

The world's smartest PCA



AXA Power PCA 130

Pre-Conditioned Air unit for code C & D aircraft



QUICK SWAP OF
COOLING MODULE

AXA Power's comprehensive knowledge of controlling and optimizing GSE equipment combined with experts' know-how within cooling technology, form the basis of the AXA Power PCA; the market's most innovative, reliable and environmentally friendly Point-of-Use PCA unit.

The AXA Power PCA will, on demand, cool, heat or ventilate the aircraft to a predefined temperature in a very energy-friendly way.

AXA POWER is part of ITW GSE
- the world's leading supplier of Ground Support Equipment:



It's all about connections

AXA Power PCA 130 Pre-Conditioned Air unit

The AXA Power PCA suits all types of aircraft and all climates. The intelligent control unit automatically adapts the PCA's output temperature and airflow to the selected type of aircraft as well as to the ambient temperature and humidity.



The AXA PCA is available for bridge- or ground-mounting for aircraft parking positions or hangar applications. Narrow-Body (Code C: A320) & Wide-Body (Code D: B767) equipped with 1 PCA connector. Jumbo (Code E: B777) equipped with 2 PCA connectors either connected to two AXA Power PCA 130 units or to one AXA Power PCA 210.

Benefits of the AXA Power PCA

- Low operational and reduced infrastructure costs
- Low environmental impact
- High passenger comfort due to fast pull-down cooling of hot aircraft
- Simple operator training
- Increased availability (up-time) thanks to modular design
- High air quality provided to aircraft





Low operational and reduced infrastructure costs

To secure a high performance at the output as well as a low energy consumption, we have chosen state-of-the-art components. All main components such as compressors and blowers are equipped with variable frequency drives (VFDs) to ensure a stepless regulation in the most energy efficient way, thus reducing the energy consumption to an absolute minimum.

The unit has an excellent high power factor of > 0.97 which gives up to 20% reduction on the required line current compared to similar PCA units with the same rating. This leads to substantial savings on the airport's electrical infrastructure.

Low environmental impact

The AXA Power PCA uses a minimal amount of refrigerant due to micro channel condenser technology and the compact design of the unit. The refrigerant R134a does not degrade the ozone layer at all. The refrigerant further provides reliable operation at high ambient temperatures, and the distance between the evaporators and the low air velocity optimize the efficiency of each cooling circuit and prevent condensation drops from moving from one evaporator to the next.

High passenger comfort due to fast pull-down cooling of hot aircraft

The AXA Power PCA is designed to deliver a boost cooling capacity, which sets completely new standards for pull-down cooling of hot aircraft. This helps make aircraft turnaround faster and more effective with a pleasant working environment for the staff getting the aircraft ready. It also makes the aircraft feel clean and inviting for the next passengers.

Simple operator training

To ease daily operation and operator training, the user interface is equipped with as few LEDs and push-buttons as possible. Actually, the ground handler only has to connect the hose(s) and press the start button to start the cooling process.



The user interface is easy to understand and to use by the operators.

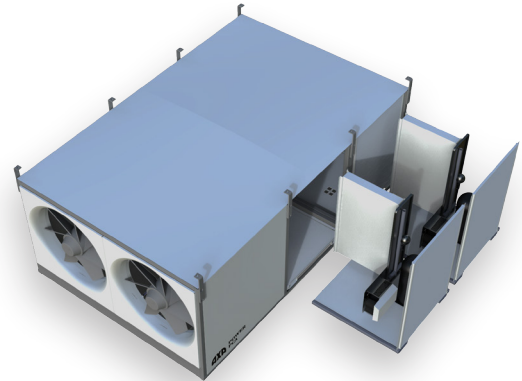
External communication (optional)

- Galvanically isolated RS485 port (MODBUS/JBUS RTU protocol)
- TCP/IP / Ethernet interface (MODBUS/JBUS TCP protocol)
- Interface for connection to the AXA Service Tool

Increased availability thanks to modular design

The AXA Power PCA is equipped with multiple cooling modules. Because of the modular construction, the AXA Power PCA is able to continue providing cooling even with one inactive module. Further, one cooling module can be replaced by a technician with no special skills and in 20 minutes only. This considerably increases the up-time.

All parts (e.g. cooling modules, condenser fans, main blower etc.) can be replaced without removing the PCA unit from underneath the passenger boarding bridge.

