



China Loong Copper Co.,Ltd



Copper Product Catalog

PANCAKE COILS | STRAIGHT LENGTHS | FITTINGS |
LEVEL WOUND COIL | INNER GROOVED TUBE
INSULATED COPPER TUBE

OVERVIEW

About Us

China Loong Copper Co., Ltd., a core subsidiary of China Loong Group, has been dedicated to the research, production, sales, and service of high-quality copper products and new conductive materials since its establishment in 2001. For the past twenty-three years, the company has become a global leader in copper and copper alloy materials, providing comprehensive copper solutions for strategic emerging industries such as 5G communications, new energy vehicles, rail transit, the power Internet of Things, and smart cities.

Loong Copper's core products include copper pipes, copper rods, copper foils, and other copper-based materials and processed products, with thousands of grades and tens of thousands of specifications. These products are widely used in household appliances like air conditioners, equipment machinery, ships, power, new energy vehicles, energy storage, photovoltaics, wind power, semiconductors, 5G communications, and other fields. The company continuously launches high-end products such as high-efficiency internally threaded copper pipes, new copper alloy pipes, and environmentally friendly lead-free precision copper rods, optimizing its product structure to meet the diverse needs of the market.

Core Values

Responsiveness: We value responsiveness in our interactions with clients, partners, and team members. We prioritize open communication and timely actions to address their needs efficiently.

Integrity: It is at the core of our business. We uphold ethical practices, transparency, and honesty in all our endeavors, building trust and long-lasting relationships with our stakeholders.

Mindfulness: Extends to our workplace culture. We are committed to fostering a supportive and inclusive environment where employees' well-being and personal growth are prioritized, ensuring a positive and collaborative work atmosphere.

Empowerment: We believe in empowering our team members to foster creativity, growth, and professional development. We encourage collaboration and foster an environment where everyone's ideas and contributions are valued.

Diverse Copper Solutions

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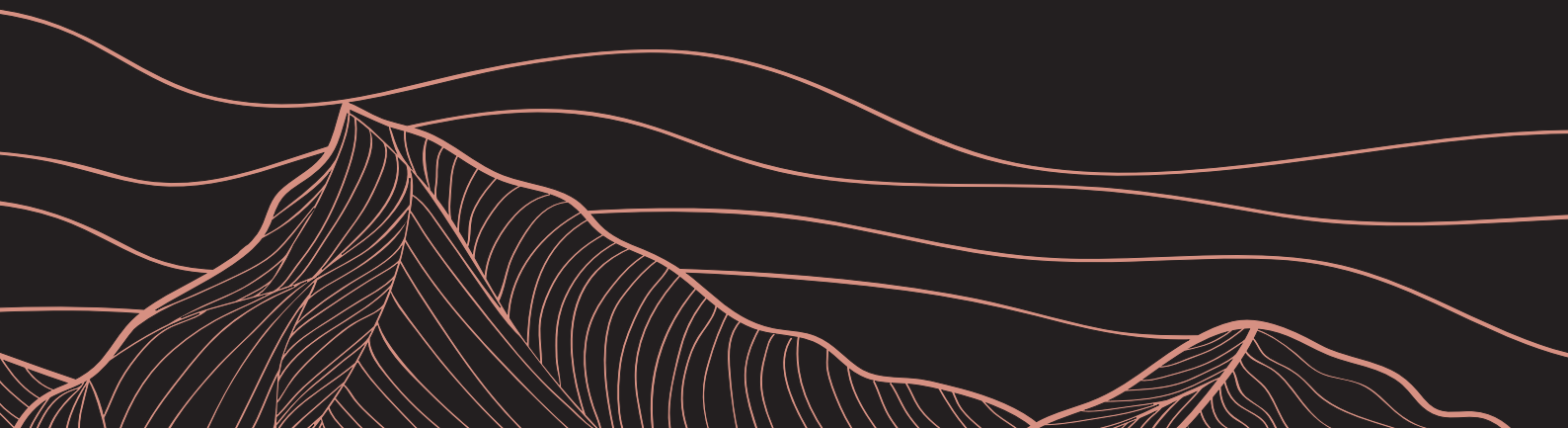
Inner Grooved Tube | 07 |



Our Copper Product Range

As an established copper tube manufacturer, Loong Copper supplies copper tubes with excellent thermal and electrical conductivity, corrosion resistance, strength, ductility, and broad temperature resistance. In addition to their superior formability and lightweight, these properties make copper tubes the most popular choice for plumbing, heating, and cooling systems in residential, commercial, and industrial buildings.

Loong Copper manufactures Copper Coils, Straight Lengths & Copper Fittings with the following international standards for air conditioning and refrigeration applications, including connecting heat exchangers and piping systems. They are also widely used in cold and hot water supply and drainage of buildings, direct drinking water, gas, medical, food, chemical, and various industries.



