

Maximum Allowable Working Pressure (MAWP) Table

- Working pressure calculated in accordance with ASME B31.3, Chemical Plant and Petroleum Refinery Piping Code, 2014 Edition

Table 5. Stainless Steel Tubing

Fully annealed 304 or 316 high quality seamless stainless steel tube to ASTM A269 or equivalent.

Hardness : HRB90 (Hv200) or less

Stainless Steel Tube Inch Size																				
Tube OD (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

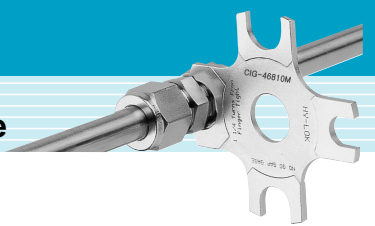
Stainless Steel Tube Metric Size															
Tube OD (mm)	Tube Wall Thickness in Millimeters														
	0.8	1	1.2	1.5	1.8	2	2.2	2.5	2.8	3	3.5	4	4.5	5	
2	1180														
3	720	950													
4	520	670	840												
6	330	430	520	680											
8		310	380	490											
10		240	300	380	470	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

- Unless otherwise specified, allowable working pressure is calculated from ASTM A269 tubing and an S value of 20,000psi (137,800kPa) for ASTM A213 tubing at -28°C ~ 37°C (-20°F ~ 100°F) as specified in ASME B31.3 and ASME B31.1 respectively.
- Based on minimum wall thickness and maximum O.D. allowable by ASTM A269
- For welded tubing, the following derating rate to be applied for weld integrity. (ASME B31.3 - 2014 Edition, Table A - 1B)
 - for double welded tubing : 0.85
 - for single welded tubing : 0.80
- To determine bar, multiply psig by 0.0689 and to determine kPa by 6.89

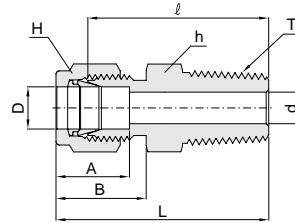
Note :

- All calculations are based on maximum outside diameter and minimum wall thickness without allowance for corrosion and erosion.
- Care should be taken for temperature rating if tubing is coated or plated.
- Figures shown are not for design purpose but for reference only and the accuracy of information here is not liability of our company.

