



SST/ALU

Evaporators



Key benefits

- Guaranteed thermal performance
- Low maintenance
- Long service life

Configuration

- Axial fans
- Stainless steel tube
- Heavy gauge aluminium fins
- For low, medium and high temperature

Refrigerant type

- ammonia
- chilled water or glycol solutions

Application

- blast freezers
- cold storage
- meat and fish processing



Guaranteed thermal performance

- **Tubes** are staggered in the direction of airflow to ensure maximum air turbulence and coil heat transfer efficiency.
- **Fins** have a clean full collar to optimize performance, resistance to airflow and improve cleanability. They provide performance comparable to corrugated fins at a given horsepower.
- **Fans** are selected and positioned to maximize fan performance and efficiency.

Low maintenance

- The **coil** improves cleanability by reducing cavities.
- **Casing panels** are removable to permit access to both faces of the tube bundle for maintenance and cleaning.
- **Pans** are furnished with an extra large drain connection that, when coupled with the flatness and smoothness of the sloped pan, permits swift and total drainage.

Long service life

- The **coil** incorporates a heavy-duty rectangular structural frame, improving rigidity, squareness and long-term stability.
- **Coils and headers** are designed and manufactured according to the stringent requirements of ASME B31.5
- **Casings and drain pans** are constructed of durable, corrosion resistant and self healing [Baltiplus 800 TM](#) or constructed of heavy-gauge, corrosion resistant Type 304 [stainless steel](#).
- **Load carrying components** are engineered with reinforcing panel breaks and hardware particularly suited for the application.

Year-round reliable operation

- **Fans** are direct-drive and are individually compartmented.
- **Motors** are SATMOS treated and designed to ensure reliability and longevity in harsh environments.
- **Coils** have precise welds made by high quality orbital welding.
- BAC's evaporators are backed-up by a **3 year warranty**.

Safe and hygienic operation

- Heavy-duty **support hangers** are engineered with rigging points to permit safe and easy hanging.
- The drain pan has a flat and smooth surface and is sloped for **easy drainage**.

Ideal replacement unit

BAC's evaporators have a **small footprint, low weight and low refrigerant volume**.



You want to benefit from BAC's evaporators? Contact your [local BAC representative](#) for more information.

Downloads

- [S - Evap](#)



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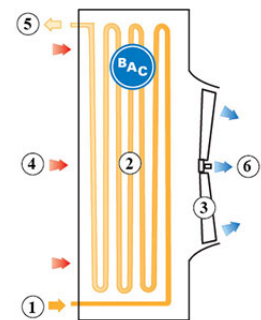
Evaporators



Principle of operation

Refrigeration fluid (1) enters through a **evaporator coil (2)**. At the same time the **fans (3)**, located at the side of the unit, draw the outside ambient **air (4)** passing it over the extended surface coil. Heat is collected from the surrounding air to the refrigerant fluid circulating in the coil tubes and turning it into vapor. The vapor then **exits the unit (5)**. The **cold air (6)** is then blown into the environment.

Interested in BAC evaporators? Contact your local BAC representative for more information.





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Construction details

Casing

- **Standard** - Steel panels and structural elements are constructed of durable, corrosion resistant and self healing [Baltiplus 800™](#).
- **Optional** - Steel panels and structural elements are constructed of corrosion resistant [stainless steel](#) type 304.

Coil configurations

- **Coils** are manufactured according to ASME B31.5; pressure tested to 26 Bar with air under water and can be shipped with a nitrogen holding charge.
- **Tubes** are constructed of 15.88 mm diameter, stainless steel Type 304.
- **Fins** are constructed of aluminium, die-formed, in flat pattern.
- **Headers** are constructed of schedule 40 pipe as required by ASME B31.5



Coils have precise welds made by high quality orbital welding. To address the issue of operator error in the tungsten arc welding process, BAC makes use of specially developed orbital welding equipment to weld our tubes. Orbital welding provides the operator the ability to produce consistent, repeatable, high quality, controlled and documented welds maintaining accuracy while improving efficiency. Orbital welding remains consistent, whereas manual welding may produce inconsistent results because each weld is completed by hand.



Pan

- **Standard** - Pan is constructed of durable, corrosion resistant and self healing [Baltiplus 800™](#).
- **Optional** - Pan is constructed of corrosion resistant [stainless steel](#) type 304.
- **Defrost** - Electric heating elements or hot gas coil with double skin.
- **Pan insulation** is available in [Baltiplus 800™](#) or [stainless steel](#) type 304
- Pans are furnished with an **extra large drain connection**.

Fans & motors

- **Fans** are direct-drive, cast aluminium blade or polyprop (optional).
- **Fan motors** are foot-mounted on steel base plates, supported by fan housing constructed of heavy-gauge self healing Baltiplus 800. Motors are IP 55/IE, totally enclosed, fan cooled (TEFC), furnished with low temperature grease and SATMOS treated.

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Unit placement

Cold store - Racked

The flow should be directly down every other aisle if possible, with the alternating aisles left for return airflow. Flow across the tops of the racks is very disruptive and leaves no clear return path for the air. Air units placed opposite from the doors in freezers will have to penetrate the warm air pocket that rises up from the open doors. This will require a high velocity. Conversely, air units placed on the dock wall of a freezer will be subjected to high infiltration loads unless internal vestibules are used.

Cold store - Unracked

Unracked rooms generally have ceiling heights of 3-5 meter. Therefore, the airstream does not have to fall far to be disrupted by the pallets or totes. Evaporators with propeller fans will only throw 15-18 meter in these conditions. Axial fan units will throw up to 30 meter. The airflow out of an evaporator without long throw adaptors will diverge out by approximately 10 to 15 degree per side.

You want to know more about evaporators placement? Contact your [local BAC representative](#) for more information.



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Options and accessories

Below is a listing of the main options and accessories. If your required option or accessory is not listed, look no further than your [local BAC representative](#).

Drain pan electrical defrost

Electric elements are clamped to the bottom of the drain pan, effectively heating the pan bottom to provide quick defrost.

Drain pan hot gas defrost

Stainless steel hot gas circuit is provided and clamped to the bottom of the drain pan for maximum heat transfer to the pan.

Drain pan insulation

The drain pan can be insulated when either hot gas or electric defrost is required to contain the heat inside the drain pan or if there is a risk of condensation occurring on the underside of the drain pan. Insulation covers are constructed from self-healing [Baltiplus 800 TM](#).

Reheat coil

Finned reheat coils produce continuous dehumidification and reduce sweating by heating the air after it leaves the cooling coil section. The reheat section is separated from the cooling section by an air break

Air discharge alternatives

These include:

- Fans selected for external static pressure
- Draw through and blow through options are available.



Additional uses

Increasingly, our product has also found use more industrial applications such as oil coolers for transformer oil and heat recovery applications.

You are interested in one of these accessories for your BAC evaporator? Contact your local [BAC representative](#).