

Tubing selection chart

Selection Chart for 304 and 316 Stainless Steel Annealed Seamless Tubing ASTM - 249 or equivalent for Imperial Tubing

Allowable Stress = 18,750 psi between -20°F and 100°F

Tubing O.D (inch)	WALL THICKNESS (inch)												
	0.010	0.012	0.014	0.016	0.020	0.028	0.035	0.049	0.065	0.083	0.095	0.109	0.102
1/16	5600	6800	8100	9400	12000								
1/8						8500	10900						
3/16						5400	7000	10200					
1/4						4800	5100	7500	10200				
5/16							4000	5800	8000				
3/8							3300	4800	6500				
1/2							2400	3500	4700	6200			
5/8								2900	4000	5200	6000		
3/4								2400	3300	4200	4900	5800	
7/8								2000	2800	3600	4200	4800	
1									2400	3100	3600	4200	4700

Factor of safety = 4, considering tensile strength to be 75,000 psi at room temperature

Selection Chart for 304 and 316 Stainless Steel Annealed Seamless Tubing ASTM - 249 or equivalent for Metric size Tubing

Allowable Stress = 41 Mpa between -29°C and 38°C

Tubing O.D (mm)	WALL THICKNESS (mm)												
	0.71	0.89	1.00	1.25	1.50	1.65	2.00	2.11	2.41	2.58	2.77	3.00	3.05
3	10800	13800	15300										
4	7900	10100	11500	14400									
6	5000	6500	7400	9400	11500	12700							
8		4700	5800	6800	8400	9300							
10		3700	4200	5300	6500	7300							
12		3000	3400	4400	5300	5900	10600	11100					
16			2500	3200	3900	4300	5300	5700	6600	6800			
18				2800	3400	3800	4700	5000	5800	6000	6700		
20				2500	3000	3400	4200	4400	5100	5300	6000		
22				2300	2800	3000	3800	4000	4600	4800	5400		
25				2000	2400	2700	3300	3500	4000	4200	4700	5100	5200

Factor of safety = 4, considering tensile strength to be 517.1 Mpa at room temperature