



Cambridge-Lee Industries LLC



LEADING SUPPLIER OF COPPER TUBE IN THE USA,  
MEXICO, LATIN AMERICA AND MIDDLE EAST



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## IUSA CAMBRIDGE-LEE INDUSTRIES - LEADING THE WAY WITH QUALITY & SERVICE

**"84 YEARS OF EXCELLENCE:  
THE INDUSTRY'S  
FINEST PRODUCTS"**

IUSA Cambridge-Lee Industries entered the copper tube industry in 1955 as a small distributor serving the U.S. plumbing market. Over the years, the company has evolved into one of the world's largest distributors of copper with sales offices in every corner of the globe.



During 1993, Industrial Unidas S.A. de C.V. (IUSA), one of Mexico's largest conglomerates, acquired Cambridge-Lee.

IUSA Cambridge-Lee has a modern, state-of-art copper refinery and tube mill in Pasteje Mexico. In 1996, IUSA Cambridge-Lee purchased Reading Tube Corporation, a major U.S. producer of copper tube. As a result of the merger and acquisition, IUSA Cambridge-Lee has become one of the world's leaders in the manufacture and distribution of copper tube for water supply, air conditioning, refrigeration and a variety of commercial applications. IUSA Cambridge-Lee has grown to be a world leader because we understand that customer satisfaction requires not only quality products but also a high level of service. Our employees take pride in ensuring we meet our customer needs and requirements: from on-time deliveries, to well-trained sales and service departments, to utmost product quality.

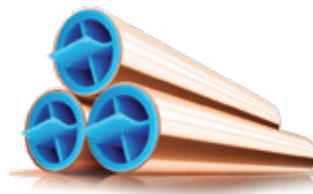
## COMMITMENT TO QUALITY

IUSA Cambridge-Lee implements strict testing methods and controls to ensure that the highest quality tube reaches our customers. IUSA Cambridge Lee Copper Tubes are dehydrated, degreased, purged with nitrogen and capped to maintain the internal cleanliness of the product. From the selection of raw materials to final packaging, Our tube is continually tested and inspected at all stages in the manufacturing process to ensure problems and defects are detected by Eddy-Current testing and solved at their source. Each Coil is individually packed in recycled dye cut carton boxes. This ensures the Originality & Exclusivity of the product while also giving additional protection during transportation. Environmentally harmful material such as plastic shrink wrap are eliminated in the packaging process.

## COMPATIBILITY TO FITTINGS

Copper Tubes & Coils manufactured by IUSA Cambridge Lee are compatible with Copper Fittings manufactured by NIBCO INC or equivalent.

# SOFT & HARD DRAWN PIPES



| PRODUCTS          | Refrigeration Tube                     | ACR Tube (L Cleaned and Capped/Degreased)  | Water Tube Type M                                            | Water Tube Type L                                                         | Water Tube Type K                                            | OXY/MED Tube (K&L Cleaned and Capped/Degreased) | DWV       |
|-------------------|----------------------------------------|--------------------------------------------|--------------------------------------------------------------|---------------------------------------------------------------------------|--------------------------------------------------------------|-------------------------------------------------|-----------|
| APPLICATION       | Air Conditioning Refrigeration Service | Air Conditioning Refrigeration Natural Gas | Domestic Water Service<br>Fire protection<br>Solar, Fuel Oil | Domestic Water Service<br>Fire protection<br>Solar, Fuel Oil, Natural Gas | Domestic Water Service<br>Fire protection<br>Solar, Fuel Oil | Medical Gas Systems                             | Drainage  |
| TEMPER            | Annealed                               | Drawn                                      | Drawn                                                        | Drawn<br>Annealed                                                         | Drawn<br>Annealed                                            | Drawn                                           | Drawn     |
| INK COLOR MARKING | N/A                                    | Blue                                       | Red                                                          | Blue<br>N/A                                                               | Green<br>N/A                                                 | (L) Blue<br>(K) Green                           | DWV       |
| STANDARDS         | ASTM B-280                             | ASTM B-280                                 | ASTM B-88                                                    | ASTM B-88                                                                 | ASTM B-88                                                    | ASTM B-280,<br>B-819                            | ASTM-B306 |

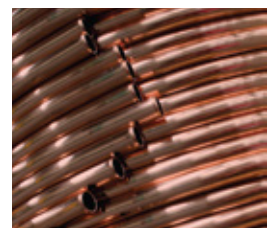
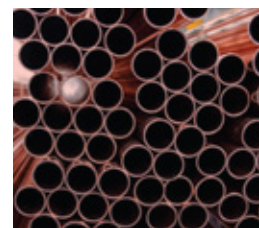
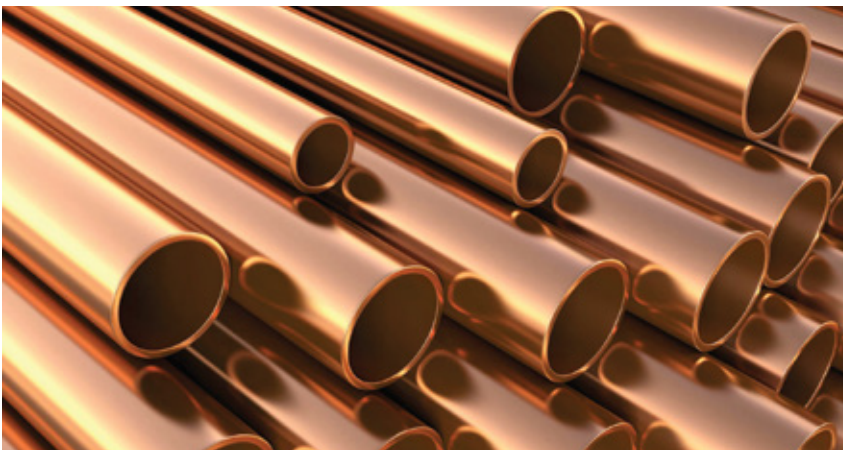


