

Hybrid PCAir ACWDX-3 For Cat E/F Aircraft



- ATES Hybrid PCAir are selfcontained units electric powered, automatically controlled, to provide cooled and hot air to parked aircraft.
- First cooling stage utilizes chilled water to eliminate most of the condensate and provides two thirds of the total cooling power.
- Second and eventual third stages are Direct Expansion with Scroll compressors to bring the output air up to -4°C .
- Refrigerated water going out from first stage is the cooling media of DX condensers at low temperature and high efficiency.
- Hybrid PCAir units have higher EER and lower noise, compared with equivalent air to air PCAir units.
- Hybrid PCAir units are well performing in hot climates typical of ME and Asia.
- The central water system capacity design optimisation shall take in consideration different contemporary factors like aircraft presence at gates, passengers load factor, different cooling loads during aircraft presence at gate.
- Optional heating pump circuit.

ACWDX-3 Specifications

Nominal air flow	210 Kg/min
Air flow range	60-100%
Air pressure at unit exhaust	10.000 Pa
Blower motor power	50 kW
Scroll compressor Nb	4
Nb of DX cooling stages	2
Total Nb of cooling stages	3
Refrigerating gas	R410a
Nb of electric heating stages	3 - 90 kW (optional)
Input power	400 V +/-10% / 50 Hz
Design summer ambient conditions	35° C 50% R.H.
Design winter ambient conditions	-2° C 100% R.H.
Working temperature range	-15° C /+ 50° C

Cooling performances

Refrigerated water cooling circuit

Water flow	450 l/min
Water inlet temperature	+7° C
Water outlet temperature	+17° C
Water inlet pressure	3 bar
Pressure losses in the hydraulic circuit	2 bar
Cooling power of water coil	165 kW

DX stages

DX cooling stage capacity	80 kW
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Total cooling capacity **245 kW**

Maximum input power **75,0 kW**

Air outlet temperature **-4° C**

EER in cooling mode **3,27**

Performances in heating mode (optional)

Nominal capacity heat pump mode	90 kW
Air outlet temperature with 0° C and 100% R.H.	50° C
Heating mode air flow	125 Kg / min
Input power in heating mode	53 kW
COP heat pump	1,70

Noise level

Cooling	75 dbA at 1 m
Heating	72 dbA at 1 m

Main features

Digital regulation
VFD on blower
Cabin temperature probe
Condensate water pump
Remote control at boogie
Control box protection IP 65
Water pressure boost pump (optional)

Weight and dimensions

Length 4400 mm; Width 2230 mm; Height (with foot) 1900 mm; Weight 4500 kg

Codes and standards

Machine Directory	2006/42/CE
EMI	2004/108/CE
Radio & Communications	99/5/CE
Safety	EN 12100-1 e -2
Electrical Safety	EN 60/204

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