

PLANT GROWTH ROOMS

Darwin Chambers Company provides Plant Growth Rooms that are engineered for maximum value, sustainability, and conformance with USDA-APHIS standards, as applicable. Our plant growth rooms are modular, reconfigurable, and are offered both as standard and as entirely customizable systems—from panel configuration to available surface finishes, to nearly unlimited lighting and humidification/water distribution options, to movable, adjustable storage and racking/shelving options—we can work to meet each researcher's unique and specific requirements. Temperatures available down to 4° C and go up to 40° C.

Benefits

- Exceptionally quiet, solid-state thermoelectric or liquid-circuited cooling with electric reheat.
- Eco-friendly and efficient.
- No risk of corrosion
- Various threshold barrier options.
- Optional on-site validation services that have included multi-point temperature and humidity mapping have repeatedly proven nearly unbelievable uniformity and control results that far surpass FDA/ICH/GMP guidelines.
- Customizable plans, in addition to extensive warranty coverage.
- All rooms are produced with microprocessor controls, high/low alarms, and exceptionally accurate temperature/optional humidity control.
- ADA compliance available with no additional cost to the customer.
- The lighting that is included standard with programmed dimming capabilities to achieve 500-1000 $\mu\text{mol}/\text{m}^2/\text{s}$ (6") of broad PAR 5000K making this useful for entomology, arabidopsis, tissue culture, C3, C4, cannabis, algae, and general corn, wheat or soybean plant studies. Dimming is "all at once" type. Fixtures are easy to clean, white powder-coated aluminum with robust sealed LEDs. Fixtures are attached to (removable) shelves above and can be manually height adjusted in 1" increments as study needs change.



Standard Features

- 4" to 6" Polyurethane Foam Insulated Panels, R-Value 31+ or Higher
- Embossed White Aluminum Interior Surface Finish
- Embossed White Galvanized Steel Exterior Surface Finish
- Exceptional Temperature Uniformity
- Temperature Control At Sensor / Set-Point: $\pm 0.2^\circ \text{C}$
- High / Low Alarms
- Flexible Configurations
- Complies With LEED Standards
- Energy Efficient Offering Lowered Maintenance Costs
- Pre-tested, Pre-charged Refrigeration Systems
- Non-proprietary Controls
- Corrosive Resistant Equipment
- Precision Sizing
- Diurnal Cycling Temperature
- Virtual Touchscreen with Datalogging
- CSA certified control panel (UL equivalent)

Optional Features

- Added Dehumidification and/or Ultrasonic Humidification
- Extended Temperature And Humidity Ranges
- Stainless Steel / Special Surfaces
- Corrosive Resistant Equipment
- Added Redundancy in Controls and/or Conditioning system
- Water-Cooled Or Air-Cooled Condensers
- High Density Shelving
- Unlimited Door / View Window Sizing
- Insulated Glass View Ports
- High Weight Capacity Flooring
- Calibration / Validation / Maintenance Services
- Touchscreen Control Interface

The Darwin Advantage

All installed instrumentation is calibrated to NIST traceable standards and provided with a calibration form. In-house, factory calibrations are performed using state-of-the-art equipment with great accuracies. These reports are three-point verifications, traceable calibration documents.