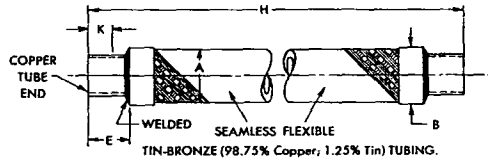


ANACONDA METAL HOSE DIVISION

The American Brass Company
WATERBURY 20, CONNECTICUT

Engineering Data
ANACONDA
Vibration Eliminators
WITH FEMALE ENDS



TO FIT COPPER TUBE		Flexible TUBING	DIMENSIONS (See Drawing Above)				FOR SUCCTION AND DISCHARGE LINES	
Actual O.D.	Nom.	I.D.	H ± 1/4	A Max.	B Max.	E ± 1/4	Part No.	U.L. No. (*)
1/2	1/2	3/8	7	1/2	1/2	1/2	3618F	M-36 (UL)
1/2	1/2	3/8	7 1/2	1/2	1/2	1/2	1418F	M-14 (UL)
3/4	3/4	5/8	8 1/2	1 1/4	1 1/4	1 1/4	5614F	M-56 (UL)
1/2	3/4	3/4	9	1/2	1/2	1/2	3838F	M-38 (UL)
3/4	1/2	1/2	9 1/2	1	1 1/4	1 1/4	1212F	M-12 (UL)
3/4	1/2	1/2	10	1	1 1/4	1	1258F	M-12 (UL)
3/4	3/4	3/4	11 1/2	1 1/4	1 1/4	1 1/4	3458F	M-34 (UL)
1 1/4	1	1	11 1/2	1 1/4	1 1/4	1 1/4	3434F	M-34 (UL)
1 1/4	1	1	13	1 1/4	1 1/4	1 1/4	1010F	M-10 (UL)
1 1/4	1 1/4	1 1/4	14 1/2	2 1/4	2 1/4	1 1/4	5454F	M-54 (UL)
1 1/4	1 1/4	1 1/4	17	2 1/4	2 1/4	2	6464F	M-64 (UL)
2 1/4	2	2	20	3 1/4	3 1/4	2 1/4	2020F	M-20H (UL)
2 1/2	2 1/2	2 1/2	24	3 1/4	3 1/4	3	5252F	M-52H (UL)
3 1/4	3	3	27	4 1/4	4 1/4	3 1/4	3030F	M-30 (UL)
3 1/4	3 1/4	3 1/4	32	5	5 1/4	4	7272F	M-72 (UL)
4 1/4	4	4	33	5 1/4	6	4 1/4	4040F	M-40 (UL)
5 1/4	5	5	41	6 1/4	7 1/4	5 1/4	5050F	—
6 1/4	6	6	49	7 1/4	8 1/4	6 1/4	6060F	—
8 1/4	8	8	62	9 1/4	10 1/4	7	8080F	—

Flexible TUBING	FOR APPLICATIONS UP TO 300 PSI (1)		FOR APPLICATIONS UP TO 400 PSI (2)		FOR APPLICATIONS UP TO 450 PSI (3)		FOR APPLICATIONS UP TO 500 PSI (4)	
I.D.	Part No.	U.L. No. (*)	Part No.	U.L. No. (*)	Part No.	U.L. No. (*)	Part No.	U.L. No. (*)
3/8	3618F	M-36 (UL)	3618FX	M-36 (UL)X	3618FY	M-36 (UL)Y	3618FZ	M-36 (UL)Z
1/2	1418F	M-14 (UL)	1418FX	M-14 (UL)X	1418FY	M-14 (UL)Y	1418FZ	M-14 (UL)Z
3/4	5614F	M-56 (UL)	5614FX	M-56 (UL)X	5614FY	M-56 (UL)Y	5614FZ	M-56 (UL)Z
3/4	3838F	M-38 (UL)	3838FX	M-38 (UL)X	3838FY	M-38 (UL)Y	3838FZ	M-38 (UL)Z
1/2	1212F	M-12 (UL)	1212FX	M-12 (UL)X	1212FY	M-12 (UL)Y	1212FZ	M-12 (UL)Z
1/2	1258F	M-12 (UL)	1258FX	M-12 (UL)X	1258FY	M-12 (UL)Y	1258FZ	M-12 (UL)Z
3/4	3458F	M-34 (UL)	3458FX	M-34 (UL)X	3458FY	M-34 (UL)Y	3458FZ	M-34 (UL)Z
3/4	3434F	M-34 (UL)	3434FX	M-34 (UL)X	3434FY	M-34 (UL)Y	3434FZ	M-34 (UL)Z
1	1010F	M-10 (UL)	1010FX	M-10 (UL)X	1010FY	M-10 (UL)Y	1010FZ	M-10 (UL)Z
1 1/4	5454F	M-54 (UL)	5454FX	M-54 (UL)X	5454FY	M-54 (UL)Y	5454FZ	M-54 (UL)Z
1 1/4	6464F	M-64 (UL)						
2	2020F	M-20H (UL)						
2 1/2	5252F	M-52H (UL)						
3	3030FH	M-30H (UL)						

