

# Stainless Steel Pipe Sizes

## Theoretical Internal Bursting Pressures\*

Nominal I.P.S. (in.)	Nominal O.D. (in.)	SCHEDULE 5S		SCHEDULE 10S		SCHEDULE 40S		SCHEDULE 80S	
		Wall (in.)	Pressure (psi.)	Wall (in.)	Pressure (psi.)	Wall (in.)	Pressure (psi.)	Wall (in.)	Pressure (psi.)
1/8	.405			.049	18150	.068	25175	.095	35175
1/4	.540			.065	18050	.088	24450	.119	33050
3/8	.675			.065	14450	.091	20225	.126	28000
1/2	.840	.065	11600	.083	14825	.109	19475	.147	26250
3/4	1.050	.065	9275	.083	11850	.113	16150	.154	22000
1	1.315	.065	7425	.109	12450	.133	15175	.179	20425
1-1/4	1.660	.065	5875	.109	9850	.140	12650	.191	17250
1-1/2	1.900	.065	5125	.109	8600	.145	11450	.200	15800
2	2.375	.065	4100	.109	6875	.154	9750	.218	13775
2-1/2	2.875	.083	4325	.120	6250	.203	10600	.276	14400
3	3.500	.083	3550	.120	5150	.216	9250		
3-1/2	4.000	.083	3100	.120	4500	.226	8475		
4	4.500	.083	2750	.120	4000	.237	7900		
5	5.563	.109	2950	.134	3625	.258	6950		
6	6.625	.109	2475	.134	3050	.280	6350		
8	8.625	.109	1900	.148	2575	.322	5600		
10	10.750	.134	1875	.165	2300	.365	5100		
12	12.750	.156	1825	.180	2125	.375	4400		
14	14.000	.156	1675	.188	2025				
16	16.000	.165	1550	.188	1775				
18	18.000	.165	1375	.188	1575				
20	20.000	.188	1400	.218	1625				
24	24.000	.218	1375	.250	1550				
30	30.000	.250	1250	.312	1550				

\* Bursting pressure calculated using Barlow's formula:  $P = \frac{2ST}{D}$

S = 75,000 psi fiber stress. T = nom. wall. D = nom. O.D.

