

QUALITY AND RELIABILITY



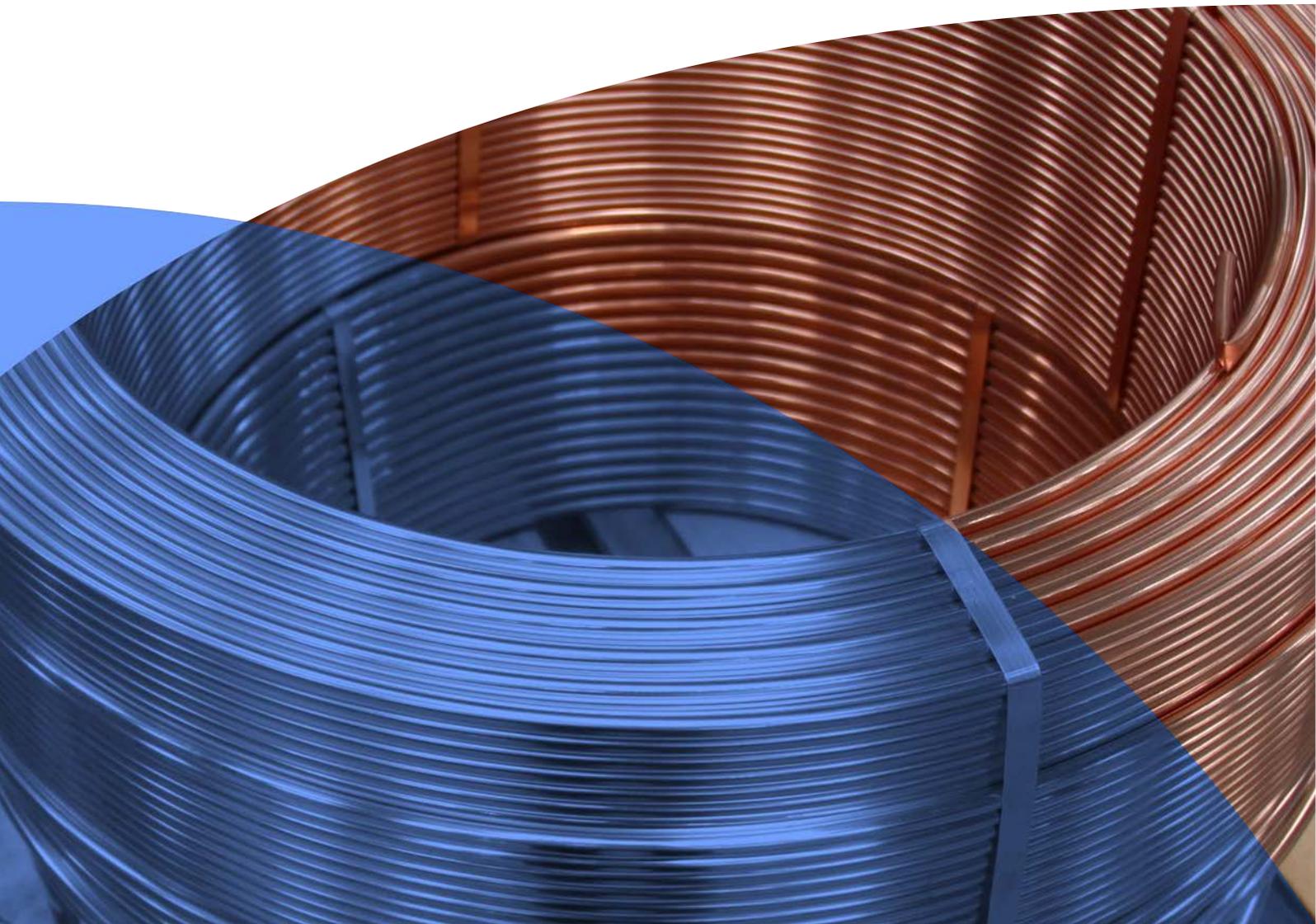
**COPPER TUBES
PRODUCTION**
ANGREN PIPE PLANT LLC

OUR PARTNERS



CONTENT

ABOUT COMPANY	4
FIELD OF APPLICATION	5
ADVANTAGES OF COPPER TUBES	6
QUALITY AND ENERGY SAVING POLICY	7
TECHNOLOGY AND MACHINES (EQUIPMENT)	8
QUALITY CONTROL	9
CHARACTERISTICS AND STANDARDS FOR COPPER PIPES	10
STRAIGHT LENGTH (CUT) TUBES	12
LEVEL WOUND COILS (LWC)	14
PANCAKE COILS (PC)	15
INNER GROOVED TUBES	16
SPECIAL FORM COPPER PIPES	17
PLACING ORDERS FOR COPPER PIPES	19



ABOUT COMPANY

The Angren pipe plant LLC, which produces copper pipes of various diameters and shapes, was created in 2013 in Angren Special Industrial zone of Tashkent region. The designed capacity of the company is 5,000 - 8,000 tons per year. The main raw material is copper cathodes with a base metal content of 99.99% (GOST 5462001) supplied by Almalyk MMC JSC. Manufactured products are sold it domestic market (15%) and for export (85%).