Straight Length

Copper Tube for Construction applications Air-conditioning & Refrigeration Field Service



ASTM B280/B68/B88/JIS-H3300/AS-1432-Straight Lengths – Specifications

Types of Copper Straight Lengths and Uses:	Physical Properties
Type K underground residential, commercial, and industrial uses. (Sizes range from 1/4"–8" diameter)	Composition Alloy C12200 Copper = 99.90% min Phosphorus = 0.015 ~ 0.040% Melting Point 0981 °F(1083°C)
Type L residential and commercial uses. (Sizes range from 1/4"–8" diameter)	Density 558lb/ft3(8.94 x 103kg/m3) Thermal Expansion 0.00118 in/10°F.ft (0.177mm/10°C.m)
Type M above-ground residential and light commercial uses. (Sizes range from 3/8"–8" diameter)	Modulus of Elasticity 2.46 106psi(17,000MPa)

Product	Temper	Lengths	Uses	Specifications
Type K Copper Water Tube, (heavy wall)	Hard	12ft straight 20ft straight	Domestic water service and distribution, fire protection, solar, fuel/fuel oil HVAC, snow melting, compressed air, natural gas, liquified petroleum (LP) gas, vacuum	ASTM-B88 JIS-H3300 AS-1432
	Soft	12ft straight 50ft coils 100ft coils		
Type L Copper Water Tube, (heavy wall)	Hard	20ft straight	Domestic water service and distribution, fire protection, solar, fuel/fuel oil, HVAC, snow melting, compressed air, natural gas, liquified petroleum(LP) gas, vacuum	STM-B88 JIS-H3300 AS-1432
	Soft	20ft coils 50ft coils		
Type M Copper Water Tube, (heavy wall)	Hard	20ft straight	General plumbing and heating purposes; drainage waste, vent and other light pressure uses.	ASTM-B88 JIS-H3300 AS-1432

*All tubes are manufactured from phosphorus-deoxidized copper (DHP), complying with UNS C12200.

Straight Length Copper Tube - ASTM B280 / Type L-ACR	Actual Size in Inches	Outside diameter			Wall Thickness			Theoretical Weight		ASTM B 280 -ECO
		inch	mm	Tolerance (inch)	inch	mm	Tolerance (inch)	lb/ft	kg/m	
	3/8	0.375	9.52	0.001	0.03	0.762	0.003	0.126	0.187	1/4" x 0.76mm x 5.8 Mtr
	1/2	0.5	12.7	0.001	0.035	0.889	0.004	0.198	0.295	3/8" x 0.61mm x 5.8 mtr
	5/8	0.625	15.9	0.001	0.04	1.02	0.004	0.285	0.424	1/2" x 0.61mm x 5.8 mtr
	3/4	0.75	19.1	0.001	0.042	1.07	0.004	0.362	0.539	
	7/8	0.875	22.2	0.001	0.045	1.14	0.004	0.455	0.677	5/8" x 0.71 mm x 5.8 mtr
	1 1/8	1.125	28.6	0.0015	0.05	1.27	0.005	0.655	0.975	
	1 3/8	1.375	34.9	0.0015	0.055	1.4	0.006	0.884	1.32	3/4" x 0.89 mm x 5.8 mtr
	1 5/8	1.625	41.3	0.002	0.06	1.52	0.006	1.14	1.7	7/8" x 0.81mm x 5.8 mtr
	2 1/8	2.125	54	0.002	0.07	1.78	0.007	1.75	2.6	
	2 5/8	2.625	66.7	0.002	0.08	2.03	0.008	2.48	3.36	1 1/8"x 0.91mm x 5.8 mtr
	3 1/8	3.125	79.4	0.002	0.09	2.29	0.009	3.33	4.96	1 3/8" x 1.02mm x 5.8 mtr
	3 5/8	3.625	92.1	0.002	0.1	2.54	0.01	4.29	6.38	
	4 1/8	4.125	105	0.002	0.11	2.79	0.011	5.38	8.01	2 1/8" x 1.50mm x 5.8 mtr

Type K (STRAIGHT, DRAWN) - ASTM B88	Nominal Size in Inches	Actual Size in Inches	Outside diameter			Wall Thickness			Theoretical Weight	
			inch	mm	Tolerance (inch)	inch	mm	Tolerance (inch)	lb/ft	kg/m
	1/4	3/8	0.375	9.52	0.001	0.035	0.89	0.0035	0.145	0.216
	3/8	1/2	0.500	12.7	0.001	0.049	1.24	0.005	0.269	0.4
	1/2	5/8	0.625	15.9	0.001	0.049	1.24	0.005	0.344	0.512
	5/8	3/4	0.750	19.1	0.001	0.049	1.24	0.005	0.419	0.624
	3/4	7/8	0.875	22.2	0.001	0.065	1.65	0.006	0.639	0.953
	1	1 1/8	1.125	28.6	0.0015	0.065	1.65	0.006	0.838	1.25
	1 1/4	1 3/8	1.375	34.9	0.0015	0.065	1.65	0.006	1.034	1.54
	1 1/2	1 5/8	1.625	41.3	0.002	0.072	1.83	0.007	1.359	2.03
	2	2 1/8	2.125	54.0	0.002	0.083	2.11	0.008	2.060	3.07
	2 1/2	2 5/8	2.625	66.7	0.002	0.095	2.41	0.01	2.922	4.36
	3	3 1/8	3.125	79.4	0.002	0.109	2.77	0.011	3.996	5.96
	3 1/2	3 5/8	3.625	92.1	0.002	0.120	3.05	0.012	5.112	7.62
	4	4 1/8	4.125	104.8	0.002	0.134	3.40	0.013	6.500	9.69
	5	5 1/8	5.125	130.2	0.002	0.160	4.06	0.016	9.654	14.4
	6	6 1/8	6.125	155.6	0.002	0.192	4.88	0.019	13.843	20.64

