

TRILECTRON™ air-a-plane

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TRILECTRON / AIR-A-PLANE

Trilectron / Air-a-plane introduces the next generation of Pre-Conditioned Air units for the aviation market: the eLITE™ Series PCAir. This newly designed air conditioning system was developed, tested and optimized to take advantage of the latest generation of high efficiency, zero ozone depleting refrigerant to cool any aircraft type under the most demanding of ambient conditions. New fail-safe controls enhance the efficiency of the air conditioning system to provide faster cool down of the aircraft and insure more consistent aircraft cabin temperature for passenger comfort. The compact, light weight package allows the units to be easily mounted on a bridge/stand for fixed applications, or easily moved when assembled on a trailer/truck for mobile applications. The eLITE™ Series is available in various sizes to provide the optimal delivered air temperature, volume and static pressure to cool or heat any commercial aircraft and avoid the cost of running the APU. The new eLITE™ Series PCAir from Trilectron is reliable, efficient and environmentally friendly in a compact package.

PERFORMANCE FEATURES

- Zero ODP R-410A refrigerant
- Better heat transfer than R-22, R-134a and R-407C
- Tested for high performance output at 131°F
- Provides faster aircraft cool down times
- Highest efficiency micro channel coils
- Building management system compatible
- Lowest package size in the industry
- Optional bridge cooling options
- Fail-safe, patent pending controls
- Night Setback Mode
- Auto/Manual operating mode selection
- Patent pending modular building block design
- Low mean time to repair
- Easy service, maintenance and training
- Common spare parts inventory across all models

Regional-Narrow Body
1 Module Unit



Narrow-Wide Body
2 Module Unit



Wide - Jumbo Body
3 Module Unit



Trilectron eLITE™ Series Modular PCAir Specifications

R-410A

R-410A has a higher volumetric cooling capacity compared to R-22 and has better thermal exchange properties. This results in overall performance gains in terms of system efficiency. The greater density of the vapor in R-410A permits higher system velocities, reduces pressure drop losses and uses smaller diameter tubing.

Our environmental lab testing confirms that the eLITE Series design with R-410A defines new performance and efficiency levels for the industry. And, coupled with R-410A's low global warming rating, offers a low cost, high-capacity, yet environmentally friendly solution.

Construction

- Formed steel frame construction
- Aluminum body access panels and doors with stainless steel hardware
- NEMA 4 Electrical enclosure and wiring conduit
- Large operational switches, buttons and latches for cold weather operation in heavy gloves
- Corner bumpers and high-visibility tape for head knock protection
- UL and CSA approved

Protective Finish

- Anti-corrosive polyester powder provides excellent weather resistance, flexibility and adhesion, plus a strong resistance to chemical agents such as glycol and skydrol
- Standard color is high gloss white
- Custom colors require a paint chip or swatch for accurate color match

Environmental

- Operating Temperature: -40°F to 131°F (-40°C to 55°C)
- Relative humidity 0 – 100%

Electrical

Blower Motor

- DAC321: 15HP (11.2kW)
- DAC322: 40HP (29.8kW)
- DAC323: 75HP (55.9kW)

Condenser Fan Motor

- DAC321: 4 @ 3HP (2.24kW)
- DAC322: 8 @ 3HP (2.24kW)
- DAC323: 12 @ 3HP (2.24kW)

Control

- Industrial grade PLC controller
- 24V control voltage
- Laptop interface port for troubleshooting
- Blower outlet damper airflow control
- Remote mountable operator interface with large lighted momentary push buttons

Generator Set

Generator

- AC Output: 480V, 3PH, 4 Wire
- Continuous duty generator

Engine

- Tier 3 Perkins or Cummins
- Turbocharged 4-stroke, inline 4 or 6 cylinder

Protection

Air Conditioning

- Smoke detector
- High discharge air temperature switch (with heat option only)
- Low airflow indicator
- High refrigerant pressure switch and transducer
- Low refrigerant pressure switch and transducer
- Input voltage phase monitor
- Circuits breakers and overloads on all motors
- Corrosion resistant coil coatings (optional)

Engine

- High temperature shutdown
- Low oil pressure shutdown
- Overvoltage / undervoltage shutdown
- Overcrank starting protection
- Output circuit breaker

Displays/Instrumentation

- Discharge air temperature, fuel level, hour meter, water temperature, oil temperature, oil pressure, battery volt meter
- Communication Interface: Output data for maintenance via serial ports to computer
- Indicator Lights: Lighted pushbuttons, summary faults
- Fault code display: ambient probe fault, discharge probe fault, compressor fault, heater fault, low airflow fault
- Buttons: start, stop, aircraft class selection, night setback (optional), dual hose (optional)

Available Options

Configuration

- 14"D insulated, flat air delivery hose
- Shore power cable and switch
- Proximity crash rail
- CE package
- Low fuel warning beacon
- Heat (Upgradable at customer location)
- Custom paint colors
- Operation indicator beacon

Engine

- Engine block heater
- Racor® fuel filter

Model	Airflow Range (min / max)	Air Static Press. @ Max Flow	Output Temp*	Heat Capacity	Width	Height	Length	Weight
DAC321	75 - 210 PPM	21 in WG	37°F	30 - 60 kW	91" 230.1cm	89" 226.2cm	156" 394.7cm	7,600 lbs 3,455 kg
DAC322	90 - 350 PPM	26 in WG	37°F	30 - 90 kW	91" 230.1cm	89" 226.2cm	214" 542.0cm	9,900 lbs 4,500 kg
DAC323	100 - 600 PPM	30 in WG	37°F	30 - 120 kW	96" 243.8cm	118" 229.7cm	214" 542.0cm	13,000 lbs 5,910 kg

Specifications subject to change without notice

*Temperature at maximum airflow on 120°Fdb/92°Fwb



Built in Palmetto FL, USA
ISO 9001 Certified
An ITW Company

Trilectron Industries

Headquarters & Factory: 11001 US Hwy. 41 North, Palmetto, FL 34221 U.S.A.

Phone: 941.721.1000 Fax: 941.722.5327

E-mail: tisales@itwgsegroun.com www.trilectron.com

Trilectron Asia Office

Phone: +852.264.14.489 Fax: 852.264.14.489

Trilectron International (UK)

Phone: 44.1723.370437 Fax: 44.1723.370125