSIG					
	150	300	600	900	1500	2500	150	300	600	900	1500	2500
-20 to 100	290	750	1500	2250	3750	6250	290	750	1500	2250	3750	6250
200	260	750	1500	2250	3750	6250	290	750	1500	2250	3750	6250
300	230	730	1445	2185	3640	6070	290	750	1500	2250	3750	6250
400	200	705	1410	2115	3530	5880	290	750	1500	2250	3750	6250
500	170	665	1330	1995	3325	5540	290	750	1500	2250	3750	6250
600	140	605	1210	1815	3025	5040	290	750	1500	2250	3750	6250
650	125	590	1175	1765	2940	4905	290	750	1500	2250	3750	6250
700	110	570	1135	1705	2840	4730	280	735	1465	2200	3665	6110
750	95	530	1065	1595	2660	4430	280	730	1460	2185	3645	6070
800	80	510	1015	1525	2540	4230	275	720	1440	2160	3600	6000
850	65	485	975	1460	2435	4060	260	615	1225	1840	3065	5105
900	50	375	745	1120	1870	3115	230	465	935	1400	2335	3895
950	35	275	550	825	1370	2285	170	345	685	1030	1715	2855
1000	20	200	400	595	995	1655	125	250	495	745	1245	2070
1050	20(a)	145	290	430	720	1200	90	180	360	540	900	1500
1100	20(a)	100	200	300	495	830	60	125	250	375	620	1035
1150	20(a)	60	125	185	310	515	40	75	155	230	385	645
1200	15(a)	35	70	105	170	285	20	45	85	130	215	355

NOTE: Use normalized and tempered material only. The deliberate addition of any element not listed in ASTM A217, Table 1 is prohibited, except that Ca and Mg may be added for deoxidation.

(a) Flanged end valve ratings terminate at 1000°F (537°C).

ASTM A217 GR C12

°F	STANDARD CLASS B16.34 - 2013						SPECIAL CLASS B16.34 - 2013					
	MAXIMUM NON-SHOCK WORKING PRESSURE, PSIG						MAXIMUM NON-SHOCK WORKING PRESSURE, PSIG					
	150	300	600	900	1500	2500	150	300	600	900	1500	2500
-20 to 100	290	750	1500	2250	3750	6250	290	750	1500	2250	3750	6250
200	260	750	1500	2250	3750	6250	290	750	1500	2250	3750	6250
300	230	730	1455	2185	3640	6070	290	750	1500	2250	3750	6250
400	200	705	1410	2115	3530	5880	290	750	1500	2250	3750	6250
500	170	665	1330	1995	3325	5540	290	750	1500	2250	3750	6250
600	140	605	1210	1815	3025	5040	290	750	1500	2250	3750	6250
650	125	590	1175	1765	2940	4905	290	750	1500	2250	3750	6250
700	110	570	1135	1705	2840	4730	280	735	1465	2200	3665	6110
750	95	530	1065	1595	2660	4430	280	730	1460	2185	3645	6070
800	80	510	1015	1525	2540	4230	275	720	1440	2160	3600	6000
850	65	485	975	1460	2435	4060	260	680	1355	2030	3385	5646
900	50	450	900	1350	2245	3745	230	600	1200	1800	3000	5000
950	35	375	755	1130	1885	3145	180	470	945	1415	2355	3930
1000	20	255	505	760	1270	2115	120	315	635	950	1585	2645
1050	20(a)	170	345	515	855	1430	80	215	430	645	1070	1785
1100	20(a)	115	225	340	565	945	55	140	285	425	705	1180
1150	20(a)	75	150	225	375	630	35	95	190	285	470	785
1200	20(a)	50	105	155	255	430	25	65	130	195	320	535

NOTE: Use normalized and tempered material only. The deliberate addition of any element not listed in ASTM A217, Table 1 is prohibited, except that Ca and Mg may be added for deoxidation.

(a) Flanged end valve ratings terminate at 1000°F (537°C).

* "Special Class" applies to weld-end valves only and requires NDE testing in accordance with ASME B16.34 - 2013.



How To Order

First 11 Figure Number Characters*

Size		Type	Class	Material	Trim	Operator	End	Schedule	Weld End Prep	Mounting
1	2	A	1	A	8	H	F	4	B	0

*The remaining 6 characters are used for Options, Features, Special Material Processes and Special Requirements. N is used to signify "No" requirement.