FIELD OF APPLICATION

Copper pipes are widely used in everyday life, in production, in construction work, for installing water pipes, thermal communications, when installing climate control equipment, and including in the following areas:

- ✓ Cold and hot water supply;
- ✓ Water heating and water heated floor systems;
- ✓ In compressed air and gas pipelines (gas supply);
- ✓ In hydraulic systems for oil supply;
- ✓ In systems for connecting technological equipment;
- ✓ In fuel systems of engines for different purposes.

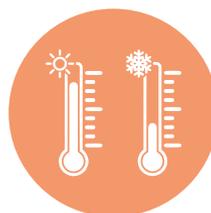
Copper pipes are used for all types of engineering communications, and they do not require specialization. In the UK, USA, Sweden and Hong Kong, copper pipes are the main pipe for heating and water systems. In addition, pipelines made of copper and copper alloys are widely used in the shipbuilding and energy industries to transport liquids and steam. Due to its excellent thermal conductivity properties, copper is the most suitable material for use in heating, refrigeration and air conditioning systems.

Liquid fuel lines are another field where copper pipes work well. Such fuel lines are also used in everyday life, for example, where it is impossible to use gas as fuel. The main type of fuel in such installations is liquid fuel oil. Since fuel oil is flammable, it is important to ensure the tightness of the fuel line, and modern copper pipelines successfully solve this problem.



ADVANTAGES OF COPPER TUBES

- ✓ Long service life (the service life of copper pipes for water and gas is about 50 years).
- ✓ High anti-corrosion properties (not subject to corrosion, as a result of which they have a longer service life and reduce the costs of operating pipelines).
- ✓ Low thermal expansion.
- ✓ Withstanding high and low temperatures well. The minimum allowed temperature is minus 100°C. The maximum permissible operating temperature of copper pipes reaches plus 250°C. However, the melting point of copper connections used in pipeline systems exceeds 1100°C, which suggests heat resistance corresponding to refractory pipes.
- ✓ Strength (high margin of mechanical strength against hydraulic damage).
- ✓ Ability to withstand high pressures (indifferent to any possible pressure values in water supply systems). The fracture pressure for a copper pipe is from 25 to 220 atmospheres at 100°C (depending on the size of the pipe), which creates a huge margin of safety.
- ✓ Simplicity and ease of installation due to the high flexibility and elasticity (ductility) of copper. Material consumption during installation can be calculated to the nearest centimeter (minimum waste).
- ✓ High resistance to defrosting (during interruption, interruption of heat or power supply).
- ✓ Resistance to vibration (indifference to vibration, including in winter).
- ✓ Gas-tightness (impermeable not only to liquids, but also to gases, such as oxygen, which is very important for heating systems and water supply systems).
- ✓ No material aging.
- ✓ Environmentally friendly (do not emit harmful and toxic compounds) and safe for health.
- ✓ Resistant to sludge formation in surface heating systems due to 100% diffusion impermeability.
- ✓ Good for health, high bactericidal and bacteriostatic properties (i.e. prevents the growth of bacteria on the inner surface of the pipe).
- ✓ Aesthetic appearance.
- ✓ Extremely low internal surface roughness and low losses due to local hydraulic resistance in connections, which can be neglected (the roughness of copper pipes is 100 times lower than that of steel pipes, and 4+5 times lower than that of polymer pipes).
- ✓ Not afraid of exposure to ultraviolet radiation.
- ✓ Copper pipes are completely recycled after use.



QUALITY AND ENERGY SAVING POLICY

The quality and timeliness of shipment of produced copper pipes in accordance with received applications is the main criterion for assessing the performance of the management of Angren pipe plant LLC, which allows us to satisfy the interests and demands of our Consumers.

This policy is communicated with and understood by every employee of Angren Pipe Plant LLC and is annually analyzed by its management for suitability and relevance.

We have implemented an integrated management system that meets the requirements of international standards ISO 9001 and ISO 50001, ensure its compliance and are constantly working to improve it, in order to increase the satisfaction of our Consumers and the energy efficiency of copper pipe production.

- Fulfillment of labor and production discipline requirements;
- Accident-free operation of production equipment, machines and mechanisms.

We set for ourselves achievable, specific, measurable, time-bound goals agreed upon with the founders and strive to achieve them.

We have defined criteria for the quality and energy efficiency of our work, which are:

- Implementation of copper pipe production forecasts;
- Purchase and implementation of advanced and energy-saving technologies, new equipment, best practices.

