

AXA 3400 PCA

Pre-Conditioned Air unit - 130 & 210 kg/min



QUICK SWAP OF
COOLING MODULE

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

**ITW
GSE** **AXA POWER**

It's all about connections



THE SMART CHOICE

ITW GSE is a trustworthy partner designing and optimizing GSE equipment. We have strong expertise within cooling technology and our AXA 3400 PCA is the market's most innovative, reliable and environmentally friendly point-of-use PCA. The AXA 3400 PCA is also the market's only true modular PCA (patented).

The AXA 3400 PCA supplies fresh, clean air into parked aircraft, at carefully monitored temperatures and provides a pleasant atmosphere for the crew and the passengers. It also makes aircraft turn-around faster and more effective.

DESIGNED FOR ALL KINDS OF AIRCRAFT

The AXA 3400 PCA is available for bridge- or ground-mounting for aircraft parking positions or hangar applications. It is designed to suit all types of aircraft from the Narrow-Body (Code C: A320) & Wide-Body (Code D: B767) equipped with 1 PCA connector over the Jumbo (Code E: B777) to the Super Jumbo (Code F: A380) equipped with 4 PCA connectors connected to two AXA 3400 PCA 210 units.

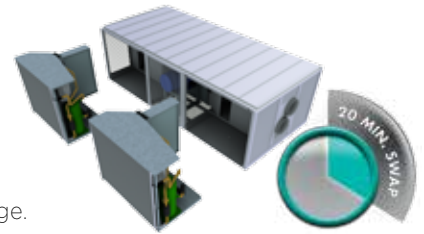
The AXA 3400 PCA uses a minimal amount of refrigerant due to micro channel condenser technology and the compact design of the unit. The refrigerant R410A does not degrade the ozone layer at all. The refrigerant further provides reliable operation at high ambient temperatures. The distance between the 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.

IMPROVE YOUR ENVIRONMENT AND CUT COST

The increasing focus on environmental issues means that airports aim to let an external pre-conditioned air unit and a 400 Hz solid-state unit take over the functions of the aircraft APU while the aircraft is parked at the gate. We call this the "Go Green on Ground" concept whereby carbon emission is reduced by approx. 80-85%. The concept furthermore provides savings on the costly maintenance to the on-board APU, based on hours of operations. For the airports, the "Go Green on Ground" also means a reduction of the noise level to the benefit of the airport personnel, passengers and to surroundings in general.

INNOVATIVE DESIGN

The AXA 3400 PCA is the market's only modular PCA. It is designed around identical cooling modules that are easy to swap by a technician with no special skills and in 20 minutes only. This helps you keep aircraft turn-arounds on schedule. The modular design also means big savings on spare part inventories. All parts (e.g. the self-containing cooling modules, condenser fans, main blower etc.) can be replaced without removing the PCA unit from underneath the passenger boarding bridge.



POWER CONSUMPTION

The AXA 3400 PCA enables limiting of the current drawn. In this way, the AXA 3400 PCA does not overload the entire mains supply with blown fuses and aircraft delays as possible consequences. In the event of a later infrastructure upgrade, the current limit can be set to another value allowing the PCA to cool more!

The excellent high power factor of > 0.97, means a line current reduction of up to 20% compared to similar PCA units with the same rating. Also, smaller and less costly cables can be used. Add to this the choice of state-of-the-art components that ensures a high performance at the output as well as a low energy consumption. Further reductions on the energy consumption are achieved due to the variable frequency drive (VFD) control of all main parts such as compressors and blowers. Therefore, the life time costs of AXA 3400 PCA are as low as they can possibly be.

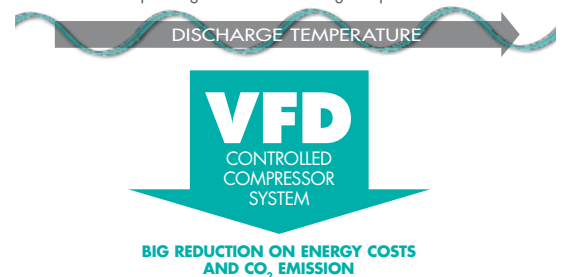


STEPLESS REGULATION

The AXA 3400 design breaks completely new ground by using variable frequency drive technology that gives easy, stepless regulation of the discharge temperature. Therefore, the AXA 3400 PCA units supply exactly the required amount of cold air and not more. They use much less energy than other PCAs that are designed for peak load conditions although these conditions probably only apply for 10-20 days each year. Those PCAs deliver excess capacity for about 80% of the time, wasting lots of expensive energy and creating undesirable emissions. Another advantage of the stepless regulation is less mechanical stress - which boosts reliability and service life and gives you a better return on investment.

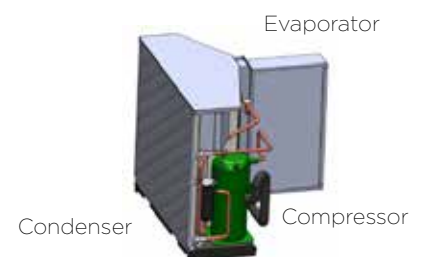
stepless REGULATION

The variable frequency drive of the AXA 3400 PCA ensures stepless regulation of the discharge temperature



OPTIMUM PERFORMANCE ENSURED

The AXA Power PCA is, as standard, designed with one stage of M5 filtre. 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. Afterwards, the evaporators and condensers can be cleaned to optimize the efficiency of the AXA 3400 PCA, which again reduces the whole life costs of the PCA to a minimum.



