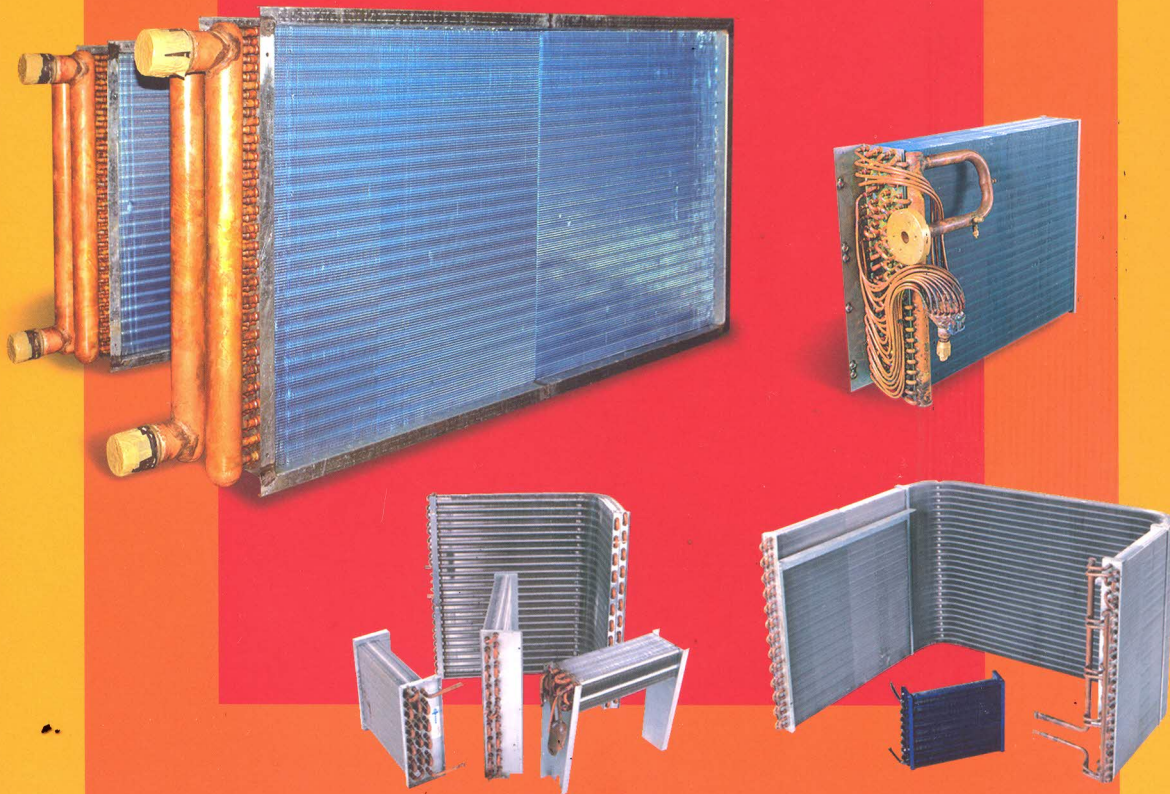


*Heat Exchangers For Every Application*



**BREEZE FROST**  
Industries (Pvt.) Ltd.





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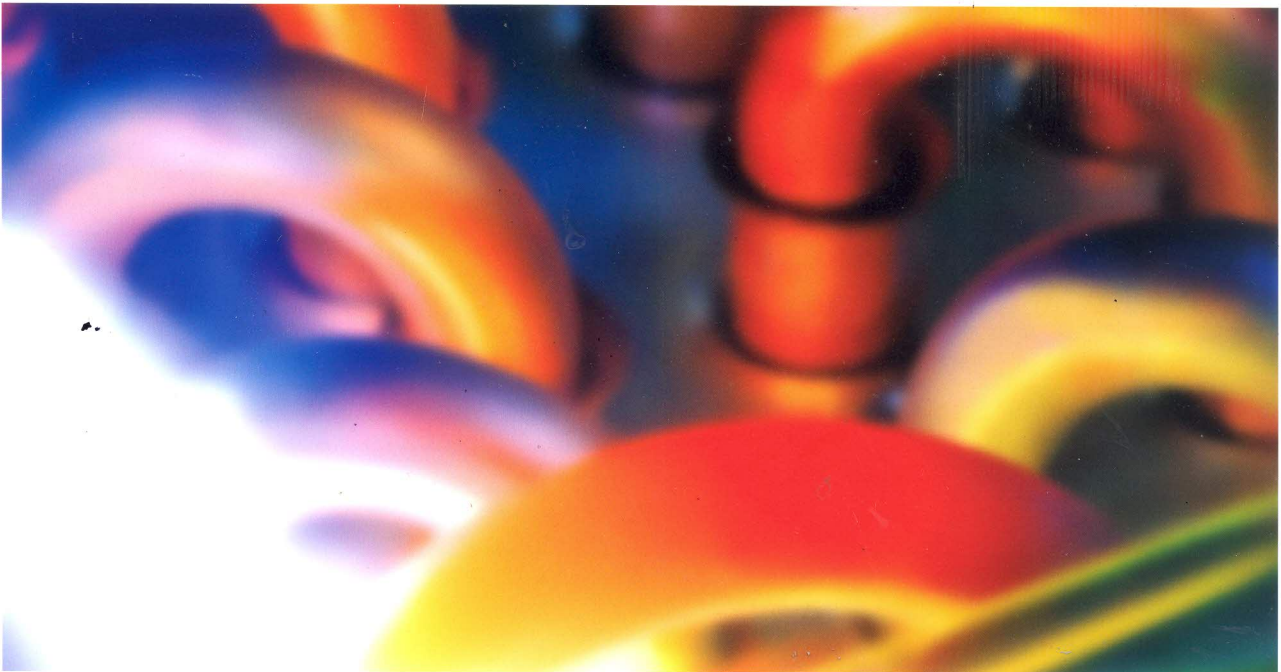
***Providing Quality & Flexible Manufacturing For Three Decades***

## Company Overview

Breeze Frost Industries (Pvt.) Limited was established in 1983 for manufacturing of high quality heating and cooling coils for commercial, industrial, original equipments manufacturer and replacement market users. It was the first and is now the largest coil manufacturing company in Pakistan.

Breeze Frost Industries (Pvt.) Ltd started export of its products in 1999. Since then, the company has been exporting its products to clients in UAE, Saudi Arabia, Bangladesh, Kenya and Afghanistan. BFI is known for its engineering and quality. The company provides the same level of commitment to local as well as foreign customers.

For over three decades, equipment manufacturers have recognized the BFI (Pvt.) Ltd. as a producer of durable heat-transfer products. BFI continues to provide custom-made, 'guaranteed to fit' coils, manufactured to meet its customers' individual specifications. BFI has gained a leading position in the foreign heat-transfer market through its uncompromising commitment to engineering, quality and flexible manufacturing. Organization's focus on the continuous improvement of all processes from order entry to fabrication, testing, and shipping has been relentless. The organization adheres to rigorous standards to maintain the quality of the materials used in fabricating BFI products. Quality inspections throughout the fabrication process, including leak testing of every heat exchanger, ensure the customer of an uninterrupted supply of quality components.





**BREEZE FROST**  
Industries (Pvt.) Ltd.

***Quality, Durability & On-Time Delivery***

## Vision

To be the leading company, in HVACR sector, in Pakistan with a global reach

## Mission

To provide our local & world-wide customer with quality and reasonably priced products consistently

## Values

- Teamwork
- Professionalism
- Quality
- Customer Satisfaction
- Integrity
- Respect

## Quality Assurance

Breeze frost industries (Pvt.) Ltd. is an ISO certified company and is committed to the continuous improvement of all processes. Beginning with the raw materials, we set rigorous vendor standards to maintain the quality of materials used in the fabrication of our heat transfer products. From order entry to shipping and from prototype design to production manufacturing, our focus on quality is unyielding.