Angren Pipe Plant LLC is one of the leading manufacturers of copper pipes in the Republic of Uzbekistan and sets itself the task of ensuring the supply to domestic and foreign markets of various types and sizes of copper pipes that fully meet the requirements of consumers and regulatory documents, in quantity that satisfy applications for their purchase.

We evaluate our employees according to such criteria as productivity, personal qualities, personal motivation, professionalism and make every effort within our power to constantly improve these criteria for each of our employees.



TO PERFORM THESE TASKS

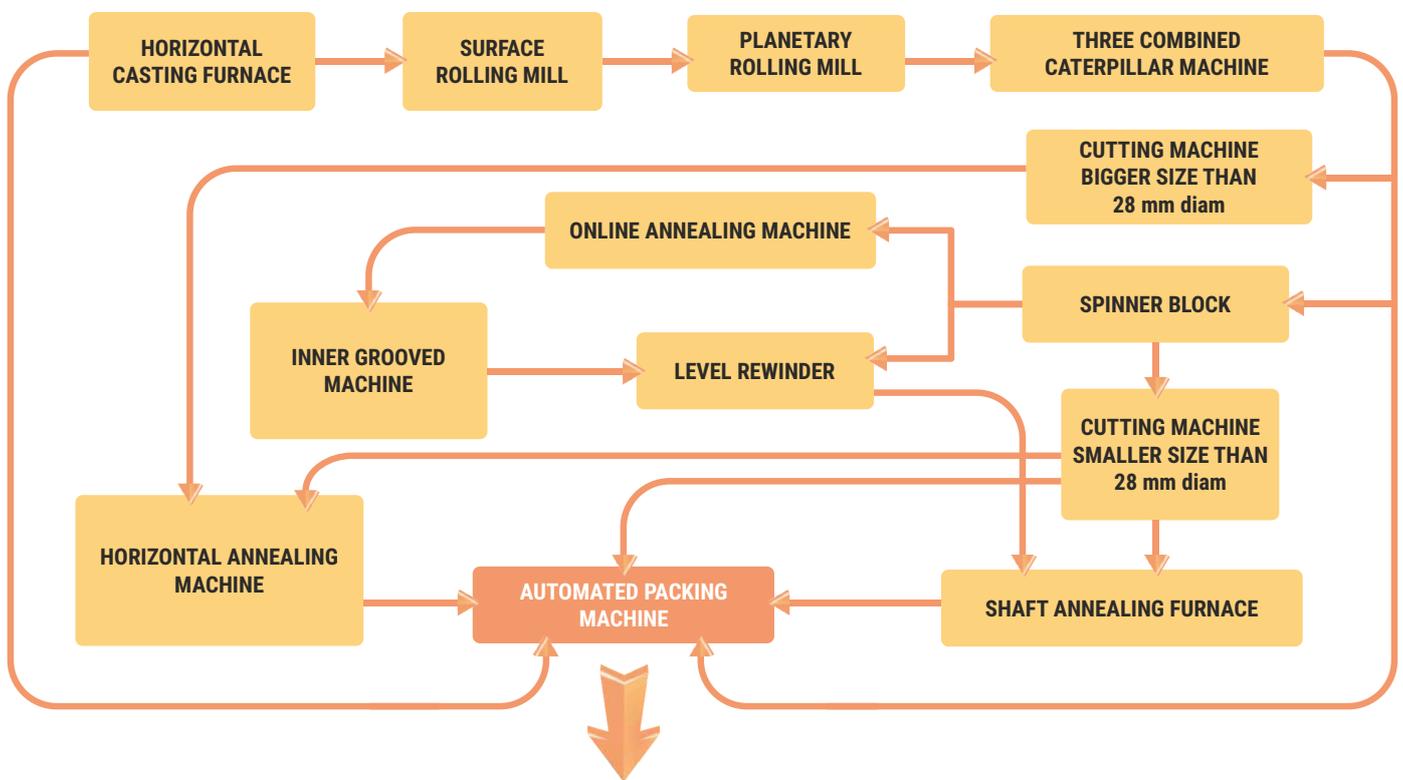
- Improving the energy performance of the copper pipe production workshop and increasing the use of renewable energy sources;
- Absence of cases of industrial injuries, occupational diseases, violations of occupational health and safety requirements, rules of technical operation of equipment, industrial sanitation and internal regulations.

We always deliver to our consumers what we promise and make every effort to anticipate their needs and desires.

TECHNOLOGY AND MACHINES (EQUIPMENT)

We produce copper pipes with diameters from 4 mm to 42 mm with wall thicknesses from 0.3 to 1.8 mm in soft, semi-hard and hard states. All our products comply with the requirements of EN 12735-1:2001, EN 1057, O'zDst 3348:2018 and are also harmonized with ASTM B280, ASTM B68 standards.

