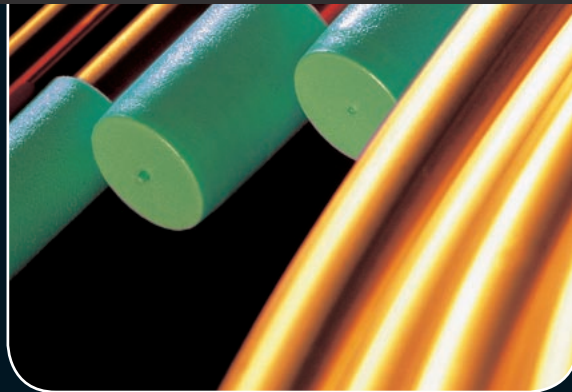


**Superior quality,  
reliable performance**

**AIR-CONDITIONING, REFRIGERATION  
AND MEDICAL GAS COPPER TUBE**



Crane Copper Tube is a manufacturer and international supplier of a wide range of refrigeration, air-conditioning and medical gas tube. Crane Copper Tube manufactures quality copper tube in accordance with Australian, American and European Standards.

#### Specification

AS/NZS 1571	Copper Alloy N°.	C12200 CW024A or CuDHP
ASTM B280		
BSEN 1057- Medical	Chemical Requirement	Cu+Ag min. 99.9% P 0.015-0.040%
	Tolerances	As required by the standard
	Cleanness	0.038g/m <sup>3</sup>

#### Working Pressures

Safe working pressures for copper tube are calculated on the basis of annealed temper tube with the maximum allowable outside diameter and minimum wall thickness, thus allowing for softening of the tube due to brazing or heating. All safe working pressures are based on the following formula:

$$P_{sw} = \frac{2000 \times S_D \times t_m}{D - t_m}$$

where:

$P_{sw}$  = safe working pressure (kPa)

$S_D$  = maximum allowable design stress for annealed copper (MPa)

$t_m$  = minimum wall thickness of tube (mm)

$D$  = outside diameter of tube (mm)

#### Tube Integrity

All Crane copper tube is electronically tested by Eddy Current method to ensure tube integrity as part of Crane Copper Tube quality system.

Interpolation of allowable design stress as defined by table D7 of AS4041 for the below temperatures.

Temperature (°C)	50.0	55.0	60.0	65.0	70.0	75.0
$S_D$ (MPa)	41	38.6	36.83	35.55	34.63	34

# Air-conditioning and Refrigeration Grade Tube

## Capping

The standard air-conditioning and refrigeration grade copper tube is distinguished by yellow coloured capping.

## Ink Marking

The tube is also identified with ink marking along its length stating the Manufacturer's Name, Country of Origin, Conforming Standard, Temper and Size.

eg: "CRANE COPPER TUBE AUSTRALIA AS/NZS 1571 ½H 19.05 x 0.91"

eg: "CRANE COPPER TUBE AUSTRALIA ASTM B280 3/8 H"



# R410A Rated Tube

Crane Copper Tube has extended its range of refrigeration tube with the introduction of R410A rated copper tube. The R410A rated copper tube is especially designed to comply with AS4041 Pressure Piping Code. Our R410A rated copper tube is capable of withstanding working pressures of 4131kPa when the refrigerant is operating at a temperature of 65°C, which is the recommended operating temperature as per AS/NZS 1677 Refrigerating systems.

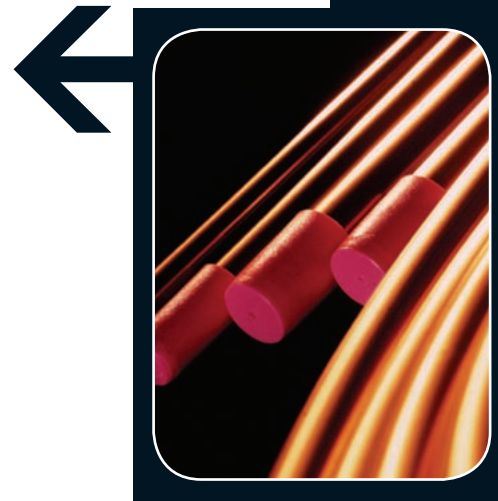
## Capping

The R410A rated copper tube is distinguished by rose coloured capping.

## Ink Marking

The tube is also identified with ink marking along its length stating the Manufacturer's Name, Country of Origin, Conforming Standard, Temper, Size and Special Usage.

eg: "CRANE COPPER TUBE AUSTRALIA AS/NZS 1571 ½H 12.7 x 0.91 R410A RATED"



# Medical Gas Grade Copper Tube

Crane Copper Tube offers a range of copper tube for use in Medical Gas applications. The medical gas copper tube has specific internal cleanliness requirements that require the tube to go through a degreasing, cleaning, checking, additional cleaning and checking if required before being capped.

Medical gas tube is also available for AS1571 and ASTM B280 copper tube with the same size configuration and temper as the standard refrigeration grade tube.

Medical gas tube can also be manufactured in accordance with EN13348 - Seamless, round copper tubes for medical gases or vacuum. This standard specifically relates to copper tube used for medical gas applications.

## Capping

The medical gas copper tube is distinguished by green coloured capping.

