

Refrigeration Copper Tube Data Sheet



Lawton Refrigeration Tube	Straight Length or Coil
Applications	Air Conditioning, Refrigeration Piping Systems
Market Segment	Domestic and Commercial

Outside Diameter	1/4" - 4.1/8" (6.35 mm - 104.775 mm)
Wall Thickness	0.028" - 0.104" (0.71 mm - 2.64 mm)
Material Condition	R220, R250 ¹ , R290 ¹
Material	CW024A Copper
Product Marking	Inkjet Durable Marking to EN12735-1
Delivery Condition	Nitrogen Purged and Capped
Standard	EN 12735-1
Straight Lengths Form of Supply	Wooden Cases, Bundles
Coils Form of Supply	Boxed Pancake or Spool
Inner Surface Quality	Clean and Smooth, Carbon Content ≤ 0.38 mg/dm ²
Guarantee	75 Years (See website for full T&Cs)

1) Straight lengths only

Material Mechanical Properties

Material Designation	Tensile strength min. (N/mm ² MPa)	Elongation min. (%)	Hardness (Indicative) HV5 VPN
R220 (soft, annealed)	220	40	40 - 70
R250 (half-hard)	250	30	75 - 100
R290 (hard)	290	3	> 100

Material Composition and Other Properties

Copper Content Including Silver	99.90 %
Phosphorus	0.015 - 0.040 %
Total Impurities Excluding Phosphorus and Silver	0.060 %
Melting Point	1083 °C
Density	8.96 g/cm ³

Maximum Operating Pressure Coiled Tube EN 12735-1 R220

O.D. (Inches)	Wall (Inches)	Gauge (SWG)	MOP in annealed condition up to 100°C (bar)
1/4	0.028	22	101
5/16	0.028	22	79
5/16	0.036	20	104
3/8	0.032	21	75
1/2	0.032	21	55
5/8	0.036	20	49
3/4	0.040	19	45
7/8	0.040	19	38

For more details, please refer to our website or contact us by e-mail at technical@lawtontubes.co.uk

Maximum Operating Pressure Straight Lengths EN 12735-1

O.D. (Inches)	Wall (Inches)	Gauge (SWG)	MOP in annealed condition R220 ^a up to 100°C (bar)	MOP in supplied condition R250 up to 100°C (bar)	MOP in supplied condition R290 up to 100°C (bar)
3/8"	0.032	21	75	99	119
3/8"	0.036	20	85	113	136
3/8"	0.048	18	117	156	188
1/2"	0.036	20	62	82	99
1/2"	0.040	19	70	92	111
1/2"	0.048	18	85	113	136
5/8"	0.036	20	49	65	78
5/8"	0.040	19	55	72	88
5/8"	0.048	18	67	88	106
5/8"	0.064	16	91	121	146
3/4"	0.040	19	45	60	72
3/4"	0.048	18	55	72	88
3/4"	0.064	16	75	99	119
3/4"	0.104	12	129	171	206
7/8"	0.048	18	46	62	74
7/8"	0.064	16	63	84	101
7/8"	0.080	14	81	107	129
1.1/8"	0.048	18	36	47	57
1.1/8"	0.064	16	48	64	77
1.1/8"	0.080	14	61	81	98
1.1/8"	0.104	12	81	108	130
1.5/8"	0.048	18	24	32	39
1.5/8"	0.064	16	33	43	52
1.5/8"	0.080	14	41	55	66
1.5/8"	0.104	12	55	72	88
1.5/8"	0.116	11	61	81	98
2.1/8"	0.048	18	18	24	30
2.1/8"	0.064	16	25	33	40
2.1/8"	0.080	14	31	41	50
2.1/8"	0.104	12	41	55	66
2.5/8"	0.048	18	15	20	24
2.5/8"	0.064	16	20	26	32
2.5/8"	0.080	14	25	33	40
2.5/8"	0.104	12	33	44	53
3.1/8"	0.064	16	17	22	27
3.1/8"	0.080	14	21	28	34
3.1/8"	0.104	12	28	36	44
3.5/8"	0.064	16	14	19	23
3.5/8"	0.080	14	18	24	29
4.1/8"	0.064	16	13	17	20
4.1/8"	0.080	14	16	21	25
4.1/8"	0.104	12	21	27	33

^a Areas around brazed joints count as in annealed condition for the purposes of maximum operating pressure calculation