Pressure Rating of Stainless Steel Tubes

UPPER VALUES : BURST PRESSURE (PSIG) — LOWER VALUES : WEIGHT PER FOOT (in Lbs.)

WALL THICKNESS

O.D. IN INCH	.020"	.025"	.028"	.035"	.049"	.065"	.083"	.095"	.109"	.120"	.156"	.188"	.250"	.313"	.375"	.500"	.625"	.750"
1/8	24,000 .022	30,000 .026	39,000 .029	42,000 .033	58,000 .040													
3/16	15,998 .035	19,950 .043	22,403 .047	22,403 .057	39,203 .073	58,800 .040												
1/4	12,000 .049	15,000 .060	16,800 .066	21,000 .080	29,400 .105	39,000 .128	49,800 .148	57,000 .157										
5/16	9,600 .062	12,000 .078	13,440 .085	16,800 .103	23,520 .138	31,200 .172	39,780 .203	45,750 .221										
3/8	8,003 .075	9,998 .093	11,998 .103	14,003 .127	19,598 .170	26,003 .215	33,203 .258	38,003 .284	43,598 .309	48,000 .326								
1/2	6,000 .102	7,500 .129	8,400 .141	10,500 .173	14,700 .236	19,500 .302	24,900 .369	28,500 .418	32,700 .455	36,000 .487								
5/8	4,800 .129	6,000 .160	6,720 .178	8,400 .221	11,760 .301	15,600 .388	19,920 .480	22,888 .537	26,160 .600	28,800 .647	37,440 .781	44,880 .877						
3/4	3,998 .155	5,003 .193	5,603 .215	6,998 .267	9,803 .366	12,997 .475	16,598 .591	18,998 .664	21,803 .746	24,000 .807	31,200 .990	37,403 1.128						
7/8	3,428 .183	4,283 .227	4,800 .253	6,000 .314	8,400 .432	11,145 .562	14,228 .702	16,283 .791	18,683 .891	20,573 .968	26,745 1.198	32,055 1.379						
1	3,000 .209	3,750 .260	4,200 .290	5,250 .360	7,350 .497	9,750 .649	12,450 .812	14,250 .918	16,350 1.037	18,000 1.128	23,400 1.406	28,050 1.630	37,500 2.003					
1 1/8	2,663 .236	3,330 .294	3,735 .328	4,665 .407	6,533 .563	8,670 .736	11,070 .923	12,668 1.045	14,535 1.183	15,998 1.288	20,798 1.614	24,930 1.881	33,330 2.336					
1 1/4	2,400 .262	3,000 .326	3,360 .365	4,200 .454	5,880 .628	7,800 .822	9,960 1.034	11,400 1.172	13,080 1.328	14,400 1.502	18,720 1.823	22,440 2.132	30,000 2.670					
1 3/8			3,053 .402	3,818 .501	5,438 .694	7,087 .909	9,053 1.145	10,365 1.299	11,888 1.473	13,088 1.608	17,018 2.031	20,400 2.383	27,270 3.004					
1 1/2			2,948 .440	3,503 .547	4,898 .759	6,503 .996	8,303 1.256	9,503 1.426	10,890 1.619	12,000 1.769	15,600 2.239	18,698 2.634	24,998 3.338					
1 3/4				3,000 .641	4,200 .890	5,573 1.170	7,118 1.478	8,145 1.679	9,345 1.910	10,283 2.160	13,373 2.656	16,028 3.136	21,428 4.005					
2				2,625 .734	3,675 1.021	4,875 1.343	6,225 1.699	7,125 1.933	8,175 2.201	9,000 2.409	11,700 3.072	14,025 3.638	18,750 4.673	23,475 5.639	28,125 6.508	37,500 8.010		
2 1/4				2,333 .828	3,270 1.152	4,335 1.517	5,535 1.921	6,330 2.250	7,268 2.556	8,003 2.730	10,403 3.489	12,465 4.140	16,665 5.340	20,865 6.475	24,998 7.509	33,330 9.345		
2 1/2				2,100 .921	2,940 1.283	3,900 1.690	4,980 2.143	5,700 2.440	6,540 2.783	7,200 3.050	9,360 3.905	11,220 4.642	15,000 6.008	18,780 7.311	22,500 8.511	30,000 10.680	37,500 12.515	
2 3/4				1,913 1.015	2,670 1.413	3,548 1.864	4,530 2.364	5,183 2.699	5,948 3.177	6,548 3.495	8,513 4.322	10,200 5.144	13,636 6.675	17,070 8.147	20,453 9.512	27,270 12.015	34,088 14.180	40,913 16.020
3				1,748 1.108	2,453 1.544	3,248 2.037	4,148 2.586	4,748 2.947	5,453 3.393	6,000 3.691	7,800 4.739	9,353 5.646	12,503 7.343	15,653 8.982	18,750 10.513	24,998 13.350	31,253 15.853	37,500 18.020
3 1/4						3,000 2.211	3,833 2.805	4,388 3.201	5,033 3.634	5,535 3.975	7,200 5.155	8,633 6.148	11,535 8.010	14,445 9.818	17,310 11.514	23,078 14.685	28,845 17.520	34,613 32.146
3 1/2						2,783 2.385	3,555 3.029	4,073 3.455	4,673 3.976	5,145 4.385	6,683 5.571	8,018 6.650	10,718 8.678	13,418 10.650	16,073 12.515	21,428 16.020	26,783 19.191	22,027 30.000
3 3/4						2,603 2.558	3,323 3.248	3,803 3.708	4,358 4.235	4,800 4.650	6,240 5.988	7,478 7.152	9,998 9.345	12,518 11.490	15,000 13.520	20,003 17.355	24,998 20.860	24,030 28.030
4						2,438 2.732	3,112 3.472	3,563 3.962	4,088 4.530	4,500 4.973	5,850 6.404	7,013 7.654	9,375 10.010	11,738 12.330	14,063 14.520	18,750 18.690	23,438 22.530	28,125 26.030

Operating pressure for TP304 and TP316 for ASTM A269 tubes with operating temperature between -20°F and 100°F .

ASME B31.3 suggests a safety factor of 4 (eg MAWP for 1/4" x 0.035" = 5250 psig)

For other higher temperature, multiply by the following derating values:

	300°F	500°F	1000°F
T304	.828	.774	.665
T316	.900	.853	.746

Figures and tables are for reference only. No implication is made that these values can be used for design work. Applicable codes and practices in industry should be considered.