## Ink Marking

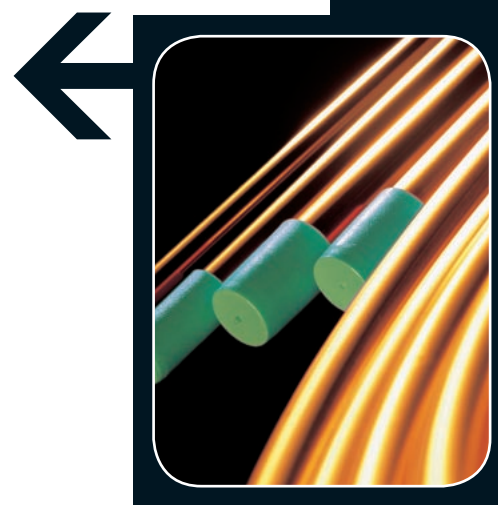
The tube is also identified with ink marking along its length stating the Manufacturer's Name, Country of Origin, Conforming Standard, Temper, Size and Special Usage.

eg: "CRANE COPPER TUBE AUSTRALIA AS/NZS 1571 H 28.6 x 0.91 MEDICAL GAS"

eg: "CRANE COPPER TUBE AUSTRALIA EN 13348 R290 H 28 x 0.9 MEDICAL GAS"

eg: "CRANE COPPER TUBE AUSTRALIA (VPSB) LISTED TO BSEN 1057 HH 28 x 1.2 TYPE Y MEDICAL GAS"

eg: "CRANE COPPER TUBE AUSTRALIA ASTM B280 3/8 H MEDICAL GAS"



# Straight Seamless Tubes for Air-conditioning and Refrigeration

## Australian Standard AS/NZS 1571

### Standard sizes and data for straight copper tubes

Crane Item Number	Outside Diameter (mm)	Wall Thickness (mm)	Imperial Equivalent O.D. and swg	Nominal Weight (kg/m)	Form	Temper	Safe working pressure (kPa) at service temperature				
							50 °C	55°C	60°C	65°C	70°C
50106405	6.35	0.71	1/4" x 22	0.112	5.8m Straight	H	9175	8638	8242	7955	7749
50129021	6.35	0.81	1/4" x 21	0.126	5.8m Straight	H	10635	10012	9553	9221	8982
50106465	6.35	0.91	1/4" x 20	0.139	5.8m Straight	H	12142	11431	10907	10528	10256
50106464	9.53	0.71	3/8" x 22	0.176	5.8m Straight	H	5893	5548	5294	5110	4978
50127985	9.53	0.81	3/8" x 21	0.198	5.8m Straight	H	6792	6395	6101	5889	5737
50106467	9.53	0.91	3/8" x 20	0.220	5.8m Straight	H	7710	7258	6925	6685	6512
50106463	12.7	0.71	1/2" x 22	0.239	5.8m Straight	H	4344	4090	3903	3767	3669
50127986	12.7	0.81	1/2" x 21	0.270	5.8m Straight	H	4994	4701	4486	4330	4218
50103068	12.7	0.91	1/2" x 20	0.301	5.8m Straight	1/2H	5653	5322	5078	4901	4774
*	12.7	1.02	1/2" x 19	0.335	5.8m Straight	1/2H	6389	6015	5739	5540	5396
50103081	15.88	0.71	5/8" x 22	0.303	5.8m Straight	H	3438	3237	3088	2981	2904
50116054	15.88	0.91	5/8" x 20	0.383	5.8m Straight	H	4459	4198	4006	3866	3766
50106466	15.88	1.02	5/8" x 19	0.426	5.8m Straight	H	5031	4737	4519	4362	4249
50108674	15.88	1.02	5/8" x 19	0.426	5.8m Straight	1/2H	5031	4737	4519	4362	4250
50106476	15.88	1.22	5/8" x 18	0.502	5.8m Straight	1/2H	6091	5734	5471	5281	5145
50103161	19.05	0.71	5/8" x 22	0.366	5.8m Straight	H	2846	2679	2557	2468	2404
50103162	19.05	0.91	5/8" x 20	0.464	5.8m Straight	1/2H	3684	3468	3309	3194	3111
*	19.05	1.02	3/4" x 19	0.517	5.8m Straight	1/2H	4152	3909	3729	3600	3507
50106475	19.05	1.22	3/4" x 18	0.611	5.8m Straight	H	5015	4722	4505	4349	4236
50108675	19.05	1.22	3/4" x 18	0.611	5.8m Straight	1/2H	5015	4722	4505	4349	4236
50106404	22.23	0.71	7/8" x 22	0.429	5.8m Straight	H	2427	2285	2180	2104	2050
50103199	22.23	0.91	7/8" x 20	0.545	5.8m Straight	1/2H	3137	2953	2818	2720	2649
50106577	22.23	1.22	7/8" x 18	0.720	5.8m Straight	1/2H	4261	4011	3827	3694	3599
50106473	22.23	1.63	7/8" x 16	0.943	5.8m Straight	H	5794	5455	5204	5024	4894
50106468	25.4	0.91	1" x 20	0.626	5.8m Straight	H	2732	2572	2454	2369	2308
50106592	25.4	1.22	1" x 18	0.829	5.8m Straight	H	3705	3488	3328	3212	3129
50108676	25.4	1.63	1" x 16	1.088	5.8m Straight	H	5026	4732	4515	4358	4245
50130169	28.57	0.81	1 1/8" x 21	0.632	5.8m Straight	H	2147	2021	1929	1862	1814
50103253	28.57	0.91	1 1/8" x 20	0.707	5.8m Straight	H	2420	2278	2174	2098	2044
50119320	28.57	1.02	1 1/8" x 19	0.789	5.8m Straight	H	2722	2563	2445	2360	2299
50103256	28.57	1.22	1 1/8" x 18	0.937	5.8m Straight	H	3277	3086	2944	2842	2768
50107234	28.57	1.27	1 1/8" x 17.5	0.974	5.8m Straight	H	3417	3217	3070	2963	2886
50106586	28.57	1.63	1 1/8" x 16	1.233	5.8m Straight	H	4438	4179	3987	3848	3749
50106472	28.57	1.83	1 1/8" x 18	1.374	5.8m Straight	H	5016	4723	4506	4350	4237

# Denotes R410A tube requires safety shut off limit of 3800kPa.

\* Denotes tube made to order where minimum order quantities required.

