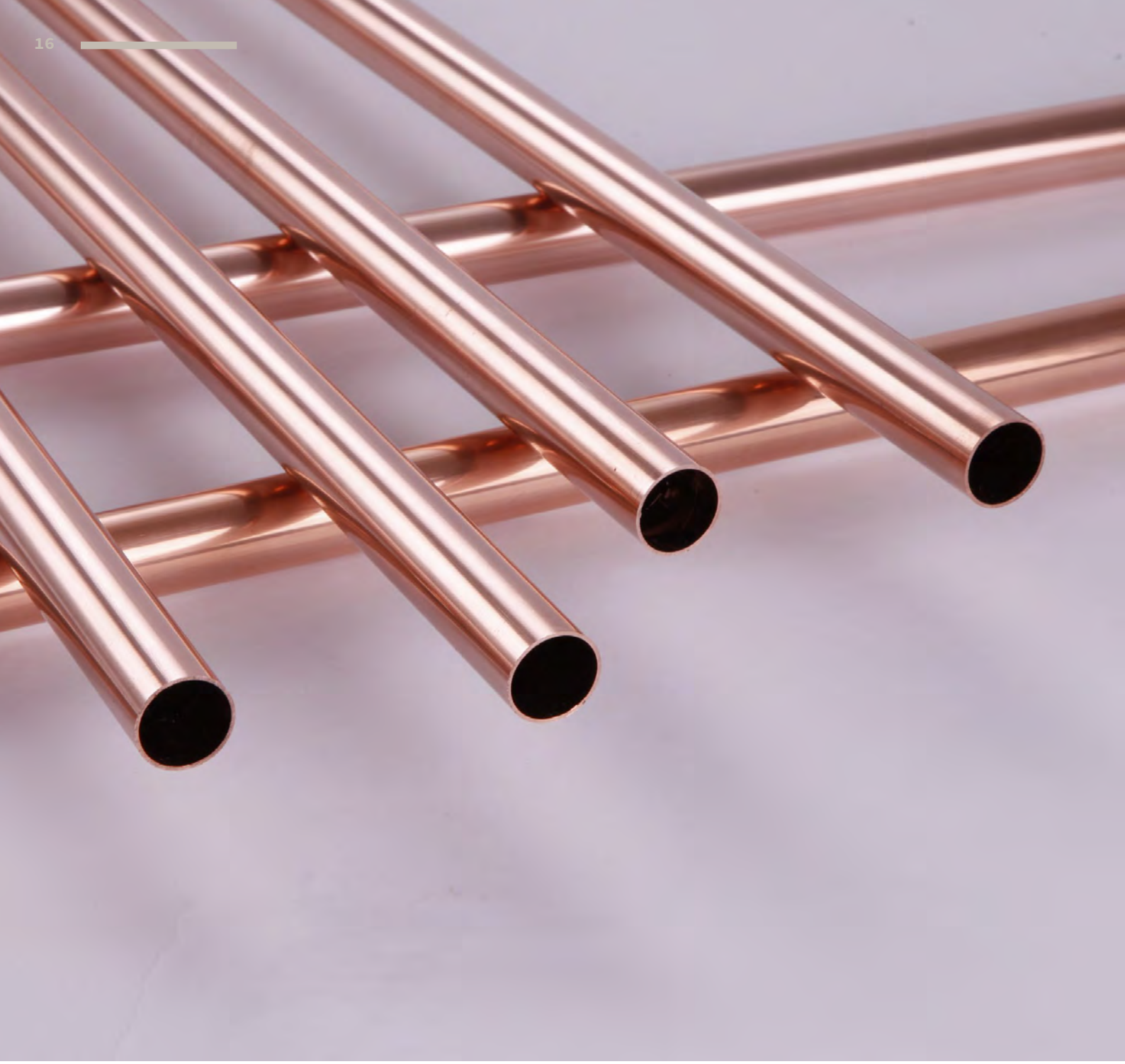

SCUDO®

QUALITY IN ITS PUREST FORM

FIELDS OF APPLICATION:

- Distribution of drinking water.
- Distribution of liquid and gaseous fuels.
- Heating systems and hot drinking water (subject to suitable insulation applied on site).

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

SCUDO® is a copper tube made of refined Cu-DHP copper (Cu ≥ 99.90%). The material does not contain additives such as colourants, plasticisers or flow agents, which may instead be present in alternative materials of petrochemical origin.

Thanks to a patented production process, SCUDO® offers higher quality levels than the minimum requirements set by the reference standards, ensuring high performance, safety and durability in plumbing/sanitary, heating and gas systems.

