

THEORETICAL BURSTING PRESSURES

STAINLESS STEEL PIPE

Upper figures: Pressures in pounds. Lower figures: Wall thickness/wt/ft

		Pipe Schedules							
Pipe Size	O.D.	5	10	40	STD	80	E.H.	160	DBLE E.H.
1/8"	.405"	12,963 .035/1383	48,000 .049/1863	25,185 .068/.2447	25,185 .068/.2447	35,185 .095/.3145	35,185 .095/.3145		
1/4"	.540"	13,611 .049/.3270	18,056 .065/.3297	24,444 .086/.4248	24,444 .088/.4248	33,056 .119/.5351	33,056 .119/.5351		
3/8"	.675"	10,889 .049/.3276	14,444 .065/.4235	20,222 .091/.5676	20,222 .091/.5676	28,000 .126/.7388	28,000 .126/.7388		
1/2"	.840"	11,607 .065/.5380	14,821 .083/.6710	19,464 .109/.8510	19,464 .109/.8510	26,250 .147/1.088	26,250 .147/1.088	33,383 .187/1.304	52,500 .294/1.714
3/4"	1.050"	9,286 .065/.6838	11,857 .083/.8572	16,143 .113/1.131	16,143 .113/1.131	22,000 .154/1.474	22,000 .154/1.474	31,143 .218/1.937	44,000 .308/2.441
1"	1.315"	7,414 .065/.8678	12,433 .109/1.404	15,171 .133/1.679	15,171 .133/1.679	20,418 .179/2.172	20,418 .179/2.172	28,517 .250/2.844	40,837 .358/3.659
1-1/4"	1.660"	5,873 .065/1.107	9,849 .109/1.806	12,651 .140/2.273	12,651 .140/2.273	17,259 .191/2.997	17,259 .191/2.997	22,590 .250/3.765	34,518 .382/5.214
1-1/2"	1.900"	5,132 .065/1.274	8,505 .109/2.085	11,447 .145/2.718	11,447 .145/2.718	15,789 .200/3.631	15,789 .200/3.631	22,184 .281/4.859	31,579 .281/4.859
2"	2.375"	4,105 .065/1.604	6,884 .109/2.638	9,726 .154/3.653	9,726 .154/3.653	13,768 .218/5.022	13,768 .218/5.022	21,663 .343/7.444	27,537 .436/9.029
2-1/2"	2.875"	4,330 .083/2.475	6,261 .120/3.531	10,591 .203/5.793	10,591 .203/5.793	14,400 .276/7.661	14,400 .276/7.661	19,565 .343/10.01	28,800 .552/13.69
3"	3.5"	3,557 .083/3.029	5,143 .120/4.332	9,257 .216/7.576	9,257 .216/7.576	12,857 .300/10.25	12,857 .300/10.25	18,771 .438/14.32	25,714 .600/18.58
3-1/2"	4.0"	3,112 .083/3.472	4,500 .120/4.973	8,475 .226/9.109	8,475 .226/9.109	11,925 .318/12.50	11,925 .318/12.50		23,850 .636/22.85
4"	4.5"	2,767 .083/3.915	4,000 .120/5.613	7,900 .237/10.79	7,900 .237/10.79	11,233 .337/14.98	11,233 .337/14.98	17,700 .531/22.51	22,467 .674/27.54
5"	5.563"	2,939 .109/6.349	3,613 .134/7.770	6,957 .258/14.62	6,957 .258/14.62	10,111 .375/20.78	10,111 .375/20.78	16,852 .625/32.96	20,223 .75/38.55
6"	6.625"	2,468 .109/7.585	3,034 .134/9.289	6,340 .280/18.97	6,340 .280/18.97	9,781 .432/28.57	9,781 .432/28.57	16,257 .718/45.30	19,562 .864/53.16
8"	8.625"	1,896 .109/9.14	2,574 .148/13.40	5,600 .322/28.55	5,600 .322/28.55	8,696 .500/43.39	8,696 .500/43.39	15,756 .906/74.69	15,217 .875/72.42
10"	10.75"	1,870 .134/15.19	2,302 .165/18.70	5,093 .365/40.48	5,093 .365/40.48	8,274 .593/64.33	6,977 .500/54.74		
12"	12.75"	1,941 .156/20.93	2,118 .180/24.16	4,776 .406/53.52	4,776 .375/49.56	8,082 .687/88.51	5,882 .500/65.42		
14"	14.0"		2,679 .250/36.71	4,693 .438/63.37	4,693 .375/54.57	8,036 .750/106.1	5,357 .500/72.09		
16"	16.0"		2,344 .250/42.05	4,688 .500/82.77	4,688 .375/62.58	7,903 .843/136.5	4,688 .500/82.77		
18"	18.0"		2,083 .250/47.39	4,683 .562/104.8	4,683 .375/70.59	7,808 .937/170.8	4,167 500/93.45		
20"	20.0"		1,875 .250/52.73	4,448 .593/122.9	4,448 .375/78.60	7,733 1.031/208.9	3,750 500/104.1		
24"	24.0"		1,563 .250/63.41	4,294 .687/171.2	3,344 .375/94.62	7,613 1.218/296.4	3,125 .500/125.5		

The ASME code suggests a safety factor of four when determining working pressure.

T304/L and T316/L pipe for temperatures between -20°F and 100°F.

E.g. 1" SCH40 = 3,793 PSI

For higher temperatures multiply working pressure by:

	300°F	500°F	1000°F
T304/L	.828	.744	.665
T316/L	.900	.853	.764

All pressure ratings are approximate and for illustration purposes only. Values are not guaranteed or warranted.