

HME Ibertubos, S.A.U.

High-Accuracy flow control solutions

Precision Copper Capillary Tubes – Technical Capabilities & Quality Overview

2026

About the Company



Ribera & Schmöle, S.A.



New Production Plant

Production plant: Santa Perpètua de Mogoda (Barcelona),.

Total Size of Area: 12.900 m2

Total Size of indoor Shop Floor: 6.500 m2



KME Ibertubos, S.A.

1967

1991

1995

2001

2019

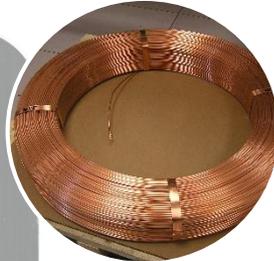
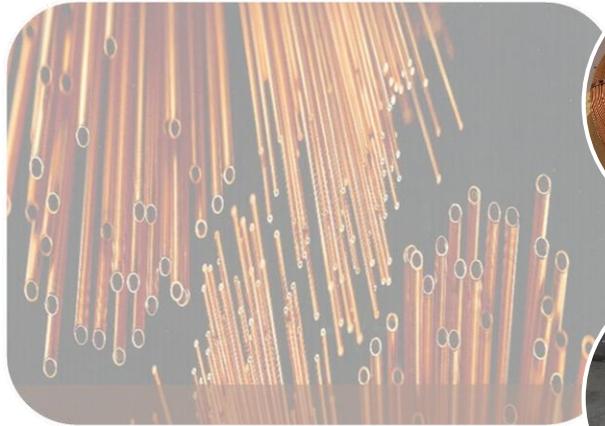
KM Ibertubos, S.A.

HME Ibertubos, S.A.

- ✓ +50 years of experience in precision copper capillary tubes
- ✓ Integrated into the **Hailiang Group**, global leader in copper processing
- ✓ Continuous investment in new production technologies
- ✓ Strong presence in HACR, automotive and industrial markets



Copper Capillary Tubes



LWC
Coils



Spools



Straight
lengths

Specialists in
Flow Controlled
Capillary tubes
TECTUBE®_flow

All formats

- OD 1,00 to 6,00 mm
- WT 0.10 to 1.25
- Cu DHP - Cu HCP
- All tempers

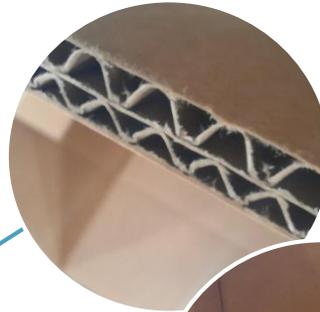
LWC Coils or Spools

- LWC 20 to 100 kg
- Spools of 100 to 450 kg

Straight Lengths

- Minimum length 185 mm
- Hard max length 7 m
- Soft max length 5 m

PACKAGING LWC COILS



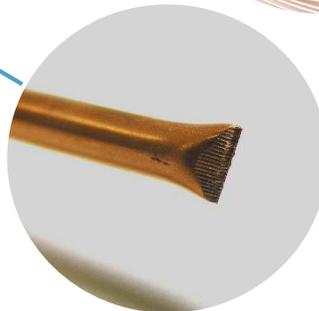
Strong cardboard:
physical protection and
anti humidity properties



Smart design for easier
unloading



Traceability
information and flow
rate value



Ends closed

PACKAGING STRAIGHT LENGTHS



Strong wooden boxes.
Tubes internally protected
with plastic film



Traceability
information and flow
rate value in every
bundle.



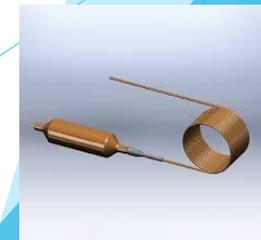
Capillary bundles of
50-100 units. Ends
protected with plastic
bags.



Special thermosealed
anti-humidity bags
available, if necessary

APPLICATIONS

- **Air Conditioning and Refrigeration:**
Our tubes are essential for controlling refrigerant flow in HVACR systems, ensuring optimal cooling and energy efficiency
- **Automotive and Brake Tubes:**
We supply corrosion-resistant copper tubing for hydraulic brake systems and thermal management in vehicles
- **Connectors and Cooling Devices:**
We provide customized solutions for heat exchangers, condensers, and copper fittings used in cooling applications.
- **Thermostat and Thermocouples:**
Our capillary tubes are used in temperature sensing and control devices, offering consistent thermal response.
- **Others:**
Our products are also used in niche applications such as laboratory equipment, beverage dispensers, and precision instruments.