INTERNAL PROTECTION

During the production process, SCUDO® undergoes a specific patented treatment of passivation and stabilisation of the internal wall, which ensures the reliability of the tube in compliance with hygiene and potability requirements.
The product complies with Directive (EU) 2020/2184 on the quality of water intended for human consumption, paying particular attention to the suitability of materials in contact with drinking water.

CE MARKING

Each SCUDO® tube bears the CE marking in compliance with the EN 1057 standard, in accordance with Regulation (EU) No. 305/2011 (CPR – Construction Products Regulation).

The SCUDO® copper tube is identified by stamping every 60 cm, showing all the information required by Regulation (EU) 305/2011 for construction products, ensuring traceability and regulatory compliance.

THE SMART CHOICE

Manufactured according to UNI EN 1057, SCUDO® has proven bacteriostatic properties, which make it particularly suitable for the construction of drinking water systems.

Its high melting point (1083 °C), pressure resistance and thermal conductivity make it the ideal material for traditional heating systems (in the pre-insulated version or combined with suitable insulating sleeves), and for the construction of floor or wall systems. It is also the most suitable material for domestic gas systems, where safety, reliability and impermeability performance are non-negotiable.

SCT copper tubes constitute a universal application system, compatible with all the main joining techniques (brazing, welding, press fittings and push-fit fittings), making it possible to build – in compliance with regulations – water, heating and gas systems with the same product, with clear operational and stock-management advantages.

As a further guarantee to the end consumer, SCUDO® is marked with the CE mark and the most important international Quality marks, attesting compliance with the highest quality standards.

CALIBRATION

Accurate calibration, for both straight-length and coiled tubes, is a fundamental characteristic to ensure the reliability of all types of joints, and is essential in particular for press fittings.

BACTERIOSTATIC EFFECTS

Systems made of copper have a greater capacity to reduce pathogenic germs than systems made of plastic materials, naturally contributing to the maintenance of the microbiological quality of the water.

THE NATURAL SOLUTION

Copper is non-magnetic and does not alter the natural magnetic field. Its bacteriostatic properties make it particularly suitable for plumbing/sanitary networks, helping to prevent bacterial proliferation, including Legionella.

Thanks to its direct action on the cell wall of micro-organisms, SCUDO® inhibits the formation of bacteria inside pipes intended for human consumption, reducing the risks associated with water nebulisation (showers, whirlpool baths, fountains).

The copper tube also allows remediation and decontamination treatments to be carried out (thermal shock, chlorination, chlorine dioxide) without the risk of damaging the system.

It should also be noted thatplastic pipes, which are generally manufactured from petrochemical feedstocks, require – due to their composition – careful control of various chemical parameters.
It is essential, first of all, to know their actual chemical composition and the possible presence of adhesives, additives, stabilisers, colourants or other compounds that may be used during production.

TECHNICAL CHARACTERISTICS

- Alloy: Cu DHP CW024A (Cu: 99.9% min. P: 0.015 ÷ 0.040%) according to EN 1412
- Dimensions and tolerances: according to EN 1057
- Melting point: 1083 °C
- Absolute roughness e.: e. = 0.0015 mm (low pressure drops)
- Coefficient of linear thermal expansion: 0.0168 mm/m°C
- Thermal conductivity: at 20 °C = 364 W/m°C (over 1,000 times higher than that of plastics)
- Thermal expansion: ≅ 1.2 mm/m with $\Delta T = 70$ °C
- Does not soften at high temperatures
- Absolute impermeability to gases
- UV-resistant
- Temper: R 220 or R 290 according to EN 1057

Coiled tubes are supplied in annealed temper (R220) with the following characteristics:

- Ultimate tensile strength: R. min. ≥ 220 MPa (N/mm^2)
- Elongation: A5 min. > 40%

Straight-length tubes are supplied in hard temper (R290) with the following characteristics:

- Ultimate tensile strength: R. min. ≥ 290 MPa (N/mm^2)
- Elongation: A5 min. > 3%
- Carbon residue (coiled tubes): C < 0.06 mg/dm^2 (compared to C ≤ 0.20 mg/dm^2 required by the EN 1057 standard)