Denotes R410A rated tube.

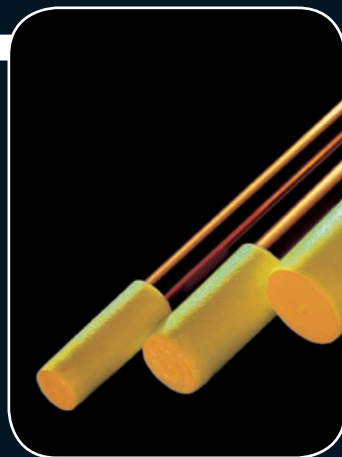
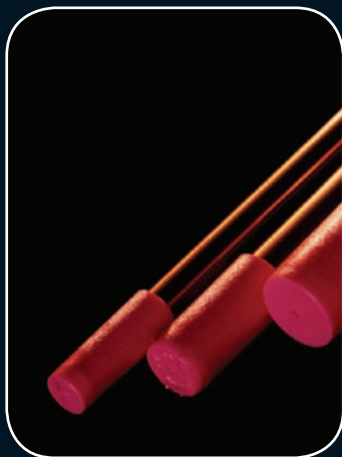
Crane Item Number	Outside Diameter (mm)	Wall Thickness (mm)	Imperial Equivalent O.D. and swg	Nominal Weight (kg/m)	Form	Temper	Safe working pressure (kPa) at service temperature				
							50 °C	55°C	60°C	65°C	70°C
50106469	31.75	0.91	1 1/4" x 20	0.788	5.8m Straight	H	2171	2044	1950	1883	1834
*	31.75	1.22	1 1/4" x 18	1.046	5.8m Straight	H	2937	2765	2639	2547	2481
50106580	31.75	2.03	1 1/2" x 14	1.694	5.8m Straight	H	5007	4714	4497	4341	4229
50103274	34.92	0.91	1 3/8" x 20	0.869	5.8m Straight	H	1969	1854	1769	1708	1663
50106470	34.92	1.22	1 3/8" x 18	1.155	5.8m Straight	H	2662	2506	2391	2308	2249
#50106474	34.92	2.03	1 3/8" x 14	1.875	5.8m Straight	H	4527	4262	4067	3925	3824
*	38.1	0.91	1 1/2" x 20	0.951	5.8m Straight	H	1801	1696	1618	1562	1522
50106471	38.1	1.22	1 1/2" x 18	1.264	5.8m Straight	H	2433	2291	2186	2110	2055
50106406	41.27	0.91	1 5/8" x 20	1.032	5.8m Straight	H	1660	1563	1491	1440	1402
50103297	41.27	1.02	1 5/8" x 19	1.153	5.8m Straight	H	1865	1756	1676	1618	1576
50110507	41.27	1.22	1 5/8" x 18	1.372	5.8m Straight	H	2241	2110	2013	1943	1893
50103309	41.27	1.63	1 5/8" x 16	1.815	5.8m Straight	H	3022	2845	2715	2620	2553
#50108678	41.27	2.41	1 5/8" x 12.5	2.630	5.8m Straight	H	4549	4282	4086	3944	3842
*	44.45	0.91	1 3/4" x 20	1.113	5.8m Straight	H	1539	1449	1383	1335	1300
50108644	44.45	1.22	1 3/4" x 18	1.481	5.8m Straight	H	2077	1955	1866	1801	1754
50112249	50.8	0.91	2" x 20	1.275	5.8m Straight	H	1344	1265	1207	1165	1135
50103325	53.97	1.02	2 1/8" x 19	1.517	5.8m Straight	H	1419	1336	1275	1230	1198
*	50.8	1.22	2" x 18	1.699	5.8m Straight	H	1812	1706	1627	1571	1530
50108664	50.8	1.63	2" x 16	2.251	5.8m Straight	H	2438	2296	2190	2114	2060
*	53.97	0.91	2 1/8" x 20	1.356	5.8m Straight	H	1264	1190	1135	1096	1067
50106460	53.97	1.22	2 1/8" x 18	1.807	5.8m Straight	H	1703	1603	1530	1477	1438
50103330	53.97	1.63	2 1/8" x 16	2.396	5.8m Straight	H	2291	2157	2058	1987	1935
50106461	66.68	1.22	2 5/8" x 18	2.243	5.8m Straight	H	1373	1293	1233	1190	1160
*	66.68	1.63	2 5/8" x 16	2.978	5.8m Straight	H	1845	1737	1657	1599	1558
50107520	66.68	2.03	2 5/8" x 14	3.686	5.8m Straight	H	2310	2175	2075	2003	1951
50106843	79.4	1.63	3" x 16	3.414	5.8m Straight	H	1610	1515	1446	1396	1360
*	101.6	1.63	4" x 16	4.577	5.8m Straight	H	1201	1131	1079	1042	1015

# Denotes R410A tube requires safety shut off limit of 3800kPa.

\* Denotes tube made to order where minimum order quantities required.

