TXG INDUSTRIES

Flange Working Pressures

Carbon Steel Pressure-Temperature Rating — The pressure-temperature ratings shown below were taken from the 1977 edition of ANSI B16.5. All pressures are in pound per square inch gage (PSIG). When ratings below are used, consult the necessar code(s) to assure proper application of such ratings. These ratings are for material group 1.1 which includes A105 carbon steel.

Service Temperature Degree F	Working Pressures by Classes and PSIG Carbon Steel Pressure Temperature Ratings						
	150	300	400	600	900	1500	2500
-20 to 100	285	740	990	1480	2220	3705	6170
200	260	675	900	1350	2025	3375	5625
300	230	655	875	1315	1970	3280	5470
400	200	635	845	1270	1900	3170	5280
500	170	600	800	1200	1795	2995	4990
600	140	550	730	1095	1640	2735	4560
650	125	535	715	1075	1610	2685	4475
700	110	535	710	1065	1600	2665	4440
750	95	505	670	1010	1510	2520	4200
800	80	410	550	825	1235	2060	3430
850	60	270	355	535	805	1340	2230
900	50	170	230	345	515	860	1430
950	30	105	140	205	310	515	860
1000	20	50	70	105	155	260	430

Carbon steel flanges should not be used for applications requiring prolonged exposure to temperatures above 800°F due to the possibility of graphitization. When shock resulting from sudden stoppage of flow is expected, the shock pressure may be safely approximated by multiplying the velocity of flow through the line in feet per second by the factor 60. The sum of the normal line pressure plus the shock pressure thus calculated should be used to determine the appropriate pressure class of flange.