

DXU90 All-Electric Pre-Conditioned Air Unit

TRILECTRON'S AIR-A-PLANE DIVISION



Model DXU90 Bridge Mounted

TRILECTRON/AIR-A-PLANE:

Trilectron Industries and air-a-plane products division have led the industry in product design and innovation. The best combination of experience, new technology and customer input has resulted in a product line you can trust for your aircraft's needs.

APPLICATION:

Completely self-contained all-electric bridge or ground mounted PCAir unit for comfortable conditioning of wide body and jumbo passenger aircraft cabins.

OPTIONS:

Mounting:

Unit location options are designed to fit the application. Under and over bridge installations allow the unit to be attached to an apron drive bridge and move freely with bridge actuation. Ground mounted installations on pedestal legs provide flexibility in unit location for fixed bridge and hangar application.

Passenger Bridge Conditioning:

Conditioned air can be delivered to the aircraft or to the loading bridge using the bridge-cool diverting valve mounted downstream of the unit.

Hose Storage and Implementation:

Flexible air delivery hoses can be stored on fixed stand-mounted baskets or in movable baskets attached to bridge bogies. Hose reels with or without drive yokes are also available.

PERFORMANCE FEATURES:

Proven design:

- Hermetic scroll compressor refrigeration circuits with oversized condensing coils
- Finned-tube enclosed element electric resistance heaters
- Aluminum box frame and panels
- ETL tested, listed and labeled
- Meets all UL, NEMA, CE, NEC, OSHA, NFPA, ASHRAE, ASME and AHM 73 & 74 standards

Easy to Operate:

- Simple lighted button operator station mounted at ramp level
- Automatic DDC controls determine appropriate mode and output temperatures

Economical:

- Blower fan mounted directly to the fan motor requiring no clutches, gears or pulleys
- Fewer moving parts equate to lower maintenance costs
- High efficiency output through the use of multiple refrigerant circuits in a "cascading series" arrangement
- Significantly less cost than running the aircraft APU

Durable:

- Designed to endure the rigors of the airport environment
- Easy access to all components for maintenance

Model	Cooling Capacity	Heating Capacity	Length	Width	Height	Weight
DXU90	90 Tons (317 kW)	108 kW	262" (665 cm)	92" (234 cm)	62" (158 cm)	9,380 lb (4,255 kg)

Trilectron's DXU90 All-Electric Pre-Conditioned Air Unit

Specifications

Construction

- Base Unit Weight: 9,380 lb
- Mounting Hardware weight: 500 lb
- Aluminum box frame construction
- Aluminum body access panels and doors with stainless steel hardware
- NEMA 4 Electrical enclosure and weather tight 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

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 colors are high gloss white over black frame
- Custom colors require a paint chip or swatch for accurate color match

Performance

- Nominal Cooling Capacity: 90 tons
- Nominal Airflow: 500 ppm (3.78 kg/s)
- Nominal Static Press: 37"wg (9.22 kPa)
- Nominal Heater Capacity: 90 kW, 6 stg
- Rating Condition: 95°Fdb/78°Fwb (35°Cdb / 26°Cwb), 460/3/60, R22, sea level
- Rated Cooling Capacity: 1,048,200 Btu/hr (307.2 kW)
- Rated Condenser Airflow: 76,000 CFM (35,866 L/s)
- Rated Condensate Flow: 0.70 GPM (44 mL/s)
- Rated Heat Output (Blower+Heater): 369,000 Btu/hr (108 kW)
- Refrigerants: R22, R134a, 407c
- Regional temperatures and elevation affect unit performance. Consult factory for specific unit selection data.

Environmental

- Operation Temperature: -40° F to +125° F (-40° C to + 52° C)
- Relative humidity 0-100%

Electrical

- Input (V/PH/HZ): 460/3/60
- FLA Cool/Heat: 236/125A
Max. Fuse: 300 A
- Blower Motor: 60 HP (44.7 kW)
- Condenser Fan Motors: 2 @ 10 HP (2 @ 7.5 kW)
- Electric heater (optional): 90 kW, 6 stage, finned-tube enclosed element

Control

- ALC® DDC Controller
- 24VDC Control Voltage
- Laptop interface port for set-point adjustment and troubleshooting
- Damper Airflow Control
- Remote mountable operator interface with large lighted momentary push buttons
- Bridge cabin mounted resistive element temperature sensor on flexible cable for placement inside aircraft cabin
- Central control interface box for terminations with cabin temperature sensor, remote operator panel and BMS communications

Protection

- Supply Air Smoke Detector
- High discharge air temperature (with heat option)
- Airflow loss
- High refrigerant pressure
- Low refrigerant pressure
- Input voltage phase monitor
- Circuit breakers and overloads on all motors

Displays/Instrumentation

- Meters: Output data for maintenance via serial port to computer or live reporting to BMS
- Indicator Lights: Lighted pushbuttons (see below), summary fault

- Fault Code Display: Dirty air filter, cabin probe fault, ambient probe fault, discharge probe fault, compressor fault, heater fault
- Buttons: Start, stop, Aircraft class selection

Available Options

Configuration

- Single outlet
- Variable Frequency Drive
- Bridge Mounting Brackets
- Ground Mounting Stand
- Up Blast Condenser Fan for ground mount
- High Capacity Heater — 144 kW
- 380/3/50 or 575/3/60 (V/PH/HZ) Input Voltages
- Operating Indication beacon
- Special paint scheme

Controls

- Cabin Temperature Probe with automatic probe failure over-ride
- Night Setback
- Bridge Interlock
- BMS communication interface

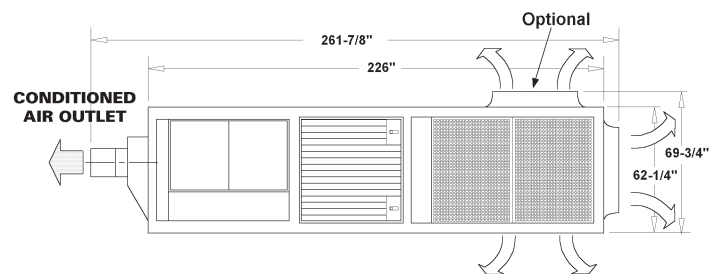
Bridge Cooling

- Bridge-Cool Diverter Valve
- Bridge-Cool Duct, Plenum & Diffuser kit
- Bridge-Cool Remote Operator Panel

Hose and Hose Storage

- 14"D Insulated, Flat Main Air Delivery Hose
- 14"D Insulated, Flat Extension Hose
- 14"D Insulated, Spiral Starter Hose
- Hose Baskets, Fixed and Caster
- Hose Reels, Fixed and Caster
- Suspension hardware for air delivery hose(s) on apron drive bridge applications

Specifications subject to change without notice.



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