

# ICE

THE IDEAL CHOICE FOR REFRIGERATION  
AND AIR-CONDITIONING SYSTEMS.

## ICE COPPER TUBE

Manufactured according to the most modern technologies available on today's world market, in observance of European standard EN 12735-1, it is the result of scientific studies and tests that guarantee maximum compatibility with the latest generation of cooling liquids available on the market.

EN 12735-1: Copper and copper alloys - Seamless, round copper tubes for air conditioning and refrigeration - Tubes for piping systems

### TECHNICAL CHARACTERISTICS OF ICE COPPER TUBE

Alloy – Rif. EN 1976	Cu-DHP CW024A (Cu = 99,90% min. - P = 0,015 ÷ 0,040%)		
Physical state according to EN 12735-1	Annealed R220	Half-Hard R250	Hard R290
Unit tensile strength – R min.	220 N/mm <sup>2</sup>	250 N/mm <sup>2</sup>	290 N/mm <sup>2</sup>
Percentage elongation – A min.	40%	20% or 30%	3%
Total carbon	C ≤ 0,20 mg/dm <sup>2</sup> , lower than expected to standard EN 12735-1		
Internal surface	glossy		
Marking on tube <sup>1</sup>	SILMET EN 12735-1 Cu 99.9 Ø X wt year quarter $\equiv$ ICE		
Dimensions and tolerances <sup>1</sup>	According to EN 12735-1 standard		
Internal surface roughness	RA - 1/10 di micron		
Linear thermal expansion coefficient	0,00168 mm/m °C		
Thermal conductivity at 20°C	364 W/m · K		

<sup>1</sup> Products with marking, dimensional tolerances and various lengths can be prepared on specific Customer request.

<sup>2</sup> the symbol  $\equiv$  is present only in the half-hard physical state



**TABLE OF DIMENSIONS**

external nominal diameter <i>d</i>			nominal thickness <i>e</i> mm						
metric series		imperial series							
mm	mm	in	0,8	1	1,25	1,5	1,65	2	2,5
	3,18	1/8	•						
	3,97	5/32	•	•					
	4,76	3/16	•						
6			— •	•					
	6,35	1/4	•	•					
	7,94	5/16	•	•					
8			— •	•					
	9,52	3/8	•	•					
10			— •	— •					
12				— •					
	12,7	1/2	•	— •					
15				— •					
	15,87	5/8		— •					
18				— •					
	19,05	3/4		•	—				
22				— •					
	22,22	7/8		•	—				
	25,4	1		—					
28						—			
	28,57	1 1/8		—	—				
	34,92	1 3/8			—				
35						—			
	41,27	1 5/8			—				
42						—			
	53,97	2 1/8			—		—		
54								—	
64								—	
	66,67	2 5/8			—		—	—	
76,1								—	
	79,37	3 1/8					—		—
	88,9	3 1/2						—	
	92,07	3 5/8					—		—
	104,77	4 1/8					—		—
108									—
133									—

  

—	straight lengths
•	coils

**STANDARD DIMENSIONS - THICKNESS 0.80 MM - COILS**

diameter		thickness	water content/m	bursting pressure	operating pressure
mm	in	mm	l/m	MPa	MPa
6	-	0,8	0,0152	59,84	14,96
6,35	1/4	0,8	0,0177	56,54	14,14
7,94	5/16	0,8	0,0316	45,22	11,3
8		0,8	0,0322	44,88	11,22
9,52	3/8	0,8	0,0493	37,71	9,43
10		0,8	0,0554	35,9	8,98
12		0,8	0,0849	29,92	7,48
12,7	1/2	0,8	0,0968	28,27	7,07

**STANDARD DIMENSIONS - THICKNESS 1.00 MM – COILS**

diameter		thickness	water content/m	bursting pressure	operating pressure
mm	in	mm	l/m	MPa	MPa
6	-	1	0,0126	74,80	18,70
6,35	1/4	1	0,0149	70,68	17,67
7,94	5/16	1	0,0277	56,52	14,13
8		1	0,0283	56,10	14,03
9,52	3/8	1	0,0444	47,14	11,79
10		1	0,0503	44,88	11,22
12		1	0,0785	37,40	9,35
12,7	1/2	1	0,0899	35,34	8,83
15		1	0,1327	29,92	7,48
15,87	5/8	1	0,1511	28,28	7,07
18		1	0,2011	24,93	6,23
19,05	3/4	1	0,2286	23,55	5,89
22	-	1	0,3142	20,40	5,10
22,22	-	1	0,3211	20,20	5,05

**PALLETISATION**

diameter		thickness	coils per pallet	meters per pallet	approx. gross weight
mm	in	mm	n	m	kg
6	-	0,8	44	2.200	274
6,35	1/4	0,8	44	2.200	300
7,94	5/16	0,8	36	1.800	333
8		0,8	36	1.800	304
9,52	3/8	0,8	28	1.400	298
10		0,8	28	1.400	302
12		0,8	22	1.100	289
12,7	1/2	0,8	20	1.000	287
6	-	1	44	2.200	339
6,35	1/4	1	44	2.200	361
7,94	5/16	1	36	1.800	380
8		1	36	1.800	383
9,52	3/8	1	28	1.400	364
10		1	28	1.400	383
12		1	22	1.100	368
12,7	1/2	1	20	1.000	354
15		1	18	900	379
15,87	5/8	1	16	800	359
18		1	14	700	357
19,05	3/4	1	10	500	277
22	-	1	14*	350*	230
22,22	7/8	1	14*	350*	235

\* 25 metre coils