

## DUCTLESS



# Twin Tube insulation for ductless (mini split) line sets!

JMF announces the introduction of "Twin Tube" insulation for ductless (mini split) line sets!

Twin Tube insulation will be offered in four sizes and will be available in 1/2" wall insulation.



## **LINE SET PRODUCTS**

| Temper         | 060 (Soft Anneal) - Annealed to customer specifications                         |  |
|----------------|---|--|
| Lengths        | Available from 10'-60' using 5' intervals/other lengths available upon request  |  |
| Uses           | Split system air conditioning, chilled water systems, and warm water systems    |  |
| Specifications | Currently there is no ASTM specification for insulated copper tube              |  |
| End Finishing  | 90° bends, plain end or brass forged flare nuts (specialty line sets/duct-less) |  |

## **COPPER TUBE**

| Standard Line Set              | Suction Line: 5/8" - 1-1/8" | Liquid line: 1/4" - 1/2" |
|--------------------------------|-----------------------------|--------------------------|
| Specialty Line Set (Duct-less) | Suction Line: 3/8" - 1-1/8" | Liquid Line: 1/4" - 1/2" |

**Materials:** The designation is alloy UNS 12200 and referred to as DHP. The DHP stands for a phosphorus deoxidized copper with a high residual phosphorus range of .015% to .040 %. The copper content is 99.9% copper. The tubing is fully annealed to the soft temper designation of 060.

### REFRIGERANT

## **INSULATION**

| Standard Line Set             | Suction Line - 1/4" - 1"      | Liquid line - not insulated |
|-------------------------------|-------------------------------|-----------------------------|
| Specialty Line Set(Duct-less) | Suction Line - 1/4" - 3/4"    | Liquid Line - 1/4" - 3/4"   |
| Cell Structure                | Closed Cell                   | Test Method                 |
| Density                       | 4/6 lbs/ft                    | ASTM D1667                  |
| Thermal Conductivity - 75°    | Test Method - ASTM C177 0.257 | NA                          |
| Service Temp                  | -40° F to 220°                | NA                          |
| UV Weather Resistance         | Excellent                     | ASTM G23                    |
| Ozone Resistance              | No cracking                   | ASTM D1171                  |
| Water Vapor Permeability      | 0.10PERM-IN (0.15x 10-12)     | ASTM C355                   |
| Water Absorption              | 0.2                           | ASTM C109                   |
| Flammability                  | 25/50                         | ASTM E84                    |
| Smoke Density                 | Self extinguishing            | ASTM D635                   |
| Flexibility                   | Excellent                     | NA                          |

## **INSULATION R VALUES**

| 3/8" wall - R-2.5 | 1/2" wall - R-3.3 | 3/4" wall - R-5.2 | 1" wall - R-7.4 |
|-------------------|-------------------|-------------------|-----------------|

<sup>\*</sup> R - Value calculation using a K-Factor of 0.25 BTU-in/hr-ft (2)-F @ 75°F, 24°C mean temp.