



AdvancAir® environmental control units (ECUs) are ideal for a variety of applications from both OEM (original equipment manufacturers) and single-project customers. Providing temperature control as low as $\pm 0.02^{\circ}\text{C}$ and humidification control to $\pm 0.5\%$ RH, AdvancAir environmental control systems are custom built to the exact specifications your project requires. Our engineering staff will work with you to develop a custom ECU which will then be tested under contract load conditions simulated in our psychrometric testing chamber.

AdvancAir® puts greater capacity and enhanced performance in a smaller footprint. A system of individual, standardized components is pre-fabricated into customized cubes that can take any shape, any volume and any capacity. These units can be installed anywhere in standalone or mounted fashion.

Technical Capabilities

- Temperature control as low as $\pm 0.02^{\circ}\text{C}$
- Humidification control capable to $\pm 0.5\%$ RH
- Sophisticated process and static pressure controls
- Chilled water or DX-based systems
- Computer managed system-wide control for total environmental process, capable or integration into facility control system
- Vertical or horizontal configurations
- Can meet a broad range of industry standards
- Non out-gassing construction available

Installation Applications

- Semiconductor (lithography, CMP, wafer-processing)
- Aerospace (satellite and space craft development)
- Pharmaceuticals/Biotechnology
- Cleanrooms/Ultra Clean Assembly
- Explosion Proof (Class I Div I and Class I Div II)
- Military
- Microelectronic

Rev 8/25



AiR INNOVATIONS

7000 Performance Drive, Syracuse, NY 13212

(315) 452-7400

airinnovations.com

Controls

- Hot gas bypass refrigeration control
- PID loop controllers

Options

- Frequency drive for recirculation fan control
- Electronic suction throttling or liquid injection refrigeration control
- Touchscreen/PLC, PC or customer specific controls
- Remote monitoring, modern monitoring, or computer interface capabilities
- Automatic room/enclosure pressure control
- Monitoring of critical control points; airside, refrigeration or process
- Chart recording or datalogging capabilities
- Smoke detectors, loss of airflow and other alarms available
- Automatic restart after power interruption



Pharma explosion-proof
Advancair unit

Componentry Options

- Scroll compressors or semi-hermetic compressor
- DX evaporator coil
- Water-cooled condenser with built-in chillers for process water control utilizing same DX system
- Electric reheater
- DI ultrasonic humidifier or immersed element humidifier-DI or standard water
- Chilled water evaporator coils or hot water reheat coils
- Air-cooled condensers with Class II centrifugal recirculation fan or direct-drive plug recirculation fan
- Filter options include HEPA, carbon filters, ULPA, molecular
- Shunt trip breaker for emergency unit shutdown
- Condensate pump

Cabinet

Standard Features

- Welded frame capable of being lifted by top four corners
- 360 removable door panels for accessibility
- Customized cube construction— any shape, any volume, any capacity, any color

Options

- Aluminum, galvanized steel, stainless steel, carbon fiber, plastics construction
- Any finish based on design criteria including baked polyurethane finish, powder-coated finish, and more
- Internal steel or stainless steel cladding insulation
- Once-thru or recirculated air pre-filtration