- UL Recognized to 700 PSI ( UL 207 )
- Constructed of high-grade copper

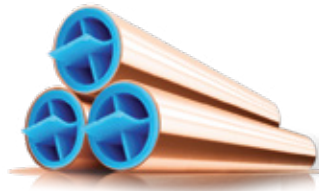
- ASTM standards B743, B280, B88
- Meets NSF 61



IUSA Cambridge Lee copper tube meets many HVACR codes including: ASME B31.5, ASHRAE 15



## ACR L STANDARD ASTM B280



IUSA Cambridge Lee copper tubes are manufactured as per ASTM B280 Standards with highest precision and cleanliness needed for the demanding conditions of HVAC and refrigeration applications. Our products are purged with nitrogen to provide maximum protection against the formation of harmful oxides during brazing operations. IUSA Cambridge Lee copper tubes are degreased, dehydrated and packed in eco – friendly individual cartons for the highest level of protection.

| Temper Designation |                       | Form             | Tensile Strength Min |       | Elongation in 2 in, min, % | Average Grain Size, mm | Expansion of Outside Diameter % |
|--------------------|-----------------------|------------------|----------------------|-------|----------------------------|------------------------|---------------------------------|
| Standard           | Former                |                  | Ksi                  | (Mpa) |                            |                        |                                 |
| O60                | Soft Annealed         | Coiled Lengths   | 30                   | (205) | 40                         | 0.040 Min              | 40                              |
| H58                | Drawn General Purpose | Straight Lengths | 36                   | (250) | N/A                        | N/A                    | N/A                             |



- UL Recognized to 700 PSI ( UL 207 )
- Constructed of high-grade copper

- ASTM B280
- Meets NSF 61

| SIZES | HARD DRAWN LENGTHS | SOFT ANNEALED COILS |
|-------|--------------------|---------------------|
|       | WT                 | WT                  |
| 1/8   | -                  | 0.030               |
| 3/16  | -                  | 0.030               |
| 1/4   | -                  | 0.030               |
| 5/16  | -                  | 0.032               |
| 3/8   | 0.030              | 0.032               |
| 1/2   | 0.035              | 0.032               |
| 5/8   | 0.040              | 0.035               |
| 3/4   | 0.042              | 0.035               |
| 7/8   | 0.045              | 0.045               |
| 1 1/8 | 0.050              | 0.050               |
| 1 3/8 | 0.055              | -                   |
| 1 5/8 | 0.060              | -                   |
| 2 1/8 | 0.070              | -                   |
| 2 5/8 | 0.080              | -                   |
| 3 1/8 | 0.090              | -                   |
| 3 5/8 | 0.100              | -                   |
| 4 1/8 | 0.110              | -                   |

## ACR PERFORM - ASTM B743

IUSA Cambridge Lee copper tubes are manufactured as per ASTM B743 Standards with highest precision and cleanliness needed for the demanding conditions of HVAC and refrigeration applications. ACR Perform Coils & Pipes are dehydrated, degreased, purged with nitrogen and capped to maintain the internal cleanliness of the product.

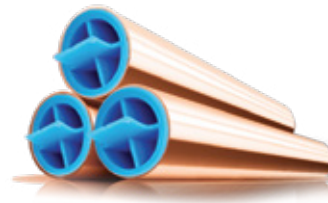
| Temper Designation | Wall Thickness in (mm)          | Rockwell Hardness |        | Tensile Strength Min |       | Yield Strength Min |       | Enlogation in 2 in Min % | Average Grain Size mm |
|--------------------|---------------------------------|-------------------|--------|----------------------|-------|--------------------|-------|--------------------------|-----------------------|
|                    |                                 | Scale             | Value  | Ksi                  | (Mpa) | Ksi                | (Mpa) |                          |                       |
| H58                | 0.020 an over (0.508)           | 30T               | 30 Min | 36                   | (250) | 36                 | (250) | N/A                      | N/A                   |
| 050                | 0.020 to 0.035 (0.508 to 0.889) | 15T               | 65 Max | 30                   | (205) | 9                  | (62)  | 40                       | 0.040 Máx.            |
|                    | Over 0.035 (0.889)              | F                 | 55 Max |                      |       |                    |       |                          |                       |
| 060                | 0.020 to 0.035 (0.508 to 0.889) | 15T               | 60 Max | 30                   | (205) | 6                  | (40)  | 40                       | 0.040 Min.            |
|                    | Over 0.035 (0.889)              | F                 | 50 Max |                      |       |                    |       |                          |                       |



