

Insulated Copper Tubes



Features;

- Dual layer structure insulations have 30 times independent crosslinked polyethylene foam with heat resistance up to 120° .
- Seamless extrusion molding enhances adhesion of copper tube and insulation, which achieves high prevention of dew condensation.
- Embossing on the surface film is high resistant to scratches and wrinkle-free.
- Softly annealed copper pipe is applied.
- Flexible material makes bending easily and saving working time

Material and Characteristic of Copper Pipes - JIS H3300 C1220T

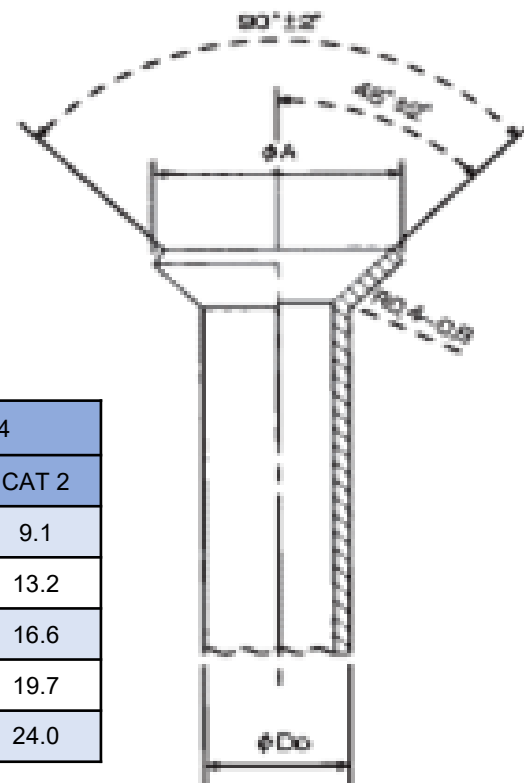
Material	Chemical Composition (%)		Mechanical Property			
	Cu	P	Temper	Tensile strength (N/mm ²)	Elongation	Grain size(mm)
Phosphorous-deoxidized seamless copper pipe	More than 99.90	0.015 ~ 0.040	O	More than 205	More than 40	0.025 to 0.060
			1/2H	245 to 325	-	-
			H	More than 315	-	-

Material and Characteristic of Insulation – JIS A9511 A-PE-C-2

Material	Type	Code	Thermal Conductivity W/(m·K)	Thermal resistant (°C)	Tensile strength (N/cm ²)	Absorbent (g/100cm ²)	Thickness shrinkage (120±5°C)
30 times independent polyethylene foam with the embossed finished film	Polyethylene Material class A and Polyethylene foam mould class 2	A-PE-C-2	Less than 0.043	Up to 120	More than 14	Less than 2.0	Less than 7%

Category indication for applying refrigeration gas

Number	Category	Applying refrigeration gas
①	1	R22, R407C, R404A, R507 etc...
②	2	R22, R410A, R407C, R404A, R507A, R32 etc...
③	3	High pressure refrigeration gas less than 4.80 Mpa



High pressure safety act
Refrigeration safety act
Standard

$$t = \frac{PD_o}{2\sigma_a\eta + 0.8P}$$

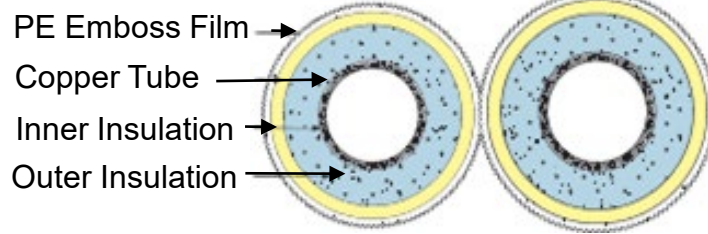
t : Wall thickness of copper pipe (mm)
P : Designated pressure (Mpa)
Do : Outer diameter of copper pipe (mm)
 σ_a : Allowable tensile stress (N/mm²)
 η : Efficiency of welded joint (l)

About Flaring

Pipe Outer Diameter (mm)	A +0/-0.4	
	CAT 1	CAT 2
6.35	9.0	9.1
9.52	13.0	13.2
12.70	16.2	16.6
15.88	19.4	19.7
19.05	23.3	24.0

Insulated Copper Tubes

TD Twin Dia – 20m / 30m coil



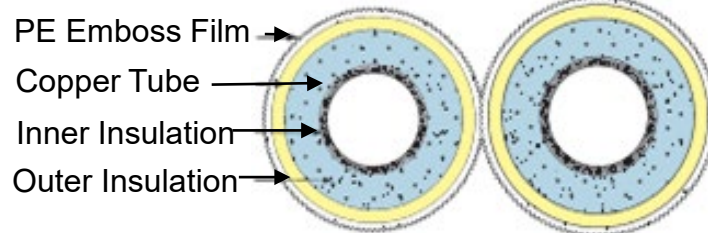
Features;

- Integrated liquied pipe and gas pipe.
- Easy to separate the pairing.
- Easy to cut to the required length, good to improve working efficiency