Inspection and testing of our products is carried out at the manufacturing site using advanced portable or in-line measuring instruments, as well as in our laboratory. This allows us to guarantee high quality and compliance with all standards.



QUALITY CONTROL

During the copper pipes production process the following controls and tests are followed:

- ✓ Visual inspection of the outer and inner surfaces;
- ✓ Control the diameter and thickness using a micrometer; Controlling the length of pipes produced in sections;
- ✓ Control of surface and dimensions carried out by statistical method;
- ✓ Tensile or hardness test;
- ✓ Flattening test;
- ✓ Leak test;
- ✓ Chemical composition control;
- ✓ Control of mechanical properties using a statistical method (as agreed with the consumer).

Control and testing are carried out at the manufacturing site using portable instruments or measuring instruments built into the equipment, or in the laboratory. In order to ensure the quality of products, the analytical laboratory of the plant is equipped with equipment from leading companies "Zwik/Roell", "Spectro", "ELTRA" made in Germany, which ensures chemical and physical-mechanical analysis necessary to subsequently obtain a quality standard according to the ISO/IEC17025 system. The analytical laboratory of the plant is certified by the Uzstandard Agency of the Republic of Uzbekistan.



CHARACTERISTICS AND

STANDARD	DESIGNATION	CONTENT %	MECHANICAL FEATURES				WALL THICKNESS TOLERANCES mm			
		Cu/P	Temporary resistance, σ_b , MPa (kgf/mm ²) not less than		Relative expansion δ , %, not less than	Vickers hardness HV 5/3				
O'zDSt 3348:2018	Cu-DHP, CW024A	Copper+ silver-99,90	Soft	210	36	38-72	Nominal outer diameter	from 0,25 to 0,30	more than 0,3 and 0,35	more than 0,35 and 0,40
							4,0 до 9,52	±0,02	±0,02	±0,02
		Phosphorous 0,012-0,04	Half hard	240	3	not less than 95	9,52 до 13,0	-	±0,02	±0,02
							13,0 до 16	-	-	±0,02
			Hard	280	3	not less than 95	16 до 22	-	-	-
22 до 44	-	-					-			
EN 12735-1:2020	Cu-DHP, CW024A	Cu 99,9	Annealed	220	40	40-70	Nominal outer diam.			Wall thickness tolerance e
										e < 1 mm
		P 0,015-0,04	Half hard	250	30	75-10	d ≥ 18 мм			±0,10
							d ≥ 18 мм			±0,10
			Hard	290	3	мин 100				
EN 1057-2006	Cu-DHP, CW024A	Cu 99,9	Annealed	220	40	40-70	Nominal outer diam.			Wall thickness tolerance e
										e < 1 mm
		P 0,015-0,04	Half hard	250	30° 20°	75-10	d < 18 mm			±0,10
							d ≥ 18 mm			±0,10
			Hard	290	3	min. 100				

STANDARDS FOR COPPER PIPES

WALL THICKNESS TOLERANCES, mm					OUTER DIAMETER TOLERANCES		FIELD OF APPLICATION
from 0,40 to 0,50	from 0,50 to 0,63	from 0,63 to 0,80	from 0,80 to 1,5	from 1,5 to 2,00	Nominal outer diameter	Outer diameter tolerances	<p>This standard applies to seamless copper pipes cold-formed round section general purpose and installs technical requirements for them. The pipes are intended for use in cold and hot water supply systems, water (steam) heating, cooling, sewerage, treatment facilities and gas supply, as well as for use in heat exchangers. Everyone's demands sections of this standard are mandatory and suitable for certification</p>
±0,03	±0,04	±0,04	-	-	from 3,0 to 9,0	±0,04	
±0,03	±0,04	±0,04	-	-	from 9,0 to 19,0	±0,1	
±0,03	±0,04	±0,04	-	-	from 19,0 to 28,0	±0,15	
-	-	±0,04	±0,1	-	from 28,0 to 44,0	±0,2	
-	-	±0,04	±0,1	-			
Wall thickness tolerance e					from 3 to 18	R220±0,04, R290±0,04, R250±0,09	<p>This European Standard specifies requirements, sampling, test methods and delivery conditions for seamless round copper pipes, which are used for refrigeration piping systems and air conditioning technology (i.e. pipelines, connections, repairs)</p>
e ≥ 1 mm					from 18 to 28	R220±0,05, R290±0,06, R250±0,10	
±0,13					from 28 to 54	R220±0,06, R290±0,07, R250±0,11	
±0,15					from 54 to 76,1	R220±0,07, R290±0,10, R250±0,15	
					from 76,1 to 88,9	R220±0,07, R290±0,15, R250±0,2	
					from 88,9 to 108	R220±0,07, R290±0,2, R250±0,3	
Wall thickness tolerance e					from 3 to 18	R220±0,04, R290±0,04, R250±0,09	<p>This European standard specifies the requirements sampling, test methods and delivery conditions seamless round copper pipes. It is applied to pipes with outer diameter from 6 mm to 267 mm inclusive used in distribution networks for hot and cold water, hot water heating systems, including panel heating systems (underfloor, wall, air), distribution of household gas and liquid fuel, cleaning Wastewater. It can also be applied to seamless round copper pipes intended for pre-insulation before use for any of the above purposes.</p> <p>It applies to pipes with an outer diameter of 6mm or more up to 267 mm inclusive used in:</p> <ul style="list-style-type: none"> • distribution networks for hot and cold water; • hot water heating systems, including panel heating systems (underfloor, wall, air); • distribution of household gas and liquid fuel; • wastewater treatment. <p>It can also be applied to seamless round copper pipes intended for pre-insulation before using for any of the above purposes.*</p>
e ≥ 1 mm					from 18 to 28	R220±0,05, R290±0,06, R250±0,10	
±0,13					from 28 to 54	R220±0,06, R290±0,07, R250±0,11	
±0,15					from 54 to 76,1	R220±0,07, R290±0,10, R250±0,15	
					from 76,1 to 88,9	R220±0,07, R290±0,15, R250±0,2	
					from 88,9 to 108	R220±0,07, R290±0,2, R250±0,3	
					from 108 to 159	R220±0,2, R290±0,7, R250±0,4	
					from 159 to 267	R220±0,6, R290±1,5, R250-	