Type L (STRAIGHT, DRAWN)	Nominal Size in Inches	Actual Size in Inches	Outside diameter			Wall Thickness			Theoretical Weight	
			inch	mm	Tolerance (inch)	inch	mm	Tolerance (inch)	lb/ft	kg/m
	1/4	3/8	0.375	9.52	0.001	0.030	0.76	0.003	0.126	0.187
	3/8	1/2	0.500	12.7	0.001	0.035	0.89	0.004	0.198	0.295
	1/2	5/8	0.625	15.9	0.001	0.040	1.02	0.004	0.285	0.425
	5/8	3/4	0.750	19.1	0.001	0.042	1.07	0.004	0.362	0.54
	3/4	7/8	0.875	22.2	0.001	0.045	1.14	0.004	0.453	0.676
	1	1 1/8	1.125	28.6	0.0015	0.050	1.27	0.006	0.654	0.975
	1 1/4	1 3/8	1.375	34.9	0.0015	0.055	1.40	0.006	0.881	1.31
	1 1/2	1 5/8	1.625	41.3	0.002	0.060	1.52	0.006	1.142	1.7
	2	2 1/8	2.125	54.0	0.002	0.070	1.78	0.007	1.749	2.61
	2 1/2	2 5/8	2.625	66.7	0.002	0.080	2.03	0.008	2.475	3.69
	3	3 1/8	3.125	79.4	0.002	0.190	2.29	0.009	3.32	4.95
	3 1/2	3 5/8	3.625	92.1	0.002	0.100	2.54	0.01	4.284	6.39
	4	4 1/8	4.125	104.8	0.002	0.114	2.79	0.011	5.368	8.01
	5	5 1/8	5.125	130.2	0.002	0.125	3.18	0.012	7.596	11.33
	6	6 1/8	6.125	155.6	0.002	0.140	3.56	0.014	10.183	15.19

Type M (STRAIGHT, DRAWN)	Nominal Size in Inches	Actual Size in Inches	Outside diameter			Wall Thickness			Theoretical Weight	
			inch	mm	Tolerance (inch)	inch	mm	Tolerance (inch)	lb/ft	kg/m
	3/8	1/2	0.500	12.7	0.001	0.025	0.64	0.002	0.144	0.215
	1/2	5/8	0.625	15.9	0.001	0.028	0.71	0.003	0.203	0.303
	3/4	7/8	0.875	22.2	0.001	0.032	0.81	0.003	0.327	0.488
	1	1 1/8	1.125	28.6	0.0015	0.035	0.89	0.004	0.464	0.692
	1 1/4	1 3/8	1.375	34.9	0.0015	0.042	1.07	0.004	0.68	1.01
	1 1/2	1 5/8	1.625	41.3	0.002	0.049	1.24	0.006	0.939	1.4
	2	2 1/8	2.125	54.0	0.002	0.058	1.47	0.006	1.457	2.17
	2 1/2	2 5/8	2.625	66.7	0.002	0.065	1.65	0.006	2.023	3.02
	3	3 1/8	3.125	79.4	0.002	0.072	1.83	0.007	2.672	3.98
	3 1/2	3 5/8	3.625	92.1	0.002	0.083	2.11	0.008	3.573	5.33
	4	4 1/8	4.125	104.8	0.002	0.095	2.41	0.01	4.653	6.94
	5	5 1/8	5.125	130.2	0.002	0.109	2.77	0.011	6.644	9.91
	6	6 1/8	6.125	155.6	0.002	0.122	3.01	0.012	8.9	13.27

Seamless Copper Tube for Air-conditioning & Refrigeration Service Field

ASTM B 280/JIS - H3300/ AS-1571 / ASTM B88 Straight Lengths – Specifications

A. To calculate the average outside diameter of a tube, simply find the average of the maximum and minimum outer diameters measured at any one cross-section of the tube.

B. Please note that the listed tolerances indicate the maximum deviation at any point for tubes that are made to order and require a minimum order quantity.

The physical properties of this copper tube are identical as determined by ASTM B88.

Capping & Ink Marking

You can recognize the standard copper tube used for air-conditioning and refrigeration by its blue-colored cap. Additionally, it has blue ink markings along its length that indicate details such as the manufacturer's name, country of origin, size, and lot number. These markings help to trace the tubing back to its origin of manufacture.