■ Denotes R410A rated tube.

Quality, reliability, and performance



# Annealed Seamless Tubes for Air-conditioning and Refrigeration

## Australian Standard AS/NZS 1571

### Standard sizes and data for annealed copper tubes

Crane Item Number	Outside Diameter (mm)	Wall Thickness (mm)	Imperial Equivalent O.D. and swg	Nominal Weight (kg/m)	Form	Temper	Safe working pressure (kPa) at service temperature				
							50 °C	55°C	60°C	65°C	70°C
50108642	4.76	0.56	3/16" x 24	0.066	15m Coil	0	9711	9142	8723	8420	8202
50102949	4.76	0.71	3/16" x 22	0.081	15m Coil	0	12715	11971	11422	11025	10739
50108671	4.76	0.91	3/16" x 20	0.098	15m Coil	0	17041	16043	15308	14776	14393
50102960	6.35	0.56	1/4" x 24	0.091	15m Coil	0	7069	6656	6350	6130	5971
50102968	6.35	0.61	1/4" x 22	0.098	15m Coil	0	7760	7306	6971	6729	6555
50102970	6.35	0.71	1/4" x 22	0.112	15m Coil	0	9175	8638	8242	7955	7750
50115755	6.35	0.81	1/4" x 21	0.126	15m Coil	0	10635	10012	9553	9221	8983
50102974	6.35	0.91	1/4" x 20	0.139	15m Coil	0	12142	11431	10907	10528	10256
*	6.35	1.22	1/4" x 18	0.176	15m Coil	0	17143	16140	15400	14864	14480
50102980	7.94	0.56	5/16" x 24	0.116	15m Coil	0	5558	5233	4993	4819	4694
50102982	7.94	0.71	5/16" x 22	0.144	15m Coil	0	7177	6757	6447	6223	6062
50108672	7.94	0.91	5/16" x 20	0.180	15m Coil	0	9431	8879	8472	8177	7966
50102996	9.53	0.56	3/8" x 24	0.141	15m Coil	0	4579	4311	4113	3970	3867
50102997	9.53	0.61	3/8" x 22	0.153	15m Coil	0	5013	4719	4503	4346	4234
50102996	9.53	0.56	3/8" x 24	0.141	15m Coil	0	4579	4311	4113	3970	3867
50103007	9.53	0.71	3/8" x 22	0.176	15m Coil	0	5893	5548	5294	5110	4978
50115722	9.53	0.81	3/8" x 20	0.198	15m Coil	0	6792	6395	6101	5889	5737
50103016	9.53	0.91	3/8" x 20	0.220	15m Coil	0	7710	7258	6925	6685	6512
50103023	12.7	0.56	1/2" x 24	0.191	15m Coil	0	3389	3190	3044	2938	2862
50103031	12.7	0.61	1/2" x 22	0.207	15m Coil	0	3705	3488	3328	3212	3129
50103039	12.7	0.71	1/2" x 22	0.239	15m Coil	0	4344	4090	3903	3767	3669
50115719	12.7	0.81	1/2" x 21	0.271	15m Coil	0	4994	4701	4486	4330	4218
50103065	12.7	0.91	1/2" x 20	0.301	15m Coil	0	5653	5322	5078	4901	4774
50103080	15.88	0.56	5/8" x 24	0.241	15m Coil	0	2688	2531	2415	2331	2270
50103114	15.88	0.61	5/8" x 22	0.262	15m Coil	0	2936	2765	2638	2546	2480
50103115	15.88	0.66	5/8" x 22.5	0.282	15m Coil	0	3186	3000	2862	2763	2691
50103107	15.88	0.71	5/8" x 22	0.303	15m Coil	0	3438	3237	3088	2981	2904
50103123	15.88	0.81	5/8" x 21	0.343	15m Coil	0	3946	3715	3544	3421	3333
50103128	15.88	0.91	5/8" x 20	0.383	15m Coil	0	4459	4198	4006	3866	3766
50108669	15.88	1.02	5/8" x 19	0.426	15m Coil	0	5031	4737	4519	4362	4250
50108484	19.05	0.56	5/8" x 24	0.291	15m Coil	0	2228	2098	2002	1932	1882
50103149	19.05	0.61	5/8" x 22	0.316	15m Coil	0	2433	2291	2186	2110	2055
50103150	19.05	0.71	3/4" x 22	0.366	15m Coil	0	2846	2679	2557	2468	2404
50106642	19.05	0.89	5/8" x 20.2	0.454	15m Coil	0	3599	3389	3233	3121	3040
50103160	19.05	0.91	3/4" x 20	0.464	15m Coil	0	3684	3468	3309	3194	3111
50103183	19.05	1.22	3/4" x 18	0.611	15m Coil	0	5015	4722	4505	4349	4236
50103197	22.23	0.91	7/8" x 20	0.545	15m Coil	0	3137	2953	2818	2720	2649

# Denotes R410A tube requires safety shut off limit of 3800kPa.

\* Denotes tube made to order where minimum order quantities required.

■ Denotes R410A rated tube.

