



Premium SEAMLESS COPPER TUBE

FOR AIR CONDITIONING &
REFRIGERATION FIELD SERVICE



ASTM INTERNATIONAL

Certified to: ASTM B 280-13
Certificate No.: FC 002437

Certified to: MS H 3300: 2009
Certificate No.: FC 000958

ACONLAND HOLDINGS SDN. BHD.

No. 1, Jalan Perusahaan 3, Taman Industri Selesa Jaya 2, 43300 Balakong, Selangor.

T: +6 03 8964 5399

F: +6 03 8964 0066

W: www.aconland.com.my

PREMIUM SEAMLESS COPPER TUBE

Introduction

Incorporated on 1 February 2007, with its plan to expand the business under the leadership of Dato' Andy Kwan Teck Hian, a new business unit of private limited company was established on 1 August 2007 in Malaysia on residential and light commercial air conditioning and refrigeration equipment and parts supply.

With over 20 years of experience in HVAC industry, the Company is currently a leading supplier and distributor of air-conditioning, refrigeration and its related components, parts and equipment in Klang Valley area and expanded the retail arm to cover Southern, East Coast and East Malaysia regions. For the past decade, we have focused well in the supplies of superior quality materials for HVAC industry i.e. copper tubes, insulation tubes and sheets, HDG brackets, air conditioning equipment, compressors, component & parts and etc to various local and overseas projects.

Aconland Holdings Sdn Bhd (formerly known as Gain City Sdn Bhd) is now one of the major player in air-conditioning and refrigeration industry. Being an ISO 9001 QMS certified company, we are committed to assure our clients on quality services and products, with its ultimate aim to enhance customer satisfaction.

Material Composition & Mechanical Properties For JISH 3300 and ASTM B280

STANDARD	PRODUCT TYPE	COPPER ALLOY UNS NO	STANDARD COUNTRY	TEMPER GRADE		TENSILE STRENGTH (Mpa)	ELONGATION (%)	HARDNESS (HV / HR)	GRAIN SIZE (mm)	CHEMICAL COMPOSITION (%)
JIS H3300	COIL /LENGTH	C1201 C1220	JAPAN	O	SOFT ANNEALED	> 205	>40	HR15T : < 60	0.025 - 0.06	HIGH PHOSPHORUS DEOXIDIZED COPPER Cu + Ag: 99.90 P: 0.015 - 0.040
				OL	LIGHT ANNEALED	> 205	>40	HR15T : < 65	< 0.040	
				1/2H	HALF HARD	245 - 325	-	HR30T : 30 - 6	-	
				H	HARD DRAWN	> 315	-	HR30T : > 55	-	
ASTM B280	COIL /LENGTH	C12200	U.S.A	50	SOFT ANNEALED	> 205	-	HRF : < 50	≥ 0.04	
				60	LIGHT ANNEALED	> 205	-	HRF : < 55	> 0.025	
				H58	HARD DRAWN	> 250	-	HR30T : > 30	-	



ISO-TUBE copper tube is manufactured to a variety of international standards, including Japanese and American, and is suitable for different applications such as plumbing, air conditioning, refrigeration, and general engineering applications.

ADVANTAGES



Quality Certified



Reliable



High Heating Conductivity



Variety Range Of Sizes



Trusted Brand



Recyclable



ASTM B 280 STANDARD

Safe Working Pressure At Service Temperature (Pancake Coil)

TYPE	OUTSIDE DIAMETER		WALL THICKNESS		WEIGHT KG/M	TEMPER	SAFE WORKING PRESSURE AT SERVICE TEMPERATURE	
	INCH	MM	INCH	MM			65°C	149°F
					kPa		PSI	
L	1/4	6.35	0.030	0.762	0.120	O60	9300	1350
	5/16	7.94	0.032	0.813	0.163		7800	1140
	3/8	9.53	0.032	0.813	0.199		6400	930
	1/2	12.70	0.032	0.813	0.271		4700	690
	5/8	15.88	0.035	0.889	0.374		4100	600
	3/4	19.05	0.035	0.889	0.453		3400	490
	7/8	22.23	0.045	1.143	0.677		3700	540
	1 - 1/8	28.58	0.050	1.270	0.974		3200	470
K	3/8	9.53	0.035	0.889	0.216	O60	7100	1030
	1/2	12.70	0.049	1.245	0.400		7500	1080
	5/8	15.88	0.049	1.245	0.512		5900	850
	3/4	19.05	0.049	1.245	0.622		4800	700
	7/8	22.23	0.065	1.651	0.954		5500	800
	1 - 1/8	28.58	0.065	1.651	1.248		4200	620

ASTM B 280 STANDARD

FOR AIR CONDITIONING & REFRIGERATION FIELD SERVICE

Safe Working Pressure At Service Temperature (Straight Tube)

