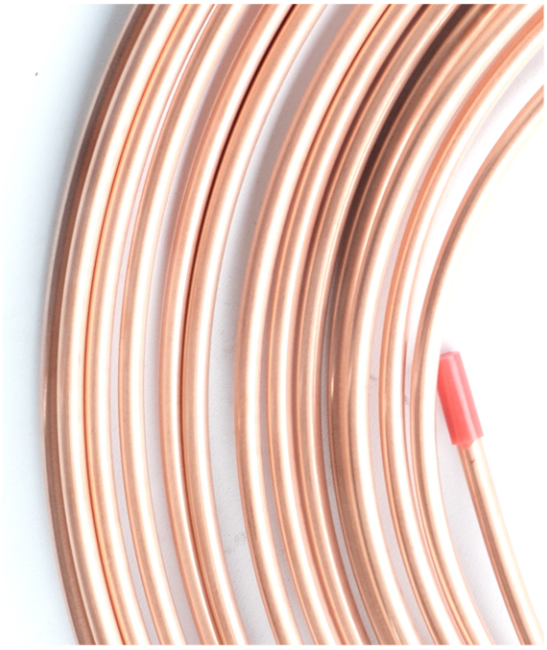
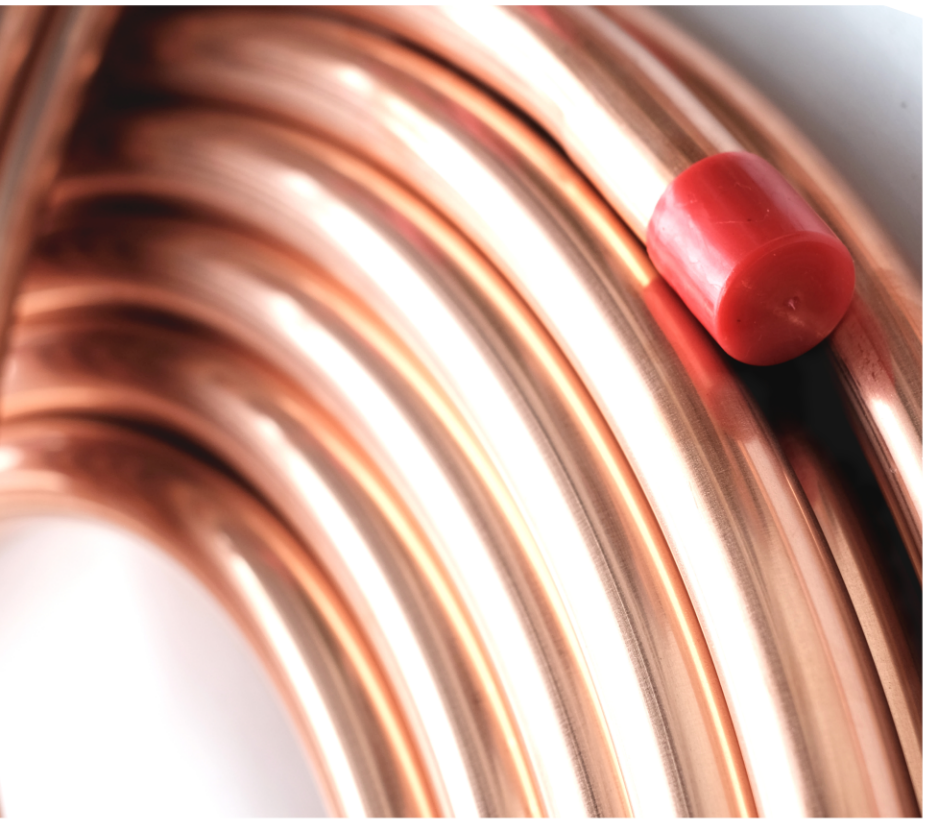
Apic
cooper tube



copper tube and pre insulated paired copper coil

Air Conditioning, Refrigeration, Medical Gas, General Plumbing, HVAC, Fuel, Gas Distribution and Fire Sprinkler Installation



APIC Cooper tube is one of leading products for HVAC and Refrigeration applications.

APIC is engineered to be able to cater market demands and needs in reliable products for cooper tube. APIC comes with range of application from 30 meters coils (with insulation or without insulation) up to straight 3 meters pipes.

Features

Reliable

Used for many years in HVACR industry. Strong and adaptable.

Durability

Copper is durable, strong and resists damage. You can always rely on copper tube and fittings for HVACR application and expect working well for many years.