THE ITW GSE OPERATOR INTERFACE

The ITW GSE operator interface is easy and intuitive. This is your guarantee for correct operation and on-time aircraft departures. The operator only has to press the combined start/stop button. Also, he can monitor various parameters such as temperature and air flow at the display screen. For easy set-up and maintenance purposes, there is a deeper level dedicated for the technician. The operator interface is common from one ITW GSE product to another. Therefore, airport staff familiar with one ITW GSE product can easily switch to another as the icons and display are the same.



DOWNLOADS AND UPDATES

The software-based control system means that your AXA 3400 PCA can be updated and given additional capabilities in the future, simply by transferring new software from a USB stick.



Specifications

AXA 3400 PCA 130 & 210 kg/min

Input

- Voltage: 3 x 400 V
- Frequency: 50/60 Hz
- Rectification: 12 pulse
- Line current by 40°C and relative humidity of 45%:
PCA 130: 163 A (Cooling mode)
PCA 210: 250 A (Cooling mode)
- Line current distortion: < 10%
- Recommended pre-fusing:
PCA 130: 250 A; **PCA 210:** 400 A
- Power factor: >0.97 at 100% load

Output

- **PCA 130:** Up to 60 tons; nominal compressor capacity
- **PCA 210:** Up to 120 tons; nominal compressor capacity
- Max. pressure: **PCA 130:** 8,500 Pa; **PCA 210:** 10,000 Pa
- Air flow:
PCA 130: Up to 130 kg/ min; 280 ppm
PCA 210: Up to 210 kg/min; 460 ppm
- Discharge air temperature: Subzero, depending on ambient temperature relative humidity and air flow

Dimensions & Weight

- Dimensions: kindly refer to outline drawing
- Weight: **PCA 130:** < 3300 kg; **PCA 210:** < 4500 kg
- Construction: Welded, anti-corrosive coated steel frame

Environmental data

- Operating temperature: -30°C to +50°C
- Relative humidity: 10-100%, non condensing
- Noise level: < 85 dB(A) at 4.6 m
- IP class: IP54 (Electronic part)

Miscellaneous

- MTTR: Typically 20 minutes
- Refrigerant: R410A

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

Available standard options

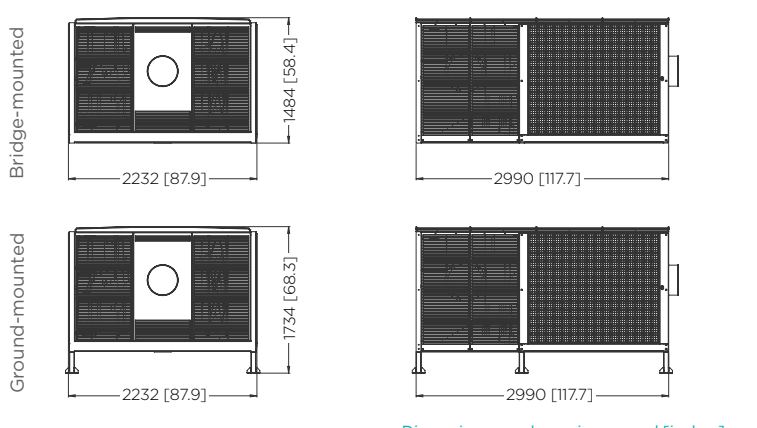
- Cabin sensor
- Heater and automatic overheating protection
- **PCA 130:** 72 kW; **PCA 210:** 120 kW
- Feet for ground mounted units
- RS485 port with Modbus/Jbus protocol
- AXA Service Tool
- Colour: RAL 7035 (standard)
 or any other RAL colour on an optional basis

The AXA 3400 PCA is equipped with the following features

- Stepless regulation via VFD on main blower & compressors
- Quick swap of cooling module; only takes 20 minutes
- **PCA 130:** 2 Condensate Pumps; **PCA 210:** 4 Condensate pumps
- Internal ducts made of stainless steel
- Smoke detector
- Measure of outlet pressure and air flow
- Air temperature sensors (discharge and inlet)
- 2 pressure and 3 temperature sensors as well as 1 sight glass on each refrigerant circuit
- Micro channel condensers (sea water resistant aluminium)
- M5 Filtration including clogging alarm
- Remote control station with display and single communication cable
- **PCA 130:** One outlet 14"
PCA 210: Dual outlet (2x14") (or one outlet 14" or 18" diameter)
- Internal 14" damper of the second outlet
- Special condenser coating
- TCP/IP interface via RJ45 port

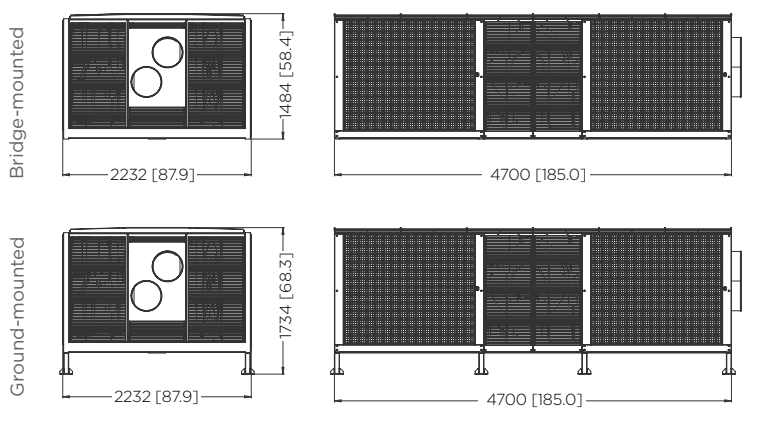
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PCA 130 - 2 Cooling Modules



Dimensions are shown in mm and [inches]

PCA 210 - 3 or 4 Cooling Modules



Dimensions are shown in mm and [inches]

