



Copper Tube Plant

Majdanpek



Copper Connecting Centuries



Copper Tube Plant Majdanpek



Since 1979, Fabrika bakarnih cevi Majdanpek (Copper Tube Plant) has been a specialised manufacturer of copper tubes and highly regarded throughout Europe. High quality is achieved by the use of up to date processing equipment, the application of the latest copper tube manufacturing technology and the high-quality raw material.

The production runs under strictly controlled conditions. Technical and technological parameters in product manufacturing and quality monitoring processes are in compliance with ISO 9001:2000 (certificate by British Standards Institution No. FM 86683).

Copper Tube Plant Majdanpek is proud owner of quality marks: KITEMARK (United Kingdom), KIWA (Holland), WHI and DWV (Canada) and manufactures copper tubes according to all EU, US and other national standards.

Copper tubes

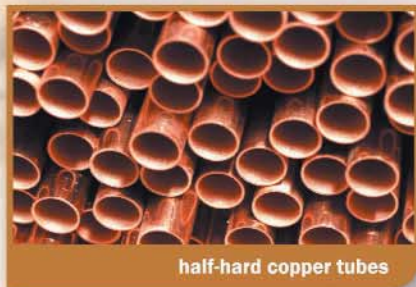
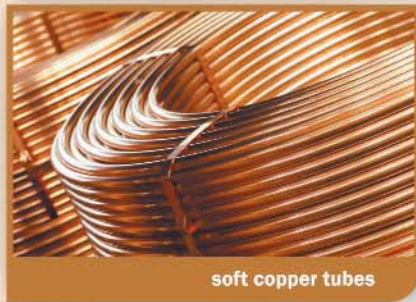
The copper tubes are produced of high phosphorus deoxidized copper, designation Cu-DHP (according to EN 1057), with guaranteed copper content of 99.90% min. and phosphorus content 0.015 - 0.040%.

Physical characteristics of Cu-DHP copper:

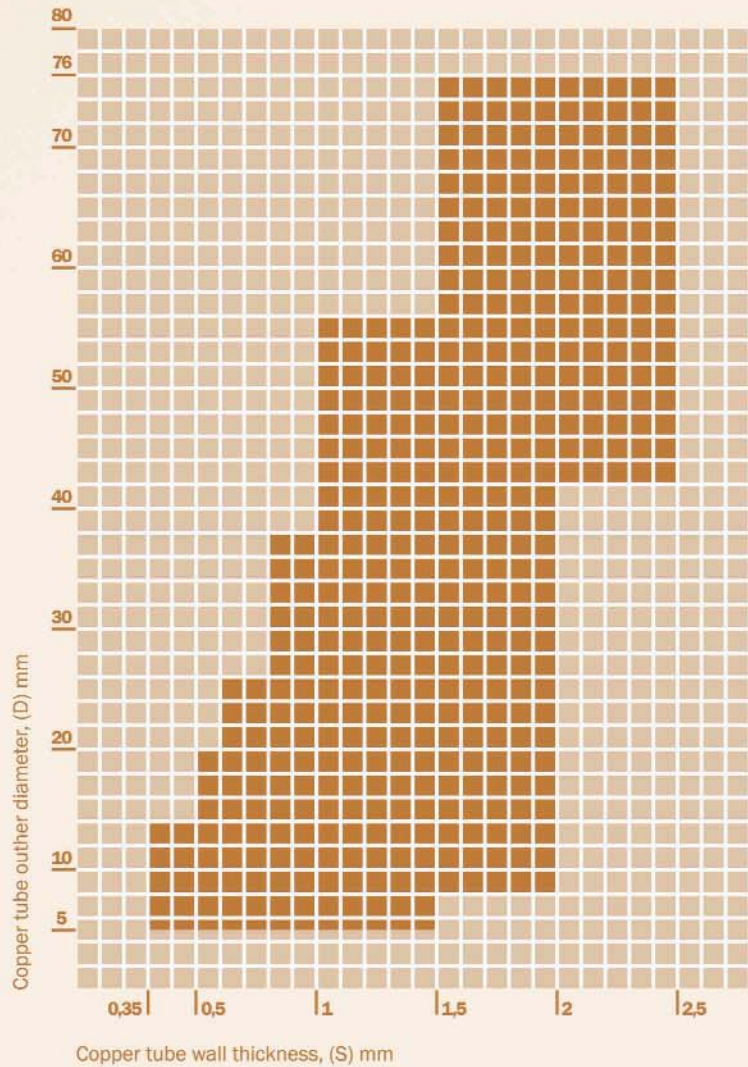
Specific weight	8,94 kg/dm³
Melting temperature	1083°C
Linear expansion coefficient 25-100 °C	16.8 · 10⁻⁶m/m
Thermal conductivity coefficient at 20 °C	340 W/m²K
Electrical conductivity (indicative)	42 - 54 S

Production programme

According to the Plant's production programme, copper tubes are manufactured in the following sizes: outer diameter \varnothing 5 - 76 mm, wall thickness 0.35 - 2.50 mm, and in the following quality: soft, half-hard and hard.



CTPM production programme diagram



The most representative standards in manufacturing of copper tubes: EN 1057, EN 12735-1, EN 12449, ASTM B280, ASTM B68/251, ASTM B88, GOST 617, GOST 11383, JUS C.D5.500, JUS C.D5-502...