Efficient & Effective

With high reliability and good performance result on HVACR application, Copper tube becomes one the best solution.

Easy to Install

Many people have used it for so many years because of easy to install and less jointing on the application. Reduce working time.

Fire Safety

Copper tube is less combustible material when is comes to fire safety requirements and decomposing to toxic gas.

Green Sustainability

Over 90% of copper is recyclable. It contributes significantly to world sustainability but at the same times gives you comfort and high result performance.

Environment Safety

Cooper gives excellent protection against contamination to domestic water supply.

Apic cooper tube

Product Detail

APIC SEAMLESS COPPER TUBE
ASTM B 280
For: Air Conditioning, Refrigeration and Natural Gas

For Annealed Coil Copper Tubes

SS Inch	OD Inch (mm)	WT Inch (mm)	W, Lb/ Ft (Kg/ m)	SWIP PSI (Kpa) 150° F
1/8	0.125 (3.18)	0.030 (0.76)	0.0347 (0.0516)	2613 (18013)
3/16	0.187 (4.76)	0.030 (0.76)	0.0575 (0.0856)	1645 (11340)
1/4	0.250 (6.35)	0.030 (0.76)	0.0804 (0.120)	1195 (8238)
5/16	0.312 (7.92)	0.032 (0.81)	0.109 (0.162)	1017 (7011)
3/8	0.375 (9.52)	0.032 (0.81)	0.134 (0.199)	836 (5763)
1/2	0.500 (12.70)	0.032 (0.81)	0.182 (0.271)	618 (4260)
5/8	0.625 (15.88)	0.035 (0.89)	0.251 (0.373)	525 (3619)
3/4	0.750 (19.05)	0.035 (0.89)	0.305 (0.454)	435 (2999)
7/8	0.875 (22.23)	0.045 (1.14)	0.455 (0.677)	495 (3412)
1 1/8	1.125 (28.58)	0.050 (1.27)	0.665 (0.975)	420 (2895)
1 3/8	1.375 (34.93)	0.055 (1.40)	0.884 (1.32)	373 (2571)
1 5/8	1.625 (41.28)	0.060 (1.52)	1.14 (1.70)	347 (2392)

Note: Tubes are supplied in 15 meter for annealed coil copper tubes

For Hard Drawn Straight Length Copper Tubes

SS Inch	OD Inch (mm)	WT Inch (mm)	W, Lb/ Ft (Kg/ m)	SWIP PSI (Kpa) 150° F
3/8	0.375 (9.52)	0.030 (0.76)	0.126 (0.187)	1367 (9423)
1/2	0.500 (12.70)	0.035 (0.89)	0.198 (0.295)	1168 (8051)
5/8	0.625 (15.88)	0.040 (1.02)	0.285 (0.424)	1082 (7458)
3/4	0.750 (19.05)	0.042 (1.07)	0.362 (0.539)	947 (6528)
7/8	0.875 (22.23)	0.045 (1.14)	0.455 (0.677)	873 (6018)
1 1/8	1.125 (28.58)	0.050 (1.27)	0.655 (0.975)	741 (5108)
1 3/8	1.375 (34.93)	0.055 (1.40)	0.884 (1.32)	658 (4536)
1 5/8	1.625 (41.28)	0.060 (1.52)	1.14 (1.70)	613 (4226)
2 1/8	2.125 (53.98)	0.070 (1.78)	1.75 (2.60)	545 (3757)
2 5/8	2.625 (66.68)	0.080 (2.03)	2.48 (3.69)	504 (3474)
3 1/8	3.125 (79.38)	0.090 (2.29)	3.33 (4.96)	476 (3281)
3 5/8	3.625 (92.08)	0.100 (2.54)	4.29 (6.38)	455 (3136)
4 1/8	4.125 (104.78)	0.110 (2.79)	5.38 (8.01)	440 (3033)

Note: Tubes are supplied in 5.8 meter for Straight tubes

Copper Pipe Technical properties

Desc	Copper Alloy No.	Copper (min)	Phosphorus	Temper: Coil	Temper: Hard Drawn	Tensile Strength: Coil (min)	Tensile Strength: Hard Drawn (min)	Elongation (min)
Value	C12200	99.90	0.015 - 0.040	O60	H58	205	250	40
Unit		%	%			Mpa	Mpa	%

Values of allowable internal working pressure for copper tube in service are based on the formula from ANSI B31, Standard Code for Pressure Piping:

$$P = \frac{2\,S\,tm}{D\,max - 0.8\,tm}$$

P = Allowable Pressure
S = Allowable Stress
T = Wall Thickness
D Max = Outside Diameter

