



AMMONIA HEAT EXCHANGER

“Advanced Industrial Refrigeration Solutions”

Industrial Refrigeration



Industrial refrigeration plays a vital role in preserving perishable products by maintaining precise temperature and humidity conditions throughout the storage environment. It helps protect product quality, extend shelf life, and ensure safe storage of a wide range of fresh and frozen goods.

Blue Cold delivers world-class industrial refrigeration systems engineered for reliable, efficient, and consistent cooling performance. Backed by advanced technology and industry expertise, our solutions provide dependable temperature control for modern cold storage facilities.

From fresh produce to frozen products, Blue Cold offers customized refrigeration solutions designed to meet specific storage requirements, ensuring optimum performance, product safety, and long-term reliability.



Precise Cooling

Maintains Ideal
Temperature & Humidity



Product Protection

Ensures Quality
and extends shelf life



Advanced Technology

Efficient & reliable
Systems



Sustainable Storage

Energy efficient for
a better tomorrow

Why to choose BLUE COLD Refrigeration System?



High Grade Aluminum Fins High grade aluminum fins with corrugated pattern and rippled edges for enhanced heat transfer.

High air flow volume with high external static pressure for blast freezing & chilling.



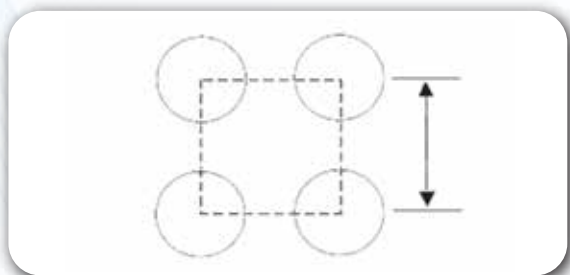
Multiple defrosting options including electric and hot gas for efficient frost removal.

Fin spacing from 4 mm to 10 mm helps reduce frost formation and maintain efficiency.



Each tube is individually pressure tested to ensure reliability and leak-free performance.

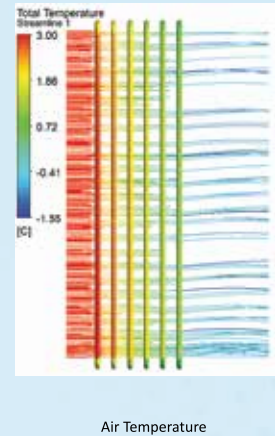
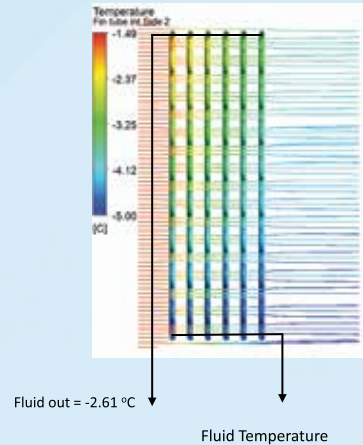
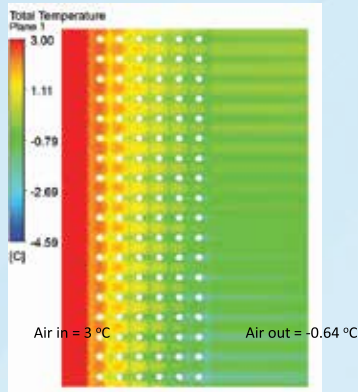
SS 304L tubes provide excellent durability, corrosion resistance and long service life.