## Straight Seamless Tubes for Air-conditioning and Refrigeration

### American Standard ASTM B280

#### Standard sizes and data for straight copper tubes

Crane Item Number	Std size	Outside diameter		Wall Thickness		Nominal Weight		Form	Temper	Safe working pressure at service temperature									
		in	(mm)	in	(mm)	lb/ft	(kg/m)			120°F	130°F	140°F	150°F	160°F					
										[48.9°C]	[54.4°C]	[60°C]	[65.5°C]	[71.1°C]					
PSI	(kPa)	PSI	(kPa)	PSI	(kPa)	PSI	(kPa)	PSI	(kPa)										
50109034	3/8"	0.375	(9.52)	0.03	(0.76)	0.126	(0.187)	5.8m Straight	H (H58)	792	(5464)	770	(5313)	756	(5216)	747	(5149)	739	(5099)
50109035	1/2"	0.5	(12.7)	0.035	(0.89)	0.198	(0.295)	5.8m Straight	H (H58)	705	(4859)	685	(4725)	673	(4638)	664	(4579)	658	(4535)
50107521	5/8"	0.625	(15.9)	0.04	(1.02)	0.285	(0.426)	5.8m Straight	H (H58)	653	(4500)	635	(4376)	623	(4295)	615	(4241)	609	(4200)
50107522	3/4"	0.75	(19.1)	0.042	(1.07)	0.362	(0.542)	5.8m Straight	H (H58)	571	(3936)	555	(3828)	545	(3757)	538	(3710)	533	(3674)
50106962	7/8"	0.875	(22.2)	0.045	(1.14)	0.455	(0.674)	5.8m Straight	H (H58)	526	(3630)	512	(3530)	502	(3465)	496	(3421)	491	(3387)
50103255	1 1/8"	1.125	(28.6)	0.05	(1.27)	0.655	(0.975)	5.8m Straight	H (H58)	447	(3080)	434	(2995)	426	(2940)	421	(2903)	417	(2875)
50103279	1 3/8"	1.375	(34.9)	0.055	(1.4)	0.884	(1.317)	5.8m Straight	H (H58)	397	(2735)	386	(2660)	379	(2611)	374	(2578)	370	(2553)
50103305	1 5/8"	1.625	(41.3)	0.06	(1.52)	1.14	(1.698)	5.8m Straight	H (H58)	369	(2545)	359	(2475)	352	(2429)	348	(2398)	344	(2375)
50109036	2 1/8"	2.125	(54.0)	0.07	(1.78)	1.75	(2.611)	5.8m Straight	H (H58)	328	(2265)	319	(2202)	313	(2162)	309	(2134)	307	(2114)
*	2 5/8"	2.625	(66.7)	0.08	(2.03)	2.48	(3.687)	5.8m Straight	H (H58)	303	(2092)	295	(2034)	290	(1997)	286	(1971)	283	(1952)
*	3 1/8"	3.125	(79.4)	0.09	(2.29)	3.33	(4.959)	5.8m Straight	H (H58)	286	(1975)	278	(1920)	273	(1885)	270	(1861)	267	(1843)
*	3 5/8"	3.625	(92.1)	0.1	(2.54)	4.29	(6.389)	5.8m Straight	H (H58)	274	(1890)	267	(1838)	262	(1804)	258	(1781)	256	(1764)
*	4 1/8"	4.125	(104.8)	0.11	(2.79)	5.38	(7.993)	5.8m Straight	H (H58)	265	(1826)	257	(1775)	253	(1743)	250	(1721)	247	(1704)

\* Denotes tube made to order where minimum order quantities required.

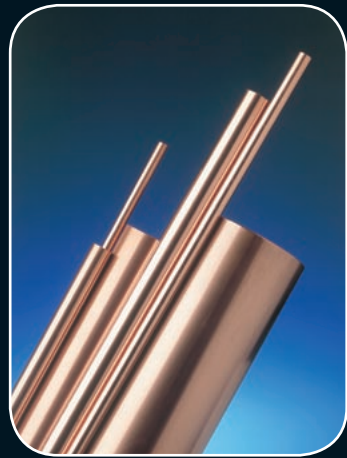
## Annealed Seamless Tubes for Air-conditioning and Refrigeration

### American Standard ASTM B280

#### Standard sizes and data for annealed copper tubes

Crane Item Number	Std size	Outside diameter		Wall Thickness		Nominal Weight		Form	Temper	Safe working pressure at service temperature									
		in	(mm)	in	(mm)	lb/ft	(kg/m)			120°F	130°F	140°F	150°F	160°F					
										[48.9°C]	[54.4°C]	[60°C]	[65.5°C]	[71.1°C]					
PSI	(kPa)	PSI	(kPa)	PSI	(kPa)	PSI	(kPa)	PSI	(kPa)										
50109029	3/16"	0.187	(4.76)	0.03	(0.76)	0.057	(0.085)	15m Coil	O (O60)	1746	(12039)	1698	(11708)	1666	(11492)	1645	(11346)	1629	(11236)
50102969	1/4"	0.25	(6.35)	0.03	(0.76)	0.080	(0.119)	15m Coil	O (O60)	1268	(8747)	1233	(8506)	1211	(8350)	1195	(8244)	1184	(8164)
50109030	5/16"	0.312	(7.92)	0.032	(0.81)	0.109	(0.162)	15m Coil	O (O60)	1079	(7444)	1050	(7239)	1030	(7106)	1017	(7015)	1007	(6947)
50102992	3/8"	0.375	(9.52)	0.032	(0.81)	0.134	(0.198)	15m Coil	O (O60)	887	(6118)	863	(5950)	847	(5840)	836	(5766)	828	(5710)
50103043	1/2"	0.5	(12.7)	0.032	(0.81)	0.182	(0.271)	15m Coil	O (O60)	656	(4521)	638	(4396)	626	(4316)	618	(4261)	612	(4220)
50109031	5/8"	0.625	(15.9)	0.035	(0.89)	0.251	(0.375)	15m Coil	O (O60)	557	(3843)	542	(3737)	532	(3668)	525	(3621)	520	(3586)
50103152	3/4"	0.75	(19.1)	0.035	(0.89)	0.305	(0.455)	15m Coil	O (O60)	461	(3180)	448	(3092)	440	(3035)	435	(2997)	430	(2968)
50109033	3/4"	0.75	(19.1)	0.042	(1.07)	0.362	(0.542)	15m Coil	O (O60)	570	(3928)	554	(3820)	544	(3750)	537	(3702)	532	(3666)
50103201	7/8"	0.875	(22.2)	0.045	(1.14)	0.455	(0.674)	15m Coil	O (O60)	525	(3621)	511	(3521)	501	(3456)	495	(3412)	490	(3379)
*	1 1/8"	1.125	(28.6)	0.05	(1.27)	0.665	(0.975)	15m Coil	O (O60)	446	(3075)	434	(2990)	426	(2935)	420	(2898)	416	(2870)
*	1 3/8"	1.375	(34.9)	0.055	(1.4)	0.884	(1.317)	15m Coil	O (O60)	404	(2788)	393	(2712)	386	(2662)	381	(2628)	377	(2602)

