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Pressure - Temperature Ratings

**For Steel Pipe Flanges and Flanged Fittings
American National Standard ANSI B16.5 – 1988**

NOTES:

1. For service temperatures above 850 F it is recommended that killed steels containing not less than 0.10% residual silicon be used.
2. Upon prolonged exposure to temperatures above 800 F, the carbide phase of carbon steel may be converted to graphite.
3. The material shall not be used in thickness above 2-1/2 in.

Flanges of ANSI B16.5 shall not be used for higher ratings except where it is justified by the design methods of the Code.

Ratings are maximum allowable non-shock working pressures expressed as gage pressure, at the tabulated temperatures and may be interpolated between temperatures shown.

Temperatures are those

Gage Pressure (psi)

Temperature (°F)	Flange Class						
	150	300	400	600	900	1500	2500
< 100	285	740	985	1480	2220	3705	6170
200	260	680	905	1360	2035	3395	5655
300	230	655	870	1310	1965	3270	5450
400	200	635	845	1265	1900	3170	5280
500	170	605	805	1205	1810	3015	5025
600	140	570	755	1135	1705	2840	4730
650	125	550	730	1100	1650	2745	4575
700	110	530	710	1060	1590	2655	4425
750	95	505	675	1015	1520	2535	4230
800	80	410	550	825	1235	2055	3430
850	65	320	425	640	955	1595	2655
900	50	230	305	460	690	1150	1915
950	35	135	185	275	410	685	1145
1000	20	85	115	170	255	430	715
Hydrostatic Test Pressure (psig)	450	1125	1500	2225	3350	5575	9275

Gasket dimensions for ASME B16.5 Pipe Flanges and Flange Fittings - can be found in the table below.

Nominal Pipe Size	Gasket Inside Diameter (ID) (inch)	Gasket Outside Diameter (OD) (inches)			
		Class 300	Class 400	Class 600	Class 900
1/2	0.84	2.12	2.12	2.12	2.50
3/4	1.06	2.62	2.62	2.62	2.75
1	1.31	2.88	2.88	2.88	3.12
1 1/4	1.66	3.25	3.25	3.25	3.50
1 1/2	1.91	3.75	3.75	3.75	3.88
2	2.38	4.38	4.38	4.38	5.62
2 1/2	2.88	5.12	5.12	5.12	6.50
3	3.50	5.88	5.88	5.88	6.62
4	4.50	7.12	7.00	7.62	8.12
5	5.56	8.50	8.38	9.50	9.75
6	6.62	9.88	9.75	10.50	11.38
8	8.62	12.12	12.00	12.62	14.12
10	10.75	14.25	14.12	15.75	17.12
12	12.75	16.62	16.50	18.00	19.62