



Home Civilian Aviation ▾ Military Engineering Maintenance
Avicorp Underground Service Pits

CONTACT



CIVILIAN AVIATION

AIRCRAFT PRE-CONDITIONED AIR

Avicorp prioritizes optimal system performance, efficiency, and reliability. Our expertise encompasses total system design, from central chiller plants to distribution networks. This focus on holistic solutions led to innovations like the hybrid CW+DX design and the DXBoost® product line. Recognizing the rise of MARS gates, Avicorp addressed the challenge of serving two aircraft with distinct airflow, pressure, and temperature needs from a single unit.



PCA TESTING



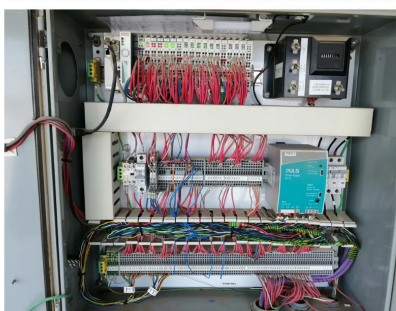
PCA INSTALLATION



PCA UNITS

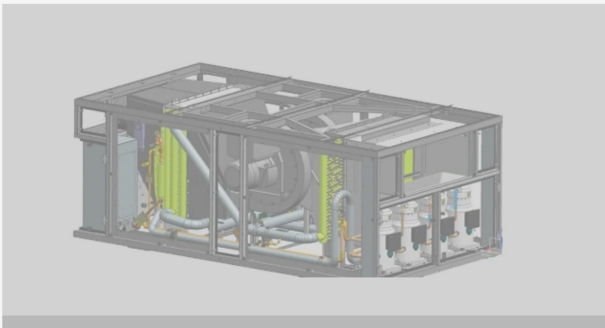


PCA SHIPPING



PCA CONTROL

DXBoost® PCA



The current DXBoost® design has matured and improved and is now the most preferred design. Requiring only standard CW supply/return and reduced electrical support, the system is capable of supplying sub-freezing air in the most challenging environments. A perfect solution for installation in hangar equipment rooms, the units can also be adapted for mounting under the passenger loading bridge.

PCAir HMI Interface



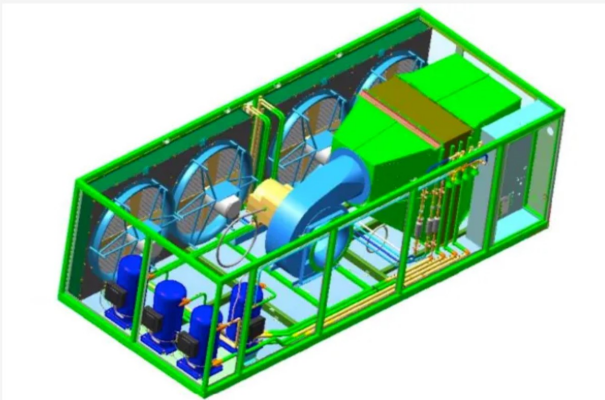
Recent industry mandates specify both maximum airflow and pressure for each aircraft. Performance is limited to "whichever condition occurs first". Pressure and temperature are measured at the aircraft connector. Both can be monitored and controlled to above freezing temperature for the Boeing product, and subfreezing for the Airbus product. The system offers a complete array of display screens, displaying status in both graphic and detailed text. Assuring compliance with IATA AHM 974 and 997, the system can be adapted to all new units, as well as adapted to units already in service.

Accurate Airflow Measurement



Measured airflow in KG/S with pressure and temperature measured at the aircraft adapter. Measurement of each hose is available to the operator. The PCAir unit internal PC Controller is programmed to maintain exacting performance, Rigidly adhering to published aircraft limitations.

Air Cooled PCAir Units



Available in either bridge mount or ground mount configurations, the air cooled DXUnit is a universally accepted PCAir solution. Avicorp supplies units specifically selected for the harsh Middle East environment. Units are sized to provide delivered air at -8°C from the unit's outlet(s). State-of-the-art controls with vivid graphics display pressure, temperature, and mass flow measured at the aircraft connector. Utilizing environmentally sensitive refrigerants, VFD support of blowers and fans, the unit has proven itself superior to all others.