\* Denotes tube made to order where minimum order quantities required.



## Medical Gases or Vacuum T ube

### Quality Control & Cleanness

The critical nature of medical gas and vacuum applications demands rigorous cleaning levels during production of these copper tubes. Crane Copper Tube ensures that we remove all residues, easily achieving the cleanness requirements, in order to prevent gas contamination or potential explosions from combustion of residual oils.

Safety standards for oxygen and other medical gases also require the use of specially cleaned tubing in order to prevent gas or potential explosion.

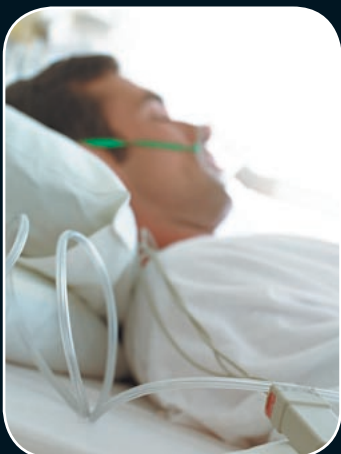
### Test Pressures

Medical and breathing gas – 415kPa

Compressed gas for tolls – 1400kPa

Medical pipeline suction – 60kPa

Quality, reliability, and performance





## Seamless Round Copper Tubes for Medical Gases or Vacuum

### Australian Standard AS/NZS 1571

#### Standard Sizes and Data

Crane Item Number	Outside Diameter (mm)	Wall Thickness (mm)	Nominal Weight (kg/m)	Form	Temper	Safe working pressure (kPa) at up to 50°C
50103067	12.7	0.91	0.301	5.8m Straight	½H	5653
50130219	12.7	0.91	0.301	5.8m Straight	½H	5653
50121634	15.9	1.02	0.426	5.8m Straight	½H	5024
50120806	19.1	0.91	0.465	5.8m Straight	½H	3674
50109258	19.1	1.02	0.518	5.8m Straight	½H	4140
50103229	25.4	1.22	0.829	5.8m Straight	H	3705
50111020	31.8	1.22	1.048	5.8m Straight	H	2933
50111030	38.1	1.22	1.264	5.8m Straight	H	2433
50118931	50.8	1.22	1.699	5.8m Straight	H	1812
50120805	63.5	1.22	2.134	5.8m Straight	H	1443
50120807	76.2	1.63	3.414	5.8m Straight	H	1610
50110592	101.6	1.63	4.577	5.8m Straight	H	1201

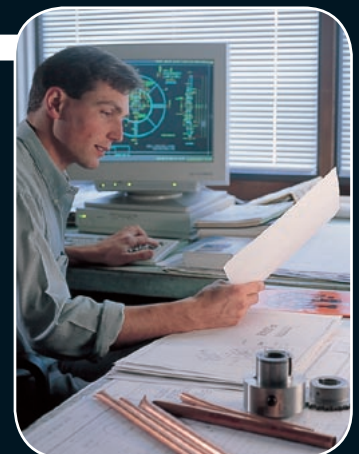
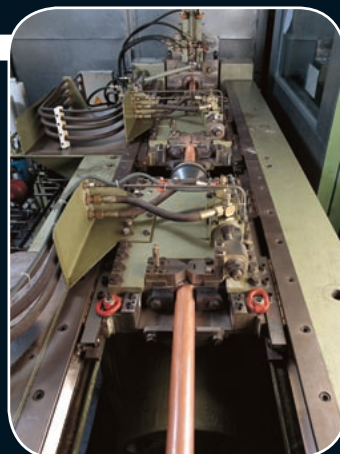
## Seamless Round Copper Tubes for Medical Gases or Vacuum

