COPPER ALLOYS

Insulated copper pipes for air conditioning and refrigeration

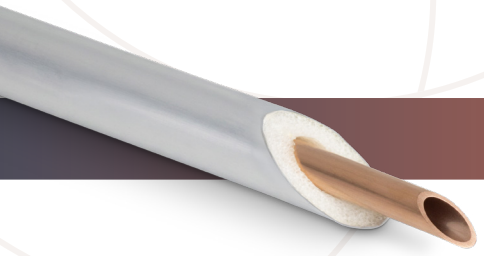
Insulated copper pipes for air conditioning are designed for the connection and distribution of refrigerant fluids in air conditioning and refrigeration systems. Made of high quality Cu-DHP alloy copper, they guarantee high mechanical strength, internal cleanliness and reliability in the transport of refrigerants used in modern HVACR systems.
The pipe is lined with a closed-cell cross-linked expanded polyethylene insulating sheath that minimises thermal dispersion and ensures high resistance to water vapour diffusion. The coating also ensures effective protection of the pipe during laying.
Thanks to the high thermal performance of the insulation and the quality of the copper used, these pipes represent a reliable and durable solution for installations in air conditioning systems, heat pumps and refrigeration systems.



Mistral & Mistral Cu-BE



Cupex Gel & Cupex Gel C



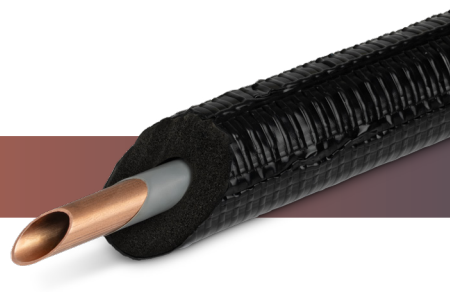
Cupex Gel Silver



Cu-pex Gel Black



Cupex Frio



Ryno

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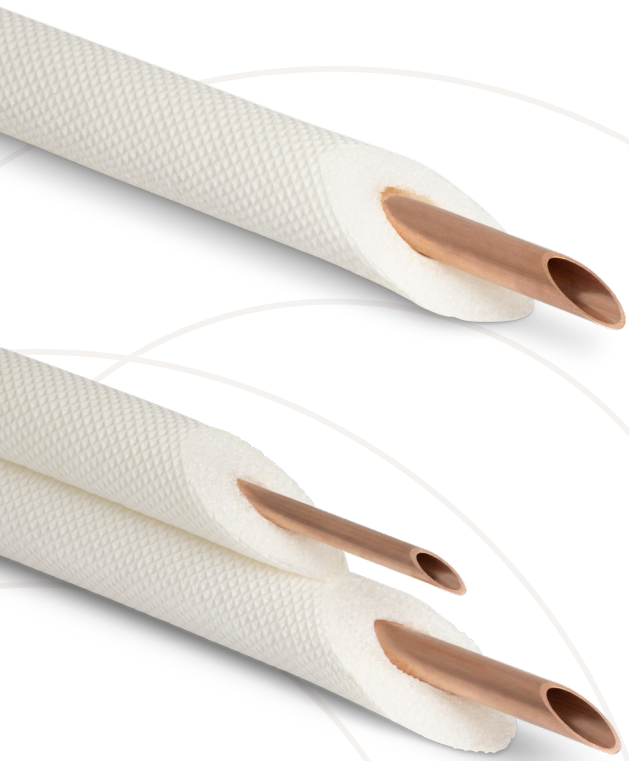
FEINROHREN GROUP

Mistral & Mistral Cu-BE



The best pipe for air conditioning systems.
The new equipment running on low GWP refrigerants reaches higher temperatures than previous models. This requires that the pipes are equipped with an insulating coating capable of withstanding these stresses.

Diameter		Available thicknesses	Insulation	Length	Maximum working pressure T ≤ 100°
Inches	mm	mm	mm	m	bar
1/4	6.35	0.8/1	9	25/50	171/212
3/8	9.52	0.8/1	9	25/50	109/134
1/2	12.7	0.8/1	9	25/50	80/98
5/8	15.87	1	9	25/50	77
3/4	19.05	1	9	25/50	62
7/8	22.22	1	9	25	53

Also available in the dual UNION version, to speed up the installation process.

