

# INSULATED COPPER TUBES

## FEATURES

- The optimal solution for conditioning systems, for the transportation of refrigerant gases, for multi-purpose machines (hot/cold) based on heat pumps and for uses where there is the need for insulating material with high energy values.
- As regards cold insulation, one of the negative factors is the formation of condensation both on the surface of the insulating material and within.
- Since water is an excellent heat conductor, good insulation material must be capable of ensuring that no flow of steam is created inside. The greater its resistance to steam (m) the longer the insulation will last over time.
- The insulating material, which is guaranteed as being environment-friendly, is made of extruded expanded polyethylene with a certified permeability factor  $\mu$  11,000 and an exceptionally resistant external protective film.
- The lower the coefficient of heat conductivity  $\lambda$  of the insulating material, the higher the resistance to transmission of heat, offering a better "insulating" performance.
- Sealed at the ends at a pressure equal to 70 tonnes, which guarantees the perfect internal cleanliness of the copper tube and the complete absence of humidity. This procedure favours the anti-oxidizing effect brought about by the presence of inert gases, nitrogen, present during the annealing phase.
- For double tubes, the 2 pipes can be manually separated without the use of special tools. This speeds up installation, guaranteeing perfect integrity of the insulation material.

## SPECIFICATIONS

- Working temperature: from -45°C to +95°C
- Coefficient of heat conductivity  $\lambda$  ISO 8497 - ASTM C 335:  
 Mean temp: 0°C W/(m.K): 0,036 kcal/h: 0,0309  
 40°C 0,040 0,0344
- Permeability:  $\mu \geq 11,000$
- Class 1 fire rating certificate CSE RF 2/75/A
- CSI (CSE RF 3/77)
- Density: 30 kg/m<sup>3</sup>
- Neutral odour
- Optimal resistance to chemical agents, fungi and parasites
- No toxicity in case of fire
- Insulating material produced without the use of CFC's
- Noise reduction >30 dB of the noise due to the flow or to the contact with metal pipes
- Type of copper: CU-DHP 99,9 UNI 5649-71 ASTM B 280 - tolerances as per UNI 7773

## SINGLE TUBES INSULATED

PART NUMBER	Copper pipe ext. dia		Insulating thickness	Covered pipe ext. dia	Weight of naked tube (kg/m)	Max. Working pressure (kg/cm <sup>2</sup> )*	Water flow per meter of tube (V lt/m)	Coil length (m)
	inch	mm						
IPS-04	1/4"	6,35 x 0,76	6	18	0,120	158	0,016	25
IPS-05	5/16"	7,93 x 0,81	9	26	0,162	117	0,029	25
IPS-06	3/8"	9,52 x 0,81	9	28	0,199	93	0,046	25
IPS-08	1/2"	12,70 x 0,81	9	31	0,271	66	0,093	25
IPS-10	5/8"	15,88 x 0,89	9	34	0,373	51	0,155	25
IPS-12	3/4"	19,05 x 1,00	13	46	0,539	41	0,233	25
IPS-14	7/8"	22,22 x 1,10	13	49	0,677	35	0,327	25

## DOUBLE TUBES INSULATED

PART NUMBER	Copper pipe ext. dia		Insulating thickness	Covered pipe ext. dia	Weight of naked tube (kg/m)	Max. working pressure (kg/cm <sup>2</sup> )*	Water flow per meter of tube (V lt/m)	Coil length (m)
	inch	mm						
IPD-0406	1/4" x 3/8"	6,35 x 9,52	6 - 9	18 - 28	0,120 - 0,199	158 - 93	0,016 - 0,046	20
IPD-0408	1/4" x 1/2"	6,35 x 12,70	6 - 9	18 - 31	0,120 - 0,271	158 - 66	0,016 - 0,093	20
IPD-0410	1/4" x 5/8"	6,35 x 15,88	6 - 9	18 - 34	0,120 - 0,373	158 - 51	0,016 - 0,155	20
IPD-0608	3/8" x 1/2"	9,52 x 12,70	9 - 9	28 - 31	0,199 - 0,271	93 - 66	0,046 - 0,093	20
IPD-0610	3/8" x 5/8"	9,52 x 15,88	9 - 9	28 - 34	0,199 - 0,373	93 - 51	0,046 - 0,155	20
IPD-0612	3/8" x 3/4"	9,52 x 19,05	9 - 13	28 - 46	0,199 - 0,539	93 - 41	0,046 - 0,233	20
IPD-0812	1/2" x 3/4"	12,70 x 19,05	9 - 13	31 - 46	0,271 - 0,539	66 - 41	0,093 - 0,233	20

\*kg/cm<sup>2</sup> x 0,981 = bar