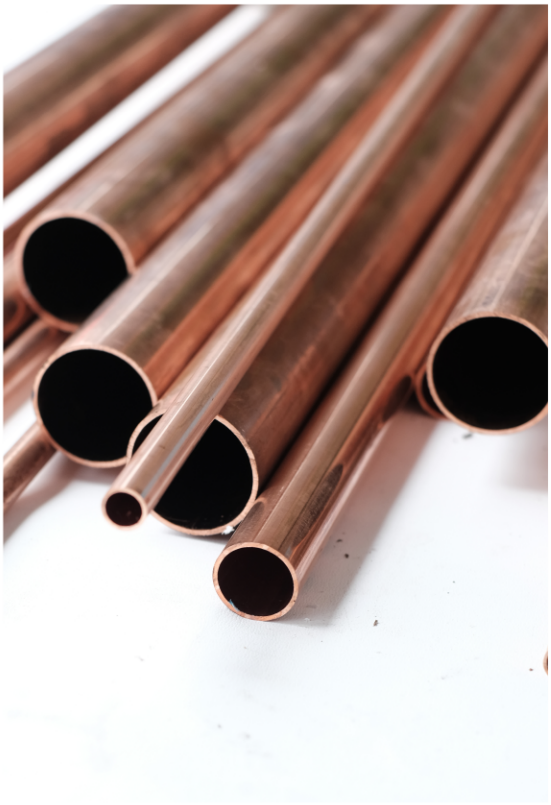
@ 150° F S = 5100 PSIG Annealed
@ 300° F S = 4700 PSIG Annealed
@ 150° F S = 9000 PSIG Hard Drawn
@ 300° F S = 8700 PSIG Hard Drawn

APIC SEAMLESS COPPER TUBE
ASTM B 819
For: Medical Gas

Seamless Copper Tube ASTM B819 For Medical Gas

SS Inch	OD Inch (mm)	WT Inch (mm)	NW kg/m	*Safe Working Internal Pressures Hard Drawn PSI 150°F	PSI 300°F	PSI 150°F	PSI 300°F
3/8	0.375 (9.52)	0.030 (0.76)	0.188	1367	1322	9423	9113
1/2	0.500 (12.70)	0.035 (0.89)	0.295	1168	1129	8051	7783
5/8	0.625 (15.88)	0.049 (1.02)	0.425	1082	1046	7458	7211
3/4	0.750 (19.05)	0.049 (1.07)	0.539	947	916	6528	6315
7/8	0.875 (22.23)	0.065 (1.14)	0.667	873	844	6018	5818
1 1/8	1.125 (28.58)	0.065 (1.27)	0.975	741	717	5108	4943
1 3/8	1.375 (34.93)	0.065 (1.40)	1.317	658	636	4536	4384
1 5/8	1.625 (41.28)	0.072 (1.52)	1.703	613	592	4226	4081
2 1/8	2.125 (53.98)	0.083 (1.78)	2.609	545	527	3757	3633
2 5/8	2.625 (66.68)	0.095 (2.03)	3.692	504	487	3474	3357
3 1/8	3.125 (79.38)	0.109 (2.29)	4.954	476	460	3281	3171
3 5/8	3.625 (92.08)	0.120 (2.54)	6.393	455	440	3136	3033
4 1/8	4.125 (104.78)	0.134 (3.79)	8.010	440	425	3033	2930
5 1/8	5.125 (130.18)	0.160 (3.18)	11.335	404	390	2785	2689
6 1/8	6.125 (155.58)	0.192 (3.56)	15.196	376	364	2592	2509
8 1/8	8.125 (206.38)	0.271 (5.08)	28.745	406	392	2799	2702

