

## Pressure/Temperature Charts

### ASTM A216 Grade WBC//A105

Upon prolonged exposure to temperatures above 800°F, the carbide phase of steel may be converted to graphite.

Permissible, but not recommended for prolonged use above 800°F.

#### Standard Class

Working Pressures by Classes, psig								
Temperature, °F	150	300	400	600	900	1500	2500	4500
-20 to 100	285	740	990	1480	2220	3705	6170	11,110
200	260	675	900	1350	2025	3375	5625	10,120
300	230	655	875	1315	1970	3280	5470	9845
400	200	635	845	1270	1900	3170	5280	9505
500	170	300	800	1200	1795	2995	4990	8980
600	140	550	730	1095	1640	2735	4560	8210
650	125	535	715	1075	1610	2685	4475	8055
700	110	535	710	1065	1600	2665	4440	7990
750	95	505	670	1010	1510	2520	4200	7560
800	80	410	550	825	1235	2060	3430	6170

## Pressure/Temperature Charts

### ASTM A216 Grade WC6/A182-F11

Use normalized and tempered material only. Not to be used over 1100°F.

#### Standard Class

Working Pressures by Classes, psig								
Temperature, °F	150	300	400	600	900	1500	2500	4500
-20 to 100	290	750	1000	1500	2250	3750	6250	11,250
200	260	750	1000	1500	2250	3750	6250	11,250
300	230	720	965	1445	2165	3610	6015	10,830
400	200	695	925	1385	2080	3465	5775	10,400
500	170	695	885	1330	1995	3325	5540	9965
600	140	605	805	1210	1815	3025	5040	9070
650	125	590	785	1175	1765	2940	4905	8825
700	110	570	755	1135	1705	2840	4730	8515
750	95	530	710	1065	1595	2660	4460	7970
800	80	510	675	1015	1525	2540	4230	7610
850	65	485	650	975	1460	2435	4060	7305
900	50	450	600	900	1350	2245	3748	6740
950	35	320	425	640	955	1595	2655	4785
1000	20	215	290	430	650	1080	1800	3240
1050	20(1)	145	790	290	430	720	1200	2160
1100	20(1)	95	130	190	290	480	800	1440

NOTE: (1) For welding end valves only. Flanged end ratings terminate at 1000°F

## Pressure/Temperature Charts

### ASTM A217 Grade WC9/A182-F22

Use normalized and tempered material only. Not to be used over 1100°F.

#### Standard Class

Working Pressures by Classes, psig								
Temperature, °F	150	300	400	600	900	1500	2500	4500
-20 to 100	290	750	1000	1500	2250	3750	6250	11,250
200	260	750	1000	1500	2250	3750	6250	11,250
300	230	730	970	1455	2185	3640	6070	10,925
400	200	705	940	1410	2115	3530	5880	10,585
500	170	665	885	1330	1995	3325	5540	9965
600	140	605	805	1210	1815	3025	5040	9070
650	125	590	785	1175	1765	2940	4905	8825
700	110	570	755	1135	1705	2840	4730	8515
750	95	530	710	1065	1595	2660	4430	7970
800	80	510	675	1015	1525	2540	4230	7610
850	65	485	650	975	1460	2435	4060	7305
900	50	450	600	900	1350	2245	3745	6740
950	35	375	505	755	1130	1885	3145	5665
1000	20	260	345	520	780	1305	2170	3910
1050	20(1)	175	235	350	525	875	1455	2625
1100	20(1)	110	145	220	330	550	915	1645

NOTE: (1) For welding end valves only. Flanged end ratings terminate at 1000°F

## Pressure/Temperature Charts

### ASTM A351 Grade CF3(a)/A182-F304L & ASTM A351 Grade CF8(b)/A182-F304

(a) Not to be used over 800°F

(b) At temperatures over 1000°F, use only when the carbon content is 0.04% or higher. This requirement must be specified by customer when applicable.