### British Standard BSEN 1057

#### Standard Sizes and Data

Crane Item Number	Outside Diameter (mm)	Wall Thickness (mm)	Nominal Weight (kg/m)	Form	Temper	Safe working pressure (kPa) at up to 50°C
50109188	15	0.7	0.281	5.8m Straight	½H (R250)	3595
50111368	15	1.0	0.393	5.8m Straight	½H (R250)	5234
50109189	22	0.9	0.533	5.8m Straight	½H (R250)	3135
50109190	28	0.9	0.685	5.8m Straight	½H (R250)	2443
50103244	28	1.2	0.903	5.8m Straight	½H (R250)	3290
50109194	35	1.2	1.139	5.8m Straight	H (R290)	2611
50109195	42	1.2	1.375	5.8m Straight	H (R290)	2164
50109197	54	1.2	1.780	5.8m Straight	H (R290)	1674
50109199	66.7	1.2	2.208	5.8m Straight	H (R290)	1350
50109201	76.1	1.5	3.143	5.8m Straight	H (R290)	1481
50109202	108	1.5	4.487	5.8m Straight	H (R290)	1038

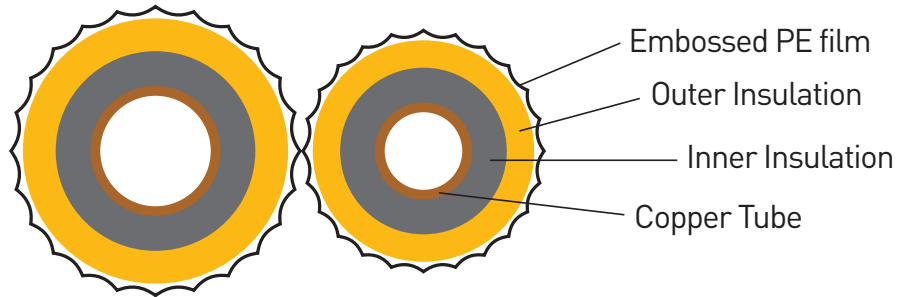
Quality, reliability, and performance





## Pair Coil

Crane Copper Tube Pair Coil is a superior pre-insulated copper tube ideal for rapid cost effective split air-conditioning installation. Pair Coil uses soft annealed copper tube. The tube is flexible and easily bent for quick and easy installation.



### Pair Coil Specifications

Crane Item Number	Outside Diameter (mm)	Wall Thickness (mm)	Imperial Equivalent O.D and swg	Nominal Weight (kg/m)	Form	Temper	Safe Working Pressure (kPa) at service temperature				
							50 °C	55°C	60°C	65°C	70°C
50103431	6.35	0.81	1/4" x 21	0.126	20m Coil	0	10635	10012	9553	9221	8982
	9.52	0.81	3/8" x 21	0.198			6800	6402	6108	5896	5743
50103432	6.35	0.81	1/4" x 21	0.126	20m Coil	0	10635	10012	9553	9221	8982
	12.7	0.81	1/2" x 21	0.270			4994	4701	4486	4330	4218
50103433	6.35	0.81	1/4" x 21	0.126	20m Coil	0	10635	10012	9553	9221	8982
	15.88	1.02	5/8" x 19	0.426			5031	4737	4519	4362	4249
50103434	9.52	0.81	3/8" x 21	0.198	20m Coil	0	6800	6402	6108	5896	5743
	15.88	1.02	5/8" x 19	0.426			5031	4737	4519	4362	4249
50103435	9.52	0.81	3/8" x 21	0.198	20m Coil	0	6800	6402	6108	5896	5743
	19.05	1.22	3/4" x 18	0.611			5015	4722	4505	4349	4236
50103436	12.7	0.81	1/2" x 21	0.270	20m Coil	0	4994	4701	4486	4330	4218
	19.05	1.22	3/4" x 18	0.611			5015	4722	4505	4349	4236

■ Denotes R410A rated tube

- **Manufactured to AS/NZS1571**
- **R410A compliant**
- **Ideal for split system air-conditioners**
- **Saves time on installations**
- **Easier and neater installations**
- **Bends easily without kinking using Crane Copper Tube Pair Coil Benders**

