

APPLICATIONS

- Air conditioning and refrigeration systems.
- Transportation of refrigerant gases.
- Transport of medical gases.
- Transport of technical gases.

In compliance with applicable regulations.



SCT offers a complete range of copper tubes for both the plumbing-sanitary sector and industrial applications. SCT tubes are manufactured with the highest possible levels of quality, in full compliance with prevailing technical standards and respecting customer specifications.

To enable a clear distinction between the technical applications addressed by different product categories, we introduced the MediClim® brand, which satisfies the requirements of two highly specialised areas such as **the medical and air conditioning sector**.

MediClim® tube has a **high degree of internal cleanliness** and is specifically designed for the conveyance of industrial and refrigerant gases as well as vacuum distribution. They can be used in high-pressure systems and have excellent workability characteristics.

Special patented processes ensure that the inside of the tubing is cleaned to a very high degree, assuring perfect compatibility with the special requirements of the various intended application fields.

MediClim® is manufactured according to standards EN 12735-1 and EN 13348.

MediClim® is produced in 5 m straight lengths (R290 hard temper) and in 25 m coils (R220 annealed temper). In both delivery formats, the ends are sealed with stoppers to grant the internal cleanliness of each unit piece, which is also marked by a specific numbering identifying the production lot and ensuring its traceability.

The use of the MediClim® range requires a careful assessment of the intended application, as well as the prevailing environmental and functional conditions in which the product will be installed. This assessment must be made by qualified personnel at the project design stage: the correct use and the operational functionality of the finished tubing plant requires appropriate installation in full compliance with applicable regulations and expert craftsmanship.

All MediClim® products in straight lengths are **specifically packaged** for each dimension.

MediClim® production is carried out in accordance with the rules defined by a Quality Management System approved under ISO 9001:2000, aligned to the Pressure Equipment Directive 2014/68/EU.

TECHNICAL SPECIFICATIONS

- Cu DHP (Cu: 99,9% min. P: 0,015 ÷ 0,040%) according to EN 1412
- Dimensions and tolerances, according to EN 12735-1 and EN 13348
- Temper annealed (R220)
Unit break load: R. min. ≥ 220 MPa (N/mm²)
Elongation percentage: A₅ min. > 40%
- Temper hard (R290)
Unit break load: R. min. ≥ 290 MPa (N/mm²)
Elongation percentage: A₅ min. > 3% .