Diameter		Available thicknesses	Insulation	Length
Inches	mm	mm	mm	m
1/4+3/8	6.35+9.52	0.8/0.8	9/9	20/25/50
1/4+1/2	6.35+12.70	0.8/0.8	9/9	20/25/50
1/4+5/8	6.35+15.87	0.8/1	9/9	20/25
3/8+5/8	9.52+15.87	0.8/1	9/9	20/25
3/8+4/4	9.52+19.05	0.8/1	9/9	20/25

FEINROHREN SUPERGREEN FIVE STARS COPPER PIPE

- Alloy: Cu-DHP (Cu min. 99.90%, P: 0.015-0.040%) according to UNI EN 12449.
- Dimensions, tolerances and cleaning according to EN 12735-1.

ZETACELL COATING

- Exterior: LD-PE (low-density polyethylene) film.
- Interior: closed-cell cross-linked polyethylene foam, according to EN 14313.
- Free from CFCs and HCFCs (Reg. EEC/EU 2037/2000).
- Resistance to vapour diffusion μ > 9,000 (EN 13469).
- Operating temperature: -80°C to +120°C.
- Reaction to fire: Euroclass B s1 d0 according to EN 13501-1 CE.
- Thermal conductivity λ (9mm): (0/40°C) 0.0363/0.0424 (EN 12667).

Application sectors

HVACR

Heat pumps

Certifications

B s1 d0

Customisation

We offer comprehensive customisation options to meet each Customer's specific needs.

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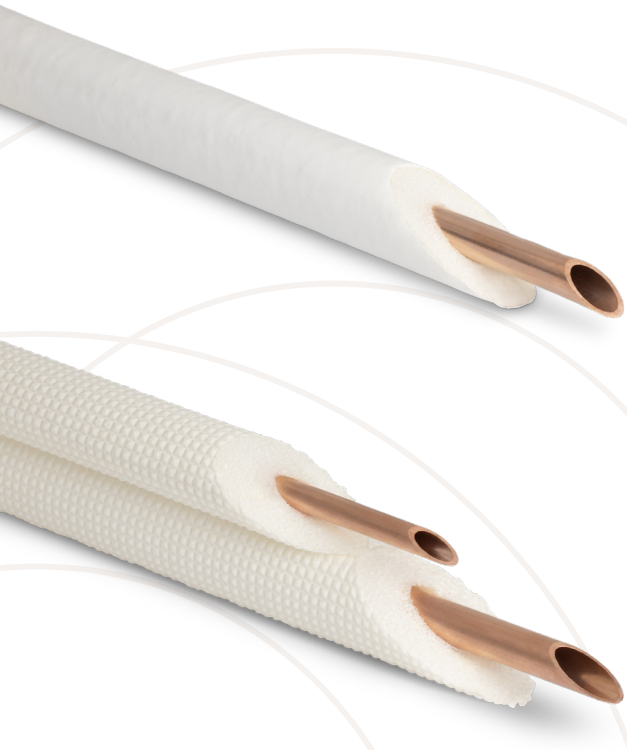
Cupex Gel & Cupex Gel C



The best for air conditioning systems. The new appliances operating with R410A and R32 type refrigerant fluids, reaching higher temperatures than the previous ones, make it necessary to use coated pipe that meet these requirements.

Copper pipe ext. Ø		Available thicknesses	Nominal insulating thickness	Max working pressure T ≤ 100°	Nominal weight of copper pipe
Inches	mm	mm	mm	bar	g/m
1/4	6.35	0.8/1.0	9.0	171/212	124/150
3/8	9.52	0.8/1.0	9.0	109/134	196/239
1/2	12.7	0.8/1.0	9.0	80/98	267/328
5/8	15.87	1.0	9.0	77	417
3/4	19.05	1.0	9.0/11	62	506
7/8	22.22	1.0	9.0/11	53	595

Also available in the double UNION version to facilitate the installation phase of the air conditioning systems.

Diameter		Available thicknesses	Nominal insulating thickness	Roll length
Inches	mm	mm	mm	m
1/4+3/8	6.35+9.52	0.8/0.8	9.0-9.0	20/25/50
1/4+1/2	6.35+12.70	0.8/0.8	9.0-9.0	20/25/50
1/4+5/8	6.35+15.87	0.8/1	9.0-9.0	20/25
3/8+5/8	9.52+15.87	0.8/0.8	9.0-9.0	20/25

FEINROHREN SUPERGREEN FIVE STARS COPPER PIPE

- Alloy: Cu-DHP (Cu: 99.90% min., P: 0.015÷0.040%) according to UNI EN 12449.
- Dimensions, tolerances, internal cleaning according to UNI EN 12735-1 IGQ P112 certificate.