TYPE	OUTSIDE DIAMETER		WALL THICKNESS		WEIGHT KG/M	TEMPER	SAFE WORKING PRESSURE AT SERVICE TEMPERATURE	
	INCH	MM	INCH	MM			65°C	149°F
							kPa	PSI
L	3/8	9.53	0.030	0.762	0.188	H58	6000	870
	1/2	12.70	0.035	0.889	0.295		5200	750
	5/8	15.88	0.040	1.016	0.424		4700	690
	3/4	19.05	0.042	1.067	0.539		4100	600
	7/8	22.23	0.045	1.143	0.677		3700	540
	1 - 1/8	28.58	0.050	1.270	0.974		3200	470
	1 - 3/8	34.93	0.055	1.397	1.315		2900	420
	1 - 5/8	41.28	0.060	1.524	1.701		2600	380
	2 - 1/8	53.98	0.070	1.778	2.606		2300	340
	2 - 5/8	66.68	0.080	2.032	3.689		2200	320
	3 - 1/8	79.38	0.090	2.286	4.949		2000	300
	3 - 5/8	92.08	0.100	2.540	6.386		1900	280
	4 - 1/8	104.78	0.110	2.794	8.001		1900	270
	5 - 1/8	130.18	0.125	3.175	11.323		1700	250
	6 - 1/8	155.58	0.140	3.556	15.180		1600	230
8 - 1/8	206.38	0.200	5.080	28.715	1700	250		
K	3/8	9.53	0.035	0.889	0.216	H58	7100	1030
	1/2	12.70	0.049	1.245	0.400		7500	1080
	5/8	15.88	0.049	1.245	0.512		5900	850
	3/4	19.05	0.049	1.245	0.622		4800	700
	7/8	22.23	0.065	1.651	0.954		5500	800
	1 - 1/8	28.58	0.065	1.651	1.248		4200	620
	1 - 3/8	34.93	0.065	1.651	1.543		3400	500
	1 - 5/8	41.28	0.072	1.829	2.026		3200	470
	2 - 1/8	53.98	0.083	2.108	3.070		2800	410
	2 - 5/8	66.68	0.095	2.413	4.355		2600	380
	3 - 1/8	79.38	0.109	2.769	5.957		2500	360
	3 - 5/8	92.08	0.120	3.048	7.620		2400	340
	4 - 1/8	104.78	0.134	3.404	9.690		2300	340
	5 - 1/8	130.18	0.160	4.064	14.392		2200	320
	6 - 1/8	155.58	0.192	4.877	20.638		2200	320
8 - 1/8	206.38	0.271	6.883	38.558	2400	350		

JIS H3300 STANDARD

Annealed Seamless Copper Tube Data (Soft Annealed)

OUTSIDE DIAMETER (INCH)	OUTSIDE DIAMETER (MM)	WALL THICKNESS (MM)	FORM	TEMPER	NOMINAL WEIGHT (KG/Length)	SAFE WORKING PRESSURE			
						50°C ~ 75°C		75°C ~ 125°C	
						PSI	MPa	PSI	MPa
1/4"	6.35	0.56	15m Coil	Soft Annealed (Type O)	1.362	820	5.70	770	5.37
		0.61	15m Coil	Soft Annealed (Type O)	1.471	860	5.95	810	5.60
		0.71	15m Coil	Soft Annealed (Type O)	1.682	1040	7.21	980	6.79
		0.81	15m Coil	Soft Annealed (Type O)	1.885	1170	8.12	1100	7.64
		0.91	15m Coil	Soft Annealed (Type O)	2.079	1370	9.44	1280	8.89
5/16"	7.94	0.56	15m Coil	Soft Annealed (Type O)	1.735	650	4.51	610	4.25
3/8"	9.52	0.56	15m Coil	Soft Annealed (Type O)	2.107	540	3.74	510	3.52
		0.61	15m Coil	Soft Annealed (Type O)	2.283	560	3.90	530	3.67
		0.71	15m Coil	Soft Annealed (Type O)	2.627	680	4.70	640	4.43
		0.81	15m Coil	Soft Annealed (Type O)	2.963	760	5.28	720	4.97
		0.91	15m Coil	Soft Annealed (Type O)	3.291	880	6.11	830	5.75
1/2"	12.70	0.56	15m Coil	Soft Annealed (Type O)	2.855	400	2.78	370	2.61
		0.61	15m Coil	Soft Annealed (Type O)	3.097	420	2.89	390	2.72
		0.71	15m Coil	Soft Annealed (Type O)	3.575	500	3.49	470	3.28
		0.81	15m Coil	Soft Annealed (Type O)	4.045	560	3.90	530	3.67
		0.91	15m Coil	Soft Annealed (Type O)	4.506	650	4.51	610	4.24
5/8"	15.88	0.56	15m Coil	Soft Annealed (Type O)	3.602	310	2.16	290	2.03
		0.61	15m Coil	Soft Annealed (Type O)	3.911	330	2.30	310	2.16
		0.71	15m Coil	Soft Annealed (Type O)	4.522	400	2.77	370	2.60
		0.81	15m Coil	Soft Annealed (Type O)	5.125	430	3.00	410	2.82
		0.91	15m Coil	Soft Annealed (Type O)	5.720	500	3.47	470	3.27
3/4"	19.05	0.61	15m Coil	Soft Annealed (Type O)	4.724	270	1.90	260	1.79
		0.71	15m Coil	Soft Annealed (Type O)	5.469	330	2.29	310	2.15
		0.81	15m Coil	Soft Annealed (Type O)	6.205	360	2.48	330	2.34
		0.91	15m Coil	Soft Annealed (Type O)	6.933	410	2.87	390	2.70

