

Maximum Allowable Working Pressure Tables STAINLESS STEEL TUBING

Fully annealed high quality type 304, 316, etc
Stainless steel hydraulic tubing ASTM A-269 or A-2213 or equivalent.
Hardness : Rb90 or less

Stainless Steel Tube Inch Size

Tube O.D. (Inches)	Tube Wall Thickness In Inches															
	0.010	0.012	0.014	0.016	0.020	0.028	0.035	0.049	0.065	0.083	0.095	0.109	0.120	0.134	0.156	0.188
1/16"	5,600	6,800	8,200	9,600	12,600											
1/8"					8,500	11,200										
3/16"					5,400	7,000	10,400									
1/4"					4,000	5,100	7,500	10,400								
5/16"						4,000	5,800	8,000								
3/8"							3,300	4,800	6,500							
1/2"							2,600	3,700	5,100	6,700						
5/8"								2,900	4,000	5,200	6,000					
3/4"								2,400	3,300	4,200	4,900	5,800				
7/8"								2,000	2,800	3,600	4,200	4,800				
1"									2,400	3,100	3,600	4,200	4,700			
1-1/4"										2,500	2,800	3,300	3,600	4,100	4,900	
1-1/2"											2,300	2,700	3,000	3,400	4,000	4,900
2"												2,000	2,200	2,500	2,900	3,600

Working Pressure in psig

For gas service, applying tube wall thickness only on outside of shade boundary

Stainless Steel Tube Metric Size

Tube O.D. (mm)	Tube Wall Thickness In Millimeter														
	0.8	1	1.2	1.5	1.8	2	2.2	2.5	2.8	3	3.5	4	4.5	5	
3	720	950													
4	520	670	840												
6	330	430	520	680											
8		310	380	490											
10		240	300	380	470	530									
12		200	240	310	380	430									
14		180	220	280	340	390	430								
15		170	200	260	320	360	400								
16			190	240	300	330	370	430							
18			170	210	260	290	330	380							
20			150	190	230	260	290	330	380						
22			140	170	210	240	260	300	340						
25				150	180	200	230	260	300	320					
28					180	200	230	260	280	330					
30					170	190	210	240	260	310					
32					160	170	200	230	240	290	330				
38						140	170	190	200	240	280	310			
50									150	180	210	230	260		

Working Pressure in psig

For gas service, applying tube wall thickness only on outside of shade boundary

ALLOWABLE STRESS

20,000psi between -20°F and 100°F based on ultimate tensile strength 75,000psi (ANSI B31.3 code)
(Bar = psig×0.0689 kPa = psig×6.89)

Notification

- 1) All calculations are based on maximum outside diameter and minimum wall thickness without allowance for corrosion and erosion.
- 2) Care should be taken for temperature rating if tubing is coated or plated
- 3) Figures shown are not for design purpose but for reference only and the accuracy of information is not liability of Ihsung Tech Co.,Ltd.

COPPER TUBING

High quality soft annealed seamless copper tube to ASTM B-75 or equivalent.

Fractional Copper Tubing

Tube O.D. (Inches)	Tube Wall Thickness In Inches										
	0.010	0.012	0.028	0.035	0.049	0.065	0.083	0.095	0.109	0.020	
1/16"	1,652	2,124	6,742	9,871							
1/8"			2,840	3,787							
3/16"			1,810	2,343	3,615						
1/4"			1,321	1,696	2,565	3,639					
5/16"				1,329	1,988	2,782					
3/8"				1,093	1,623	2,251					
1/2"				806	1,187	1,630	2,160				
5/8"					935	1,277	1,681	1,970			
3/4"					748	1,017	1,332	1,555	1,823		
7/8"					639	867	1,133	1,320	1,544		
1"					559	756	986	1,147	1,339	1,479	

Metric Copper Tubing

Tube O.D. (mm)	Tube Wall Thickness In Millimeter										
	0.8	1.0	1.2	1.5	1.8	2.0	2.2	2.5	2.8	3.0	
3	239	326									
4	175	228	291								
6	111	142	178	237	299						
8	81	103	128	168	210						
10	64	81	100	131	162	184					
12	53	67	82	107	131	149					
14		57	70	90	111	125	139	162			
15		53	65	84	102	116	129	150			
16		49	61	78	96	108	120	139			
18		43	53	68	83	94	104	121	138	150	
20		39	47	61	75	84	93	107	123	133	
22		35	43	55	67	76	84	97	110	120	
25		31	38	48	59	66	73	84	96	104	

ALLOWABLE STRESS

6,500psi between -20°F and 100°F based on ultimate tensile strength 30,000psi (ANSI B31.3 code)
 (Bar = psig × 0.0689 kPa = psig × 6.89)

MONEL TUBING

Fully annealed quality seamless MONEL 400 hydraulic tubing ASTM B-165 or equivalent.
 Hardness : Rb75 Maximum

Monel 400 Fractional Tubing

Tube O.D. (Inches)	Tube Wall Thickness In Inches										
	0.010	0.012	0.028	0.035	0.049	0.065	0.083	0.095	0.109	0.020	
1/8"			7,900	10,100							
1/4"			3,700	4,800	7,000	9,500					
3/8"				3,100	4,400	6,100					
1/2"				2,300	3,200	4,400					
3/4"					2,200	3,000	4,000	4,600			
1"						2,200	2,900	3,400	3,900	4,300	

ALLOWABLE STRESS

18,700psi between -20°F and 100°F based on ultimate tensile strength 70,000psi (ANSI B31.3 code)
 (Bar = psig × 0.0689 kPa = psig × 6.89)