COPPER PIPES IN STRAIGHT CUTS

Standards: EN 12735-1; EN 1057; O'zDst 3348:2018; ASTM B68; ASTM B280

Copper brand: M1 M00k
 Tempers: Hard, half hard, soft
 Tubes type: straight length (cut)
 Packing: In straight cuts from 3 m to 6 m
 (in bundles up to 350 kg and in wooden boxes up to 1 ton)



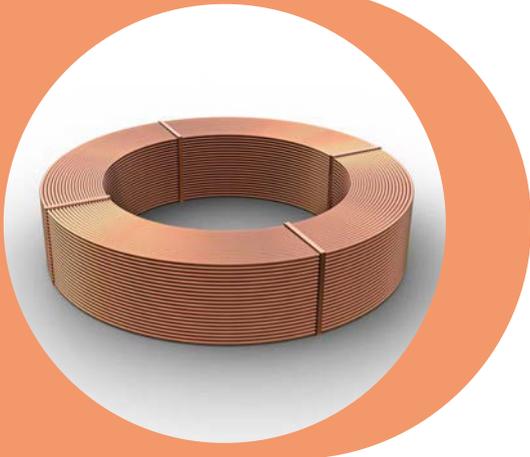
Copper pipes in straight length are used in many areas of industry, including refrigeration, air conditioning systems, and heat exchange units. They meet the requirements of international standards ASTM B280, ASTM B68.

DIAMETER		WALL THICKNESS																		PACKING FORM	LENGTH				
		mm																							
		0,28	0,30	0,32	0,35	0,40	0,45	0,50	0,60	0,70	0,80	0,90	1,00	1,10	1,20	1,25	1,30	1,35	1,50			1,70	1,80	1,90	2,00
inch	mm	inch																							
		0,011	0,012	0,013	0,014	0,016	0,018	0,020	0,024	0,028	0,031	0,035	0,039	0,043	0,047	0,049	0,051	0,053	0,059	0,067	0,071	0,075	0,079		
	4							⊙			⊙		⊙											STRAIGHT LENGTH	from 3 to 6 m
3/16	4,76					⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙											STRAIGHT LENGTH	from 3 to 6 m
	5							⊙		⊙	⊙		⊙											STRAIGHT LENGTH	from 3 to 6 m
	5,5					⊙		⊙	⊙	⊙	⊙													STRAIGHT LENGTH	from 3 to 6 m
	6							⊙	⊙	⊙	⊙	⊙	⊙											STRAIGHT LENGTH	from 3 to 6 m
1,4	6,35				⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙											STRAIGHT LENGTH	from 3 to 6 m
5/16	7,93				⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙										STRAIGHT LENGTH	from 3 to 6 m
	7,8							⊙		⊙	⊙	⊙	⊙	⊙										STRAIGHT LENGTH	from 3 to 6 m
	8					⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙									STRAIGHT LENGTH	from 3 to 6 m
	9							⊙		⊙	⊙	⊙	⊙											STRAIGHT LENGTH	from 3 to 6 m
3/8	9/52	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙									STRAIGHT LENGTH	from 3 to 6 m
	9,8									⊙	⊙	⊙	⊙	⊙										STRAIGHT LENGTH	from 3 to 6 m
	10							⊙	⊙	⊙	⊙	⊙	⊙	⊙										STRAIGHT LENGTH	from 3 to 6 m
	12		⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙									STRAIGHT LENGTH	from 3 to 6 m
	12,5					⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙											STRAIGHT LENGTH	from 3 to 6 m
1/2	12,7		⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙								STRAIGHT LENGTH	from 3 to 6 m
	13					⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙									STRAIGHT LENGTH	from 3 to 6 m
	13,5					⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙											STRAIGHT LENGTH	from 3 to 6 m
	14					⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙									STRAIGHT LENGTH	from 3 to 6 m
5/8	15,87				⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙							STRAIGHT LENGTH	from 3 to 6 m
	16							⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙						STRAIGHT LENGTH	from 3 to 6 m

