



IPS INDUSTRIAL TUBING – THEORETICAL BURSTING AND COLLAPSING PRESSURES

OD Inches	.020 25	.022 24	.025 23	.028 22	.032 21	.035 20	.042 19	.049 18	.058 17	.065 16	.072 15	.083 14	.095 13	.109 12	.120 11	.134 10	.148 9	.165 8
1/8	24,000	26,400	30,000	33,600	38,600	38,400	42,000	50,400	58,800									
1/4	12,000	13,200	15,000	16,800	19,200	21,000	25,200	29,400	34,800	39,000								
3/8	8,000	8,800	10,000	11,200	12,800	14,000	16,800	19,600	23,200	26,000								
1/2	6,000	6,600	7,500	8,400	9,600	10,500	12,600	14,700	17,400	19,500	21,600	24,900	28,500					
5/8	4,800	5,300	6,000	6,725	7,675	8,400	10,075	11,750	13,925	15,600	17,250	19,925	22,800					
3/4	4,000	4,400	5,000	5,600	6,400	7,000	8,400	9,800	11,600	13,000	14,400	16,600	19,000	21,800				
7/8	3,425	3,750	4,300	4,800	5,475	6,000	7,200	8,400	9,950	11,150	12,350	14,225	16,275	18,675				
1	3,000	3,300	3,750	4,200	4,800	5,250	6,300	7,350	8,700	9,750	10,800	12,450	14,250	16,350	18,000	20,100	22,200	
1-1/8			3,325	3,750	4,275	4,650	5,600	6,550	7,750	8,650	9,600	11,050	12,650	14,550	16,000	17,875	19,725	
1-1/4			3,000	3,350	3,850	4,200	5,050	5,875	6,950	7,800	8,650	9,950	11,400	13,075	14,400	16,075	17,750	
1-3/8			2,725	3,050	3,500	3,825	4,575	5,350	6,325	7,100	7,850	9,050	10,350	11,900	13,100	14,625	16,150	
1-1/2			2,500	2,800	3,200	3,500	4,200	4,900	5,800	6,500	7,200	8,300	9,500	10,900	12,000	13,400	14,800	
1-5/8			2,300	2,575	2,950	3,225	3,875	4,525	5,350	6,000	6,650	7,650	8,775	10,050	11,075	12,375	13,650	
1-3/4			2,150	2,400	2,750	3,000	3,600	4,200	4,975	5,575	6,175	7,125	8,150	9,350	10,275	11,475	12,675	
1-7/8						2,800	3,350	3,925	4,650	5,200	5,750	6,650	7,600	8,725	9,600	10,725	11,850	
2						2,625	3,150	3,675	4,350	4,875	5,400	6,225	7,125	8,175	9,000	10,050	11,100	
2-1/8						2,475	2,975	3,450	4,100	4,600	5,075	5,850	6,700	7,700	8,475	9,450	10,450	
2-1/4						2,800	3,275	3,875	4,350	4,800	5,550	6,350	7,275	8,000	8,975	9,875		
2-3/8						2,650	3,100	3,675	4,100	4,550	5,250	6,000	6,900	7,575	8,475	9,350	10,425	
2-1/2						2,525	2,950	3,475	3,900	4,325	4,975	5,700	6,550	7,200	8,050	8,875	9,900	
2-5/8						2,400	2,800	3,325	3,725	4,125	4,850	5,425	6,225	6,850	7,650	8,450	9,425	
2-3/4							2,675	3,150	3,550	3,925	4,525	5,175	5,950	6,550	7,300	8,075	9,000	
2-7/8							2,550	3,025	3,400	3,750	4,325	4,950	5,675	6,250	7,000	7,725	8,600	
3							2,450	2,900	3,250	3,600	4,150	4,850	5,450	6,000	6,700	7,400	8,250	
3-1/8							2,350	2,775	3,125	3,450	3,975	4,550	5,225	5,550	6,425	7,100	7,925	
3-1/4							2,250	2,675	3,000	3,325	3,825	4,375	5,025	5,525	6,175	6,825	7,600	
3-1/2							2,100	2,475	2,775	3,075	3,550	4,075	4,675	5,150	5,750	6,350	7,075	
3-5/8								2,025	2,400	2,675	2,975	3,425	3,925	4,500	4,950	5,550	6,100	6,825
