



MediClim®

SAFE AND PROFESSIONAL

FIELDS OF APPLICATION:

- Air-conditioning and refrigeration systems (ACR).
- Transport of refrigerant gases.
- Transport of medical gases.
- Transport of technical and industrial gases.

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

MediClim® meets the needs of two particularly critical technical areas: the medical sector and the air-conditioning and refrigeration sector.

MediClim® copper tubes are characterised by an extremely high degree of internal cleanliness and are suitable for conveying refrigerant gases, industrial gases and medical gases, as well as for creating vacuum systems. They can be used in high-pressure systems and offer excellent workability characteristics. Through dedicated and controlled production processes, the internal cleanliness of the pipe is guaranteed, so as to meet the particularly stringent requirements demanded by the various application areas.

MediClim® is manufactured in compliance with the standards:

- EN 13348 – Copper tubes for the transport of medical gases and for vacuum.
- EN 12735-1 – Copper tubes for air conditioning and refrigeration.

FORM OF SUPPLY AND TRACEABILITY

MediClim® is available in the following configurations:

- Straight lengths of 5 m – hard temper R290.
- Coils of 25 m – annealed temper R220.

All pipes are supplied with the ends capped directly during production, in order to preserve internal cleanliness until installation.

Each length or coil is identified by a unique batch number, which allows complete product traceability.

MediClim® pipes in straight lengths feature suitably designed packaging dedicated to the specific field of use, designed according to size, to ensure protection and integrity during transport and storage.

Production takes place according to an ISO 9001 certified Quality Management System and complies with the requirements of the European PED Directive 2014/68/EU.

The use of MediClim® tubes requires careful assessment of the intended use, the environmental conditions and the operating conditions of the system.

This assessment must be carried out at the design stage by qualified personnel. Installation must take place in full compliance with current regulations and according to good practice, in order to ensure the safety, reliability and durability of the system.

TECHNICAL CHARACTERISTICS

- Material: Cu-DHP (Cu ≥ 99.9% – P: 0.015 ÷ 0.040%) according to EN 1412.
- Dimensions and tolerances compliant with EN 13348 and EN 12735-1.
- Annealed temper of coils (R220)
Ultimate tensile strength: $R_m \geq 220$ MPa
Elongation: $A_5 \geq 40\%$
- Hard temper of straight lengths (R290)
Ultimate tensile strength: $R_m \geq 290$ MPa
Elongation: $A_5 \geq 3\%$

MEDICAL APPLICATIONS

In compliance with the EN 13348 standard, MediClim® is the specific solution for the transport of medical gases in hospital and healthcare settings, where extremely high levels of quality, safety and reliability are required. Medical gases have a direct impact on human health and must maintain their purity throughout the entire distribution system. MediClim® is suitable for transporting: oxygen, nitrous oxide, nitrogen, helium, carbon dioxide, xenon, medical air, air for surgical instruments, anaesthetic gases and vapours, at pressures up to 2,000 kPa, and vacuum systems.

For medical gas systems, the prescribed joining method is high-temperature brazing or welding, as indicated by EN ISO 7396-1. The joining methods must ensure that the mechanical characteristics are maintained up to an ambient temperature of 600 °C. During brazing or welding operations, the inside of the pipes must be purged with inert gas (e.g. nitrogen). Filler materials must not contain more than 0.025% cadmium.

ACR APPLICATIONS

In accordance with EN 12735-1, MediClim® is fully suitable for industrial and laboratory air-conditioning and refrigeration systems, intended for the transport of refrigerant gases such as R410A, R407C, R32, R290 and fluids compatible with copper.

The product is particularly suitable for large-capacity systems, thanks to its high mechanical characteristics and the quality of the internal surface, which is bright, clean and dry.

The production process guarantees:

- soluble residues on the internal surface < 0.38 mg/dm² (EN 12735-1),
- lubricant residues < 0.20 mg/dm² (EN 13348).

Internal cleanliness is further preserved by capping the ends of each tube directly during manufacture.

TABLE: STANDARD PRODUCTION SIZES - 25 m COILED TUBES

Size OD x WT (mm)	Burst Pressure (MPa)	ASTM Working Pressure (MPa)	Water Content (l/m)
6 x 1	74,80	18,70	0,013
8 x 1	56,10	14,03	0,028
10 x 1	44,88	11,22	0,050
12 x 1	37,40	9,35	0,079
14 x 1	32,06	8,01	0,113
16 x 1	28,05	7,01	0,154
18 x 1	24,93	6,23	0,201
22 x 1	20,40	5,10	0,314

OD = Outer Diameter WT = Wall Thickness

TABLE: STANDARD PRODUCTION SIZES - 5 m STRAIGHT LENGTHS

Size OD x WT (mm)	Burst Pressure (MPa)	ASTM Working Pressure (MPa)	Water Content (l/m)
10 x 1	59,16	14,79	0,050
12 x 1	49,30	12,33	0,079
14 x 1	42,26	10,56	0,113
15 x 1	39,44	9,86	0,133
16 x 1	36,98	9,24	0,154
18 x 1	32,87	8,22	0,201
22 x 1	26,89	6,72	0,314
22 x 1,5	40,34	10,08	0,283
28 x 1	21,13	5,28	0,531
28 x 1,5	31,69	7,92	0,491
35 x 1	16,90	4,23	0,855
35 x 1,5	25,35	6,34	0,804
42 x 1	14,09	3,52	1,256
42 x 1,5	21,13	5,28	1,194
54 x 1,5	16,43	4,11	2,042
54 x 2	21,91	5,48	1,963
64 x 2	18,49	4,62	2,826
76,1 x 2	15,55	3,89	4,081
88,9 x 2	13,31	3,33	5,658
108 x 2,5	13,69	3,42	8,326

OD = Outer Diameter WT = Wall Thickness