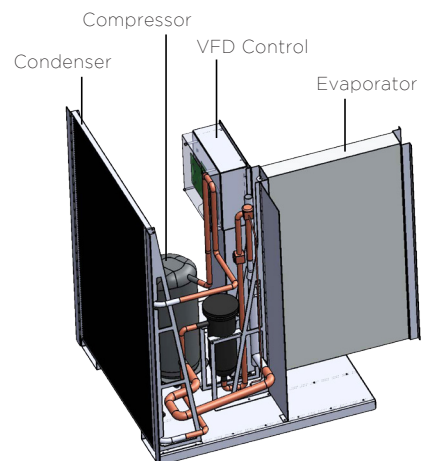


High air quality provided to the aircraft

The AXA Power PCA is, as standard, equipped with one stage of F5 filter. The whole internal plenum and stainless steel drain pan can be cleaned in less than 2 hours once the cooling modules have been pulled-out. Then, the evaporators and condensers can be cleaned in order to optimize the efficiency of the AXA Power PCA, which also reduces the whole life costs of the PCA to a minimum.

Self-contained cooling module for easy maintenance

- Low Mean Time To Repair (MTTR)
- Easy on-site replacement of any part without welding required
- Easy cleaning of evaporators and internal plenum
- Reduced spare part requirement





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Specifications

AXA Power PCA 130 Pre-Conditioned Air unit

Input

- Voltage: 3 x 400 V
- Frequency: 50/60 Hz
- Rectification: 12 pulse
- Line current: 146 A (Cooling Mode) by 35°C and relative humidity of 45%
- Line current distortion: < 10%
- Recommended pre-fusing: 250 A
- Power factor: >0.97 at 100% load
- Inrush current: None, soft start

Output

- Up to 60 tons nominal compressor capacity
- Max. pressure: Max. 8500 Pa
- Air flow: up to 130 kg/min; 280 ppm
- Discharge air temperature: Subzero depending on ambient temperature relative humidity and air flow
- One outlet 14"

Dimensions & Weight

- Dimensions: kindly refer to outline drawing.
- Weight: < 2800 kg
- Construction: Welded, anti-corrosive coated steel frame

Environmental data

- Operating temperature: -30°C to +50°C
- Relative humidity: 10-95%
- Noise level: < 80 dB(A) at 4.6 m
- IP class: IP54 (Electronic part)

Miscellaneous

- MTTR: Typically 20 minutes
- Stand-by losses: < 250W
- Refrigerant: R134a

Directive conformity

- 2004/108/EC EMC Directive
- 2006/95/EC LVD Directive
- 2006/42/EC Machinery Directive

Conformity by complying with

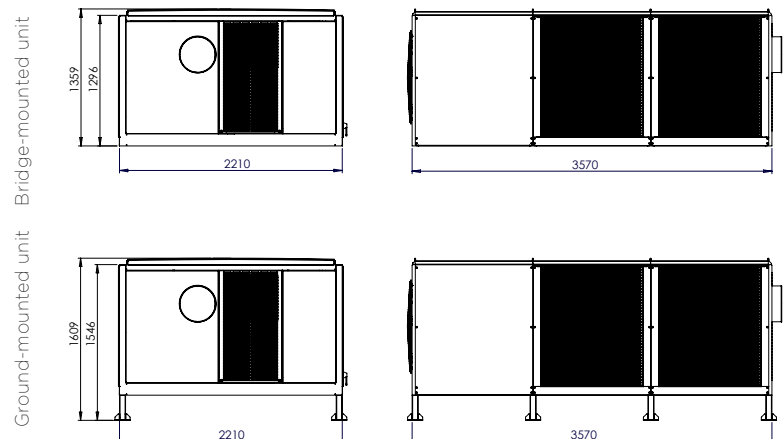
- EN61000-6-2 EMC - immunity standard
- EN61000-6-4 EMC - emission standard
- EN62040-1-1 LVD safety standard
- EN61558-2-6 General & safety requirement
- 1915-1&2 Machinery - general safety requirement
- 12312-17 Aircraft ground support equipment, specific requirements

The AXA Power PCA is equipped with the following features

- Internal ducts made of stainless steel
- Condensate pump and smoke detector
- Stepless regulation via VFD on main blower and compressors
- Measure of outlet pressure and air flow
- Air temperature sensors (discharge and inlet)
- 2 pressure and 3 temperature sensors and 1 sight glass on each refrigerant circuit
- Micro channel condensers (sea water resistant aluminium)
- F5 filtration including clogging alarm
- Remote control station with display and single communication cable

Available standard options

- 80 kW heater and automatic overheating protection
- Cabin sensor
- Feet for ground mounted units
- RS485 port with Modbus/Jbus protocol or TCP/IP interface via RJ45 port
- AXA Service Tool
- Colour: RAL 7035 (standard) or any other RAL colour on an optional basis



Dimensions are subject to change without prior notice

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