

EVAPORATORS & CONDENSERS

for the Data Center Industry



Shell and Tube Heat Exchangers

Evaporators and Condensers

Designed for performance, reliability, and flexibility, our shell & tube solutions support a wide range of industrial refrigeration and process cooling applications. From compact OEM systems to large-scale industrial installations, we deliver optimized heat transfer and proven durability.

Evaporators

DIRECT EXPANSION (DX) EVAPORATOR

Overview:

Refrigerant enters as a liquid-vapor mixture and fully evaporates within the tubes, with flow controlled by an expansion device.

Key Benefits:

- Lower refrigerant charge
- Compact, cost-effective design
- Fast response to load changes

Best Applications:

- Packaged systems
- Commercial refrigeration
- OEM equipment

FLOODED EVAPORATOR

Overview:

Liquid refrigerant fully floods the heat transfer surface, maximizing contact and efficiency during boiling.

Key Benefits:

- High thermal efficiency (superior heat transfer)
- Reduced energy consumption
- Ideal for continuous, high-load operations

Best Applications:

- Industrial refrigeration systems
- Cold storage and food processing
- Large-capacity installations

FALLING FILM EVAPORATOR

Overview:

Refrigerant forms as a thin film over the tube surface, evaporating as it flows downward.

Key Benefits:

- Very low refrigerant charge
- High efficiency at low temperature differences
- Reduced operating costs

Best Applications:

- Systems with expensive or regulated refrigerants
- Fertilizer plants
- Energy-efficient system designs
- Process cooling and specialty applications

Custom Condensers

WATER-COOLED / FLOODED CONDENSER

Overview:

Refrigerant vapor condenses within a shell & tube exchanger using cooling water, often with a flooded design to maximize heat transfer and provide inherent subcooling.

Key Benefits:

- Proven, industry-standard design
- High reliability in demanding environments
- Efficient heat rejection with stable performance
- Built-in subcooling improves system efficiency

Best Applications:

- Industrial refrigeration systems (NH₃, CO₂, HFCs)
- HVAC and process cooling
- High-capacity and high-pressure applications

Advantages of Our Shell & Tube Solutions

- **Engineered Performance:** Optimized for maximum heat transfer and efficiency
- **Application Flexibility:** Compatible with a wide range of refrigerants and system designs
- **Durable Construction:** Built for long service life in harsh operating conditions
- **Custom Configurations:** Designed to meet your exact capacity, footprint, and performance requirements
- **Manufacturing Ability:** 100-ton crane, up to 120" diameter capabilities

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GLOBAL MANUFACTURING LOCATIONS: **USA:** New York: Buffalo; Wisconsin: Franklin, Iron Ridge and Racine

Germany: Bretten | **China:** Shanghai and Suzhou