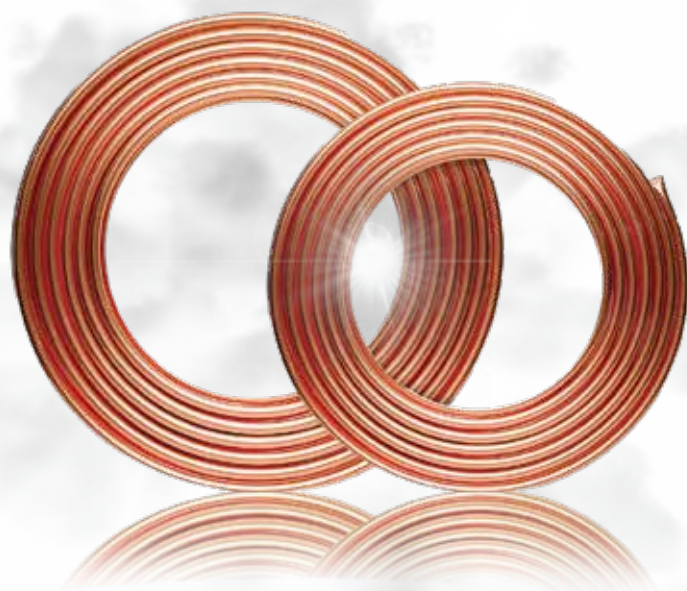
Length Of Straight Type Drawn Copper Tube

The standard length for drawn temper ASTM B88 tube is 6.006 meters (20ft). However, it is available in 6.000 meter and 5.800 meter lengths. Also, custom made length is available as by order quantities.



Pancake Coil (CPC)

Pancake coils, an essential component in refrigeration and air conditioning systems, represent a compact and efficient solution for heat exchange and cooling applications. Their design optimizes surface area for heat transfer while maintaining a compact form factor.



Product	Temper	Lengths	Uses	Specifications
Copper Refrigeration Tube	Soft	50 ft. coils 100 ft. coils	Manufacture, installation and maintenance of refrigeration equipment.	ASTM-B280 ASTM-B743 JIS-H3300 AS-1571 EN-12735-1

Coil type - Standard	Actual Size in Inches	Outside diameter			Wall Thickness			Theoretical Weight	
		inch	mm	Tolerance (inch)	inch	mm	Tolerance (inch)	lb/ft	kg/m
	1/4	0.25	6.35	0.002	0.03	0.762	0.003	0.0804	0.12
	5/16	0.312	7.92	0.002	0.032	0.813	0.003	0.109	0.162
	3/8	0.375	9.52	0.002	0.032	0.813	0.003	0.134	0.199
	1/2	0.5	12.7	0.002	0.032	0.813	0.003	0.182	0.271
	5/8	0.625	15.9	0.002	0.035	0.889	0.004	0.251	0.373
	3/4	0.75	19.1	0.0025	0.035	0.889	0.004	0.305	0.454
	3/4	0.75	19.1	0.0025	0.042	1.07	0.004	0.362	0.539
	7/8	0.875	22.2	0.003	0.045	1.14	0.004	0.455	0.677

Specification - ASTM B280 Standard

A. To calculate the average outside diameter of a tube, simply find the average of the maximum and minimum outer diameters measured at any one cross-section of the tube.

B. Please note that the listed tolerances indicate the maximum deviation at any point for tubes that are made to order and require a minimum order quantity.

The physical properties of this copper tube are identical as determined by ASTM B88.

Capping & Ink Marking

You can recognize the standard copper tube used for air-conditioning and refrigeration by its blue-colored cap. Additionally, it has blue ink markings along its length that indicate details such as the manufacturer's name, country of origin, size, and lot number. These markings help to trace the tubing back to its origin of manufacture.

Coil type - Economy	Outer Diameter inch	Outer Diameter mm	Wall Thickness inch	Wall Thickness mm
	3/16	4.76	0.024	0.61
	1/4	6.35	0.024	0.61
	5/16	7.94	0.024	0.61
	3/8	9.53	0.024	0.61
	1/2	12.7	0.028	0.71
	5/8	15.88	0.028	0.71
	3/4	19.05	0.032	0.81
	7/8	22.23	0.040	1.02

Specification - ASTM B743 Standard

Coil type - Low Economy	Outer Diameter inch	Outer Diameter mm	Wall Thickness inch	Wall Thickness mm
	1/4	6.35	0.020	0.51
	3/8	9.53	0.022	0.56
	1/2	12.7	0.024	0.61
	5/8	15.88	0.026	0.65
	3/4	19.05	0.028	0.71
	7/8	22.23	0.030	0.76

Specification - ASTM B280- Low Eco Standard

END-CAP BLUE

INK MARKING (1) PANCAKE COIL-NO MARK (2) STRAIGHT-BLUE

INCISION Trademark of the manufacturer + ACR

Insulated Copper Tube

Why insulated copper tubes are such a popular choice across a range of industries

What Is Insulated copper tube

Insulated copper tubes are widely used in the air conditioning and refrigeration industry due to their excellent thermal conductivity and durability. These insulation copper tubes are critical components of air conditioning and refrigeration systems, as they help to transport refrigerant fluids between the different components of the system.

Performance Advantages

Customization

Insulation copper tube can provide you with customized standards (up to 50 meters in length).

Nominal Wall Thickness

Insulated copper tube also meets special outer diameter and wall thickness, optimizing performance and minimizing the risk of leakage or other issues.

Black Rubber Insulation

Copper pipe with insulation can meet your needs for black rubber insulation. This type provides excellent thermal conductivity and is often used in applications where high temperatures are present.

Secure Connection Point

Copper tube insulation provides you with products covered with copper tubes at both ends. They are easy to install, as the copper provides a secure connection point that minimizes the risk of leaks or other problems.