- UL Recognized to 700 PSI ( UL 207 )
- Constructed of high-grade copper

- ASTM B743
- Meets NSF 61

| SIZES | HARD DRAWN LENGTHS | SOFT ANNEALED COILS |
|-------|--------------------|---------------------|
|       | WT                 | WT                  |
| 1/4   | -                  | 0.024               |
| 5/16  | -                  | 0.024               |
| 3/8   | 0.024              | 0.024               |
| 1/2   | 0.024              | 0.028               |
| 5/8   | 0.028              | 0.028               |
| 3/4   | 0.028              | 0.032               |
| 7/8   | 0.032              | 0.035               |
| 1 1/8 | 0.036              | 0.040               |
| 1 3/8 | 0.040              | -                   |
| 1 5/8 | 0.042              | -                   |
| 2 1/8 | 0.056              | -                   |
| 2 5/8 | 0.064              | -                   |
| 3 1/8 | 0.070              | -                   |
| 4 1/8 | 0.080              | -                   |



## ACR ECO COILS - AMERICAN STANDARDS

IUSA Cambridge Lee copper tubes are manufactured as per ASTM Standards with highest precision and cleanliness needed for HVAC and refrigeration applications. Our IUSA Cambridge Lee soft copper tubes are degreased & dehydrated, products are purged with nitrogen to provide maximum protection against the formation of harmful oxides during brazing operations.

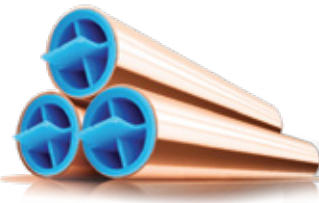


- Constructed of high-grade copper

- ASTM standards

| SIZES |        | WALL THICKNESS |        |
|-------|--------|----------------|--------|
| (mm)  | (inch) | (mm)           | (inch) |
| 6.35  | 1/4    | 0.51           | 0.020  |
| 7.94  | 5/16   | 0.51           | 0.020  |
| 9.53  | 3/8    | 0.56           | 0.022  |
| 12.70 | 1/2    | 0.61           | 0.024  |
| 15.88 | 5/8    | 0.66           | 0.026  |
| 19.05 | 3/4    | 0.71           | 0.028  |
| 22.23 | 7/8    | 0.76           | 0.030  |





## COPPER TUBE PLUMBING RANGE

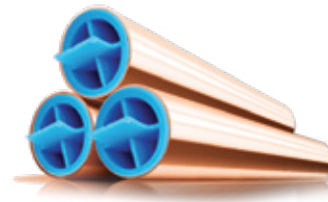


USA Cambridge Lee copper tubes are manufactured as per ASTM B88 for plumbing applications. Our plumbing range are as per Type L, K and M.

### L, K AND M MECHANICAL PROPERTIES ASTM B 88

| Temper Designation | Form     | Rockwell Hardness |        | Tensile Strength Min |       | Average Grain Size<br>mm | Expansion of Outside Diameter<br>% |     |
|--------------------|----------|-------------------|--------|----------------------|-------|--------------------------|------------------------------------|-----|
|                    |          | Standard          | Former | Scale                | Value |                          |                                    | Ksi |
| O60                | Annealed | Coils             | F      |                      | 30    | (250)                    | 0.040 Min                          | 40  |
| O50                | Annealed | Straight Lengths  | F      | 55 Max               | 30    | (205)                    |                                    | 40  |
| H58                | Drawn    | Drawn             | 30T    | 30 Min               | 36    | (205)                    | N/A                                |     |