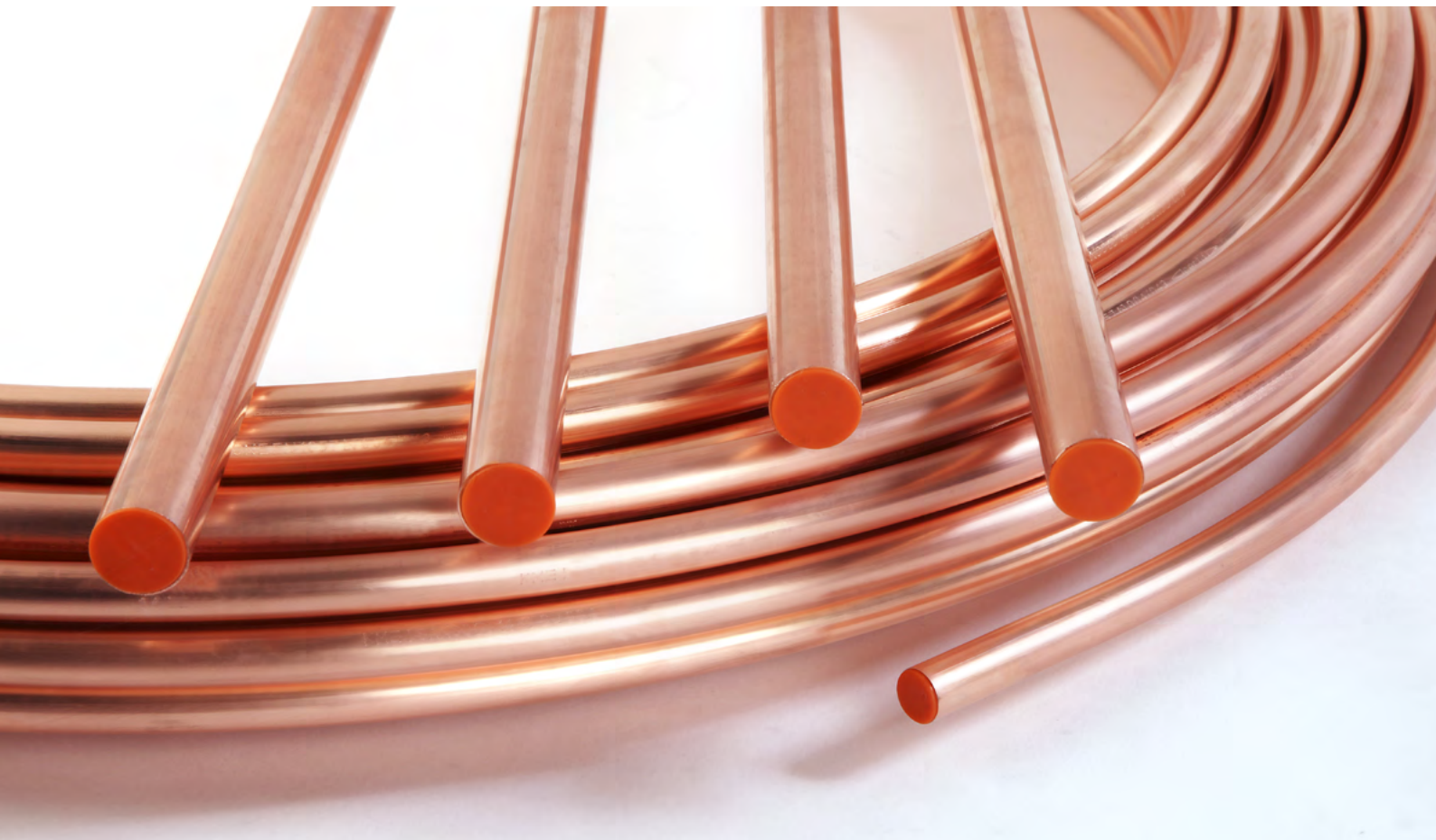
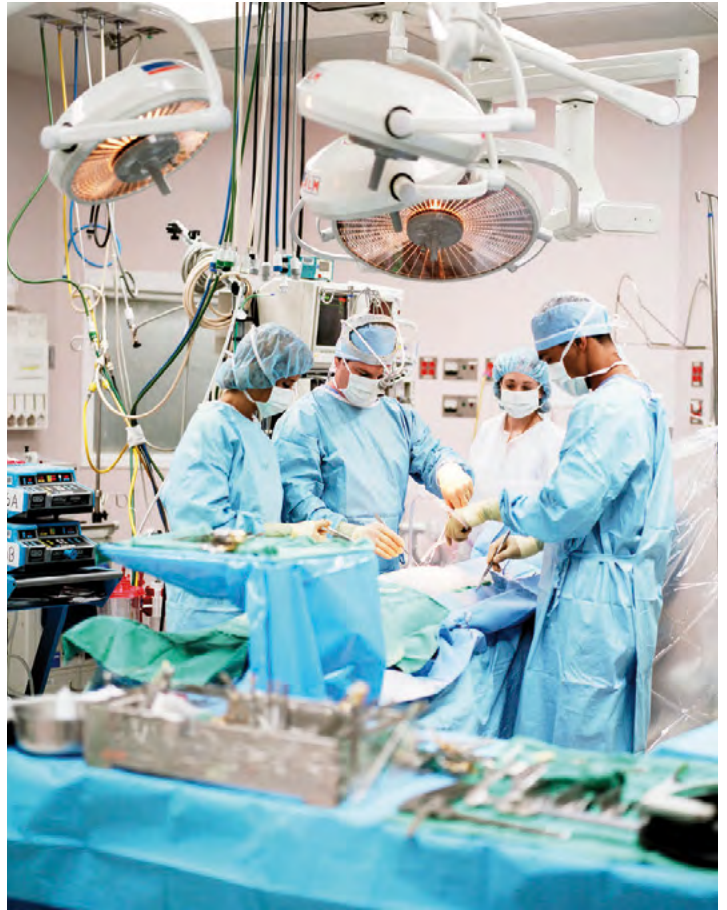


MEDICAL APPLICATIONS

With reference to EN 13348 “...copper tubes for the transport of medical gases...”, MediClim® is the specific solution for a sector in which, given the high level of quality required and the particular uses in hospital facilities, an excellence degree of quality and reliability is mandatory. Indeed, medical gases have a direct impact on human health and, therefore, must be and remain pure even during their transportation to protect the safety of treated patients.