INSULATED COPPER TUBE SPECIFICATIONS

ITEM	UNIT	INSULATED MATERIALS		
		B	C	D
Average density	G/cm ²	0.028-0.038	0.025-0.044	10.023-0.038
Extensibility	vk/g/cm	Above 2.5	Above 2.5	Above 2.0
Max.temperature	C	80	100	120
Water absorbability	mg/cm ²		Below 0.1	
Heat transfer variable	kcl/mxhxc		Below 0.037	
Contract of thickness	%		Below 7	
Fire Resistance Test	UL-04		Pass	

Specifications	Insulated Tube Outer diameterxthickness(mm)	Insulated Tube Inner diameterxthickness(mm)	Suitable for	Length(m)
1/4	6.35x0.75	Ø8(±0.5)x8(EMPAISTIC)	Centralized air condi-tioner	1-30
3/8	9.52x0.8	Ø12(±0.5)x8(EMPAISTIC)		1-30
1/2	12.70x0.8	Ø14(±0.5)x8(EMPAISTIC)		1-30
5/8	15.88x1.0	Ø18(±0.5)x9(EMPAISTIC)		1-30
3/4	19.05x1.0	Ø22(±1)x9(EMPAISTIC)		1-30
7/8	22.22x1.2	Ø25(±1)x10(EMPAISTIC)		1-30
1	25.40x1.2	Ø28(±1)x10(EMPAISTIC)		1-30
1-1/8	28.58x1.2	Ø32(±1)x10(EM PAISTIC)		1-30
1-1/4	31.75x1.5	Ø35(±1)x10(EMPAISTIC)		1-30
1-1/2	38.10x1.5	Ø42(±1)x10(EMPAISTIC)		1-30

Specifications	Insulated Tube Outer diameterxthickness(mm)	Insulated Tube Inner diameterxthickness(mm)	Suitable for	Length(m)
1/4x3/8	6.35x0.75/9.52x0.8	Ø8(\$0.5)/Ø12(±0.5)	1HP	11-30
1/4x1/2	6.35x0.8/12.70x0.8	Ø8(+0.5)/Ø14(±0.5)	1.5HP	1-30
1/4x5/8	6.35x0.8/15.88x1.0	Ø8(\$0.5)/Ø18(±0.5)	2HP	1-20
3/8x5/8	9.52x0.8/15.88x1.0	Ø12(05)/Ø18(±0.5)	3HP	1-20
3/8x3/4	9.52x0.8/19.05x1.0	Ø12(÷0.5/Ø22(±1)	4HP	1-15
1/2x3/4	12.7x0.8/19.05x1.0	Ø14(0.5/Ø22(±1)	5HP	1-15

Copper Fittings

Rime copper fittings are utilized to connect pipes or tubes, adapt to different sizes or shapes, and regulate fluid flow. They are used in plumbing to control the passage of water, gas, or liquid waste in pipes or tubes. We have a complete range of copper fittings; some models are represented below.



Coupling Rolled Stop CxC
Size: 1/4-4



Coupling Reducing CxC
Size: 1/4x43/8-4x3



Cap
Size: 1/4-4



90° Elbow Short Radius CxC
Size: 1/4-4



90° Elbow Short Radius Street FTGxC Elbow
Size: 1/4-4



45° Elbow CxC
Size: 1/4-4



45° Elbow Street CxC
Size: 1/4-4



Tee CxCxC
Size: 1/4-4



Fitting Reducer FTGxC
Size: 1/4x3/8-4x3



Adapter - Male CxMPT
Size: 1/4-4



Adapter - Female FTGxFPT
Size: 1/4-4



90° Elbow Long Radius CxC
Size: 1/4-4



Coupling Dimple Tube Stop
Size: 1/4-4



Coupling No Stop
Size: 1/4-4



Copper Tube Strap Two-hole
Size: 3/8-2



Copper Crimp Ring
Size: 3/8-1 1/2



90° Elbow Long Radius Street CxC
Size: 1/4-4



P-Trap CxC
Size: 1/4-4



U Bend CxC
Size: 1/4-2



Adapter - Female CxFPT
Size: 3/8-2 1/2



Adapter - Male FTGxMPT
Size: 3/8x2 1/2



Union CxC
Size: 3/8-3



Tee Reducing CxCxC
Size: 1/4x1/4x1/8-4x3x3



Elbow 90°CxC
Size: 6mm-108mm



Obtuse Elbow 45° CxC
Size: 6mm-108mm



Reducer Coupler CxC
Size: 10x6mm - 108x89mm



Coupler
Size: 16mm - 108mm



Equal Tee
Size: 16mm-108mm



Reducing Tee
Size: 8x8x6mm - 108x67x198mm



90° Bend FTGxC
Size: 6mm-108mm



U-bend CxC
Size: 10mm-54mm



Stop End
Size: 6mm-108mm



Full Crossover
Size: 12mm-22mm



Male Coupler
Size: 12mmx3/8" - 76mmx3"



Female Coupler
Size: 12mmx3/8" - 54mmx2"



Bent Tap Connector
Size: 3/8" x 12mm - 1" x 28mm



Straight Tap Connector
Size: 3/8" x 10mm - 2" x 54mm



SR Equal Tee
Size: 38mm - 66.7mm



SR Reducing Coupling
Size: 8x6mm - 67x54mm



SR Stop End
Size: 8mm - 54mm



SR Bent Tap Connector
Size: 15mmx1/2" - 22mmx3/4"

Level Wound Coil

Efficient Connections: Linking Heat Exchangers and Pipelines in Cooling Systems.