| Sizes |            | Type L               |               |               | Type K               |               |               | Type M               |               |               |
|-------|------------|----------------------|---------------|---------------|----------------------|---------------|---------------|----------------------|---------------|---------------|
| NOM   | O.D. (in.) | WALL THICKNESS (in.) | WEIGHT (Kg/m) | lb/ft Nominal | WALL THICKNESS (in.) | WEIGHT (Kg/m) | lb/ft Nominal | WALL THICKNESS (in.) | WEIGHT (Kg/m) | lb/ft Nominal |
| 1/4   | 3/8        | 0.030                | 0,1876        | 0,126         | 0.035                | 0.2156        | 0,145         | -                    | -             | -             |
| 3/8   | 1/2        | 0.035                | 0,295         | 0,198         | 0.049                | 0.4005        | 0,269         | 0.025                | 0.215         | 0,145         |
| 1/2   | 5/8        | 0.040                | 0,424         | 0,285         | 0.049                | 0.5115        | 0,344         | 0.028                | 0.303         | 0,204         |
| 5/8   | 3/4        | 0.042                | 0,539         | 0,362         | 0.049                | 0.6224        | 0,418         | -                    | -             | -             |
| 3/4   | 7/8        | 0.045                | 0,677         | 0,455         | 0.065                | 0.9541        | 0,641         | 0.032                | 0.489         | 0,328         |
| 1     | 1 1/8      | 0.050                | 0,974         | 0,655         | 0.065                | 1.2486        | 0,839         | 0.035                | 0.691         | 0,465         |
| 1 1/4 | 1 3/8      | 0.055                | 1,316         | 0,884         | 0.065                | 1.5430        | 1,04          | 0.042                | 1.015         | 0,682         |
| 1 1/2 | 1 5/8      | 0.060                | 1,697         | 1,14          | 0.072                | 2.0263        | 1,36          | 0.049                | 1.399         | 0,940         |
| 2     | 2 1/8      | 0.070                | 2,604         | 1,75          | 0.083                | 3.0713        | 2,06          | 0.058                | 2.172         | 1,460         |
| 2 1/2 | 2 5/8      | 0.080                | 3,691         | 2,48          | 0.095                | 4.3555        | 2,93          | 0.065                | 3.015         | 2,030         |
| 3     | 3 1/8      | 0.090                | 4,956         | 3,33          | 0.109                | 5.9573        | 4,00          | 0.072                | 3.983         | 2,680         |
| 3 1/2 | 3 5/8      | 0.100                | 6,384         | 4,29          | 0.120                | 7.6218        | 5,12          | 0.083                | 5.327         | 3,580         |
| 4     | 4 1/8      | 0.110                | 8,006         | 5,38          | 0.134                | 9.6912        | 6,51          | 0.095                | 6.938         | 4,660         |
| 5     | 5 1/8      | 0.125                | 11.325        | 7,61          | 0.160                | 14.3956       | 9,67          | 0.109                | 9.908         | 6,660         |
| 6     | 6 1/8      | 0.140                | 15.179        | 10,20         | 0.192                | 20.6426       | 13,90         | 0.122                | 13.271        | 8,920         |
| 8     | 8 1/8      | 0.200                | 28.722        | 19,30         | 0.271                | 38.5700       | 25,90         | 0.170                | 24.506        | 16,500        |



## OXY / MEDICAL GAS & REFRIGERATION COPPER TUBING

All Type L & K cleaned & capped tubing meets ASTM B-819 standard specification for seamless copper tube for Medical Gas Systems. ACR Application.

### KEY SPECIFICATIONS:

Copper Tube Type (ACR/MED) are made to meet the chemical, mechanical, cleanness, and eddy current testing requirements of the applicable specification of ASTM B280. IUSA cambridge Lee copper tube is recognized through Underwriters Laboratories (UL) for operating pressure of 700PSI on R410 gas. Oxygen and medical service tube is made to meet ASTM B819 (Types L & K) in hard drawn straight-lengths only and in accordance with CGA cleanliness specifications, CGA G4.1 and NFPA99.

All Type K cleaned & capped tubing meets ASTM B-819 standard specification for seamless copper tube for Medical Gas Systems.

| Product                                          | Application         | Temper | Lenght                             | Color Code         | Specification      |
|--------------------------------------------------|---------------------|--------|------------------------------------|--------------------|--------------------|
| OXYMED Tube (L & K cleaned & capped - degreased) | Medical Gas Systems | Hard   | 10 ft. Straight<br>20 ft. Straight | (K) Green (L) Blue | C12200, ASTM B-819 |

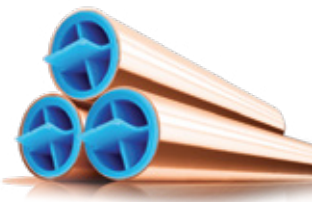


- UL Recognized to 700 PSI ( UL 207 )
- Constructed of high-grade copper

- ASTM standards B743, B280, B819
- Meets NSF 61

### TYPE L & K NITROGENIZED ACR / MED

| Sizes |            | Type L               |               |               | Type K               |               |               |
|-------|------------|----------------------|---------------|---------------|----------------------|---------------|---------------|
| NOM   | O.D. (in.) | WALL THICKNESS (in.) | WEIGHT (Kg/m) | lb/ft Nominal | WALL THICKNESS (in.) | WEIGHT (Kg/m) | lb/ft Nominal |
| 1/4   | 3/8        | 0.030                | 0,1876        | 0,126         | 0.035                | 0.2156        | 0,145         |
| 3/8   | 1/2        | 0.035                | 0,295         | 0,198         | 0.049                | 0.4005        | 0,269         |
| 1/2   | 5/8        | 0.040                | 0,424         | 0,285         | 0.049                | 0.5115        | 0,344         |
| 5/8   | 3/4        | 0.042                | 0,539         | 0,362         | 0.049                | 0.6224        | 0,418         |
| 3/4   | 7/8        | 0.045                | 0,677         | 0,455         | 0.065                | 0.9541        | 0,641         |
| 1     | 1 1/8      | 0.050                | 0,974         | 0,655         | 0.065                | 1.2486        | 0,839         |
| 1 1/4 | 1 3/8      | 0.055                | 1,316         | 0,884         | 0.065                | 1.5430        | 1,04          |
| 1 1/2 | 1 5/8      | 0.060                | 1,697         | 1,14          | 0.072                | 2.0263        | 1,36          |
| 2     | 2 1/8      | 0.070                | 2,604         | 1,75          | 0.083                | 3.0713        | 2,06          |
| 2 1/2 | 2 5/8      | 0.080                | 3,691         | 2,48          | 0.095                | 4.3555        | 2,93          |
| 3     | 3 1/8      | 0.090                | 4,956         | 3,33          | 0.109                | 5.9573        | 4,00          |
| 3 1/2 | 3 5/8      | 0.100                | 6,384         | 4,29          | 0.120                | 7.6218        | 5,12          |
| 4     | 4 1/8      | 0.110                | 8,006         | 5,38          | 0.134                | 9.6912        | 6,51          |
| 5     | 5 1/8      | 0.125                | 11.325        | 7,61          | 0.160                | 14.3956       | 9,67          |
| 6     | 6 1/8      | 0.140                | 15.179        | 10,20         | 0.192                | 20.6426       | 13,90         |
| 8     | 8 1/8      | 0.200                | 28.722        | 19,30         | 0.271                | 38.5700       | 25,90         |