Note: Tubes are supplied in 5.8 meter for straight length

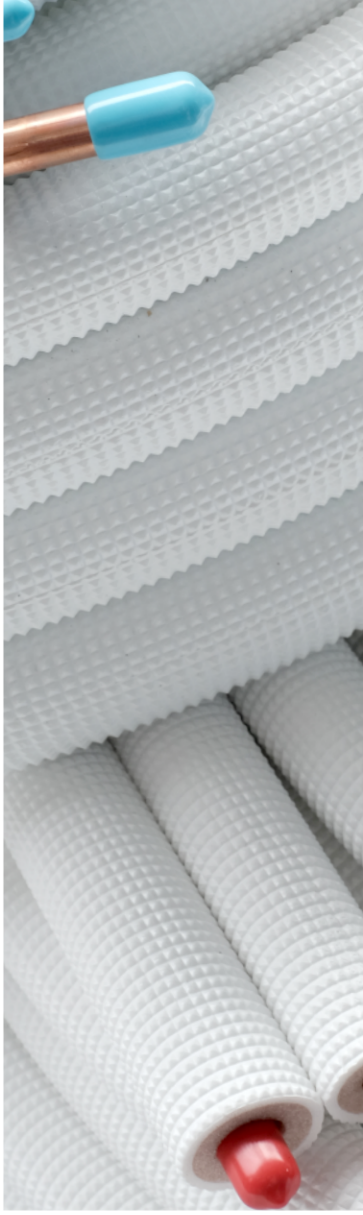


Apic cooper tube

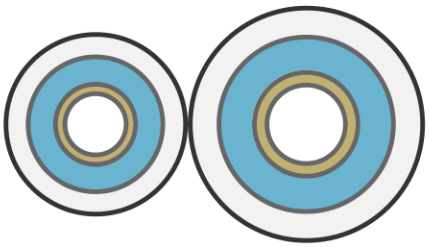
Product Detail

Technical Data - ASTM B280
Annealed Coil Copper and Insulation Tube

Type	Copper Tube (OD x mm) Size x Thickness	Insulation Size (mm) Wall Thickness	Length (m)
AP 2320	1/4" x 0.76	10	20
	3/8" x 0.81		
AP 2420	1/4" x 0.76		
	1/2" x 0.81		
AP 2520	1/4" x 0.76		
	5/8" x 0.89		
AP 3520	3/8" x 0.81		
	5/8" x 0.89		
AP 3620	3/8" x 0.81		
	3/4" x 0.89		
AP 4620	1/2" x 0.81		
	3/4" x 0.89		



Pre Insulated Paired Copper Coil



- UV Resistant PE Film
- Middle Layer
- Inner Insulation Tube
- Copper Tube

Technical Description

Standard	: ASTM B280
Tube	: Annealed Coil Copper
Insulation	: Physical Cross-Linked 30 times PE foaming pipe with outer cover
Dimension	: 30 meters continuous coil
Thermal Condusctivity	: ≤ 0.043 (0.037) W/m.k (Kcal/m.h.˚C)
Working temperature	: -70˚C - 120˚C
Tensile Strength	: >14 N/cm² (Kgfcm²)
Water absorption	: ≤ 2.0 g/ 100cm2
Radial Contraction Rate	: ≤ 7 (120±5˚C)%

APIC Pre-Insulated Twin Tube
Key Features

3 Layers Insulation
Layering has no pocket. It gives youpeace of mind from condensation, Anti-Abrasion, Anti-Impact, Anti-Aging

Cross Linked PE Insulation
Foamed continuosly without seam and closely welded with theouter 2 layers.

UV Resistant PE Insulation
Weather durabilityperformance increase. It becomes reliable for outdoor usage.

Seamless Inner Tube
Reduce risk of leakageand condensation.

Better Life Time
APIC Pre-Insulated twin paired with 3 layers insulation and seamless join, it will give you longer performance due to reduced risk of condensation and pressure leakage.

Easy Installation

Refrigerants
Temperature - Pressure Data For Common Refrigerants

RT	Refrigerant Saturated Vapour Pressures, Psi (kPa)						
	45 °C	50 °C	55 °C	60 °C	65 °C	70 °C	75 °C
R134A	153 (1054)	179 (1234)	201 (1383)	228 (1571)	260 (1789)	293 (2016)	343 (2364)
R22	239 (1649)	269 (1855)	304 (2095)	340 (2345)	376 (2592)	420 (2895)	480 (3305)
R407C	252 (1735)	286 (1970)	324 (2235)	366 (2520)	426 (2933)	473 (3262)	548 (3776)
R410A	379 (2613)	427 (2945)	480 (3308)	537 (3702)	600 (4131)	-	-
R32	379 (2690)	440 (3028)	495 (3407)	555 (3820)	620 (4268)	692 (4763)	-

RT - Refrigerant Type

Apic cooper tube

bravoindo

PT BRAVOINDO PERKASA JAYA

Superblock MGK Kemayoran Blok F No. 9
Jl. Angkasa Kav B6
Jakarta, ID
10610

Apic cooper tube

www.bravoindoperkasa.com