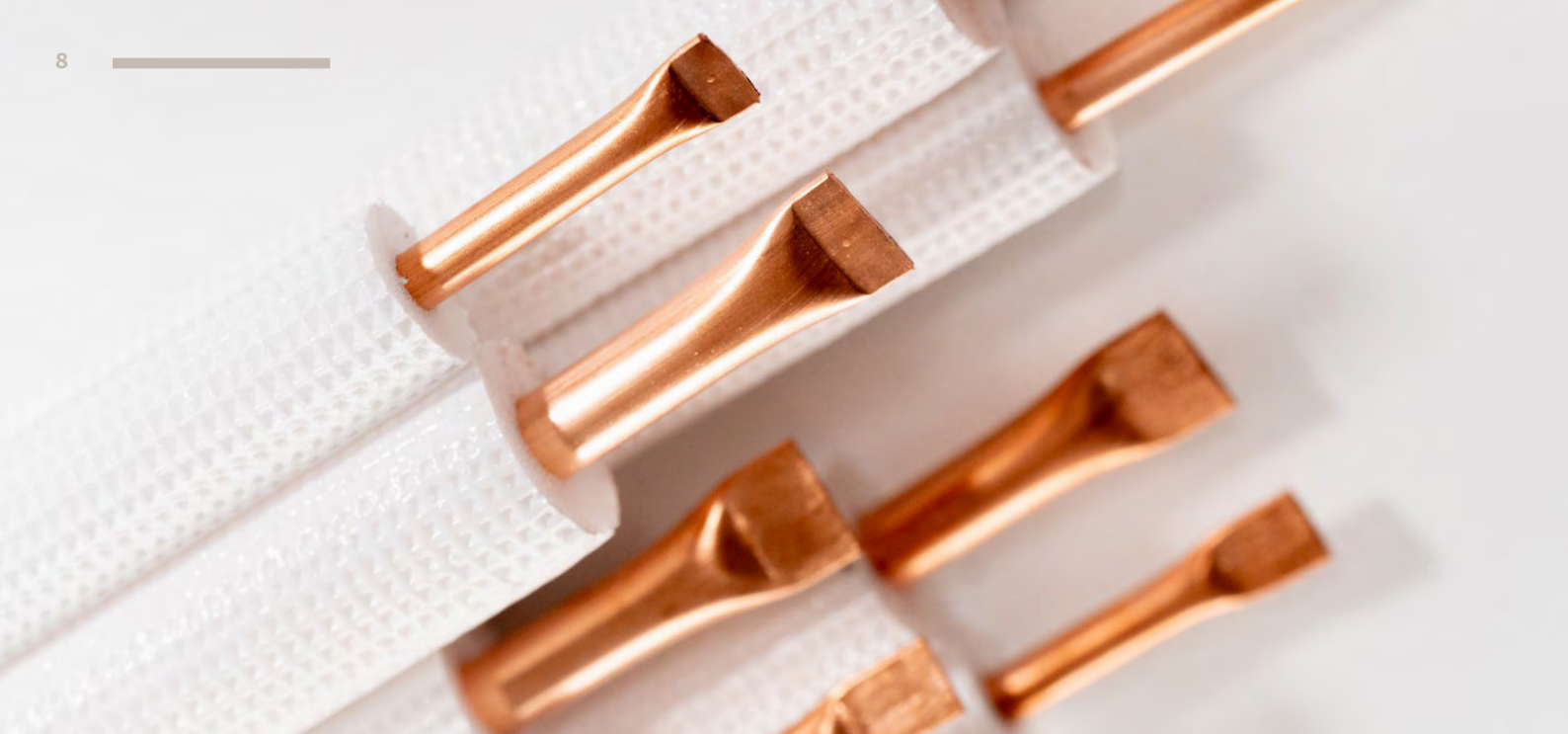




SMISOL® Clim Duo

PRACTICAL AND PROFESSIONAL

FIELDS OF APPLICATION:

- Air conditioning
- Transport of refrigerant gases (R290, R32, ...)

In compliance with and within the limits set by the applicable regulations.

SMISOL® Clim Duo consists of two coupled annealed copper tubes and complies with the EN 12735-1 standard. The tubes are pre-insulated with a closed-cell expanded polyethylene sleeve and externally protected by a white corrugated film. Thanks to the bright, dry and clean internal surface, these tubes ensure safe transport of refrigerant fluids in compliance with the strictest regulations. The tube ends are sealed in the factory, preserving integrity until the moment of installation. Furthermore, the insulation is free from CFCs and HCFCs, compliant with Reg. (EU) 2024/590, with reaction-to-fire class BL-s1,d0.