MediClim® is subjected to particularly restrictive chemical, mechanical, dimensional and safety characteristics and is **suitable for vacuum systems and the distribution of medical gases** (Oxygen, nitrous oxide, nitrogen, helium, carbon dioxide, xenon, medical air, air for the supply of surgical instruments, anaesthetic gases and vapours) at pressure levels up to 2.000 kPa.

In this specific area, the applicable joining method for this tubing is welding or brazing, as recommended by standard UNI ISO 7396-1, which specifies that “the joining methods used must be such as to maintain the mechanical characteristics of the joint up to temperature of 600 °C”. During brazing or welding operations, the inside of the tubes must be purged with a protective gas (such as nitrogen) with due care that the cadmium content of brazing filler metals does not exceed 0,025%.





ACR APPLICATIONS

With reference to EN 12735-1, MediClim® fully meets the requirements in the air conditioning and refrigeration (ACR) sectors for refrigerant gas tubing in industry and laboratories. Particularly suitable for large-scale installations, it meets the technical specifications required by European legislation on packaging and transport of refrigerants (R410, R407C, ...).

MediClim® presents **internal surfaces that are bright, clean and dry**, key features for safeguarding the efficient performance of the entire system. The special production process guarantees a value of soluble residues on the inner surface of less than 0,38 mg/dm², in full compliance with EN 12735-1 and a lubricant residue less than 0,20 mg/dm² as indicated by standard EN 13348. Such levels of cleanliness are assured by the specific adopted production techniques and also by the termination-sealing of each tube by appropriate stoppers on completion of the manufacturing cycle.

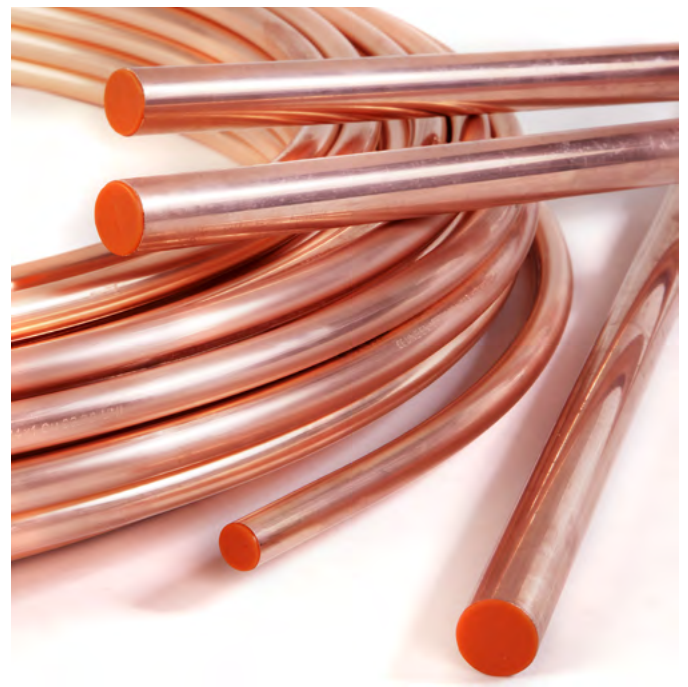


TABLE OF STANDARD PRODUCT DIMENSIONS - COILS (25 m)

dimensions Ed x Th	burst pressure	operating pressure ASTM	water content
(mm)	(MPa)	(MPa)	(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

Ed = External diameter Th = wall thickness

Standards EN 12735-1 and EN 13348, at paragraph 6.3.2, state that other dimensions not included in the table may be agreed between manufacturer and customer.

TABLE OF STANDARD PRODUCT DIMENSIONS - STRAIGHT LENGTHS (5 m)

dimensions Ed x Th	burst pressure	operating pressure ASTM	water content
(mm)	(MPa)	(MPa)	(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	8,328

Ed = External diameter Th = wall thickness