CORPORATE RESPONSABILITY



HME Ibertubos has an Integrated Management System which includes Quality, Environment, Health and Safety, certified by Lloyd's Register.

- ISO 9001:2015 since 1999
- ISO 14001:2015 since 2012
- OSHAS 18001:2007 from 2014 until 2021
- ISO 45001:2018 from 2021

Customer oriented
Technical fulfilment
Respect for Environment and Sustainability
Respect for our workers

QUALITY KEY POINTS

Internal Surface

Flow rate

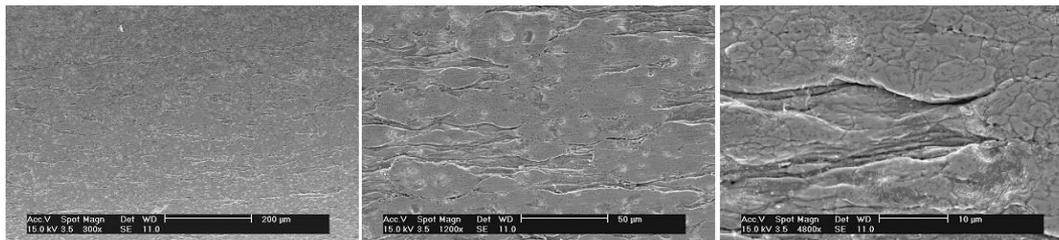
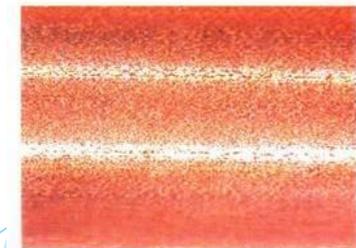
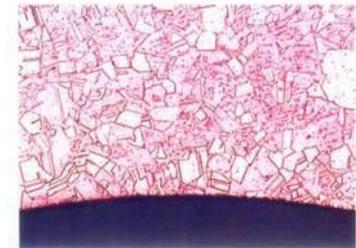
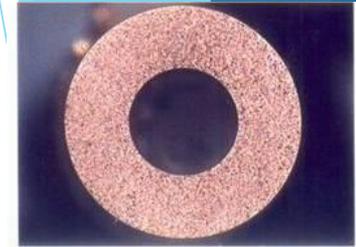
Internal Cleanliness

Mechanical properties

Cutting Machine

100% Quality inspection

- The quality of the internal surface is the key point of a capillary tube.
- The smooth surface gives a stable flow rate, the maximum effectiveness of heat exchange and a cleaner tube.
- The internal mandrel not only assures the internal diameter but also laminates the internal surface, keeping it smooth and brilliant.



QUALITY KEY POINTS

Influence of the internal mandrel on the internal quality surface

Internal Surface

Flow rate

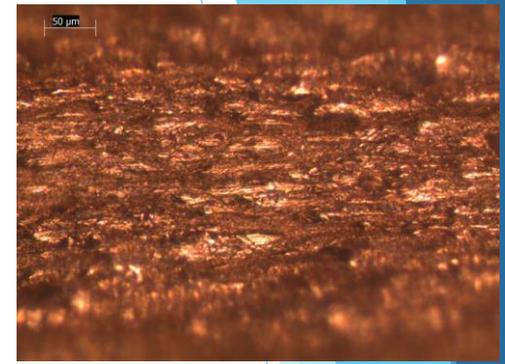
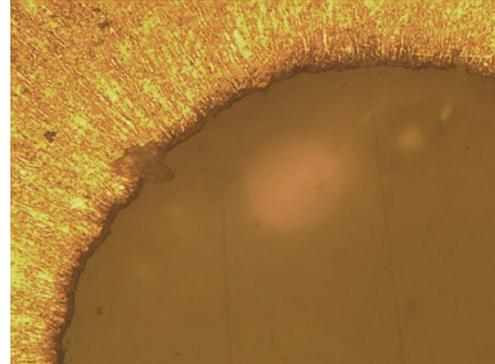
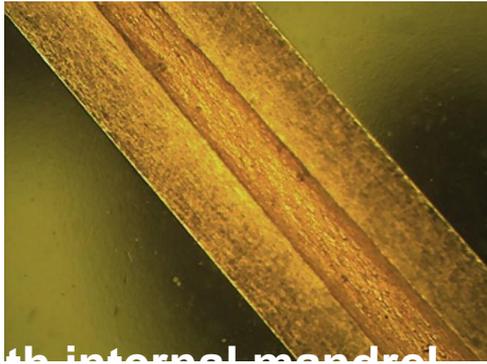
Internal Cleanliness