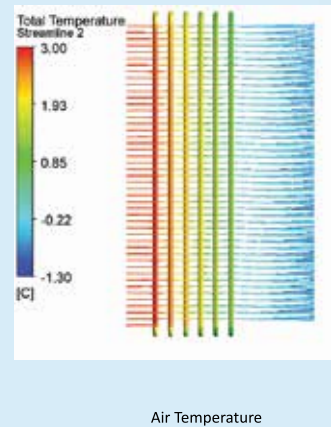
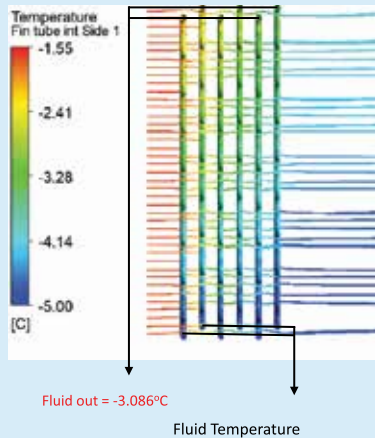
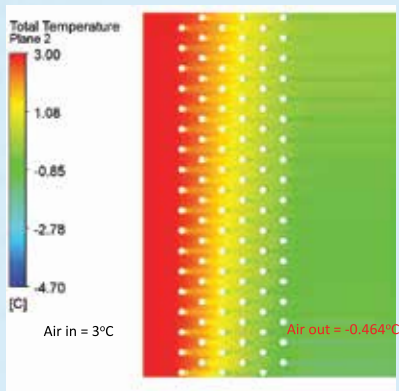
Square fin geometry Optimized Airflow with Reduced Pressure Drop for Efficient Heat Transfer and Enhanced Energy Efficiency

Square & Triangular Fin Geometry - CFD Analysis

Square Fin Geometry



Triangular Fin Geometry

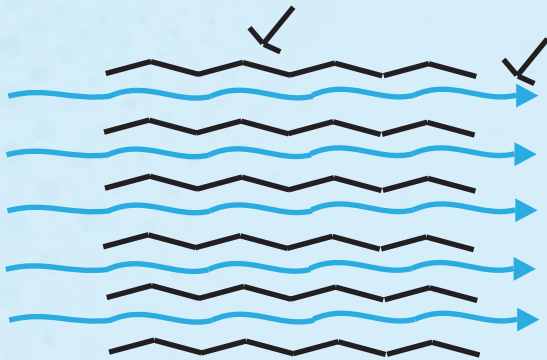


Modern Design: Square Geometry

	Square Design	Triangular Design
Suitability	Industrial Design	Commercial Design
Size of Units	Good for large size units	Good for small size units
Air Choking & Pressure Drop	Low	High
Fan Power	Less Motor Power	High Motor Power

Benefits of Square Fin Geometry

Square fin geometry is a specialized coil design that optimizes airflow and heat transfer through the fin surface. Its square-shaped arrangement helps improve air distribution, reduce pressure drop, and enhance overall cooling efficiency.



Sine Waves Fins (Top View)

1

Less Pressure Drop

2

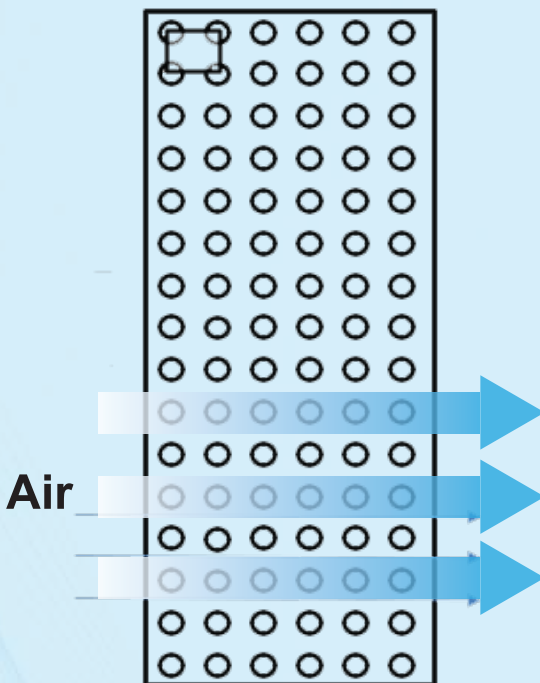
Less Power Consumption on Fan Blade

3

Less Choking in the Coil

4

Recommended for Industrial Refrigeration



Rippled Fin Edges (Side View)

Ammonia Heat Exchangers

Cubical Type



Suitable for freezer rooms, cold storage facilities, and large-scale warehousing applications.