#### Standard Class

Working Pressures by Classes, psig								
Temperature, °F	150	300	400	600	900	1500	2500	4500
-20 to 100	275	720	960	1440	2160	3600	6000	10,800
200	230	600	800	1200	1800	3000	5000	9000
300	205	540	720	1080	1620	2700	4500	8100
400	190	495	660	995	1490	2485	4140	7450
500	170	465	620	930	1395	2330	3880	6985
600	140	435	580	875	1310	2185	3640	6550
650	125	430	575	860	1290	2150	3580	6445
700	110	425	565	850	1275	2125	3540	6370
750	95	415	555	830	1245	2075	3460	6230
800	80	405	540	805	1210	2015	3360	6050
850	65	395	530	790	1190	1980	3300	5940
900	50	390	520	780	1165	1945	3240	5830
950	35	380	510	765	1145	1910	3180	5725
1000	20	320	430	640	965	1605	2675	4815
1050	20(1)	310	410	615	925	1545	2570	4630
1100	20(1)	255	345	515	770	1285	2145	3855
1150	20(1)	200	265	400	595	995	1655	2985
1200	20(1)	155	205	310	465	770	1285	2315
1250	20(1)	115	150	225	340	565	945	1695
1300	20(1)	85	115	170	255	430	715	1285
1350	20(1)	60	80	125	185	310	515	925
1400	20(1)	50	65	95	145	240	400	720
1450	15(1)	35	45	70	105	170	285	515
1500	10(1)	25	35	55	80	135	230	410

NOTE: (1) For welding end valves only. Flanged end ratings terminate at 1000°F

## Pressure/Temperature Charts

### ASTM A351 Grade CF3M(a)/A182-F316L & ASTM A351 Grade CF8M(b) /A182-F316

(a) Not to be used over 800°F

(b) At temperatures over 1000°F, use only when the carbon content is 0.04% or higher. This requirement must be specified by customer when applicable.

#### Standard Class

Working Pressures by Classes, psig									
Temperature, °F(2)	150	200	300	400	600	900	1500	2500	4500
-20 to 100	275	400	720	960	1440	2160	3600	6000	10,800
200	235	360	620	825	1240	1860	3095	5160	9290
300	215	330	560	745	1120	1680	2795	4660	8390
400	195	300	515	685	1025	1540	2570	4280	7705
500	170	270	480	635	955	1435	2390	3980	7165
600	140	240	450	600	900	1355	2255	3760	6770
650	125	230	445	590	890	1305	2170	3700	6660
700	110	215	430	580	870	1305	2170	3620	6515
750	95	205	425	570	855	1280	2135	3560	6410
800	80	190	420	565	845	1265	2110	3520	6335
850	65	180	420	555	835	1255	2090	3480	6265
900	50	170	415	555	830	1245	2075	3460	6230
950	35	150	385	515	775	1160	1930	3220	5795
1000	20	130	350	465	700	1050	1750	2915	5245
1050	20(1)	125	345	450	685	1030	1720	2865	5155
1100	20(1)	115	305	405	610	915	1525	2545	4575
1150	20(1)	90	235	315	475	710	1185	1970	3550
1200	20(1)	75	185	245	370	555	925	1545	2885
1250	20(1)	60	145	195	295	440	735	1230	2210
1300	20(1)	50	115	155	235	350	585	970	1750
1350	20(1)	45	95	130	190	290	480	800	1440
1400	20(1)	35	75	100	150	225	380	630	1130
1450	20(1)	30	60	80	115	175	290	485	875
1500	20(1)	25	40	55	85	125	205	345	620

#### NOTE:

(1) For welding end valves only. Flanged end ratings terminate at 1000°F.

(2) For Cryogenic Valves, -20°F Rating Extends to -423°F.

NOTE: Special Class Ratings apply to Threaded and Weld End Valves only and require upgrading per paragraph 8 of ASME B16.34