Tube to Male Pipe



Male Connector CMC - N



Connects Fractional Tube To Female NPT Thread

Part No.	Tube OD D		T* NPT Size	d ⁺ Min.	Width across flat (in.)		A	B	ℓ	L
	in.	mm			h	H				
CMC 1 - 1N	1/16	1.58	1/16	1.3	5/16	5/16	8.6	10.9	20.0	23.8
CMC 1 - 2N	1/16	1.58	1/8	1.3	7/16	7/16	8.6	10.9	22.4	26.2
CMC 1 - 4N	1/16	1.58	1/4	1.3	9/16	5/16	8.6	10.9	27.2	31.0
CMC 2 - 1N	1/8	3.17	1/16	2.3	7/16	7/16	12.7	15.2	23.1	29.7
CMC 2 - 2N	1/8	3.17	1/8	2.3	7/16	7/16	12.7	15.2	23.9	30.5
CMC 2 - 4N	1/8	3.17	1/4	2.3	9/16	7/16	12.7	15.2	29.0	35.6
CMC 2 - 6N	1/8	3.17	3/8	2.3	11/16	7/16	12.7	15.2	29.2	35.8
CMC 2 - 8N	1/8	3.17	1/2	2.3	7/8	7/16	12.7	15.2	35.6	42.2
CMC 3 - 2N	3/16	4.76	1/8	3.0	7/16	1/2	13.7	16.0	24.6	31.2
CMC 3 - 4N	3/16	4.76	1/4	3.0	9/16	1/2	13.7	16.0	29.7	36.3
CMC 4 - 1N	1/4	6.35	1/16	3.0	1/2	9/16	15.2	17.8	25.4	32.8
CMC 4 - 2N	1/4	6.35	1/8	4.8	1/2	9/16	15.2	17.8	25.4	32.8
CMC 4 - 4N	1/4	6.35	1/4	4.8	9/16	9/16	15.2	17.8	30.5	37.8
CMC 4 - 6N	1/4	6.35	3/8	4.8	11/16	9/16	15.2	17.8	31.0	38.4
CMC 4 - 8N	1/4	6.35	1/2	4.8	7/8	9/16	15.2	17.8	37.3	44.7
CMC 4 - 12N	1/4	6.35	3/4	4.8	1-1/16	9/16	15.2	17.8	38.9	46.2
CMC 5 - 2N	5/16	7.93	1/8	4.8	9/16	5/8	16.3	18.5	36.7	34.0
CMC 5 - 4N	5/16	7.93	1/4	6.3	9/16	5/8	16.3	18.5	31.2	38.6
CMC 5 - 6N	5/16	7.93	3/8	6.3	11/16	5/8	16.3	18.5	31.8	39.1
CMC 6 - 2N	3/8	9.52	1/8	4.8	5/8	11/16	16.8	19.3	27.9	35.3
CMC 6 - 4N	3/8	9.52	1/4	7.0	5/8	11/16	16.8	19.3	32.5	39.9
CMC 6 - 6N	3/8	9.52	3/8	7.0	11/16	11/16	16.8	19.3	32.5	39.9
CMC 6 - 8N	3/8	9.52	1/2	7.0	7/8	11/16	16.8	19.3	38.9	46.2
CMC 6 - 12N	3/8	9.52	3/4	7.0	1-1/16	11/16	16.8	19.3	40.4	47.8
CMC 8 - 2N	1/2	12.70	1/8	4.8	13/16	7/8	22.9	21.8	28.7	38.9
CMC 8 - 4N	1/2	12.70	1/4	7.0	13/16	7/8	22.9	21.8	33.3	43.4
CMC 8 - 6N	1/2	12.70	3/8	9.5	13/16	7/8	22.9	21.8	33.3	43.4
CMC 8 - 8N	1/2	12.70	1/2	10.4	7/8	7/8	22.9	21.8	38.9	49.0
CMC 8 - 12N	1/2	12.70	3/4	10.4	1-1/16	7/8	22.9	21.8	40.4	50.5
CMC 8 - 16N	1/2	12.70	1	10.4	1-3/8	7/8	22.9	21.8	47.0	57.2
CMC 10 - 6N	5/8	15.87	3/8	9.5	15/16	1	24.4	21.8	34.0	44.2
CMC 10 - 8N	5/8	15.87	1/2	12.0	15/16	1	24.4	21.8	38.9	49.0
CMC 10 - 12N	5/8	15.87	3/4	12.7	1-1/16	1	24.4	21.8	40.4	50.5
CMC 12 - 8N	3/4	19.05	1/2	12.0	1-1/16	1-1/8	24.4	21.8	40.4	50.5
CMC 12 - 12N	3/4	19.05	3/4	15.7	1-1/16	1-1/8	24.4	21.8	40.4	50.5
CMC 12 - 16N	3/4	19.05	1	15.7	1-3/8	1-1/8	24.4	21.8	47.0	57.2
CMC 14 - 12N	7/8	22.22	3/4	15.7	1-3/16	1-1/4	25.9	21.8	40.4	50.5
CMC 14 - 16N	7/8	22.22	1	18.3	1-3/8	1-1/4	25.9	21.8	47.0	57.2
CMC 16 - 8N	1	25.40	1/2	12.0	1-3/8	1-1/2	31.2	26.4	45.2	57.4
CMC 16 - 12N	1	25.40	3/4	15.7	1-3/8	1-1/2	31.2	26.4	45.2	57.4
CMC 16 - 16N	1	25.40	1	22.3	1-3/8	1-1/2	31.2	26.4	50.0	62.2
CMC 20 - 16N	1-1/4	31.75	1	22.3	1-3/4	1-7/8	41.1	38.9	55.1	77.2
CMC 20 - 20N	1-1/4	31.75	1-1/4	28.0	1-3/4	1-7/8	41.1	38.9	55.1	77.2
CMC 24 - 24N	1-1/2	38.10	1-1/2	34.0	2-1/8	2-1/4	50.0	45.2	61.7	88.9
CMC 32 - 32N	2	50.80	2	46.0	2-3/4	3	67.6	62.7	76.2	113.5

* ISO Tapered Threads are available upon request.

† The d dimension is the minimum nominal opening. These fittings may have a larger opening at the pipe/straight thread end.

All dimensions are in millimeters unless otherwise specified. Dimensions are for reference only, subject to change.