DIAMETER		WALL THICKNESS																		PACKING FORM	LENGTH				
		mm																							
		0,28	0,30	0,32	0,35	0,40	0,45	0,50	0,60	0,70	0,80	0,90	1,00	1,10	1,20	1,25	1,30	1,35	1,50			1,70	1,80	1,90	2,00
inch	mm	inch																							
inch	mm	0,011	0,012	0,013	0,014	0,016	0,018	0,020	0,024	0,028	0,031	0,035	0,039	0,043	0,047	0,049	0,051	0,053	0,059	0,067	0,071	0,075	0,079		
	16,5										○	○	○	○	○	○	○	○						STRAIGHT LENGTH	from 3 to 6 m
	18									○	○	○	○	○	○	○	○	○	○	○	○			STRAIGHT LENGTH	from 3 to 6 m
3/4	19,05								○	○	○	○	○	○	○	○	○	○	○	○	○			STRAIGHT LENGTH	from 3 to 6 m
	19,5										○	○	○	○	○	○	○	○	○	○	○	○		STRAIGHT LENGTH	from 3 to 6 m
	20											○	○	○	○	○	○	○	○	○	○	○		STRAIGHT LENGTH	from 3 to 6 m
	22									○	○	○	○	○	○	○	○	○	○	○	○	○	○	STRAIGHT LENGTH	from 3 to 6 m
7/8	22,22								○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	STRAIGHT LENGTH	from 3 to 6 m
	25											○	○	○	○	○	○	○	○	○	○	○		STRAIGHT LENGTH	from 3 to 6 m
1	25,4										○	○	○	○	○	○	○	○	○	○	○	○	○	STRAIGHT LENGTH	from 3 to 6 m
	25,5											○	○	○	○	○	○	○	○	○	○	○		STRAIGHT LENGTH	from 3 to 6 m
	28											○	○	○	○	○	○	○	○	○	○	○	○	STRAIGHT LENGTH	from 3 to 6 m
1 1/8	28,57										○	○		○	○	○	○	○	○	○	○	○	○	STRAIGHT LENGTH	from 3 to 6 m
	29											○	○	○	○	○	○	○	○	○	○	○	○	STRAIGHT LENGTH	from 3 to 6 m
2 3/16	30											○	○	○	○	○	○	○	○	○	○	○	○	STRAIGHT LENGTH	from 3 to 6 m
	31												○		○		○		○		○		○	STRAIGHT LENGTH	from 3 to 6 m
1 17/64	32														○		○		○		○			STRAIGHT LENGTH	from 3 to 6 m
	34														○	○	○	○	○	○	○	○		STRAIGHT LENGTH	from 3 to 6 m
1 3/8	34,92										○	○	○	○	○	○	○	○	○	○	○	○	○	STRAIGHT LENGTH	from 3 to 6 m
1 3/8	35										○	○	○	○	○	○	○	○	○	○	○	○		STRAIGHT LENGTH	from 3 to 6 m
	38											○	○	○	○	○	○	○	○	○	○	○		STRAIGHT LENGTH	from 3 to 6 m
1 37/64	40											○	○	○	○	○	○	○	○	○	○	○		STRAIGHT LENGTH	from 3 to 6 m
1 5/8	41,27										○	○	○	○	○	○	○	○	○	○	○	○	○	STRAIGHT LENGTH	from 3 to 6 m
1 21/32	42												○	○	○	○	○	○	○	○	○	○	○	STRAIGHT LENGTH	from 3 to 6 m



LEVEL WOUND COILS



**Standard: EN 12735-1; EN 1057;
O'zDst 3348:2018; ASTM B68; ASTM B280**

Copper brand: M1 M00k
Temper: Hard, half hard, soft
Packing: In coils from 100 kg to 350 kg