DXUnit: 120 Refrigerant Tons
Airflow: 4.2 Kg/S (* Up to)
Static: 12,500 Pa (*)
Discharge: -10°C (*)
Ambient: 46°C DB / 29°C WB
Mounting: PBB Trailer or Ground
Electrical: 50/60 Hz 380-480 VAC
Amperage: 400 Amps

Centralized PCAir System



The classic centralized PCAir system remains viable with Avicorp's unique system enhancements. The classic single loop system featured distributed EGW at -7°C / -2°C supplied to specialized AHU's. This allowed for the -4.5°C discharge air required to maintain +2°C at the aircraft. Avicorp enhancements feature a High ΔT (delta T) loop. Central plant cooling utilizes direct CW to EGW heat exchangers for initial cooling, as well as traditional EGW chillers for secondary cooling of the loop.

Initial equipment costs are reduced by $\pm 50\%$, system efficiency is improved with lower EGW flows and 50% of the cooling provided by the facility's low KW/Ton chilled water system.

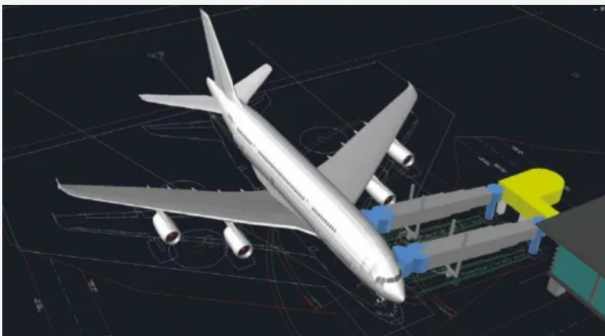
The AHU is unique with the blower located between the coils, which greatly enhances performance. Dual Loop / dual coil systems are also provided. This allows $\pm 70\%$ of the cooling to be provided by building chilled water and $\pm 30\%$ by a dedicated EGW loop. The AHU features a unique design with the blower located after the first stage coil. The second and third stage coils allow for supply of sub-freezing air. The design improves efficiency $\pm 35\%$ and performance by $\pm 15\%$ because of a reduction in the need for defrosting.

Centralized PCAir System



Avicorp's In Ground Systems (IGS) are unique, modular, factory assembled, and tested, aircraft service pits. Eliminating the need for cast in place concrete structures. Pit drainage and sump pumps are built-in. Components are all populated, in the factory, and shipped complete to the site. Rust free enclosures offer a lifetime of trouble-free service. The counterbalanced lids meet all load requirements. The hatch design allows for minimal alignment demands. In the case of damage from ground equipment, gates can be returned to immediate service, whereas the Pop-Up design can cause major operational problems.

Avicorp Middle East DXBoost Solves the MARS Gate Dilemma



Avicorp is pleased to announce that the US Patent and Trademark Office has granted patent rights for its design of an Independently Controlled Dual Outlet (PCA) Aircraft Air Unit. The unit is particularly well suited for MARS (Multiple Aircraft Ramp System) aircraft stands. MARS is an innovative bridge layout arrangement allowing for two boarding bridges to service one single jumbo aircraft or two smaller, narrow body aircraft at the same gate". Now it is possible to deliver air at different temperature, pressure and airflow to two (2) different aircraft parked at the same stand. The design is based on the CW+Hybrid design philosophy of the DXBoost®, a registered trademark of Avicorp.



AVICORP

Serving the Aviation Industry in
the Middle East

CERTIFIED ISO 9001-2008

Civilian Aviation

- Aircraft Pre-Conditioned Air
- Aircraft 400 Hz Systems
- Underground Service Pits
- Passenger Boarding Bridges
- Aircraft Power Service Points
- UPS Systems
- Integrated Aircraft Stand Systems
- Visual Docking Guidance System

Military & Defense

Design and Engineering

Maintenance & Support

Avicorp Underground Service Pits

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