

# Polairis model PLC2

# Refrigerant condensers











# Key benefits

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

#### **Polairis characteristics**

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

#### **Capacity range**

80 - 1580 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<sup>TM</sup> 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 <u>DiamondClear Design\*</u> 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.
- <u>Collection basin</u> 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.
- Water distribution system is easily accessible from outside.
- Baltibond hybrid coating for a smooth surface finish that facilitates internal cleaning.

# Superb hygiene

- The <u>DiamondClear Design</u> offers a continuous self-cleaning operation. During standstill the sloping surfaces fully drain, avoiding stagnant water and the risk of sedimenation of impurities.
- A completely encased collection basin eliminates any sunlight ingress, **preventing biological growth**.
- <u>Baltibond hybrid coating</u> 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**.

Interested in the Polairis condenser for your industrial refrigeration application? Contact your local BAC representative for more information.

## **Downloads**

- Polairis evaporative condenser
- Operating and Maintenance PLC2
- Rigging and Installation PLC2
- Spare Parts for PLC2
- Retrofit Opportunities for PLC2
- Polairis PLC

<sup>\*</sup> patent pending