ZETACELL COATING

- Exterior: LD-PE (low-density polyethylene) film.
- Interior: closed-cell cross-linked polyethylene foam, according to EN 14313.
- Free from CFCs and HCFCs (Reg. EEC/EU 2037/2000).
- Resistance to vapour diffusion μ > 9,000 (EN 13469).
- Operating temperature: -80°C to +120°C.
- Reaction to fire: Euroclass B s1 d0 and B s2 d0 according to EN 13501-1 CE.
- Thermal conductivity λ (9mm): (0/40°C) 0.0363/0.0424 (EN 12667).

Application sectors

HVACR

Heat pumps

Split

Certifications

B s1 d0 **B s2 d0**

Customisation

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FEINROHREN GROUP

Cupex Gel Silver



IS a copper pipe covered by a sheath of cross-linked expanded polyethylene, bonded on the outside to a layer of genuine aluminium foil, which makes the insulation impermeable to UV rays and water vapour, and ensures unparalleled, consistent performance over time.

Diameter		Available thicknesses	Insulation	Length	Maximum operating pressure *
Inches	mm	mm	mm	m	bar
1/4	6.35	0.8/1	7	25/50	171/212
3/8	9.52	0.8/1	7	25/50	109/134
1/2	12.7	0.8/1	7	25/50	80/98
5/8	15.87	1	9	25/50	77
3/4	19.05	1	9	25/50	62
7/8	22.22	1	9	25	53

Also available in the dual UNION version, to speed up the installation process.

Diameter		Available thicknesses	Insulation	Length
Inches	mm	mm	mm	m
1/4+3/8	6.35+9.52	0.8/0.8	7/7	20/25/50
1/4+1/2	6.35+12.70	0.8/0.8	7/7	20/25/50
1/4+5/8	6.35+15.87	0.8/1	7/9	20/25/50
3/8+5/8	9.52+15.87	0.8/1	7/9	20/25/50
3/8+3/4	9.52+19.05	0.8/1	7/9	20/25/50

FEINROHREN SUPERGREEN FIVE STARS COPPER PIPE

- Alloy: Cu-DHP (Cu: 99.90% min., P: 0.015÷0.040%)
- according to UNI EN 12449.
- Dimensions, tolerances, internal cleaning according to UNI EN 12735-1, IGQ P112 certificate.

ZETACELL COATING

- Exterior: LD-PE film + anti-UV aluminium.
- Interior: closed-cell cross-linked polyethylene foam according to EN 14313.
- Free from CFCs and HCFCs (Reg. EEC/EU 2037/2000).
- Resistance to vapour diffusion μ > 50,000 (EN 13469).
- Operating temperature: -80 ÷ +120°C.
- Reaction to fire: Euroclass B s1 d0 according to EN 13501-1 CE.
- Thermal conductivity λ (9mm): (0/40°C) 0.0363/0.0424.

Application sectors

HVACR

Heat pumps

Certifications

UNI EN 12735-1
B s1 d0

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FEINROHREN GROUP

Cupex Frio

Anti-condensation pre-insulated copper pipes for air conditioning systems and water cooling systems.



Diameter	Available thicknesses	Insulation	Length	Maximum operating pressure *
Inches	mm	mm	m	bar
6	1	9	25/50	226
10	1	9	25/50	127
12	1	9	25/50	104
16	1	9	25/50	77
18	1	9/11	25/50	66
22	1	9/11	25	54

Also available in the double UNION version, to speed up and facilitate the installation process.

Diameter	Available thicknesses	Insulation	Length
Inches	mm	mm	m
6 + 10	1/1	9/9	20
6 + 12	1/1	9/9	20
6 + 16	1/1	9/9	20
10 + 16	1/1	9/9	20

FEINROHREN SUPERGREEN FIVE STARS COPPER PIPE

- Alloy: Cu-DHP (Cu: 99.90% min., P: 0.015÷0.040%) according to UNI EN 12449.
- Dimensions, tolerances, internal cleaning according to UNI EN 12735-1.