# CERTIFICATIONS

CERTIFICATIONS & MGS

## CERTIFICATE OF COMPLIANCE

|                           |                  |
|---------------------------|------------------|
| <b>Certificate Number</b> | 20170612-SA44773 |
| <b>Report Reference</b>   | SA44773-20170322 |
| <b>Issue Date</b>         | 2017-JUNE-12     |

**Issued to:** Industrias Unidas de SA de CV  
CARR PANAMERICANA MEX-QRO KM 109  
50734 JOCOTITLAN  
MEX MEXICO

**This is to certify that representative samples of** **COMPONENT - TUBING, REFRIGERANT**  
See next page for models

Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.

**Standard(s) for Safety:** UL 207 Standard for Refrigerants-Containing Components and Accessories, Nonelectrical, CSA C22.2 No. 140.3-15 Refrigerant-Containing Components for Use in Electrical Directory

**Additional Information:** See the UL Online Certifications Directory at [www.ul.com/database](http://www.ul.com/database) for additional information

Only those products bearing the UL Certification Mark should be considered as being covered by UL's Certification and Follow-Up Service.

The UL Recognized Component Mark generally consists of the manufacturer's identification and catalog number, model number or other product designation as specified under "Marking" for the particular Recognition as published in the appropriate UL Directory. As a supplementary means of identifying products that have been produced under UL's Component Recognition Program, UL's Recognized Component Mark may be used in conjunction with the required Recognized Markings. The Recognized Component Mark is required when specified in the UL Directory preceding the recognitions or under "Markings" for the individual recognitions.

Recognized components are incomplete in certain constructional features or restricted in performance capabilities and are intended for use as components of complete equipment submitted for inspection rather than for direct separate installation in the field. The final acceptance of the component is dependent upon its installation and use in complete equipment submitted to UL, LLC.

Look for the UL Certification Mark on the product.

Page 1 of 2

0021 099864  
Folio 43318

## Industrias Unidas, S.A. de C.V. (División Tubos)

Contracting Entity, Km. 109 Carretera Panamericana México-Querétaro, Col. Pastelaje, Jocotitlán, Estado de México, C.P. 50734

Bureau Veritas Certification Holding SAS - UK Branch certifies that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standards detailed below

**Standard**

### ISO 9001:2015

Scope of Certification

**The manufacture of seamless of copper tubing for use in general, plumbing, refrigeration, air conditioning, medicinal gas systems and engineering applications.**

Not applicable 8.3 Design and development of products and services

|                                                 |                  |
|-------------------------------------------------|------------------|
| Original cycle start date:                      | 19-January-2016  |
| Expiry date of previous cycle:                  | 12-February-2021 |
| Certification/Recertification Audit date:       | 16-October-2021  |
| Certification/Recertification cycle start date: | 13-February-2022 |

Subject to the continued satisfactory operation of the organization's Management System, this certificate expires on **12-February-2025**

Certificate No: **0021 099864** Version: **1** Revision date: **14-December-2021**  
Previous Certificate No.: **0018 020003**

Certification Body Address: **5<sup>th</sup> Floor, 100 Broad Street, London E1 3BS, United Kingdom**

Local Office:  
**BVS Mexico, S.A. de C.V. - Blvd. Manuel Avila Camacho No. 35, Piso 11 Col. Lomas de Chapultepec III Sección, Miguel Alemán, C.P. 11005 Ciudad de México**

Further clarifications regarding the scope and validity of this certificate, and the applicability of the management system requirements, please call +12 32 5351 8900 9999.