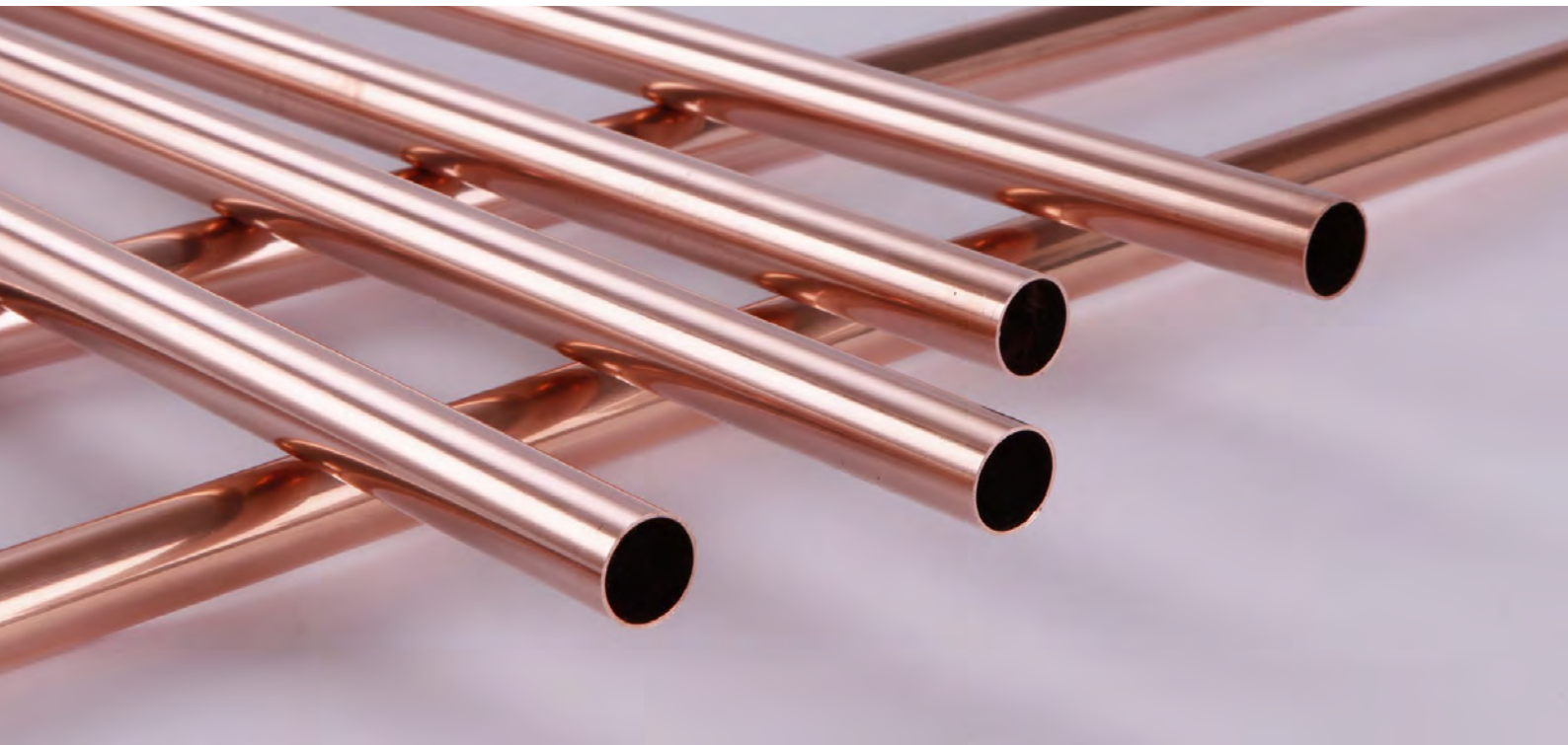

TABLE: STANDARD PRODUCTION SIZES - COILED TUBES

Size OD x WT (mm)	Min. Guaranteed Coil Length (m)	Burst Pressure (MPa)	ASTM Working Pressure (MPa)	Water Content (l/m)
6 x 1	50	74,80	18,70	0,013
8 x 1	50	56,10	14,03	0,028
10 x 1	50	44,88	11,22	0,050
12 x 1	50	37,40	9,35	0,079
14 x 1	50	32,06	8,01	0,113
15 x 1	50	29,92	7,48	0,133
16 x 1	50	28,05	7,01	0,154
18 x 1	50	24,93	6,23	0,201
22 x 1	25	20,40	5,10	0,314
22 x 1,5	25	30,60	7,65	0,283

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)
6 x 1	98,60	24,65	0,013
8 x 1	73,95	18,49	0,028
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 1,2	20,28	5,07	0,834
35 x 1,5	25,35	6,34	0,804
42 x 1	14,09	3,52	1,256
42 x 1,2	16,90	4,23	1,231
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

OD = Outer Diameter WT = Wall Thickness