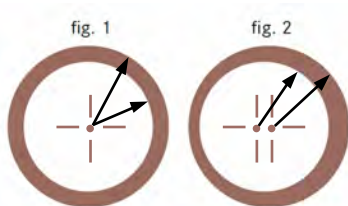
The connection system of the insulated tubes allows a simple, tool-free interconnection, facilitating quick installation. SMISOL® Clim Duo tubes are an innovative solution in the field of ACR connections, combining efficiency, safety and ease of use on site.

The original in-line coating process provides greater flexibility than comparable products, placing it at the top of its category. This specific feature is safeguarded by keeping a wider coil radius so as not to alter the malleability characteristics of the product.

This copper tube stands out for its insulating coating in closed-cell expanded polyethylene with regular cells evenly distributed in compliance with EN 15758:2016. Designed to ensure optimal performance, the insulating sleeve is made in compliance with Reg. (EU) 2024/590. This regulation requires the use of expanded insulating sleeves free from CFCs and HCFCs. The thickness of the sleeve is carefully sized to meet the different requirements of installations, while ensuring both safety and high performance.

ECCENTRICITY

Low eccentricity (see fig. 1 vs. fig. 2) ensures a regular wall thickness along the entire circumference of the tube. It is a fundamental parameter for flaring or swaging the tube end, as well as for greater safety of coupling with fittings.



CIRCULAR CROSS-SECTION INSULATING SLEEVE

The circular cross-section insulating sleeve has been designed to fit the copper tube surface perfectly. This configuration ensures a larger contact area between the insulation and the tube, reducing the risk of voids that could compromise the effectiveness of the insulation. Good adhesion is crucial to prevent heat loss and condensation formation and improves the overall efficiency of the system.

INTERNAL CLEANLINESS

The internal cleanliness of copper tubes is a crucial aspect in ensuring the efficiency and safety of any system. A high level of cleanliness in the pipework not only prevents the build-up of contaminants and deposits, but also ensures the correct operation of the systems.

COATING CHARACTERISTICS

- Thermal conductivity: $\lambda \leq 0.038 \text{ W/(m}\cdot\text{K)}$ at 40°C .
- Average water-vapour diffusion resistance factor " μ " $> 40,000$.
- Reaction to fire: BL-s1,d0 (EN 13501-1)
- Average coating density: 30 kg/m^3 .
- Free from ammonia residues.
- Excellent resistance to external chemical agents.
- Free from CFCs and HCFCs in accordance with Reg. (EU) 2024/590.
- Halogen-free flame retardant

COPPER TUBE CHARACTERISTICS

- Alloy: Cu DHP – CW024A
- Dimensions and tolerances: according to EN 12735-1
- Absolute roughness: $e. = 0.0015 \text{ mm}$
- Thermal conductivity: at $20^\circ\text{C} = 364 \text{ W/m}^\circ\text{C}$
- Linear thermal expansion: $0.0166 \text{ mm/m}^\circ\text{C}$
- Elongation: A5 min $> 40\%$
- Temper: R220
- Carbon residue: 0.38 mg/dm^2

TABLE: STANDARD PRODUCTION SIZES - COILED TUBE

Size OD x WT		Min. Guaranteed Coil Length (m)	Min. Coating Thickness (mm)	Burst Pressure (MPa)	ASTM Working Pressure (MPa)	Water Content (l/m)
(mm)	(inches)					
6,35 x 0,8 - 9,52 x 0,8	1/4" - 3/8"	20	6 - 8	56,54 - 37,71	14,14 - 9,43	0,018 - 0,049
6,35 x 0,8 - 12,70 x 0,8	1/4" - 1/2"	20	6 - 10	56,54 - 28,27	14,14 - 7,07	0,018 - 0,097
6,35 x 0,8 - 15,87 x 1	1/4" - 5/8"	20	6 - 10	56,54 - 28,28	14,14 - 7,07	0,018 - 0,151
9,52 x 0,8 - 15,87 x 1	3/8" - 5/8"	20	8 - 10	37,71 - 28,28	9,43 - 7,07	0,049 - 0,151

OD = Outer Diameter WT = Wall Thickness