Report prepared for: [Karen.Rojas@ul.com.mx](mailto:Karen.Rojas@ul.com.mx) on 13/03/2011 1:07:02 PM

## AUTHORIZATION TO MARK

This authorizes the application of the Certification Mark(s) shown below to the models described in the Product(s) Covered section when made in accordance with the conditions set forth in the Certification Agreement and Listing Report(s). This authorization also applies to the Multiple Listing model(s) identified on the continuation page of the Listing Report. This document is the property of Intertek Testing Services and is not transferable. The Certification Mark(s) may be applied only at the location of the Party Authorized to Apply Mark.

|                   |                                                                                                                     |
|-------------------|---------------------------------------------------------------------------------------------------------------------|
| <b>Applicant:</b> | JUSA S.A. de C.V.<br>Km 109 Carretera Panamericana Mex Qro<br>Jocotitlan, Pastero, Estado de Mexico 50700<br>Mexico |
| <b>Country:</b>   | Mexico                                                                                                              |
| <b>Contact:</b>   | Olando Hernandez Casas                                                                                              |
| <b>Phone:</b>     | 011-52-55-4179-3800 x 2594                                                                                          |
| <b>Fax:</b>       | 011-52-55-4118-1596                                                                                                 |
| <b>Email:</b>     | oehernandez@jusa.com.mx                                                                                             |

**Party Authorized to Apply Mark:** See following page(s)  
**Evaluation Center:** Intertek (Jocotitlan)

**Control/Client Number:** 220536 **Authorized By:**   
Bob Devision, Director, Certification Services

**Intertek**  
 This document supersedes all previous Authorizations to Mark for the noted Report Number.

This Authorization to Mark is for the exclusive use of Intertek's Client and is provided pursuant to the Certification agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Authorization to Mark. Only the Client is authorized to permit copying or distribution of this Authorization to Mark and that only in its entirety. Use of Intertek's Certification mark is restricted to the conditions listed in this agreement and in this Authorization to Mark. Any further use of the Intertek name for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. Initial Factory Assessments and Follow-up Services are for the purpose of ensuring appropriate usage of the Certification mark in accordance with the agreement, they are not for the purpose of production quality control and do not release the Client of their obligations in this regard.

|                             |                                    |
|-----------------------------|------------------------------------|
| <b>Testing Standard(s):</b> | ASTM B280 (2002)                   |
| <b>Product:</b>             | JUSA - Copper ACR Tube (ASTM B280) |

## TEST REPORT

NSF International  
 7919 DeVere Rd. Ann Arbor, MI 48106, USA  
 1-800-NSF-6611 / +1-734-769-8010 / www.nsf.org

|                                                                                                                                                                          |                                                                                                                             |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| <b>Sent To:</b> 82280<br>Mr. Orlando Hernandez<br>JUSA, S.A. de C.V. Division Tubos<br>KM 109 Carretera Panamericana<br>Mex-Qro. Jocotitlan Pastaje C.P. 50700<br>Mexico | <b>Facility:</b> 82281<br>JUSA, S.A. de C.V.<br>Km. 109 Carretera Panamericana<br>Mex-Qro.<br>Jocotitlan, Pastaje<br>Mexico |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|

| Result                   | PASS                                   | Report Date: | 05-SEP-2013 |
|--------------------------|----------------------------------------|--------------|-------------|
| <b>Customer Name</b>     | JUSA, S.A. de C.V.                     |              |             |
| <b>Tested To</b>         | NSF/ANSI 61                            |              |             |
| <b>Description</b>       | Seamless Copper Water Tube 1 1/2" pipe |              |             |
| <b>Trade Description</b> | Seamless Copper Water Tube             |              |             |
| <b>Test Type</b>         | Annual Collection                      |              |             |
| <b>Job Number</b>        | J-021279                               |              |             |
| <b>Project Number</b>    | 9140964 (CLA, TEA)                     |              |             |
| <b>Project Manager</b>   | Felicia Holmes                         |              |             |

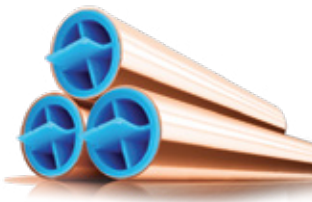
Thank you for having your product tested by NSF International.

Please contact your Project Manager if you have any questions or concerns pertaining to this report.

**Report Authorization:**   
 Amanda Phillips - Director, Technology Services

**Date:** 05-SEP-2013

T021300014908 J-021279 Page 1 of 1  
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# CERTIFICATIONS

CERTIFICATIONS & MOS



**IUSA CAMBRIDGE-LEE**  
Mexico, March 24, 2023

To Whomsoever It May Concern

For over 83 years, Grupo IUSA has been the driving force of an industry. Grupo IUSA's founder Alejo Peralta had the vision of transforming Mexico from an agrarian to an industrial nation.

The company IUSA has one of the most complete business portfolios in the international market, with over 6000 diverse products for the construction industry, including electrical power and fluids conduction, control, and metering. The quality of our products is internationally certified.

IUSA and its U.S.A. subsidiary, **Cambridge Lee Industries**, based in Reading PA, are world leaders in manufacture and distribution of copper tube for plumbing, gas, air conditioning, refrigeration, and a wide variety of commercial applications. We hereby confirm that the Copper Coils & Pipes manufactured to ASTM B280 are suitable for R-410a Gas applications.

Best Regards



Lic. Liliana Arcila E.  
Exports IUSA

**INDUSTRIAS UNIDAS, S.A. DE C.V.**  
Km. 129 Carretera PanamERICANA Mex. - Cdm. S/N  
Ixcamilco, Estado de México, 50734



10<sup>th</sup> February, 2022

TO WHOMSOEVER IT MAY CONCERN,

IUSA Cambridge Lee Industries are world leaders in manufacture and distribution of copper tube for plumbing, gas, air condition, refrigeration and a wide variety of commercial applications.