The Level Wound Coil is commonly used to connect heat exchangers and pipeline systems in the air conditioning and refrigeration industries.

Packing

A level wound coil (LWC) is a continuous length of tube tightly wound in layers and is available in below forms

Level Wound Coil - Roll Weight – 60 to 220 Kgs

Jumbo Coil – Roll Weight – 400 to 1000 Kgs

Packing – Eye to Wall/ Eye to Sky

Standard – Jintian Catalogue



Application: Refrigerator refrigeration parts | Air conditioner condenser | Air conditioner evaporator | Water heater

Standard of the Product: ASTM B 75, GB/T 17791, ASTM B280, JIS H3300, AS/NZS 1571, AS1432, EN12735

Thickness O.D	0.25 mm	0.28 mm	0.29 mm	0.35 mm	0.40 mm	0.45 mm	0.56 mm	0.60 mm	0.64 mm	0.71 mm	0.78 mm	0.81 mm	0.89 mm	1.00 mm	1.07 mm	1.14 mm	1.22 mm	1.27 mm	1.59 mm	2.00 mm
3.30		○	○	○	○	○	○	○												
4.30		○	○	○	○	○	○	○	○	○										
4.76/9/4.76in]		○	○	○	○	○	○	○	○	○	○	○								
	○	○	○	○	○	○	○	○	○	○	○	○	○							
6.00	○	○	○	○	○	○	○	○	○	○	○	○	○	○						
4.76{1/4in]	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○					
7.00	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○			
7.54{5/16in]		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
8.00		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
9.00		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
7.52{9/8in]		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
10.00			○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
12.00			○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
12.78{1/2in]				○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
14.00					○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
15.00						○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
15.55{5/2in]							○	○	○	○	○	○	○	○	○	○	○	○	○	○
16.00							○	○	○	○	○	○	○	○	○	○	○	○	○	○
18.00								○	○	○	○	○	○	○	○	○	○	○	○	○
19.05{5/2in]									○	○	○	○	○	○	○	○	○	○	○	○
20.00										○	○	○	○	○	○	○	○	○	○	○
22.00											○	○	○	○	○	○	○	○	○	○
22.23{7/8in]												○	○	○	○	○	○	○	○	○

Inner Grooved Tube

The newest and most advanced copper tubes in refrigeration & conditioning systems.

What Is Inner Grooved Tube

Inner grooved copper tubes are commonly utilized in air conditioning and refrigeration systems to enhance heat transfer efficiency. These tubes feature internal ridges that increase surface area and turbulence, facilitating better heat exchange and offering superior heat transfer coefficients to regular tubes, leading to energy savings and improved system performance.

Performance Advantages

High dimensional accuracy

Precision-manufactured copper tubes with inner grooves are ideal for applications that demand accuracy.

High cleanliness

Clean inner-grooved copper tubes made with high-quality materials and advanced production techniques are great for food and beverage industries.

Lightweight

Copper tubes with inner grooves are light and perfect for weight-sensitive applications in aviation and automotive industries

High heat dissipation performance

Copper tubes with inner grooves are great for efficient heat transfer in heat exchangers.

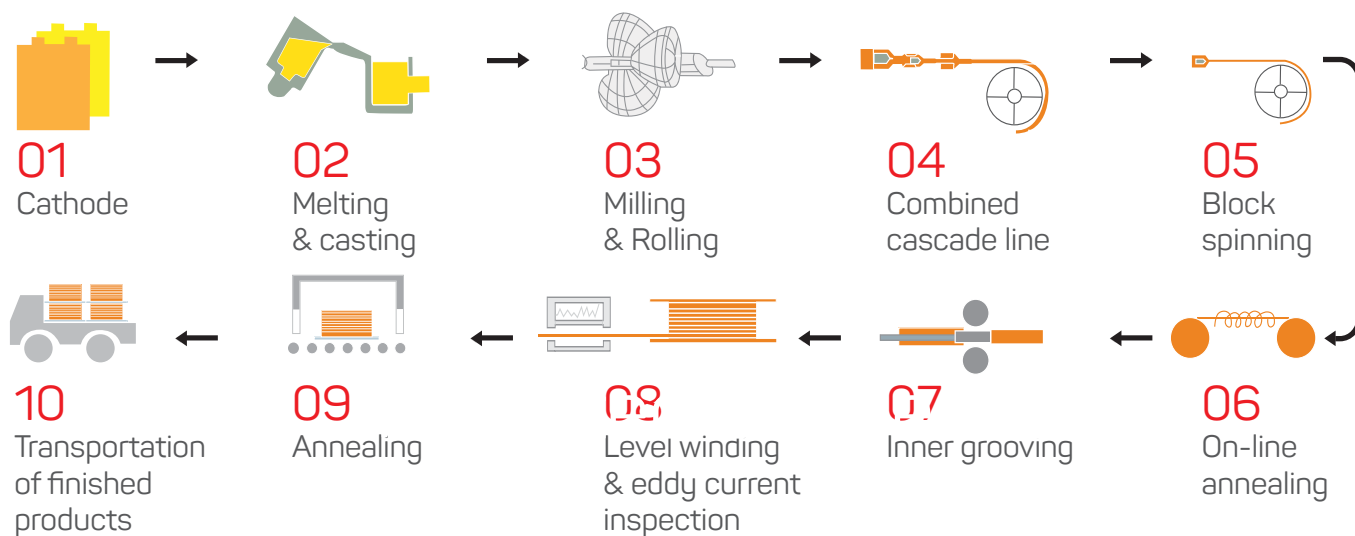
Application: Air Conditioner Condenser | Air Conditioner Evaporator | Water Heater