DIAMETER		WALL THICKNESS																		PACKING				
		mm																						
		0,28	0,30	0,32	0,35	0,40	0,45	0,50	0,60	0,70	0,80	0,90	1,00	1,10	1,20	1,25	1,30	1,35	1,5		1,70	1,80	1,90	2,00
inch	mm	inch																						
		0,011	0,012	0,013	0,014	0,016	0,018	0,020	0,024	0,028	0,031	0,035	0,039	0,043	0,047	0,049	0,051	0,053	0,059	0,067	0,071	0,075	0,079	
	4							⊙			⊙		⊙											LWC
3/16	4,76					⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙											LWC
	5							⊙		⊙	⊙		⊙											LWC
	5,5					⊙		⊙	⊙	⊙	⊙	⊙												LWC
	6							⊙	⊙	⊙	⊙	⊙	⊙											LWC
1,4	6,35				⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙											LWC
5/16	7,93				⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙										LWC
	7,8							⊙		⊙	⊙	⊙	⊙	⊙										LWC
	8					⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙									LWC
	9							⊙		⊙	⊙	⊙	⊙	⊙										LWC
3/8	9,52	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙									LWC
	9,8										⊙	⊙	⊙	⊙										LWC
	10							⊙	⊙	⊙	⊙	⊙	⊙	⊙										LWC
	12		⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙								LWC
	12,5					⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙										LWC
1/2	12,7		⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙							LWC
	13					⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙								LWC
	13,5					⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙										LWC
	14					⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙							LWC
5/8	15,87					⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙					LWC
	16							⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙					LWC
	16,5										⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙					LWC
	18									⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙			LWC
3/4	19,05							⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙			LWC
	19,5											⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙		LWC
	20											⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙		LWC

PANCAKE COILS

**Standard: EN 12735-1; EN 1057; O'zDst 3348:2018;
ASTM B68; ASTM B280**

Copper brand: M1 M00k

Temper: Hard, half hard, soft

Type: Pancake coils

Packing: PC 15m, 25m, 30m, 50m (in carton boxes)

Material: Cu DHP



DIAMETER		WALL THICKNESS																		PACKING				
		mm																						
		0,28	0,30	0,32	0,35	0,40	0,45	0,50	0,60	0,70	0,80	0,90	1,00	1,10	1,20	1,25	1,30	1,35	1,50		1,70	1,80	1,90	2,00
inch	mm	inch																						
		0,011	0,012	0,013	0,014	0,016	0,018	0,02	0,024	0,028	0,031	0,035	0,039	0,043	0,047	0,049	0,051	0,053	0,059	0,067	0,071	0,075	0,079	
	4							⊙			⊙		⊙											PANCAKE COIL
3/16	4,76					⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙											PANCAKE COIL
	5							⊙		⊙	⊙		⊙											PANCAKE COIL
	5,5						⊙		⊙	⊙	⊙	⊙												PANCAKE COIL
	6							⊙	⊙	⊙	⊙	⊙	⊙											PANCAKE COIL
1,4	6,35				⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙											PANCAKE COIL
5/16	7,93				⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙										PANCAKE COIL
	7,8							⊙		⊙	⊙	⊙	⊙	⊙										PANCAKE COIL
	8					⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙									PANCAKE COIL
	9							⊙		⊙	⊙	⊙	⊙	⊙										PANCAKE COIL
3/8	9,52	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙									PANCAKE COIL
	9,8										⊙	⊙	⊙	⊙	⊙									PANCAKE COIL
	10							⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙									PANCAKE COIL
	12		⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙								PANCAKE COIL
	12,5					⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙										PANCAKE COIL
1/2	12,7		⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙							PANCAKE COIL
	13					⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙								PANCAKE COIL
	13,5						⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙									PANCAKE COIL
	14					⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙							PANCAKE COIL
5/8	15,87					⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙					PANCAKE COIL
	16							⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙					PANCAKE COIL
	16,5										⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙					PANCAKE COIL
	18									⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙			PANCAKE COIL
3/4	19,05							⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙			PANCAKE COIL
	19,5											⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	PANCAKE COIL
	20											⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙		PANCAKE COIL
	22											⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	PANCAKE COIL
7/8	22,22							⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	PANCAKE COIL

INNER GROOVED TUBES



Standard: EN 12735-1; EN 1057;
O'zDst 3348:2018; ASTM B68; ASTM B280

Copper brand: M1 M00κ
Temper: Hard, half hard, soft
Packing: In LWC from 100 kg to 150 kg

COPPER PIPE FOR REFRIGERATION EQUIPMENT is produced according to B 280 (USA) and EN 12735-1 (EU) standards. These standards clearly regulate diameter sizes, wall thickness, maximum operating pressure and a ton of different seamless copper pipes. These characteristics are necessary to produce optimal copper tube for long and efficient operation in refrigeration equipment. Material composition: Cu (copper) - 99.9%, P (phosphorus) - 0.03%. It is these pipes that will have such properties as durability, vibration resistance, corrosion resistance and high thermal conductivity. No less important quality in standards for copper pipes is resistance to freons, pressure and temperatures. Important, that due to the high ductility of copper, when working fluids freeze, the pipe is deformed, but does not rupture. When installing air conditioners, you only need to buy and use high-quality copper pipes!