Copper tubes - dimensions, allowable pressures and weight:

D x S (mm)	6x1	8x1	10x1	12x1	15x1	16x1	18x1	22x1	28x1.5	35x1.5	42x1.5	54x2	76x2.5
Pressure (bar)*	145	109	87	71	57	52	48	38	46	36	30	31	25
Weight (kg/m)	0.140	0.197	0.253	0.309	0.393	0.421	0.477	0.590	1.116	1.411	1.705	2.919	5.158

* Values indicated for pressure in the table above are computed for soft tubes with safety factor N=5.

Values indicated for allowable pressure relate only to tubes, not to their joints.

Weight and maximum allowable working pressure of fluids are computed using the following equations for each copper tube size:

For weight:

$$Q = (D - S) \times S \times \pi \times \gamma, \text{ gr/m}$$

where:

D - outer diameter, mm

S - wall thickness, mm

γ - specific weight of copper, 8.94 kg/dm³

π - 3.14

For pressure:

$$P = 200 R_m \times S / D \times N, \text{ bara}$$

where:

200 - conversion constant

R_m - tensile strength, N/mm²

S - wall thickness, mm

D - outer diameter, mm

N - safety factor (5)



Copper tubes - mechanical characteristics according to EN 1057

Temper	Temper designation	Tensile strength (N/mm ²)	Elongation (%) A ₅	Hardness HV5 (indicative)
soft	R220	min. 220	40	40 - 70
half-hard	R250	min. 250	30	75 - 100
hard	R290	min. 290	3	min. 100



Delivery condition and packaging methods

Temper designation	Outer diameter (mm)	Wall thickness (mm)	Delivery condition	Packaging methods
R220	5 - 22	0.5 - 2.0	25 and 50m coils	Cardboard boxes on pallets
R220	6 - 20	0.5 - 1.0	LW coil, 80-120 kg weight	Cardboard spools on pallets
R220	5 - 76	0.5 - 2.5	up to 6 m, straight length	Wooden cases
R250, R290	5 - 76	0.5 - 2.5	up to 6 m, straight length	Bundles in plastic foil



packaging copper tubes in bundles



packaging LWC



packaging coils

Owing to their physical characteristics (plasticity, high thermal conductivity) copper tubes are widely applied in water supply and gas plumbing, heating and cooling installations and machines. Copper tubes in plumbing systems endure more full water frosting-defrosting cycles (without losing their properties), that is, hard copper tubes can be frosted-defrosted twice without any damage, while soft and half-hard tubes can endure this even three times. They are easy and safe to install, resistant to corrosion and have a long useful life.

Plastic-coated copper tubes

Copper tubes coated with polyvinylchloride (PVC) are intended for water, heating, gas, air, fluid and other installations. Advantages of PVC-coated copper tubes are: major reduction of heat loss, prevention of burns in users, PVC coating protects copper tubes from aggressive environments and prolongs its service life. On Client's request CTPM can coat with plastic hard and half-hard copper tubes in straight length.

Copper tubes coating material - polyvinyl chloride (PVC):

Density: 1400 - 1500 kg/m³

Elongation: 207%

Breaking strength: 14 N/mm²

Maximum working temperature: +95°C

Minimum bending temperature: -10°C



PVC coated copper tubes

The following data may be designated along plastic coated copper tubes:

- Manufacturer's designation
- PVC
- Outer diameter of copper tube
- Wall thickness of copper tube
- Quarter/year of production



PVC coated copper tubes delivery method

Plastic coated copper tubes - sizes, weight and allowable pressures:

D x S (mm)	6x0.8	8x0.8	10x0.8	12x0.8	15x0.8	16x0.8	18x0.8	22x1.0
Weight (kg/m)*	0.117	0.162	0.207	0.252	0.319	0.341	0.386	0.590
Flow (l/m)	0.015	0.032	0.055	0.085	0.141	0.163	0.211	0.314
Pressure (bar)*	115	87	69	58	46	44	39	38

* Copper tube weight only (excluding PVC coat).

* For soft copper tube and safety factor N=5.

Standard delivery conditions for plastic-coated copper tubes

Temper designation	Tube diameter (mm)*	Delivery condition	Packaging
R220 (soft)	18 - 22	25 m coil	palette
R220 (soft)	6 - 16	50 m coil	palette

* Values indicated in the table relate to outer diameter (excluding PVC coat).
PVC coat thickness ranges from 1.4 to 2.0 mm.



Products manufactured by CTP Majdanpek are used in the following countries: United Kingdom, France, Canada, Sweden, Germany, Holland, Italy, Russia, Slovakia, Hungary, Slovenia, Croatia, Bosnia and Herzegovina, Serbia and Montenegro, Macedonia, Romania, Bulgaria, Greece, Turkey, Algeria, Egypt, Israel, Iran, South Africa...

Ordering copper tubes

For more efficient communication with Copper Tube Plant Majdanpek, please state the following data in your inquiry/order:

- Copper tube size (outer diameter x wall thickness)
- Length
- Standard (technical requirements)
- Temper
- Quantity (in meters or kilograms)
- Delivery condition



Certificate No. FM 86683



Copper Tube Plant Majdanpek

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