NOTES ON APPLICATION COLUMNS:

Pressure relief device setting (PSI)

Pressure Limiting device cut-out (PSI)

I.D. of copper tube ends for depth "K" meets ASA Std. B16. 18-1950 and ASA B16.22-1951.

Braid: sizes through 1 1/4" I.D. have one signal-bronze (98.24% Copper; 1.75% Tin; 0.01% Phosphorus) braid covering.

□ 2" I.D. and larger are double-braided with signal-bronze wire for extra strength and protection.

3"-3030FH and all larger Vibration Eliminators are soldered under the ferrules after welding.

(*) Underwriters' Laboratories (U.L.) number on ferrule may appear with prefix "W" instead of "M".

Copper tube ends on sizes above 3" are commercial parts and "E" and "H" may exceed tolerances shown.

Vibration Eliminators are also available with male ends. Write for specifications.

Also write for general catalog on Anaconda hose assemblies.

GENERAL NOTES

Copper & Brass Research Association

420 Lexington Avenue, New York 17, N. Y.

Soldering Joints in Copper Tube

The two most common types of solder used in joining copper tube are 50-50 tin-lead solder and 95-5 tin-antimony solder. 50-50 solder is generally used for moderate pressures with temperatures up to 250° F. For all temperatures up to 250° F where higher strengths are required, the 95-5 solder should be used. In general, 95-5 solder melts at a higher temperature than does 50-50, has less of a pasty range, and is therefore somewhat more difficult to handle, particularly for a vertical joint to be filled upward.

The fluxes best suited to the 50-50 and 95-5 solders are in paste form and consist of a petrolatum-base, impregnated with zinc and ammonium chlorides. It should not be the function of the flux to clean the copper, but assuming that the copper has been cleaned the flux may be reasonably expected to remove residues of oxide, in addition to protecting the surfaces from oxidation during the heating process. The flux also floats out the remaining oxides ahead of the molten solder and promotes wetting action of the solder. In general, paste-type fluxes are recommended rather than liquid fluxes.

1. cleaning tube end
2. cleaning fitting socket



3. fluxing tube end
4. fluxing fitting socket



5. assembly
6. heating



7. applying solder
8. removing surplus solder and flux

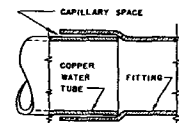


It cannot be too strongly emphasized that for strong, tight, long lasting joints, thorough cleaning of the tube surface and the inside of the cup of the fitting is of utmost importance. Pretinning is not necessary and generally is not recommended if the metal is properly cleaned and fluxed.

Fittings that are oversize will result in a loose fit. The capillary action is dependent on a fairly tight fit although a certain amount of looseness can be tolerated. Looseness is more apt to cause difficulties in working with the larger size copper tube, especially for horizontal joints where an oversize fitting may allow the tube to rest directly on the socket, resulting in a double width space at the top.

Wherever possible, such joints should be made up in a vertical position, before assembly.

For best results always use fittings conforming to accepted standards.



Making up a joint

There are six simple steps that, when followed, will result in a well-made joint. These steps should be taken after first measuring the tube to proper length so that it will run the full length of the socket of the fitting, cutting the tube end squarely and removal of all small burrs.

1. Clean tube end and socket of fitting.
2. Apply flux to the clean areas.
3. Assemble.
4. Apply heat and solder.
5. Remove residual solder and flux.
6. Allow joint to cool.

Safe Strength of Soldered Joints

Solder used in Joints	Maximum Service Pressure, PSI			
	Water†			
	Service Temperatures Deg. F	1/2 to 1 in. I.D.*	1 1/2 to 2 in. I.D.*	2 1/2 to 4 in. I.D.*
50-50 Tin-Lead**	100	200	175	150
	150	150	125	100
	200	100	90	75
	250	85	75	50
95-5 Tin-Antimony	100	500	400	300
	150	400	350	275
	200	300	250	200
	250	200	175	150
Braze Filler Metal melting at or above 1000 F††	250	300	210	170
	350	270	190	155

*Standard copper water tube sizes

**ASTM B32, Alloy grade 50A

†including refrigerants and other non-corrosive liquids and gases

††ASTM B260, Braze Filler Metal