

## ENVIRONMENTAL ROOMS

Darwin Chambers Company designs, manufactures, installs, and services custom chambers of all types and sizes, for a wide array of applications, including: GMP Shelf-Life Testing and Storage, Dry/Moist and Cold Storage for Seed and Agricultural Products, Nutritional Supplements, General Materials Testing, Mold and Fungal Incubation, Photography Storage, Compliant Vivariums (NIH, ALAAC, OLAW, USDA, etc.), more. We have pioneered a number of innovative, resource-saving technologies, from thermoelectric and liquid-circuited cooling systems to ultrasonic humidification. When custom solutions are required, our engineers have the training and experience to ensure that optimal performance does not sacrifice energy efficiency. Temperatures available down to -30° C and up to +60° C, as well as humidity as low as 5% RH and up 95% RH.

### Benefits

- 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/humidity control.
- No steam boilers used to avoid corrosion over time.
- ADA compliance available with no additional cost to the customer.
- Supplied with LED lights which emit significantly more light per unit of input energy than fluorescent bulbs. They also produce less radiant heat, and with less heat used, the cooling requirement for the controlled environment is diminished and the total energy used by an LED-equipped chamber is substantially reduced.

### Plug and Play

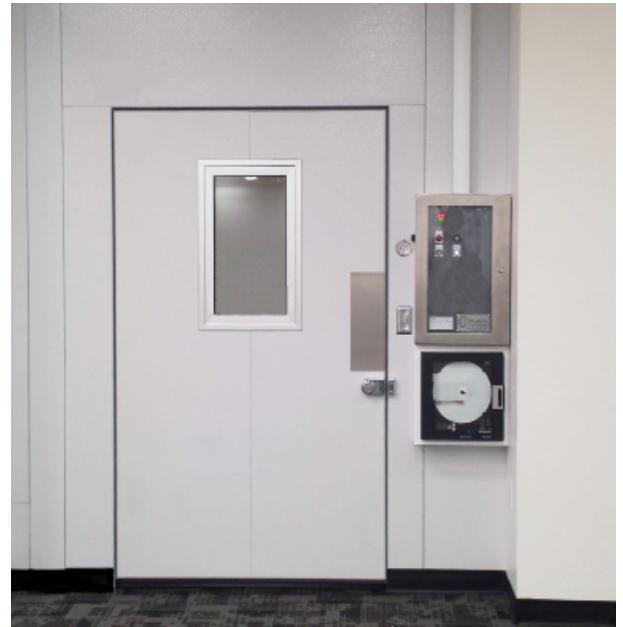
Most conditioning systems can be replaced very quickly in the future due to simple water-type connections. This ease of installation/removal also allows for greatly simplified future relocation.

### Reliable & Little Down Time

On many of our systems, our cooling and heating package can be swapped out with a new unit, if ever needed, in minutes rather than the days (or weeks) needed to fix a conventional system. In addition to the time benefits, non-certified technicians can perform the above equipment swap, in contrast to conventional systems that require certified refrigeration technicians.

### Easy Redundancy

Our rooms that include an optional redundant refrigeration system allow uninterrupted operation upon a refrigeration failure. The room does not need to be taken out of service during repair, as the failed system can be isolated and serviced with no impact upon the chamber operation.



### 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 And Humidity Uniformity
- Temperature Control At Sensor / Set-Point:  $\pm 0.2^{\circ}$  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
- CSA certified control panel (UL equivalent)

### Optional Features

- Added Dehumidification and/or Ultrasonic Humidification
- Extended Temperature And Humidity Ranges
- Stainless Steel / Special Surfaces
- Ethernet / Remote Monitoring / Alarming
- Corrosive Resistant Equipment
- Added Redundancy in Controls and/or Conditioning system
- Data Logging
- Water-Cooled Or Air-Cooled Condensers
- Custom Lighting Systems
- 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.