# STAINLESS STEEL TUBING

## Theoretical Bursting Pressures and Weights

Upper Figures - Pressures  
Lower Figures - Weight/Foot

O.D.	Wall Thickness																		
Inches	.016	.020	.028	.035	.049	.065	.083	.095	.109	.120	.134	.156	.188	.250	.313	.375	.500	.750	
1/16	38,400	48,000																	
	.008	.009																	
1/8	19,200	24,000	39,000	42,000	58,800														
	.019	.022	.029	.033	.040														
3/16	12,800	15,998	22,403	29,498	39,203	51,863													
	.029	.035	.047	.057	.073	.083													
1/4		12,000	16,800	21,000	29,400	39,000	49,800	57,000											
		.049	.066	.080	.105	.128	.148	.157											
5/16		9,600	13,440	16,800	23,520	31,200	39,780	45,750											
		.062	.085	.103	.138	.172	.203	.221											
3/8		8,003	11,998	14,003	19,598	26,003	33,203	38,003	43,598	48,000									
		.075	.103	.127	.170	.215	.258	.284	.309	.326									
7/16		6,857	9,600	12,000	16,800	22,285	28,457	32,571	37,371	41,143									
		.089	.123	.151	.204	.259	.315	.348	.383	.408									
1/2		6,000	8,400	10,500	14,700	19,500	24,900	28,500	32,700	36,000									
		.102	.141	.173	.236	.302	.369	.418	.455	.487									
9/16		5,333	7,467	9,333	13,067	17,333	22,133	25,333	29,066	32,000									
		.116	.160	.197	.269	.346	.426	.475	.529	.568									
5/8		4,800	6,720	8,400	11,760	15,600	19,920	22,888	26,160	28,800	32,160	37,440	44,880						
		.129	.178	.221	.301	.388	.480	.537	.600	.647	.703	.781	.877						
3/4		3,998	5,603	6,998	9,803	12,997	16,598	18,998	21,803	24,000	26,800	31,200	37,403						
		.155	.215	.267	.366	.475	.591	.664	.746	.807	.882	.990	1.128						
7/8		3,428	4,800	6,000	8,400	11,145	14,228	16,283	18,683	20,573	22,971	26,745	32,055						
		.183	.253	.314	.432	.562	.702	.791	.891	.968	1.061	1.198	1.379						
1		3,000	4,200	5,250	7,350	9,750	12,450	14,250	16,350	18,000	20,100	23,400	28,050	37,500					
		.209	.290	.360	.497	.649	.812	.918	1.037	1.128	1.239	1.406	1.630	2.003					
1 1/8		2,663	3,735	4,665	6,533	8,670	11,070	12,668	14,535	15,998	17,866	20,798	24,930	33,330					
		.236	.328	.407	.563	.736	.923	1.045	1.183	1.288	1.418	1.614	1.881	2.336					
1 1/4		2,400	3,360	4,200	5,880	7,800	9,960	11,400	13,080	14,400	16,080	18,720	22,440	30,000					
		.262	.365	.454	.628	.822	1.034	1.172	1.328	1.448	1.597	1.823	2.132	2.670					
1 3/8			3,053	3,818	5,348	7,087	9,053	10,365	11,888	13,088	14,618	17,018	20,400	27,270					
			.402	.501	.694	.909	1.145	1.299	1.473	1.608	1.776	2.031	2.383	3.004					
1 1/2			2,948	3,503	4,898	6,503	8,303	9,503	10,890	12,000	13,400	15,600	18,698	24,998					
			.440	.547	.759	.996	1.256	1.426	1.619	1.769	1.955	2.239	2.634	3.338					
1 5/8				3,230	4,523	6,000	7,662	8,769	10,062	11,077	12,369	14,400	17,354	23,077					
				.594	.825	1.083	1.367	1.552	1.765	1.929	2.134	2.447	2.885	3.671					
1 3/4				3,000	4,200	5,573	7,118	8,145	9,345	10,283	11,486	13,373	16,028	21,428					
				.641	.890	1.170	1.478	1.679	1.910	2.160	2.313	2.656	3.136	4.005					
2				2,625	3,675	4,875	6,225	7,125	8,175	9,000	10,050	11,700	14,025	18,750	23,475	28,125	37,500		
				.734	1.021	1.343	1.699	1.933	2.201	2.409	2.671	3.072	3.638	4.673	5.639	6.508	8.010		
2 1/4				2,333	3,270	4,335	5,535	6,330	7,268	8,003	8,933	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	3.028	3.489	4.140	5.340	6.475	7.509	9.345		
2 1/2				2,100	2,940	3,900	4,980	5,700	6,540	7,200	8,040	9,360	11,220	15,000	18,780	22,500	30,000		
				.921	1.283	1.690	2.143	2.440	2.783	3.050	3.386	3.905	4.642	6.008	7.311	8.511	10.680		
2 3/4				1,913	2,670	3,548	4,530	5,183	5,948	6,548	7,309	8,513	10,200	13,636	17,070	20,453	27,270	40,913	
				1.015	1.413	1.864	2.364	2.699	3.177	3.495	3.744	4.322	5.144	6.675	8.147	9.512	12.015	16.020	
3				1,748	2,453	3,248	4,148	4,748	5,453	6,000	6,700	7,800	9,353	12,503	15,653	18,750	24,998	37,500	
				1.108	1.544	2.037	2.586	2.947	3.393	3.691	4.102	4.739	5.646	7.343	8.982	10.513	13.350	18.020	
3 1/4					3,000	3,833	4,388	5,033	5,535	6,185	7,200	8,633	11,535	14,445	17,310	23,078	34,613		
					2.211	2.805	3.201	3.634	3.975	4.459	5.155	6.148	8.010	9.818	11.514	14.685	20.025		
3 1/2					2,783	3,555	4,073	4,673	5,145	5,743	6,683	8,018	10,718	13,418	16,073	21,428	32,146		
					2.385	3.029	3.455	3.976	4.385	4.817	5.571	6.650	8.678	10.650	12.515	16.020	22.027		
3 3/4					2,603	3,323	3,803	4,358	4,800	5,360	6,240	7,478	9,998	12,518	15,000	20,003	30,000		
					2.558	3.248	3.708	4.235	4.650	5.175	5.988	7.152	9.345	11.490	13.520	17.355	24.030		
4					2,438	3,113	3,563	4,088	4,500	5,025	5,850	7,013	9,375	11,738	14,063	18,750	28,125		
					2.732	3.472	3.962	4.530	4.973	5.533	6.404	7.654	10.010	12.330	14.520	18.690	26.030		

Working pressures for T304 and T316  
A269 tubing between -20 F and 100 F.

The A.S.M.E. code suggests a safety  
factor of four  
E.G. 1/4" O.D. x .035 = 5250 P.S.I.

For higher temperatures multiply  
working pressure by:

	300 F	500 F	1000 F
T306	.828	.744	.665
T316	.900	.853	.746