*O.D : Outer Diameter / **W.T : Width Thickness

Length (M)	Code	Model #	Refrigeration gas category	Copper size (mm)		Insulation tube size (mm)		Q'ty
				O.D*	W.T**	O.D*	W.T**	
20	72051	TD-2320-8	③	6.35	0.8	24	8	1
				9.52	0.8	27	8	
	72042	TD-2320W	③	6.35	0.8	24	8	2
				9.52	0.8	27	8	
	72052	TD-2420	②	6.35	0.8	24	8	1
				12.70	0.8	34	10	
72053	TD-3520	②	9.52	0.8	27	8	1	
			15.88	1.0	37	10		
73844	TD-3620Z	②	9.52	0.8	27	8	1	
			19.05	1.2	41	10		
30	71473	TD-2330	③	6.35	0.8	24	8	1
				9.52	0.8	27	8	
	71474	TD-2430	②	6.35	0.8	24	8	1
				12.70	0.8	34	10	

TD-t10 Twin Dia – 20m



NEW

*O.D : Outer Diameter / **W.T : Wall Thickness

Length (M)	Code	Model #	Refrigeration gas category	Copper size (mm)		Insulation tube size (mm)		Q'ty
				O.D*	W.T**	O.D*	W.T**	
20	72591	TD-2320-t10	③	6.35	0.8	28	10	1
				9.52	0.8	31	10	
	72590	TD-2320-t10W	③	6.35	0.8	28	10	2
				9.52	0.8	31	10	
	72592	TD-2420-t10	②	6.35	0.8	28	10	1
				12.70	0.8	34	10	
72593	TD-3520-t10	②	9.52	0.8	31	10	1	
			15.88	1.0	37	10		
72594	TD-3620-t10	②	9.52	0.8	31	10	1	
			19.05	1.2	41	10		

Insulated Copper Tubes

SD Single Dia – 20m coil

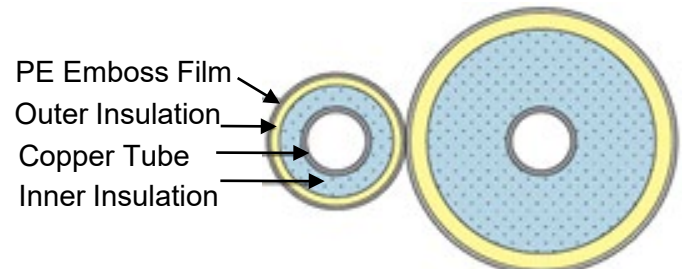


NEW

NEW

Code	Model#	Refrigeration gas CAT	Copper size (mm)		Insulation tube (mm)		Q'ty
			O.D*	W.T**	O.D*	W.T**	
72500	SD-220A	③	6.35	0.8	28	10	3
72501	SD-320A	③	9.52	0.8	31	10	3
72002	SD-420	②	12.70	0.8	34	10	2
72003	SD-520	②	15.88	1.0	37	10	1
75137	SD-620Z	②	19.05	1.2	41	10	1

TDS Twin Dia – 20m coil



Code	Model #	Refrigeration gas CAT	Copper size (mm)		Insulation tube (mm)		Q'ty
			O.T*	W.T**	O.T*	W.T**	
NEW 72586	TDS-2320A	③	6.35	0.8	28	10	1
			9.52	0.8	51	20	
NEW 72587	TDS-2420A	②	6.35	0.8	28	10	1
			12.70	0.8	54	20	
NEW 72588	TDS-3520A	②	9.52	0.8	31	10	1
			15.88	1.0	57	20	

SDS Single Dia – 20m coil

Code	Model #	Refrigeration gas CAT	Copper (mm)		Insulation tube (mm)		Q'ty
			O.T*	W.T**	O.T*	W.T**	
71582	SDS-220	③	6.35	0.8	48	20	1
71583	SDS-320	③	9.52	0.8	51	20	1
71584	SDS-420	②	12.70	0.8	54	20	1
71585	SDS-520	②	15.88	1.0	57	20	1
75139	SDS-620Z	②	19.05	1.2	61	20	1

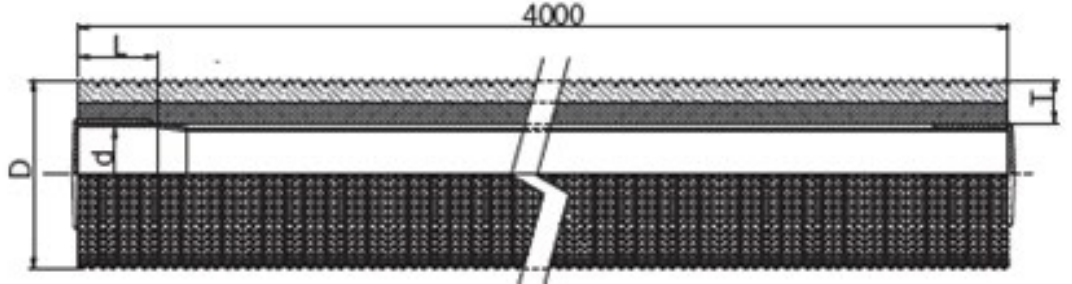
Insulated Copper Tubes

DHF / DHS

4M Straight Tube with Expansion Machining / Temper 1/2H

Features;