## Finned Tube Coils & Its Applications

### Condenser

Condenser coils are manufactured to withstand the high pressure and temperature associated with refrigerant condensing. Various fin and tube combinations provide design flexibility. Wider fin spacing is also available to minimize dirt and dust build-up. Optional corrosion-resistant materials and protective coatings help increase the service life of the coil.



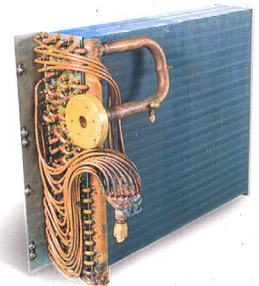
### Evaporator

Evaporator coils are designed for industrial applications such as freezing, food processing, pressure cooling, and cold storage. These are custom engineered for operation with almost any working fluid, temperature range and environmental condition.



### Direct expansion evaporator

Direct Expansion Evaporator coils are engineered that deliver maximum heat transfer efficiency under a wide range of operating conditions to meet the performance requirements of various applications.



### Water coils

Chilled water, and hot water coils are designed to meet a variety of heating and cooling needs. From HVAC to industrial process requirements, BFI's ability to vary materials of construction allows for the proper coil to match customers specific need. Optional coating applied to coils or pre-coated fin stock can be offered to increase service life of coil under corrosive environments.



### Steam coils

Heavy-duty steam and steam distributing coils are built to withstand a wide range of steam pressures.

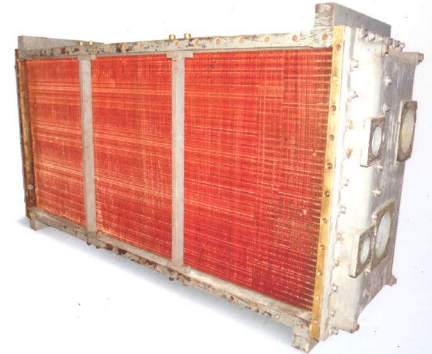




## Finned Tube Coils & Its Applications

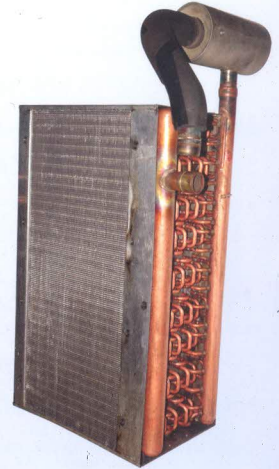
### Industrial Heat Exchangers

Breeze Frost Industries is well equipped to manufacture Charge Air Cooler or Inter Cooler in a variety of shapes and sizes for replacement. These Coolers are specific heat exchangers that are particularly used in compression sections in the industries. Our flexible manufacturing platform along with full production capabilities is available to meet customer's exact need for replacement.



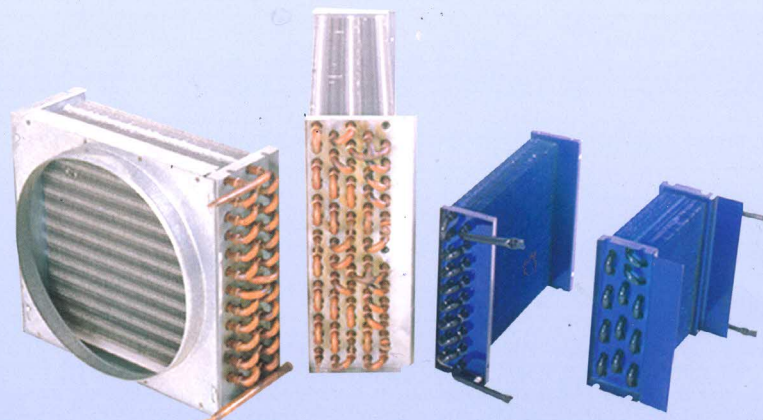
### Custom Coils

Breeze Frost Industries can also replicate coils already in customer's use. Latest technology is used to manufacture coils for Custom Applications. BFI can customize coils in various fin designs and tubing materials.