Mechanical properties

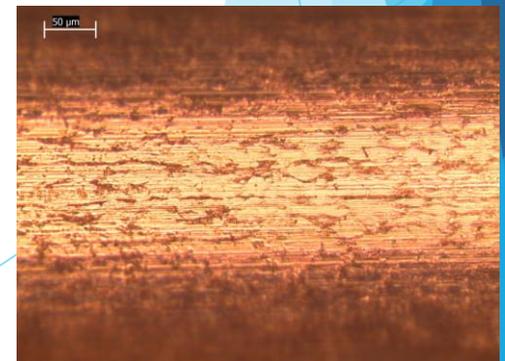
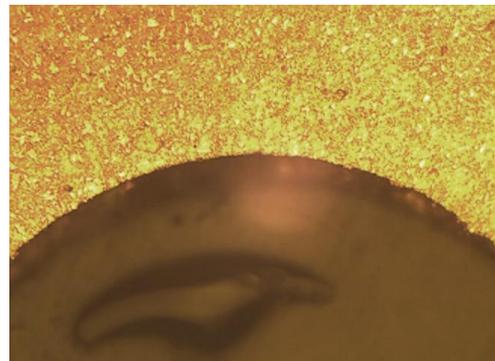
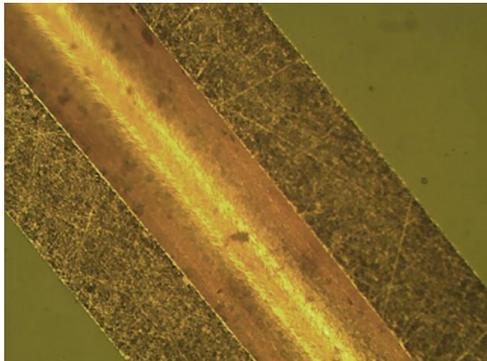
Cutting Machine

100% Quality inspection

Drawn **without** internal mandrel



Drawn **with** internal mandrel



QUALITY KEY POINTS

- Internal Surface
- Flow rate ←
- Internal Cleanliness
- Mechanical properties
- Cutting Machine
- 100% Quality inspection

- Flow rate is a way of controlling the internal diameter with high precision ($\pm 0,01$ mm)
- Capillary tube is used as expansion valve in the refrigeration circuits. Flow rate has an impact on the energy efficiency of refrigerators, and for this reason is key point for ACR industry



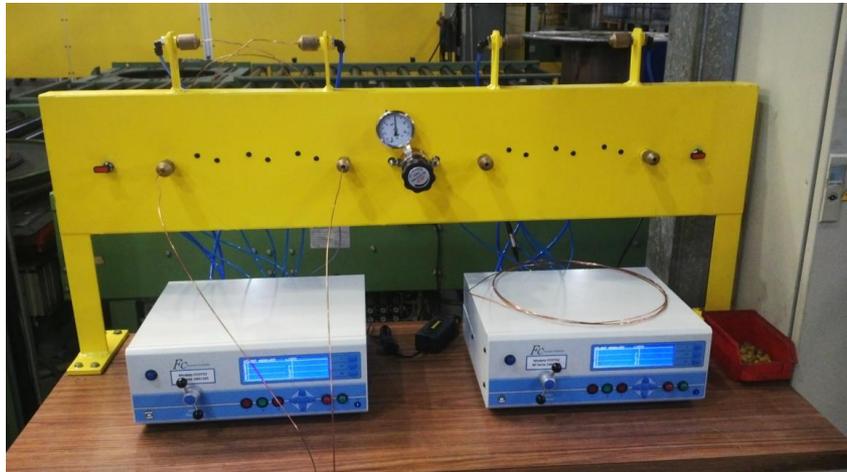
- Nevertheless, it can be also used internally to produce tubes with a lower Internal Diameter variation.

QUALITY KEY POINTS

- Internal Surface
- Flow rate ←
- Internal Cleanliness
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Flow rate control in Production:

- In each finishing line we have a flow meter where we check the flow on 100% of coils and 2% of straight lengths
- Our Flow Meters have a special feature: the sample and the Master Tube supplied by the customer are tested simultaneously, giving an exact value of flow at any environment condition, and reliable wherever the capillary is used.

