

**Tubing-Working Pressure Tables...Continued**

**Table #3: Carbon Steel Tubing**  
Wall Thickness of Tube (inches)

TUBE OD (In)	0.028	0.035	0.049	0.065	0.083	0.095	0.109	0.120	0.134	0.148	0.165	0.180	0.22
1/8	6,782	8,865											
3/16	4,319	5,556	8,253										
1/4	3,166	4,043	5,912	8,254	Working Pressure (psig)								
5/16		3,177	4,604	6,356									
3/8		2,615	3,769	5,167									
1/2		2,051	2,940	4,003	5,265								
5/8		1,623	2,318	3,140	4,106	4,774							
3/4			1,912	2,583	3,364	3,901	4,545						
7/8			1,627	2,193	2,848	3,297	3,833						
1			1,415	1,904	2,469	2,855	3,314	3,681					
1 1/4				1,504	1,946	2,246	2,601	2,885	3,251	3,624	4,086	4,501	5,650
1 1/2					1,607	1,853	2,143	2,374	2,672	2,974	3,347	3,681	4,599

The Allowable working pressures for carbon steel seamless tubing to **ASTM A 822-90 or equivalent** based on the following data: Temperature: -20°F to 100°F; Ultimate Tensile Strength: 47,000 psi; Allowable stress: 15,700 psi as specified by **ASME B31.3-2002**.

**Table #4: Monel Tubing**  
Wall Thickness of Tube (inches)

TUBE OD (In)	0.028	0.035	0.049	0.065	0.083	0.095	0.109	0.120
1/8	8,007	10,462						
1/4	3,758	4,798	7,012	9,788	Working Pressure (psig)			
3/8		3,109	4,479	6,139				
1/2		2,298	3,288	4,470	5,867			
3/4			2,269	3,064	3,989	4,625	5,389	
1			1,682	2,263	2,933	3,390	3,934	4,370

The Allowable working pressures for Monel Alloy 400 seamless tubing for **ASTM B165-05 or equivalent** based on the following data: Temperature: -20°F to 100°F; Ultimate Tensile Strength: 70,000 psi; Allowable stress: 18,700 psi as specified by **ASME B31.3-2002**.

**Table #5: Stress Factor for Elevated Temperatures**

TEMP (°F)	Stainless Steel		Copper	Carbon Steel	Monel
	ASTM A-269	316	ASTM B-75	ASTM A-179	ASTM B-165
100	1.00	1.00	1.00	1.00	1.00
200	1.00	1.00	0.80	0.96	0.88
300	1.00	1.00	0.78	0.90	0.82
400	0.94	0.97	0.50	0.86	0.79
500	0.88	0.85		0.82	0.79
600	0.82	0.85		0.77	0.79
700	0.80	0.82		0.73	0.79
800	0.76	0.80		0.59	0.68
900	0.73	0.78		0.41	0.43
1000	0.69	0.77		0.16	

To find the maximum allowable working pressure for various tubing materials at elevated temperatures, multiply the maximum allowable working pressure for the tube size and wall thickness found in Tables 1, 2 and 3 by the correct stress factor found in this Table.

# Thread Specifications

Brennan's connectors have one or more tubing end connections and there are a variety of pipe threads for which Brennan's Double-Ferrule Tube Fittings are available. Two of the most popular thread connections are the American National Pipe Thread (NPT) and the British Standard Pipe Threads (BSP). These threads meet the standards of individual countries as well as the codified ISO standards. All Brennan fittings with pipe threads or stud end threads conform to the specifications below:

- American National Pipe Thread (NPT): Reference specification ASA B2.1; 1960
- ISO Parallel Pipe Thread (British Standard Pipe Thread): Reference specifications BS 2779, ISO 228/1, DIN 259, JIS B 0202, IS 2643
- ISO Taper Pipe Thread (British Standard Pipe Taper Thread): Reference specifications BS 21, ISO 7/1, DIN 2999, JIS B 0203, IS 554
- Unified National Pipe Threads: Reference specifications ASA B1.1; 1964