JIS H3300 STANDARD

Straight Seamless Copper Tube Data (Hard Drawn)

OUTSIDE DIAMETER (INCH)	OUTSIDE DIAMETER (MM)	WALL THICKNESS (MM)	FORM	TEMPER	NOMINAL WEIGHT (KG/Length)	SAFE WORKING PRESSURE			
						50°C ~ 75°C		75°C ~ 125°C	
						PSI	MPa	PSI	MPa
1/4"	6.35	0.71	5.8m Straight Pipe	Hard Drawn (Type -H)	0.650	2640	18.26	2640	18.26
		0.81	5.8m Straight Pipe	Hard Drawn (Type -H)	0.729	2980	20.55	2980	20.55
		0.91	5.8m Straight Pipe	Hard Drawn (Type -H)	0.804	3460	23.89	3460	23.89
3/8"	9.52	0.71	5.8m Straight Pipe	Hard Drawn (Type -H)	1.016	1720	11.90	1720	11.90
		0.81	5.8m Straight Pipe	Hard Drawn (Type -H)	1.146	1930	13.35	1930	13.35
		0.91	5.8m Straight Pipe	Hard Drawn (Type -H)	1.272	2240	15.45	2240	15.45
1/2"	12.70	0.71	5.8m Straight Pipe	Hard Drawn (Type -H)	1.382	1280	8.82	1280	8.82
		0.81	5.8m Straight Pipe	Hard Drawn (Type -H)	1.564	1430	9.88	1430	9.88
		0.91	5.8m Straight Pipe	Hard Drawn (Type -H)	1.742	1650	11.41	1650	11.41
5/8"	15.88	0.71	5.8m Straight Pipe	Hard Drawn (Type -H)	1.749	1010	7.00	1010	7.00
		0.81	5.8m Straight Pipe	Hard Drawn (Type -H)	1.982	1100	7.60	1100	7.60
		0.91	5.8m Straight Pipe	Hard Drawn (Type -H)	2.212	1270	8.80	1270	8.80
		1.02	5.8m Straight Pipe	Hard Drawn (Type -H)	2.462	1460	10.13	1460	10.13
3/4"	19.05	0.71	5.8m Straight Pipe	Hard Drawn (Type -H)	2.115	840	5.80	840	5.80
		0.81	5.8m Straight Pipe	Hard Drawn (Type -H)	2.399	910	6.29	910	6.29
		0.91	5.8m Straight Pipe	Hard Drawn (Type -H)	2.681	1050	7.27	1050	7.27
		1.07	5.8m Straight Pipe	Hard Drawn (Type -H)	3.124	1280	8.86	1280	8.86
7/8"	22.23	0.71	5.8m Straight Pipe	Hard Drawn (Type -H)	2.481	720	4.97	720	4.97
		0.81	5.8m Straight Pipe	Hard Drawn (Type -H)	2.817	780	5.39	780	5.39
		0.91	5.8m Straight Pipe	Hard Drawn (Type -H)	3.150	900	6.22	900	6.22
		1.143	5.8m Straight Pipe	Hard Drawn (Type -H)	3.913	1190	8.21	1190	8.21
1"	25.4	0.91	5.8m Straight Pipe	Hard Drawn (Type -H)	3.619	780	5.42	780	5.42
1 - 1/8"	28.58	0.71	5.8m Straight Pipe	Hard Drawn (Type -H)	3.213	540	3.78	540	3.78
		0.81	5.8m Straight Pipe	Hard Drawn (Type -H)	3.653	600	4.16	600	4.16
		0.91	5.8m Straight Pipe	Hard Drawn (Type -H)	4.088	690	4.81	690	4.81
		1.27	5.8m Straight Pipe	Hard Drawn (Type -H)	5.632	1030	7.16	1030	7.16
1 - 1/4"	31.75	0.91	5.8m Straight Pipe	Hard Drawn (Type -H)	4.558	620	4.32	620	4.32
		1.02	5.8m Straight Pipe	Hard Drawn (Type -H)	5.090	720	4.96	720	4.96
1 - 3/8"	34.93	0.71	5.8m Straight Pipe	Hard Drawn (Type -H)	3.945	440	3.08	440	3.08
		0.81	5.8m Straight Pipe	Hard Drawn (Type -H)	4.488	490	3.40	490	3.40
		0.91	5.8m Straight Pipe	Hard Drawn (Type -H)	5.027	560	3.92	560	3.92
		1.02	5.8m Straight Pipe	Hard Drawn (Type -H)	5.616	650	4.50	650	4.50
		1.07	5.8m Straight Pipe	Hard Drawn (Type -H)	5.883	690	4.77	690	4.77
		1.22	5.8m Straight Pipe	Hard Drawn (Type -H)	6.678	800	5.56	800	5.56
		1.42	5.8m Straight Pipe	Hard Drawn (Type -H)	7.727	930	6.47	930	6.47
1 - 1/2"	38.1	0.91	5.8m Straight Pipe	Hard Drawn (Type -H)	5.496	520	3.59	520	3.59
		1.02	5.8m Straight Pipe	Hard Drawn (Type -H)	6.142	590	4.12	590	4.12
		1.22	5.8m Straight Pipe	Hard Drawn (Type -H)	7.307	730	5.09	730	5.09
1 - 5/8"	41.28	0.81	5.8m Straight Pipe	Hard Drawn (Type -H)	5.323	410	2.87	410	2.87
		0.91	5.8m Straight Pipe	Hard Drawn (Type -H)	5.965	480	3.31	480	3.31
		1.02	5.8m Straight Pipe	Hard Drawn (Type -H)	6.668	550	3.80	550	3.80
		1.24	5.8m Straight Pipe	Hard Drawn (Type -H)	8.062	690	4.78	690	4.78
2 - 1/8"	53.98	0.91	5.8m Straight Pipe	Hard Drawn (Type -H)	7.842	350	2.42	350	2.42
		1.22	5.8m Straight Pipe	Hard Drawn (Type -H)	10.452	500	3.47	500	3.47
		1.78	5.8m Straight Pipe	Hard Drawn (Type -H)	15.088	760	5.24	760	5.24