Inner Grooved Copper Tube Specifications

Specifications	Unit Weight (g/m)	O.D	I.D	Bottom Wall Thickness TW	Fin Groove Depth HF	Total Wall Thickness	Apex Angle	Helix Angle	Numble of Tooth
ø 5.00*0.20+0.15-18°	33	5	4.3	0.2	0.15	35	40	13	40
ø 7.0*0.22+0.10-16°	47	7	6.36	22	0.1	0.32	35	16	65
ø 7.0*0.23+0.12-17°	47.5	7	6.30	23	0.12	0.35	40	17	65
ø 7.00*0.25+0.10-15°	52	7	6.30	0.25	0.1	35	40	15	65
ø 7.00*0.25+0.18-18°	57	7	6.M	0.25	0.18	43	40	13	50
ø 7.00*0.25+0.22-16°	58	7	6.06	0.25	0.22	0.47	22	16	54
ø 7.00*0.27+0.15-18°	60	7	6.16	0.27	0.15	0.42	53	13	60
ø 7.94*0.24+0.13-18°	60.5	7.94	7.2	24	0.13	37	33	13	70
ø 7.94*0.25+0.18-18°	65	7.94	7.03	0.25	0.13	0.43	40	13	50
ø 7.94*0.25+0.20-18°	66	7.94	7.04	0.25	0.2	0.45	40	13	50
ø 7.94*0.26+0.17-18°	65	7.94	708	0.26	0.17	43	40	13	50
ø 7.94*0.28+0.20-18°	72	7.94	6.98	0.23	0.20	0.43	40	13	50
ø 7.94*0.30+0.20-18°	76	7.94	6.94	0.3	0.2	50	40	13	50
ø 9.52*0.27+0.16-18°	32	9.52	8.66	0.27	0.16	0.43	30	13	70
ø 9.52*0.28+0.12-15°	30	9.52	372	0.28	0.12	0.4	53	15	65
ø 9.52*0.28+0.15-18°	33	9.52	8.66	0.28	0.15	0.43	53	13	60
ø 9.52*0.28+0.15-25°	38	9.52	8.66	0.28	0.15	0.43	90	25	65
ø 9.52*0.28+0.20-18°	35	9.52	8.56	0.23	0.2	0.43	25	13	55
ø 9.52*0.28+0.20-18°	33	9.52	856	0.23	0.2	0.43	40	13	60
ø 9.52*0.30+0.20-18°	90	9.52	8.52	0.3	0.2	50	30	13	60
ø 9.52*0.30+0.20-18°	94	9.52	8.52	0.3	0.2	0.5	53	13	60
ø 9.52*0.34+0.15-25°	104	9.52	8.54	0.34	0.15	0.49	90	25	65
ø 9.52*0.40+0.25-18°	123	9.52	322	0.4	0.25	0.65	40	13	60
ø 12.00*0.36+0.25-18°	M0	12	10.78	0.36	0.25	0.61	40	18	70
ø 12.70*0.35+0.25-18°	155	12/0	11.5	0.35	25	0.6	53	13	70
ø 12.70*0.40+0.25-18°	170	12.7	11.4	0.4	0.25	0.65	53	13	70
ø 12.70*0.50+0.25-18°	201	12.7	11.2	0.5	0.25	0.75	53	13	75
ø 12.75*0.36+0.21/0.25-20°	150	12.75	11.53	0.36	0.25	0.61	48	20	70

Product performance standards: GB/T 17791-2007, ASTM B280, JIS H3300, AS/NZS 1571:1995, AS 1432, EN12735-2

Inner Grooved Copper Tube Production Process



Standard Reference

Material	GB	ASTM	BSEN	JIS	Main Chemical Composition (%)
Pure Copper	T ₂	C11000	C101, C102	C1100	Cu+Ag≥99.90
Phosphorus	TP ₁	C12000	--	C1201	Cu+Ag≥99.90 P: 0.004~0.012
Deoxidized Copper	TP ₂	C12200	C106	C1220	Cu+Ag≥99.90 P: 0.015~0.040