DIAMETER		WALL THICKNESS											RIB HEIGHT	QUAN-TY OF RIBS	PACKING	
		mm														
		0,25	0,28	0,30	0,32	0,35	0,38	0,40	0,42	0,45	0,50	0,55	0,60			
		inch														
inch	mm	0,010	0,011	0,012	0,013	0,014	0,015	0,016	0,017	0,018	0,020	0,022	0,024			
	5	●	●											0,15±0,01	40	LWC
9,32.5	7	●	●	●	●									0,18±0,02	44	LWC
3/8	7,93	●	●	●	●									0,15±0,02	50	LWC
3/9	9,52		●	●	●	●	●	●	●					0,16±0,03	50	LWC
3/11	12					●	●	●	●	●				0,16±0,05	60	LWC
3/12	12,7					●	●	●	●	●				0,25±0,06	60	LWC
3/13	15/87						●	●	●	●	●	●	●	0,25±0,05	65	LWC

SPECIAL FORM COPPER PIPES

Copper brand: M1 M00k

Type: Straight thickness tube

Temper: Hard

Packing: Straight length from 3 meters

Note: These pipes can be used in critically hazardous environments in cold and hot water supply systems, water and steam heating systems, wastewater treatment plants and gas supply systems.

As well as automobile aviation, shipbuilding industries.



STRAIGHT THICK WALL PIPE			
DIAMTER	WALL THICKNESS	PACKING	LENGTH
60 mm	10 mm	STRAIGHT LENGTH	from 3 to 12 m
70 mm	15 mm	STRAIGHT LENGTH	from 3 to 12 m
80 mm	20 mm	STRAIGHT LENGTH	from 3 to 12 m
90 mm	25 mm	STRAIGHT LENGTH	from 3 to 12 m
120 mm	25 mm	STRAIGHT LENGTH	from 3 to 12 m

Content: Copper cathode and phosphorous copper

Copper brand: M1 M00k

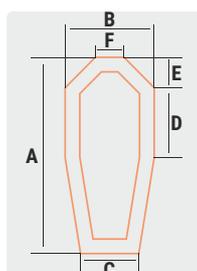
Temper: Hard

Measurement: tons

Type and size of copper rods

Packing: In straight cuts (pallets up to 1 ton)

Note: Designed for hanging cathode bases and supplying direct electric current during electrorefining of copper.



COPPER RODS									
SIZES mm						WALL THICKNESS	PACKING	LENGTH	
A	B	C	D	E	F				
40	18	12	14	6	6	3±0,5	STRAIGHT LENGTH	from 1 to 2m	
40	18	12	19,5	4,5	9	3±0,5	STRAIGHT LENGTH	from 1 to 2m	
40	18	12	15	5	8	3±0,5	STRAIGHT LENGTH	from 1 to 2m	

Content: Copper cathode and phosphorous copper
 Copper brand: M1 M00k
 Temper: Hard
 Measurement: tons
 Packing: Straight length from 3 m
 Note: Designed for instrument making in the automotive, aviation, and shipbuilding industries. Industries. Thanks to Copper rods with increased electrical conductivity are ordered for the production of electrodes, lightning protection, grounding of pantographs, winding contacts, etc. lightning protection, winding contacts, etc..



COPPER RODS		
DIAMETER	PACKING	LENGTH
60 mm	STRAIGHT LENGTH	from 3 to 12 m
90 mm	STRAIGHT LENGTH	from 3 to 12 m
120 mm	STRAIGHT LENGTH	from 3 to 12 m

Content: Copper cathode and phosphorous copper
 Copper brand: M1 M00k
 Temper: Hard
 Measurement: tons
 Packing: Straight length from 3 m
 Note: Field of application: tools and car making, aviation and shipbuilding industries.



SQUARE TUBES				
DIAMETER, mm		INTERNAL DIAMETER, mm	PACKING	LENGTH
65	65	25	STRAIGHT LENGTH	from 3 to 12 m

PLACING ORDERS FOR COPPER PIPES

When placing orders for the supply of copper pipes, you should indicate:

- ✓ Geometric dimensions of the product: (outer diameter) x (wall thickness);
- ✓ Product length;
- ✓ Standard (technical requirements);
- ✓ Delivery condition (soft, semi-hard or hard);
- ✓ Quantity of products (in meters and kilograms);
- ✓ Packing method;
- ✓ Delivery basis.



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