Remarks:
 * Safe working pressures for copper tube are calculated on the basis of annealed temper tube (design tensile stress) with the minimum allowable outside diameter and minimum wall thickness, as specified in the standards.
 * This table is supplied for guidance purposes only and operating pressures for specific refrigerants should be obtained from respective refrigerant suppliers.
 * Hard drawn tube has higher pressure ratings which will only be maintained when non-heat source joining methods are used

CERTIFICATES

LESEN PENSIHLAN BARANGAN
 Product Certification Licence

SIRIM QAS International Sdn. Bhd. dengan ini mengesahkan kepada
 SIRIM QAS International Sdn. Bhd. (selepas ini) dengan ini mengesahkan kepada

QAS CITY NEW BHD
 332, JALAN MUTIARA RAYA,
 TAMAN MUTIARA,
 50480 KUALA LUMPUR, MALAYSIA

Lesen untuk menggunakan Tanda Pendaftaran di atas berangka
 a) seperti yang tertera dalam Jadual di bawah ini
 b) sebagai syarat untuk memenuhi syarat-syarat yang tertera dalam
 c) Jadual di bawah ini

Please refer to detail in the SCHEDULE

Sebagai maklumat tambahan
 ini mengesahkan
 di bawah ini

Tan Sri Ahmad Fauzi Yusoff
 Chief Executive Officer
 SIRIM QAS International Sdn. Bhd.

19 Jun 2018

LESEN PENSIHLAN BARANGAN
 Product Certification Licence

SIRIM QAS International Sdn. Bhd. dengan ini mengesahkan kepada
 SIRIM QAS International Sdn. Bhd. (selepas ini) dengan ini mengesahkan kepada

QAS CITY NEW BHD
 332, JALAN MUTIARA RAYA,
 TAMAN MUTIARA,
 50480 KUALA LUMPUR, MALAYSIA

Lesen untuk menggunakan Tanda Pendaftaran di atas berangka
 a) seperti yang tertera dalam Jadual di bawah ini
 b) sebagai syarat untuk memenuhi syarat-syarat yang tertera dalam
 c) Jadual di bawah ini

Please refer to detail in the SCHEDULE

Sebagai maklumat tambahan
 ini mengesahkan
 di bawah ini

Tan Sri Ahmad Fauzi Yusoff
 Chief Executive Officer
 SIRIM QAS International Sdn. Bhd.

19 Jun 2018