Figure Number Rules for Size, Type and Class (first 4 characters)

SIZE		TYPE		CLASS	
02	2"	A	GATE (Flex-Wedge)	1	150#
2H	2.5"	B	GLOBE (T-Globe)	3	300#
03	3"	C	CHECK (Swing type)	6	600#
04	4"				
-	-				
18	18"				
20	20"				
24	24"				

Figure Number Rules for Material (5TH character)

MATERIAL		
No.	ASTM	Material
A	A216 WCB	Carbon Steel
B	A352 LCB	Low Carbon Steel
C	A352 LCC	Low Carbon Steel
D	A216 WCC	Carbon Steel
E	A217 WC6	11/4 CR, 1/2 Mo
F	A217 WC9	21/4 CR, 1 Mo
G	A217 C5	5% CR, 1/2 Mo
H	A217 C12	9% CR, 1 Mo
J	A351 CF8M	316 SS
L	A351 CF8	304 SS
M	A351 CF3	304L SS
N	A351 CF3M	316L SS
P	A351 CG8M	317 SS
Q	A351 CG3M	317L SS
R	A351 CF8C	347 SS
W	CD3MN	Duplex 1B
X	CD3MWCuN	Duplex 4A
Y	CD4MCuN	Duplex 6A
S	A351 CN7M	Alloy 20
Z		Special

Figure Number Rules for Trim Material (6TH character)

TRIM MATERIAL				
No.	API Trim No.	Nominal Trim	Seating Surfaces	Stem Material
	1	Obsolete (Offer Trim 8)		
5	5	HF / HF ⁽²⁾	Alloy 6	13 Cr (410)
9	9	Monel® / Monel® ⁽⁴⁾	Monel®	Monel®
8	8*	F6 / HF ⁽¹⁾⁽²⁾	13 Cr / Alloy 6	13 Cr (410)
1	11	Monel® / HF ⁽⁴⁾⁽²⁾	Monel® / Alloy 6	Monel®
2	12	316 / HF ⁽³⁾⁽²⁾	316SS / Alloy 6	316 SS
6	16	316/HF / 316/HF ⁽³⁾⁽²⁾	316SS / Alloy 6 (both)	316 SS
E		8 to NACE MR0103 / MR0175		
N		12 to NACE MR0103 / MR0175		
Z		Special / Custom		

(1) 13% Chromium AISI Type 410 Stainless Steel.
(2) Hard Facing is weld deposited Cobalt base alloy
(3) Ni-Cr-Mo stainless steel in the AISI Type 316 category
(4) Ni-Cu Alloy Standard Offering

Figure Number Rules for Operator, Valve Ends, Schedule and Weld End Prep (7TH, 8TH, 9TH & 10TH characters)

OPERATOR		SCHEDULE	
0	N/A (e.g. check valves)	0 = N/A (e.g. flanged end)	F = Schedule 60
H	Handwheel	D = Schedule STD	G = Schedule 80 ⁽²⁾
G	Bevel Gear	A = Schedule 10	H = Schedule XS
S	Bare Stem	B = Schedule 10S	J = Schedule 100
P	Pneumatic Cylinder	C = Schedule 20	X = Different Inlet & Outlet
E	Electric Motor Customer Supplied	K = Schedule 30	Z = Custom
C	Electric Motor with Bevel Gear	E = Schedule 4 ⁽¹⁾	
Y	Hydraulic Actuator Special / Custom		
Z			

(1) same as Schedule STD for size 2" - 10"
(2) same as Schedule XS for size 2" - 8"

WELD END PREP	
0	N/A (e.g. flanged end)
B	2B Or 3B Based on wall thickness
C	2C or 3C Based on wall thickness
Z	Custom

VALVE ENDS	
F	Raised Face
W	Butt Weld End

Figure Number Rules for Mounting (11TH character)

MOUNTING	
0 = N/A ⁽¹⁾	
1 = F10	A = FA10
2 = F12	B = FA12
3 = F14	C = FA14
4 = F16	D = FA16
5 = F25	E = FA25
6 = F30	F = FA30
7 = F35	G = FA35
8 = F40	H = FA40
Z = Other / Special	

(1) e.g. Handwheel / Check Valve

SPECIAL REQUIREMENT (digit 17)

N = None	M = MSS SP-61 testing
2 = API 600 12 TH edition	Z = Other
C = CE/PED	