

Polairis

Refrigerant condensers



Key benefits

- Extremely reliable
- Energy efficient
- Minimal maintenance and easy inspection

POLAIRIS

Polairis characteristics

- Counter flow, radial fan, forced draft
- PED 2014/68/EU coil design

Capacity range

850 - 1890 kW
(for single cell models, nominal R717 kW's)

Typical applications

- Industrial refrigeration applications with focus on reliability, energy efficiency and minimal maintenance
- Tight enclosures and sound critical installations
- Dry operation in winter time



Extremely reliable

- The Polairis™ evaporative condenser's design incorporates all **experience** BAC acquired over the last decades with thousands of VXC units installed globally since 1978.
- Fan drive systems are located inside the unit, in the **dry air**, preventing condensation and eliminating corrosion issues and premature failures.
- Direct driven fans **eliminate potential mechanical failures**.
- Multiple, individually driven fans guarantee **redundancy**.
- [Baltibond hybrid coating](#) for maximum equipment life, with corrosion resistance equivalent to SST 304L.
- **Dry operation** possible.

Energy efficient

- Evaporative condensers yield the lowest condensing temperatures and hereby **minimize the system energy consumption**.
- Up to **50% savings** with the energy efficient radial fans, compared to standard centrifugal fans.
- EC motors have superior efficiency that exceeds the IE4 requirements. Integrated electronics of EC motors allow for **variable speed control** at a significantly **reduced power consumption** compared to AC motors with VFD.

Minimal maintenance and easy to inspect

- Direct driven fans require **no maintenance** at all.
- **The DiamondClear™ Design*** offers a continuous self-cleaning operation. The **need for maintenance is minimized** by using fully sloping surfaces, a constant impact of falling spray water and high water velocities.
- [Collection basin](#) covers only a fraction of the unit footprint, which makes it subject to higher turbulences. Together with the significantly lower volume (25% reduction versus conventional evaporative condensers), this **reduces the chemical usage and need for cleaning**.
- **Unmatched accessibility** to the basin, drives and fans in the dry section, via the mansized access door at ground level.
- DiamondClear™ Design access louvers enable **easy inspection of coil and water collection channels**.
- Water distribution system is **easily accessible** from outside.
- [Baltibond hybrid coating](#) for a smooth surface finish that **facilitates internal cleaning**.

Superb hygiene

- **The DiamondClear™ Design*** offers a **continuous self-cleaning operation**. During standstill the sloping surfaces fully drain, avoiding stagnant water and the risk of sedimentation of impurities.
- A completely encased collection basin eliminates any sunlight ingress, **preventing biological growth**.



- [Baltibond hybrid coating](#) for a smooth surface finish that **reduces biofilm development**.
- The floor is fully sloped towards the drain - also in the dry section - for **easy cleaning**.
- Water treatment system connections are provided as standard.
- The access door is located in the dry area, **eliminating any leakage risk**.

Optimized for transport and easy installation

- **Installations costs are reduced** since units are shipped in 2 factory-built sections with a rigid base frame that guarantees squareness for easy on-site assembly.
- **Minimal freight costs** with 2,4 m wide units that fit into standard trucks.
- Fans are prewired to a terminal box to avoid time-consuming on-site wiring. Integrated electronics of EC motors eliminate the need for external VFD's, electronic filters and shielded cables.
- Single side air intake allows for **installation in confined spaces and next to solid walls**.
- Pressure capability of fans allows indoor installation with ductwork.
- Silent radial fans reduce the need for installation of sound attenuation.

Ultra silent

- **Silent radial fans** are standard.
- Single side air inlet allows directing the quiet unit rear towards **noise sensitive areas**.
- Sound attenuation is available for the most **stringent sound requirements**.
- DiamondClear™ Design access louvers **minimize water splash noise**, eliminating the need for water silencers in the basin.

* patent pending

Interested in the Polairis condenser for your industrial refrigeration application? Contact your local [BAC representative](#) for more information.

Downloads

- [S - Polairis \(EN\)](#)
- [P - PLC \(EN\)](#)
- [RO - PLC \(EN\)](#)
- [M - PLC \(EN\)](#)
- [R - PLC \(EN\)](#)