IUSA Cambridge Lee Industries manufacture only copper coils and pipes. Copper fittings are not manufactured in our facility. Copper coils and pipes manufactured by Cambridge Lee are compatible with copper fittings manufactured by NIBCO Inc. or the equivalent.

Best Regards



Lic. Liliana Arcila E.  
Exports IUSA

INDUSTRIAS UNIDAS DE CV. KM 129 CARRETERA PANAMERICANA MEX. CDM. IXCAMILCO, ESTADO DE MEXICO, C.P. 50734



11<sup>th</sup> February, 2022

TO WHOMSOEVER IT MAY CONCERN,

Founded in 1904, NIBCO INC. is a leading provider of valves, fittings and flow control products for commercial, industrial and institutional construction, as well as residential and irrigation markets. NIBCO® fittings are made from the highest quality raw materials, produced to meet the requirements of applicable product standards. With product installations throughout the world, NIBCO has provided quality products compatible with products supplied by companies such as IUSA Cambridge-Lee Industries, Inc. and continues to deliver quality products that meet or exceed customer expectations.

NIBCO does not manufacture copper tubes. NIBCO fittings are compatible with Type K, L, and ACR copper pipes manufactured by IUSA Cambridge-Lee Industries, Inc. Both manufacturers warrant their respective products in accordance with their independent published product warranties.

Sincerely,

Clyde Hayes  
NIBCO INC  
Vice President, International

SDFW2.SA44585 - Refrigeration, Fittings - Component

Page 1 of 1



ONLINE CERTIFICATIONS DIRECTORY

**SDFW2.SA44585**  
Refrigeration, Fittings - Component

Item Detail

Refrigeration, Fittings - Component

See General Information for Refrigeration, Fittings - Components

**NIBCO INC**

17410 MIDLANDWAY ST

PO BOX 1347

BARNESVILLE, OH 44005-1347 USA

Refrigeration line fittings, Nibco 9000, 9000-2, 9000-2H, 9000-4S, 9000-4S, 9000-4S, 9000-4S

Adapters, Nibco 9000

Elbows, Nibco 9000, 9001, 9001-L, 9001-U, 9001-U-L

Refrigeration line tees, Nibco 9011

Refrigeration line caps, Nibco 9027

Rating: Complete name and model designation.

SAE-ASME B16.11-11

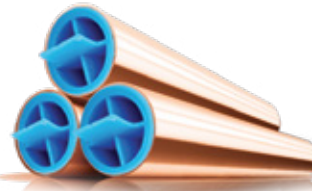
| Quantity | Unit Price | Subtotal | Tax |
|----------|------------|----------|-----|
|          |            |          |     |

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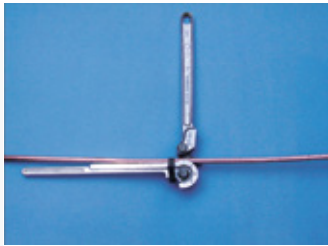
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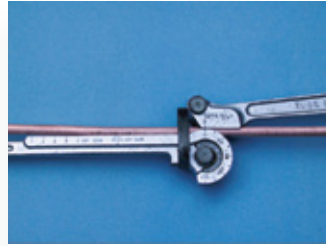


## METHOD STATEMENT

### COPPER TUBE & FITTINGS - BENDING



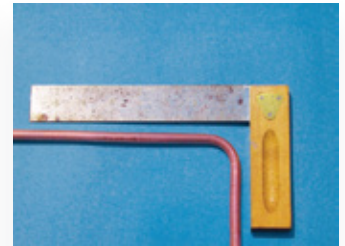
(A) With the handles of the tube bender at 90 degrees insert the tube into the forming wheel groove with the mark for the center-of-bend aligned with the "0" on the forming handle. Engage the tube holding clip to secure the tube to the bender at the appropriate location for bending.



(B) Rotate the handle to the position shown. The "0" on the handle must align with the "0" on the forming wheel before any bend pressure is applied to the bending handle. Apply gentle but steady pressure on the handle and rotate it to the appropriate degree marking on the forming wheel for the desired degree of bend.




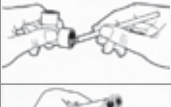




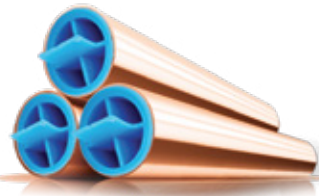
(C) Once the appropriate degree of bend is reached, as identified by the degree mark on the forming wheel, the bend is completed. The properly bent tube can be removed from the bender by rotating the handle back to the 90 degree position as shown in (A), disengage the holding clip and remove the tube from the bender.



(D) To ensure the proper degree of desired bend has been fabricated the bend should be checked against a square or other appropriate tool. (A square is shown here confirming the 90 degree bend.)