### Industries Served

- HVAC (OEM & Replacement)
- Food Industry
- Automotive
- Power Generation
- Refrigeration
- Pharmaceutical
- Oil refinery
- Chemical
- Textile



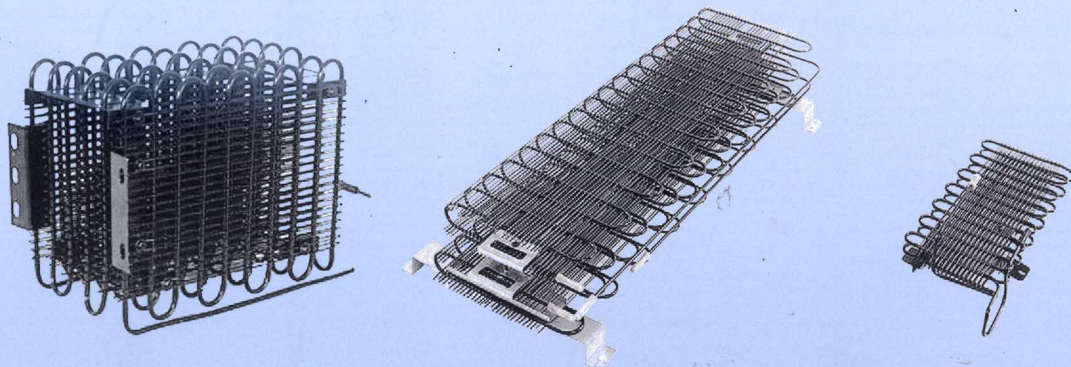


## Wire on tube condenser

Breeze Frost Industries (Pvt.) Limited offers a wide range of Wire on Tube Condenser that is widely used in various applications like Refrigerators, Freezers and Water Coolers for original equipment OR replacement in domestic and commercial sectors. These are available in all capacities and shapes.

### Wire condenser specification

RAW MATERIAL	Bundy tube: Dia 4.76mm, 6.35mm & 8mm Wall Thickness 0.60mm ~ 0.70mm Low carbon steel wire: Dia 1.3mm Bracket: Steel plate thickness 0.7mm
STRUCTURE	1) Flat type wire on tube condenser used on the back 2) Bended or Bunch type wire on tube condenser used at the bottom
KEY PROCESS	<ul style="list-style-type: none"><li>• Tube bending</li><li>• Welding with steel wires</li><li>• Bracket fixing</li><li>• Folding or bending to shape</li><li>• Coating</li><li>• Inspections and packing</li></ul>
TECHNICAL ABILITY	BFI can produce according to the drawing or sample supplied by clients.
COATING	Black powder





## Technical Information

In order to provide quality products to our customers, special attention is paid to procurement of raw materials. Breeze Frost Industries (Pvt.) Ltd procures material from USA, Korea, China and Germany.

### Materials

a) Tube Materials	Diameter		Wall Thickness		Type
	Inches	MM	SWG	MM	
Scamless ACR Copper for water, refrigerant and steam coils.	3/8	9.525	22~31	0.71~0.30	Plain/ Grooved
	1/2	12.70	18~27	1.22~0.41	Plain
	5/8	15.875	18~27	1.22~0.41	Plain
b) Fin Materials			Thickness (MM)		
Aluminum			0.110~0.210		
Copper			0.110~0.120		
c) Mounting Frame & Casing			Thickness (MM)		
Hot-Dip (standard) Galvanized steel			0.50~2.0		
304 stainless steel			1.25		
Aluminium			1.50~2.0		
Copper			1.00~3.0		
d) Brazing		Percentage			
Solder		0%~25%			
e) Protective Coatings		Polyester			
f) Testing Pressure		Nitrogen 20~35 bar			

### Patterns Available

#### a) 3/8 Inches Dia

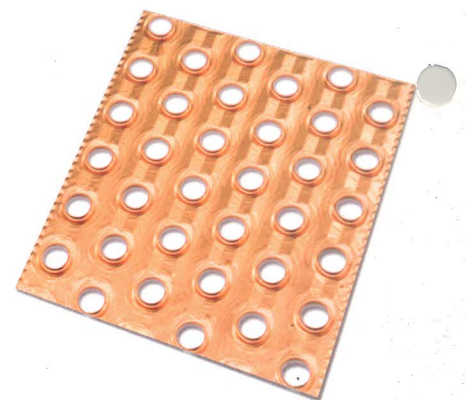
	Option A		Option B	
	MM	Inches	MM	Inches
Row Pitch	22	0.876	22	0.876
Face/Step Pitch	25.4	1	25.4	1
FPI Available	10~22		4~8	
Fin Type	Wave / Flat / Corrugated / Slit			

