

# High Purity Gas Delivery Systems

## Pressure Rating of Stainless Steel Tubes

UPPER VALUES : BURST PRESSURE (PSIG)													LOWER VALUES : WEIGHT PER FOOT (in Lbs.)						
<b>WALL THICKNESS</b>																			
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	30,000	39,000	42,000	58,000														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    .748
3/16	15,998	19,950	22,403	22,403	39,203	58,800													
1/4	12,000	15,000	16,800	21,000	29,400	39,000	49,800	57,000											
5/16	9,600	12,000	13,440	16,800	23,520	31,200	39,780	45,750											
3/8	8,003	9,998	11,998	14,003	19,598	26,003	33,203	38,003	43,598	48,000									
1/2	6,000	7,500	8,400	10,500	14,700	19,500	24,900	28,500	32,700	36,000									
	.022	.026	.029	.033	.040														
	.035	.043	.047	.057	.073	.040													
	.049	.060	.066	.080	.105	.128	.148	.157											
	.062	.078	.085	.103	.138	.172	.203	.221											
	.075	.093	.103	.127	.170	.215	.258	.284	.309	.326									
	.102	.129	.141	.173	.236	.302	.369	.418	.455	.487									
5/8	4,800	6,000	6,720	8,400	11,760	15,600	19,920	22,888	26,160	28,800	37,440	44,880							
3/4	3,998	5,003	5,603	6,998	9,803	12,997	16,598	18,998	21,803	24,000	31,200	37,403							
7/8	3,428	4,283	4,800	6,000	8,400	11,145	14,228	16,283	18,683	20,573	26,745	32,055							
1	3,000	3,750	4,200	5,250	7,350	9,750	12,450	14,250	16,350	18,000	23,400	28,050	37,500						
1 1/8	2,663	3,330	3,735	4,665	6,533	8,670	11,070	12,668	14,535	15,998	20,798	24,930	33,330						
1 1/4	2,400	3,000	3,360	4,200	5,880	7,800	9,960	11,400	13,080	14,400	18,720	22,440	30,000						
	.129	.160	.178	.221	.301	.388	.480	.537	.600	.647	.781	.877							
	.155	.193	.215	.267	.366	.475	.591	.664	.746	.807	.990	1.128							
	.183	.227	.253	.314	.432	.562	.702	.791	.891	.968	1.198	1.379							
	.209	.260	.290	.360	.497	.649	.812	.918	1.037	1.128	1.406	1.630	2.003						
	.236	.294	.328	.407	.563	.736	.923	1.045	1.183	1.288	1.614	1.881	2.336						
	.262	.326	.365	.454	.628	.822	1.034	1.172	1.328	1.502	1.823	2.132	2.670						
1 3/8			3,053	3,818	5,438	7,087	9,053	10,365	11,888	13,088	17,018	20,400	27,270						
1 1/2			2,948	3,503	4,898	6,503	8,303	9,503	10,890	12,000	15,600	18,698	24,998						
1 3/4				3,000	4,200	5,573	7,118	8,145	9,345	10,283	13,373	16,028	21,428						
2				2,625	3,675	4,875	6,225	7,125	8,175	9,000	11,700	14,025	18,750	23,475	28,125	37,500			
2 1/4				.641	.890	1.170	1.478	1.679	1.910	2.160	2.656	3.136	4.005						
				.734	1.021	1.343	1.699	1.933	2.201	2.409	3.072	3.638	4.673	5.639	6.508	8.010			
				2,333	3,270	4,335	5,535	6,330	7,268	8,003	10,403	12,465	16,665	20,865	24,998	33,330			
				.828	1.152	1.517	1.921	2.250	2.556	2.730	3.489	4.140	5.340	6.475	7.509	9.345			
				2,100	2,940	3,900	4,980	5,700	6,540	7,200	9,360	11,220	15,000	18,780	22,500	30,000	37,500		
				.921	1.283	1.690	2.143	2.440	2.783	3.050	3.905	4.642	6.008	7.311	8.511	10.680	12.515		
2 3/4				1,913	2,670	3,548	4,530	5,183	5,948	6,548	8,513	10,200	13,636	17,070	20,453	27,270	34,088	40,913	
3				1,015	1,413	1,864	2,364	2,699	3,177	3,495	4,322	5,144	6,675	8,147	9,512	12,015	14,180	16,020	
				1,748	2,453	3,248	4,148	4,748	5,453	6,000	7,800	9,353	12,503	15,653	18,750	24,998	31,253	37,500	
				1.108	1.544	2.037	2.586	2.947	3.393	3.691	4.739	5.646	7.343	8.982	10.513	13.350	15.853	18.020	
				3,000	3,833	4,388	5,033	5,535	6,033	6,535	7,200	8,633	11,535	14,445	17,310	23,078	28,845	34,613	
						2.211	2.805	3.201	3.634	3.975	5.155	6.148	8.010	9.818	11.514	14.685	17.520	32.146	
						2,783	3,555	4,073	4,673	5,145	6,683	8,018	10,718	13,418	16,073	21,428	26,783	22,027	
						2.385	3.029	3.455	3.976	4.385	5.571	6.650	8.678	10.650	12.515	16.020	19.191	30.000	
						2,603	3,323	3,803	4,358	4,800	6,240	7,478	9,998	12,518	15,000	20,003	24,998	24,030	
						2.558	3.248	3.708	4.235	4.650	5.988	7.152	9.345	11.490	13.520	17.355	20.860	28.030	
						2,438	3,112	3,563	4,088	4,500	5,850	7,013	9,375	11,738	14,063	18,750	23,438	28,125	
						2.732	3.472	3.962	4.530	4.973	6.404	7.654	10.010	12.330	14.520	18.690	22.530	26.030	

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.