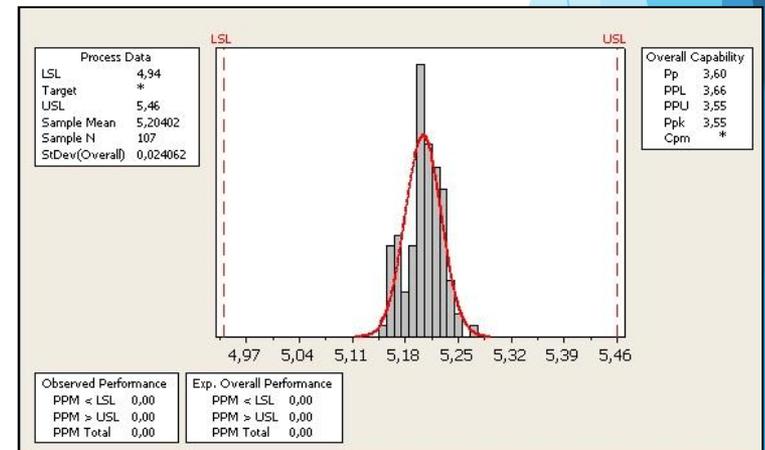


QUALITY KEY POINTS

- Internal Surface
- Flow rate ←
- Internal Cleanliness
- Mechanical properties
- Cutting Machine
- 100% Quality inspection



- Following the market needs HME Ibertubos developed a process specially designed for Energy Saving Applications.
- With our **MASTER CLASS CAPILLARY A** we grant a high precision Flow Rate, with a tolerance of $\pm 1\%$ and a $Cpk > 1.67$



QUALITY KEY POINTS

Internal Surface

Flow rate

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100% Quality inspection

- Our process grant a content of residues $< 40 \text{ mg/m}^2$ in total, soluble + insoluble.
- Every 400 kg (mother tube coil) we take a sample of 50-100 m to check the internal cleanliness according to DIN 8905.
- All our lubricants are fully compatible with refrigerant gases

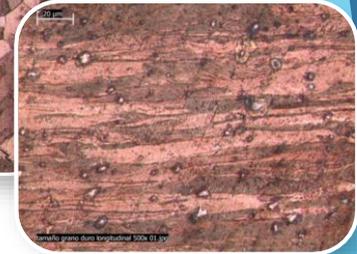
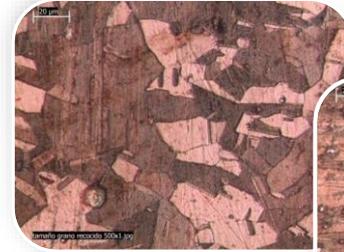


QUALITY KEY POINTS

Internal Surface
 Flow rate
 Internal Cleanliness
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 Cutting Machine
 100% Quality inspection

Possible states of the copper:

Annealed	R200 / R220 / R240 / H040
Half Hard	R250 / H070 R290 / H095
Hard	R360 / R395 / H110



- To ensure the mechanical properties every order is tested in our Universal Tensile Machine according to DIN EN 6892 Standard
- We determine the Yield Strength, Tensile Strength and percentage of Elongation