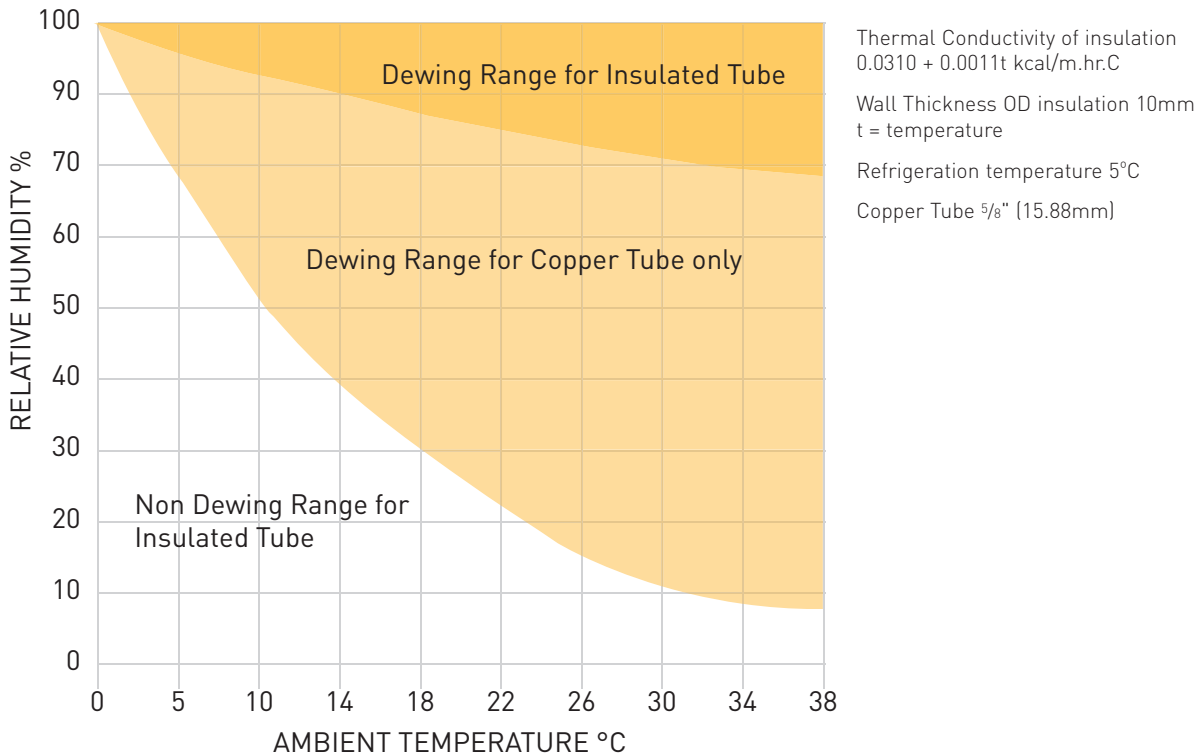
## Insulation Properties

Crane Item Number	OD x Wall Thickness (mm)	Insulation Tube (mm)		Thermal Conductivity kcal/mhrC	Surface Heat Transfer Coefficient kcal/m <sup>2</sup> hrC	Tensile Strength (Max) 24.5 (N/cm <sup>2</sup> ) 2.5 (kgf/cm <sup>2</sup> )	Water Absorption 0.01 max. g/100cm <sup>2</sup>	Shrinkage (120+5°C) 7% max.
		Outer Diameter	Wall Thickness					
50103431	6.35 x 0.8	24	8	0.031+0.00011t	7	24.5 (N/cm <sup>2</sup> ) 2.5 (kgf/cm <sup>2</sup> )	0.01 max. g/100cm <sup>2</sup>	7% max.
	9.52 x 0.8	27	8					
50103432	6.35 x 0.8	24	8					
	12.70 0.8	34	8					
50103433	6.35 x 0.8	24	8					
	15.88 x 1.0	37	10					
50103434	9.52 x 0.8	27	8					
	15.88 x 1.0	37	10					
50103435	9.52 x 0.8	27	8					
	19.05 x 1.22	41	10					
50103436	12.70 x 0.8	34	10					
	19.05 x 1.22	41	10					

Crane Copper Tube Pair Coil insulation is heat resistant to 120°C.

The Insulation is a unique double layered structure made of cross linked, foam (30 times) polyethylene with closed cells. The insulation tube is extruded to ensure close tube contact to enhance dew point proofing properties. The insulation is covered with embossed polyethylene film to prevent foam creasing. The polyethylene film contains UV protection additives built for the harsh Australian conditions.

## Dew Point



Pair Coil is a product imported by Crane Copper Tube for sale in Australia and international markets.

## Pressure-Temperature Conversion Chart

The table below gives values of saturated vapour pressures of some of the most common refrigerants. This table is supplied for guidance purposes only. Operating pressures for specific refrigerants should be obtained from your refrigerant supplier.

Temp	°C	45.0	50.0	55.0	60.0	65.0	70.0
	°F	113.0	122.0	131.0	140.0	149.0	158.0
R11	kPa	105.0	140.0	176.0	212.0	252.0	307.0
	psig	15.2	20.3	25.5	30.7	36.5	44.5
R12	kPa	981.0	1120.0	1268.0	1428.0	1586.0	1784.0
	psig	142.2	162.4	183.9	207.1	230.0	258.7
R123	kPa	78.0	114.0	147.0	182.0	228.0	276.0
	psig	11.3	16.5	21.3	26.4	33.1	40.0
R134a	kPa	1054.0	1234.0	1383.0	1571.0	1789.0	2016.0
	psig	152.8	178.9	200.5	227.8	259.4	292.3
R22	kPa	1649.0	1855.0	2095.0	2345.0	2592.0	2895.0
	psig	239.1	269.0	303.8	340.0	375.8	419.8
R404A	kPa	1967.0	2224.0	2503.0	2805.0	3093.0	3292.0
	psig	285.2	322.5	362.9	406.7	448.5	477.3
R407C	kPa	1735.0	1970.0	2235.0	2520.0	2933.0	3262.0
	psig	251.6	285.7	324.1	365.4	425.3	473.0
R408A	kPa	1822.0	2060.0	2319.0	2600.0	2842.0	3160.0
	psig	264.2	298.7	336.3	377.0	412.1	458.2
R409A	kPa	1037.0	1191.0	1363.0	1550.0	1990.0	2217.0
	psig	150.4	172.7	197.6	224.8	288.6	321.5
R410A	kPa	2609.0	2945.0	3308.0	3702.0	4131.0	4599.0
	psig	378.3	427.0	479.7	536.8	599.0	666.9
R502	kPa	1766.0	1977.0	2215.0	2475.0	2865.0	3090.0
	psig	256.1	286.7	321.2	358.9	415.4	448.1
R507	kPa	2021.0	2281.0	2572.0	2890.0	3236.0	3566.0
	psig	293.0	330.7	372.9	419.1	469.2	517.1

Information contained in this brochure is provided as a guide only. Crane Copper Tube does not warrant that the information is accurate or without error or omissions. Crane Copper reserves the right to correct any errors or misprints.

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