ZETACELL COATING

- Exterior: LD-PE (low-density polyethylene) film.
- Interior: closed-cell cross-linked polyethylene foam, according to EN 14313.
- Free from CFCs and HCFCs (Reg. EEC/EU 2037/2000).
- Resistance to vapour diffusion μ > 9,000 (EN 13469).
- Operating temperature: -80°C to +120°C.
- Reaction to fire: Euroclass B s1 d0 and B s2 d0 according to EN 13501-1 CE.
- Thermal conductivity λ (9mm): (0/40°C) 0.0363/0.0424 (EN 12667).

Application sectors

Refrigeration

Water and gas conditioning

Certifications

B s1 d0 **B s2 d0**

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FEINROHREN GROUP

Cupex Gel Black



The best pipe for air conditioning systems.
The new equipment running on low GWP refrigerants reaches higher temperatures than previous models. This requires that the pipes are equipped with an insulator capable of withstanding these stresses.

Diameter		Available thicknesses	Insulation	Length	Maximum operating pressure *
Inches	mm	mm	mm	m	bar
1/4	6.35	0.8	9	25/50	171
3/8	9.52	0.8	9	25/50	109
1/2	12.7	0.8	9	25/50	80
5/8	15.87	1	9	25/50	77
3/4	19.05	1	9	25/50	62
7/8	22.22	1	9	25/50	53

Also available in the double UNION version,
to speed up and facilitate the installation process.

Diameter		Available thicknesses	Insulation	Length
Inches	mm	mm	mm	m
1/4+3/8	6.35+9.52	0.8/0.8	9/9	20/25/50
1/4+1/2	6.35+12.70	0.8/0.8	9/9	20/25/50
1/4+5/8	6.35+15.87	0.8/1	9/9	20/25
3/8+5/8	9.52+15.87	0.8/1	9/9	20/25
3/8+4/4	9.52+19.05	0.8/1	9/9	20/25

FEINROHREN SUPERGREEN FIVE STARS COPPER PIPE

- Alloy: Cu-DHP (Cu min. 99.90%, P: 0.015-0.040%) according to UNI EN 12449.
- Dimensions, tolerances and cleaning according to EN 12735-1.

ZETACELL COATING

- Exterior: LD-PE (low-density polyethylene) film.
- Interior: closed-cell cross-linked polyethylene foam, according to EN 14313.
- Free from CFCs and HCFCs (Reg. EEC/EU 2037/2000).
- Resistance to vapour diffusion μ > 9,000 (EN 13469).
- Operating temperature: -80°C to +120°C.
- Reaction to fire: Euroclass B s1 d0 according to EN 13501-1 CE.
- Thermal conductivity λ (9mm): (0/40°C) 0.0363/0.0424 (EN 12667).

Application sectors

HVACR

Heat pumps

Certifications

B s1 d0

Customisation

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FEINROHREN GROUP



RYNO®

Premium lines for refrigeration and HVAC systems. RYNO® offers superior protection against corrosion and environmental agents thanks to the exclusive RYNOhyde® coating applied to the pipe.

RYNO+®

RYNO+® guarantees complete protection against atmospheric agents, going far beyond simple protection from UV rays.

Diameter	Available thicknesses	Length
In	In	ft
1/4 – 1 1/8	1/2 - 3/4 -1	25 – 164

FEINROHREN COPPER PIPE RYNO

- Conforms to the ASTM standards for HVAC/R refrigeration lines
- Nominal pressure: 700 psi (48.3 bar)
  Compliant with the UL 207 standard
- Compatible with HCFC, HFC and A2L refrigerants.
- Compatible with natural refrigerants, including R744 (CO_2), R290 (propane) and R600a (isobutane)
- Copper pipe C12200 for refrigeration applications

COATING RYNO

- Exclusive RYNOhyde® protective coating
- Available with polyethylene or elastomeric insulation
- Classification of reaction to fire and smoke development UL 723 / ASTM E84: 25/50

FIELDS OF USE

- Refrigeration systems
- Air conditioning systems
- Heat pump systems

Application sectors

HVACR

Certifications

US patent no. US 12,241,581 B2
US patent application no. 19/063.818
US patent no. US 11,828,404 B2
US patent no. US 12,352,379
US patent no. US 11,566,729 B2
US patent no. US 12,535,156
US patent application no. 19/180.507
Canadian patent applications nos. 3133626, 3133661, 3133669, 3255666, 3295790

The information provided is for information purposes only. For complete data and technical details refer to the product technical documentation.

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