QUALITY KEY POINTS

Internal Surface

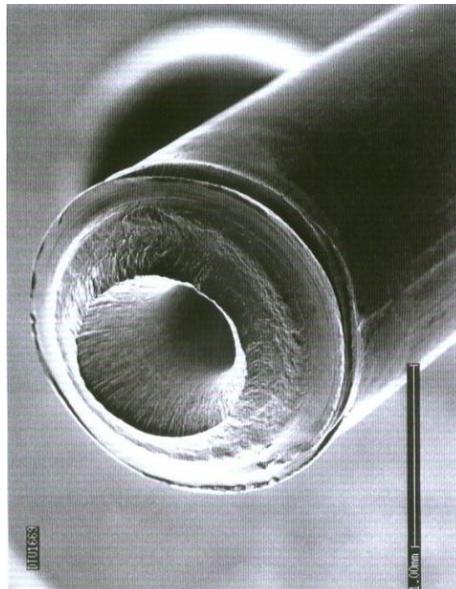
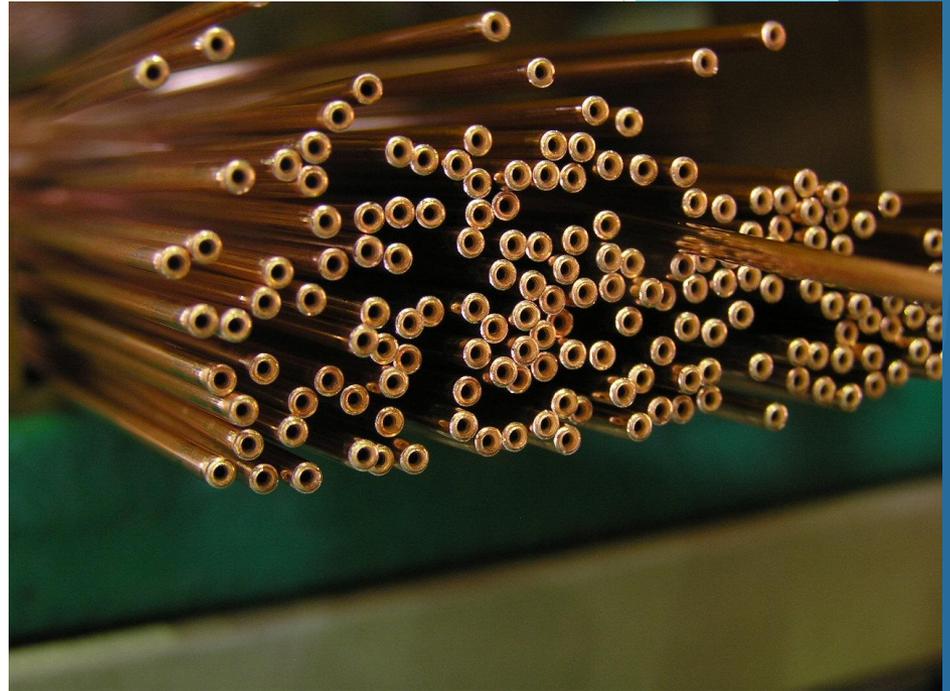
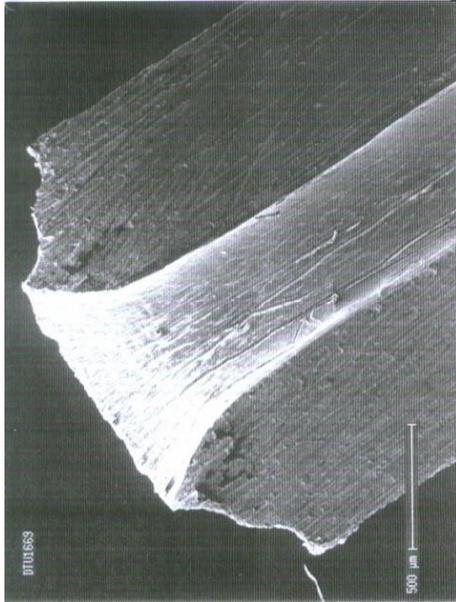
Flow rate

Internal Cleanliness

Mechanical properties

Cutting Machine

100% Quality inspection



- For those customers who need capillaries cut to length, we have an orbital cutting machine which grants a perfect end opening and a stable flow.

QUALITY KEY POINTS

Internal Surface

Flow rate

Internal Cleanliness

Mechanical properties

Cutting Machine

100% Quality inspection

- 100% of produced coils are checked during production (external diameter, internal diameter or flow rate, smooth surface)
- 10% of them are again checked in the laboratory (external diameter, internal diameter, internal cleanliness, mechanical properties)



- The dimensional measurements are carried out with micrometers, callipers, pin gauges and geometrical calculation for internal diameters.
- All devices are properly calibrated.

COMMITTED WITH CONTINUOUS IMPROVEMENT



- *Since years HME Ibertubos implemented a Continuous Improvement Plan focused in the development of business, processes and procedures.*
- *Based on Lean Six Sigma methodologies, several KPI are defined in topics like Customer Service, Productivity, Stock, Scrap, Environment or Health and Safety.*
- *All KPI are yearly targeted for improvement, particular actions implemented and capital investments planned and executed.*
- *We pay special attention to the staff training due to they are the basis of the competence and the root of success.*
- *We are permanently in contact with the market looking for new applications and technologies, which can make our products more competitive.*

Thanks for your attention

The HME Ibertubos Team