

Air Handling Units (AHU) for Conviron Plant Growth Rooms & Growth Houses

Air Handling Units (AHUs) create the stable, uniform growing environment that plants and researchers depend on. By precisely controlling airflow, temperature, and humidity, they help ensure consistent plant development, reduce environmental variability, and support reproducible research outcomes across a wide range of controlled environment applications. The image at right shows side-wall mounted AHUs that are arranged symmetrically throughout the room and connected to an overhead air distribution system.



AIR DELIVERY

- Perforated ceiling or duct socks
- Uniform downward delivery through crop zone

TEMPERATURE

- Cooling and heating duty engineered case by case
- Compressor or pump selection matched to project conditions as required

HUMIDITY

- Coordinated with humidification and dehumidification
- Return air drawn across selected coil

INTEGRATION

- Controls, utilities and filtration coordinated
- Service access assessed during engineering

HEAT EXCHANGERS & FANS

- Fan and heat exchangers selection engineered for each duty
- Cooling, heating and reheat options as required

ACCESS

- Side-wall mounted within growth space
- Maintenance clearances defined during layout review

UNIFORMITY

- Symmetrical layout supports consistent conditioning
- Downward supply and low-level return promote mixing

CAPACITY

- AHU quantity and airflow selected for each room
- Scalable for Conviron growth rooms and growth houses

KEY BENEFITS & APPLICATIONS

- Uniform environmental conditions through engineered air distribution, reducing temperature and humidity variations across the crop canopy
- Consistent airflow using perforated ceilings or duct socks that deliver conditioned air evenly through the plant zone
- Precise temperature control with custom-selected cooling and heat exchangers matched to the chamber's requirements
- Integrated humidity management by coordinating humidification and dehumidification systems with the air handling process
- Improved crop performance and research repeatability through effective air mixing and consistent conditioning
- Seamless integration with chamber controls, utilities, filtration, and service access requirements
- Scalable design that can be engineered for small chambers, large growth rooms, growth houses, and retrofit projects

One climate control platform. Multiple room applications.

GROWTH ROOMS

Distributed AHUs for room-scale plant growth.

GROWTH HOUSES

Integrated with lighting, ceiling delivery and room services.

RETROFITS

Adaptable internal arrangement for upgrades.

RESEARCH SPACES

Supports crop, seed and phenotyping work.