- Precised expansion machining is made at one side of copper tube
- Copper tubes apply 1/2H hardness



*O.D : Outer Diameter / **W.T : Width Thickness / ***Inner Diameter

NEW

Code	Model #	Refrigation gas Category	Copper tube size (mm)				Insulation size (mm)		Cap Color	Q'ty
			O.T*	W.T**	Expansion I.D*** (d)	Expansion Length (L)	O.T*	W.T**		
75042002	DHF-034A	③	9.52	0.8	9.62	9	31	10	Red	12
75043	DHF-044	③	12.70	0.8	12.81	10	34	10	Green	12
75044	DHF-054	③	15.88	1.0	16.00	12	37	10	Blue	8
75045	DHF-064	③	19.05	1.0	19.19	16	41	10	Yellow	8
75120	DHF-064A	③	19.05	1.05	19.19	16	41	10	Yellow	8
75046	DHF-074	③	22.22	1.0	22.36	18	44	10	Gray	6
75121	DHF-074A	③	22.22	1.2	22.36	18	44	10	Gray	6
75047	DHF-104	③	25.40	1.0	25.55	21	47	10	Red	6
75051	DHF-114	②	28.58	1.0	28.75	22	50	10	Green	5
75052	DHF-124	②	31.74	1.1	31.93	24	53	10	Blue	4
75053	DHF-134	②	34.92	1.2	35.11	25	56	10	Yellow	4
75123	DHF-144Z	②	38.10	1.35	38.3	27	60	10	Gray	3
75057	DHF-154	②	41.28	1.45	41.50	27	64	10	Red	3
75055	DHF-164	②	44.45	1.55	44.67	30	66	10	Green	3
75056	DHF-204	①	50.80	1.4	51.04	33	73	10	Blue	2
75058	DHF-214	①	53.98	1.5	54.22	33	76	10	Black	2
75104	DHF-2074	③	22.22	1.0	22.36	18	64	20	Gray	4
75105	DHF-2104	③	25.40	1.0	25.55	21	67	20	Red	3
75106	DHF-2114	②	28.58	1.0	28.75	22	70	20	Green	3
75107	DHF-2124	②	31.75	1.1	31.93	24	73	20	Blue	3
75124	DHF-2144Z	②	38.10	1.35	38.30	27	80	20	Gray	2
75083	DHS-034	-	9.52	0.8	9.62	9	51	20	Red	5
75084	DHS-044	-	12.7	0.8	12.81	10	54	20	Green	5
75085	DHS-054	-	15.88	1.0	16.00	12	57	20	Blue	4
75086	DHS-064	-	19.05	1.05	19.19	16	61	20	Yellow	4
75087	DHS-074	-	22.22	1.2	22.36	18	64	20	Gray	4
75081	DHS-104	-	25.4	1.35	25.55	21	67	20	Red	3
75091	DHS-114	-	28.58	1.55	28.75	22	70	20	Green	3
75092	DHS-124	-	31.75	1.7	31.93	24	73	20	Blue	3
75093	DHS-134	-	34.92	1.85	35.11	25	76	20	Yellow	2
75094	DHS-144	-	38.10	2.0	38.30	27	80	20	Gray	2
75095	DHS-154	-	41.28	2.15	41.50	27	84	20	Red	2
75096	DHS-164	-	44.45	2.3	44.67	30	86	20	Green	2

Notes : When refrigeration gas apply R410A with following models, its bending radius shall be 4 times of copper tube outdiameter;
 DHF-114, DHF-124, DHF-144Z, DHF-2114, DHF-2124, DHF-2144Z
 Model # written in Red on above table is MAKE TO ORDER.

Flared Piping Unit



Features;

- Combining Flared copper tube with insulation and piping tools saves working time.
- Softly annealed copper tube is adapted.
- Various assortment depend's on user's need
- Mirror finished fraring has high sealingness which avoids leaking of refrigeration gas.

P - Series Flared cooper tube (both side) with insulation set

Twin



Single



Code	Model #	Length(M)	Set Q'ty
71333	P-233DIA-V	3	7
71330	P-233.5DIA-V	3.5	7
71334	P-234DIA-V	4	7
71335	P--235DIA-V	5	7
71337	P-237DIA-V	7	6
71331	P-2310DIA-V	10	3

Code	Model #	Length(M)	Set Q'ty
71333	P-233SV	3	12
71330	P-233.5SV	3.5	12
71334	P-234SV	4	12
71335	P-235SV	5	7
71337	P-237SV	7	6
71331	P-2310SV	10	3

Other combination with following items for piping set is makable, please feel free to contact us;
Tape, Wall cap, Saddle part, Flame-retardant sealing putty, Screws

HJ Auxiliary pipe set (1M)



Code	Model #	Apply size	Insulation tube size	Q'ty
70931	HJ-23	1/4" x 3/8"	8mm	10
70932	HJ-24	1/4" x 1/2"	8mm	10