### COPPER TUBE & FITTINGS - BRAZING

|                                                                                     |                                                                                                                                                                                                                                                                   |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | Cut tube & remove burrs.                                                                                                                                                                                                                                          |
|  | Clean outside of tube with sandpaper or sand cloth.                                                                                                                                                                                                               |
|  | Clean inside of fitting with wirebrush, sand cloth or sandpaper.                                                                                                                                                                                                  |
|  | Apply flux thoroughly to inside of fitting.                                                                                                                                                                                                                       |
|  | Apply flux thoroughly to outside of tube - assemble tube and fitting.                                                                                                                                                                                             |
|  | Apply heat with torch. When filler metal melts upon contact with heated fitting, the proper temp for brazing has been reached. Remove flame & feed filler metal to the joint at one or two points until a ring of filler metal appears at the end of the fitting. |



# CLIENTS



EMAAR

MERAAS



ARADA



ELLINGTON PROPERTIES



SOBHA REALTY

DAMAC

MUDON



AZIZI DEVELOPMENTS

دبي الجنوب  
DUBAI SOUTH

DIAMOND DEVELOPERS

SAMANA DEVELOPERS

ميرال  
MIRAL

شروق  
SHUROOQ

Bloom

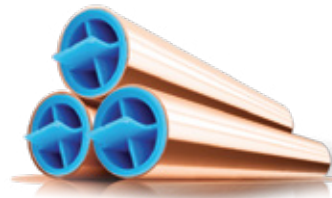


مؤسسة محمد بن راشد للإسكان  
Mohammed Bin Rashid Housing Est.

برنامج الشيخ زايد للإسكان  
Sheikh Zayed Housing Programme



PROJECT REFERENCE



**UNITED ARAB EMIRATES**

- EMAAR- South Development, Phase 1 Parkside2
- EMAAR- The Address Residence Fountain View
- EMAAR - Reem Development
- EMAAR - 382 Villas Arabian Ranches 2
- EMAAR - Arabian Ranches -324 Villas
- EMAAR- Golf Place Villas
- EMAAR - Dubai Marina Park Island
- Nakheel - Jumeirah Park
- Nakheel - JVT Villas & Townhouses Zone
- Nakheel - International City Package 4
- Nakheel - The Palm Tower IPT
- AL DAR - JUBAIL ISLAND DEVELOPMENT
- AL DAR - YAS ACRES
- AL DAR - BANIYAS NORTH HOUSING
- ELLINGTON - HAMILTON HOUSE, BERKELEY PLACE
- Al Wasl - R1015
- Al Wasl - R-1070- Port Views
- Al Wasl- R1085 Al Andaz Hotel
- Al Wasl - R1091 - Jumeirah Plots Development

**SAUDI ARABIA**

- Al Wasl - R-1070- Port View Residential Building
- Al Wasl - F1010- Al Warqaa Gardens and residential buildings
- Al Wasl - Al Maktoum Hospital Redevelopment Phase II
- Dubai Properties - The Villa at Dubai land II
- Dubai Properties - Villanova
- Dubai Properties - 558 Key Villas at Dubai land
- Dubai Properties - The Villa at Dubai land
- Dubai World Central - Jebel Ali International Airport
- DAMAC Park Tower, DIFC
- Ghurair Properties - Bldg B+G+7TYP+R Al Muraqqabat
- Ghurair Properties - G+3P+12, Port Saeed Dubai
- Ghurair Properties - B+G+6+R+UR, Al Raffa
- Ghurair Properties - G+22, Two Towers, Al Raffa
- MERAAS - Hotel 1, The Avenue Phase 2, City Walk
- MERAAS - Nikki Beach Resort Jumeirah
- Falcon City of Wonders Development-Phase 1
- Arenco - (G+2Podium+6 Floors) Residential Building
- MASDAR PARK BUILDING
- ARADA - MASAAR VILLAS
- REPORTAGE PROPERTIES - RUKAN TOWNHOUSES
- Al Andalus Towers A,B - Jumeirah Golf Estates
- Al Futtaim - KIB Development
- Deira Waterfront Development- PH1 Plot 3
- ENOC - EPCL Maintenance Building, Javel Ali
- Fairmont Palm Residence & Hotel – Palm Jumeirah

**QATAR**

- Qatar Islamic Bank - Phase II
- New Doha International Airport - Govt of Doha
- Doha Convention Center - Govnt of Doha

**OMAN**

- American British Academy- ABA Secondary School
- Residential Complex at Al Qurum - Royal Oman Police
- Al Hail Greens Residential Development Phase I

**KUWAIT**

- Ministry of Education Headquarters

**EGYPT**

- Ministry of Presidential Affairs - 411 Villas BRD Abudhabi

**IRAN**

- Novotel & IBIS Hotel -DWTC

**TURKEY**

- Habtoor Island Resort & Spa - Palm Island - Al Habtoor
- Jewel Of Creek Package 8- Dubai Intl Real Estate
- MAF Hospitality - East Hotel @ Mall of the Emirates
- MAG - MAG City, Meydan

**LEBANON**

- Palazzo Versace Hotel

**ISRAEL**

- MIZIM - Remramm Project Phase 4

**PALESTINE**

- American British Academy- ABA Secondary School

**YEMEN**

- King Abdullah Financial District - Government



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