Mechanical Properties

Standard	Product	Alloy	Temper	Tensile Strength (Mpa)	Yield Strength (Mpa)	Elongation (%)	Hardness (HV/HR)	Grain Size (MM)
JIS H3300	Coil, straight tube	C1020	O	≥205	--	≥40	HR15T:≤60	0.025~0.06
			OL	≥205	--	≥40	HR15T:≤65	≤0.040
			1/2H	245~325	--	--	HT30T:30~60	--
			H	≥315	--	--	HT30T:30≥55	--
		C1100	O	≥205	--	≥40	--	--
			1/2H	245~325	--	--	HT30T:30~60	--
			H	≥275	--	--	HRF≥80	--
			O	≥205	--	≥40	HR15T:≤60	0.025~0.06
ASTM B360	Capillary	C12000	OL	≥205	--	≥40	HR15T:≤65	≤0.040
			1/2H	245~325	--	--	HT30T:30~60	--
		C12200	H	≥315	--	--	HR30T≥55	--
			H	≥315	--	--	HR30T≥55	--
GB/T1531	Capillary	T2	(Y)	≥345	--	--	--	--
GB/T20928	Inner-grooved tube	TP1	(Y ₂)	245~370	--	--	--	--
		TP2	(M)	≥205	--	≥35	--	--
ASTM B280	Coil, straight tube	TP2	(M ₂)	215~270	--	≥43	--	0.015~0.035
ASTM B68	Coil, straight tube	C12000	H80	≥310	--	--	--	--
		C12200	H80	≥310	--	--	--	--
ASTM B75	Coil, straight tube	C10100	60	≥205	--	≥40	--	0.035
		C10200	H58	≥250	--	--	--	--
		C12000	50	≥210	--	≥40	--	0.015~0.040
		C12200	60	≥210	--	≥40	--	≥0.040
ASTM B743	Coil	C10100	H58	≥205	≥205	--	HT30T:≥30	--
		C10200	H80	≥310	≥275	--	HR15T:≥55	--
		C12000	60	≥205	≥62	--	HR15T:≤60; HRF≤50	≥0.040
		C12200	50	≥205	≥62	--	HR15T:≤65; HRF≤55	≤0.040
GB/T17791	Coil, straight tube, pancake coil	C10200	H58	≥250	≥205	--	HR30T:≥30	--
			60	≥205	≥62	≥40	HR15T:≤60; HRF≤50	≥0.040
			50	≥205	≥62	≥40	HR15T:≤65; HRF≤55	≤0.040
			50	≥205	≥62	≥40	HR15T:≤65; HRF≤55	≤0.040
		C12000	(Y)	≥275	--	--	--	--
			(Y ₂)	245~325	--	--	--	--
			(M ₂)	≥205	--	≥40	--	≤0.040
			(M)	≥205	--	≥40	--	0.025~0.06
BSEN 12735-1	Coil, straight tube	C106	TU ₁	≥315	--	--	--	--
			TU ₂	(Y ₂)	245~325	--	--	--
			TP ₁	(M)	≥205	--	--	0.025~0.06
			TP ₂	(M ₂)	≥205	--	--	≤0.040
BSEN 12735-1	Coil, straight tube	C106	R220	≥220	--	≥40	HV5:40~70	--
			R250	≥250	--	≥30	HV5:75~100	--
			R290	≥250	--	≥30	HV5:≥100	--

Quality Control & Guarantee

For ACR Copper Tube



☑ Composition analysis for cathode copper

☑ High-speed analysis for copper liquid



☑ Smooth shell dimension measurement

☑ Smooth tube defects test in line

☑ Defects test for heat transfer of high-efficiency tube



☑ Mechanics properties test for finished products

☑ Cleanness determination for the finished tube

☑ Grain size test for the finished tube

Primary Testing Items & Equipment Chart

Serial number	Testing Items	Name of the main testing equipment	Type/producing region
01	Electrolytic Copper Chemical Composition	DC arc spectrometer	Ha-12/U.S.BAIRD
02	Copper tube chemical composition	Electrospark Spectrometer	Dv-5/U.S.BAIRD
03	Copper tube defects	Eddy Current Inspection	GERMANY db GERMANY foerster
04	Oxygen content	Infrared Oxygen Sensor	Ro-416/U. S. LECD
05	Copper tube inner face	Chloride Ion Chromato-graph	DX-120/U.S.DIONEX
06	Grain size	Metallographic Microscope	O6CK-40M/Japan Aolinbasai
07	The Internal profile	Image Mapping Table	SOV-2010/CHINA
08	Computer electronic mechanical properties	Ultrasonic Cleaning Machine	CMT4504/CHINA TP2000/CHINA
09	Cleanness	Electronic Scales	BP211 D/GERMANY
10		Oil content analyzer	
11		Refrigerator system water testing machine	
12		Vickers Sclerometer	

Team of Experts

Highly skilled HVAC & refrigeration engineers, technicians, and industry professionals drive our success. We believe in delivering top-notch products and offering exceptional service to valued customers. Our expertise includes:

Tailored Solutions: We understand diverse challenges in sectors like food and beverage, logistics, pharmaceuticals, and more. Our team can optimize efficiency, product integrity, and cost-effectiveness.

Sustainable Practices: Our team focuses on energy efficiency solutions, following environmental standards, and ensuring a more sustainable future.

Client Training: The Team's capabilities extend to training clients on optimal product usage, empowering businesses to excel



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