OD Inches	.049 18	.058 17	.065 16	.072 15	.083 14	.095 13	.109 12	.120 11	.134 10	.148 9	.165 8	.180 7	.203 6	.220 5	.238 4	.259 3	.284 2	.300 1
3-3/4	1,950	2,325	2,600	2,875	3,325	3,800	4,350	4,800	5,350	5,900	6,600	7,200	8,125	8,800				
3-7/8	1,900	2,250	2,500	2,775	3,200	3,675	4,200	4,650	5,175	5,725	6,375	6,975	7,850	8,500				
4	1,825	2,175	2,425	2,700	3,100	4,075	4,090	4,500	5,025	5,550	6,175	6,750	7,600	8,250				
4-1/4	1,725	2,050	2,300	2,550	2,925	3,350	3,850	4,225	4,725	5,225	5,825	6,350	7,150	7,750				
4-1/2	1,625	1,925	2,150	2,400	2,750	3,150	3,625	4,000	4,450	4,925	5,500	6,000	6,750	7,325	7,925			
4-3/4	1,550	1,825	2,050	2,275	2,625	3,000	3,450	3,775	4,225	4,675	5,200	5,675	6,400	6,950	7,500			
5	1,475	1,750	1,950	2,150	2,500	2,850	3,275	3,600	4,025	4,450	4,950	5,400	6,100	6,600	7,150			
5-1/4	1,400	1,650	1,850	2,050	2,375	2,700	3,100	3,425	3,825	4,225	4,700	5,150	5,800	6,275	6,800			
5-1/2	1,325	1,575	1,775	1,950	2,250	2,600	2,975	3,275	3,650	4,025	4,500	4,900	5,550	6,000	6,500	7,050		
6	1,220	1,450	1,625	1,800	2,075	2,375	2,725	3,000	3,350	3,700	4,125	4,500	5,075	5,500	5,950	6,475	7,100	
8	925	1,100	1,225	1,350	1,550	1,775	2,050	2,250	2,525	2,775	3,100	3,375	3,800	4,125	4,475	4,850	5,325	5,625
10	750	875	975	1,075	1,250	1,425	1,625	1,800	2,000	2,225	2,475	2,700	3,050	3,300	3,575	3,875	4,250	4,500
12	625	725	825	900	1,050	1,200	1,375	1,500	1,675	1,850	2,075	2,250	2,550	2,750	2,975	3,250	3,550	3,750
14	525	625	700	775	900	1,025	1,175	1,300	1,450	1,600	1,775	1,925	2,175	2,350	2,550	2,775	3,050	3,225
16	450	550	600	675	775	900	1,025	1,125	1,250	1,400	1,550	1,700	1,900	2,050	2,225	2,425	2,675	2,825
18	400	475	550	600	700	800	900	1,000	1,125	1,250	1,375	1,500	1,700	1,850	1,975	2,150	2,350	2,500
20	375	450	500	550	625	725	825	900	1,000	1,100	1,250	1,350	1,525	1,650	1,775	1,950	2,125	2,250
24	300	375	400	450	525	600	675	750	850	925	1,025	1,125	1,250	1,375	1,475	1,625	1,775	1,875
30	250	300	325	350	425	475	550	600	675	750	825	900	1,025	1,100	1,200	1,300	1,425	1,500

Theoretical Bursting pressure, in pounds for welded stainless tubes. Based on Barlow's Formula: $P = \frac{2ST}{D}$

P = Bursting Pressure in psi D = Outside diameter of tube in inches

S = Fiber stress of 75,000psi ultimate for bursting pressure T = Wall thickness

* Bursting pressures shown are calculated on basis of minimum tensile strength of 75,000 psi. All dimensions shown are nominal. These are burst pressures and should not be considered as safe working pressure. The above values are provided as an example only for comparative purposes only and are based on ASTM properties and standard formulae. No warranty is made either expressed or implied concerning accuracy of the calculations or the formula used to calculate the values.