#### b) 1/2 Inches Dia

	Option A		Option B	
	MM	Inches	MM	Inches
Row Pitch	31.62	1.25	27.48	1.082
Face/Step Pitch	36.51	1.4375	31.75	1.25
FPI Available	8~18		4~9	
Fin Type	Wave / Flat / Corrugated			

#### c) 5/8 Inches Dia

	Option A	
	MM	Inches
Row Pitch	31.62	1.25
Face/Step Pitch	36.51	1.4375
FPI Available	8~18	
Fin Type	Wave / Flat / Corrugated	



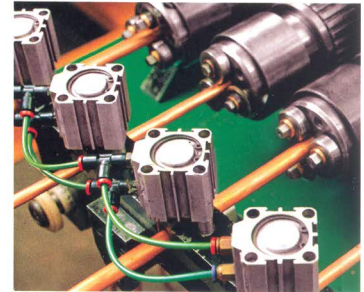


## Plant and Machinery

Breeze Frost Industries (Pvt.) Limited has invested heavily in procuring state of the art equipment for manufacturing purposes. It has imported machinery from Korea, Italy, Taiwan and United States.

### Tube Cutting

BFI offers tubes of diameter 3/8", 1/2" and 5/8". Tubes are smooth and seamless manufactured to ASTM specification with strict quality control. Tubes are available with smooth internal surface or internally enhanced surface to achieve high heat transfer. Tubes are mechanically expanded into fin collars to maximize heat transfer.



### Fin Presses

Fins are aluminum and are die formed plate type. Various types of fin surfaces like sine wave, louvered or raised lance are available to maximize heat transfer with minimal air friction. Optional materials include copper or pre-coated aluminium with corrosion resistant coating.



### Hair Pin Bending

Automatic and semi automatic machines are used to bend the copper tubes in different sizes. Return bends are made of copper tube (3/8", 1/2", 5/8") using automatic machine which are sized to provide smooth flow with minimum pressure drop.



### Headers

Headers are designed to reduce potential for leaks and provide connection locations that allow draining or venting of coils. Headers are sized to achieve low pressure drop and proper flow distribution.

### Auto Brazing

BFI uses automatic brazing machine and our qualified staff manually welds the larger units.

### Expansion Machines

Vertical expansion machine is used for smaller condensers and for the larger ones horizontal expansion is used.



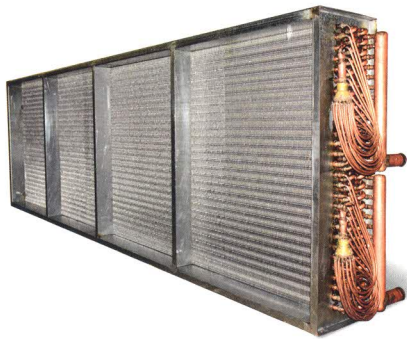
### Wire Condenser

Wire condensers are manufactured using fully automatic machines.





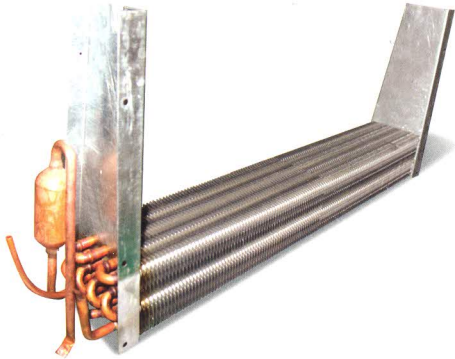
## Product Gallery



Evaporator for cold storage



Evaporator for mobile and central airconditioning system



Evaporator for visi cooler/upright freezer



Chilled water coil



Evaporator for cold storage



Condenser for bus airconditioning system



Condenser



Evaporator

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