Slim Line Evaporator



Dual-side airflow ensures uniform air distribution and maintains consistent room temperature.

Evaporative Condenser



Efficient coil design enhances heat transfer, increasing cooling capacity and overall efficiency.

Air Cooled Condenser



High-efficiency heat exchanger design delivers excellent heat transfer with reduced refrigerant volume.

Ammonia Heat Exchangers

Floor Mounted Blast Freezer



Floor-mounted design provides stability and high air velocity for efficient cooling performance.

Ceiling Mounted Blast Freezer



Designed for ceiling installation with minimal floor space, maximizing available storage area.

V-Type Floor Mounted Blast Freezer



Floor-mounted design offering stability and high airflow for large-capacity cold storage.

IQF Coil



Staggered fin spacing ensures rapid freezing, uniform air distribution, and reduced moisture loss.

Applications



Meat Freezer Room

Designed for the long-term preservation of meat products at low temperatures



Sea Food Freezer Room

Helps to store seafood safely, maintain quality, and extend its shelf life



Dairy Cold Room

Ensures the availability of fresh and high-quality dairy products to consumers



Potato Cold Storage

Helps prevent sprouting, rotting, and other forms of spoilage in potatoes



Cold Chain Logistics

Maintains temperature control during storage



Fruits & Vegetable Storage

Helps to reduce the wastage and maintain quality



Chilli Cold Storage

Important for preserving the flavor, heat level and overall quality of chilli peppers



CA Chamber for Apple Storage

Helps extend apple shelf life for longer storage while preserving freshness and product quality.

Meat & Poultry Freezer Room & Blast Freezer



Fast and reliable refrigeration is essential for maintaining the quality and safety of meat and poultry from processing to chilled or frozen storage. Proper temperature control helps extend shelf life, reduce product loss, and ensure food safety.

Freezer Room Temperature



**-18 to
-20°C**

Blast Freezer Temperature



**upto
-35°C**

High Airflow



150 - 250 ESP
during Blast
Freezing
&
70 ESP during
Storage

Our Installed Units at Site



Sea Food & Fish Freezer Room & Blast Freezer



Low-temperature storage helps slow protein degradation, fat oxidation, dehydration, and spoilage in seafood. Maintaining the appropriate storage temperature and conditions helps preserve quality, freshness, and shelf life.

Freezer Room Temperature



**-20 to
-22°C**

Blast Freezer Temperature



**upto
-40°C**

High Airflow



150 - 250 ESP
during Blast
Freezing
&
70 ESP during
Storage

Our Installed Units at Site



Dairy Products Cold Room



Rapid cooling and proper cold storage help preserve the quality, safety, and shelf life of milk and dairy products. Controlled temperature, airflow, and effective defrosting are essential for maintaining product freshness.

Freezer Room Temperature



**3 to 6°C
&
-18 to
-25°C**

Blast Freezer Temperature



0 to 5°C

High Airflow



**Low Air
Duct**

Our Installed Units at Site



Potato Storage



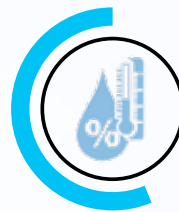
Cold storage helps extend the shelf life of potatoes by slowing sprouting, moisture loss, decay, and physiological deterioration. Maintaining the right temperature, relative humidity, and air circulation is essential to preserve potato quality and minimize storage losses.

Temperature



2 to 4°C

Humidity



90 to 95%

Our Installed Units at Site



Cold Chain Logistics



Blue Cold Refrigeration provides reliable cold chain solutions designed to maintain the required temperature from storage to transportation. Our refrigeration systems help preserve product quality, extend shelf life, and ensure temperature-controlled handling throughout the supply chain.

Chilled Transport Temperature



**+2 to
+8°C**

Frozen Transport Temperature



**-18 to
-20°C**

Temperature Monitoring



**24/7 Monitoring
Continuous
Tracking**

Our Installed Units at Site



Blue Cold Infrastructure



Blue Cold Infrastructure





BLUECOLD[®]

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