



2945 Washington Ave. St. Louis, MO 63103

877-783-6774 | sales@darwinchambers.com

www.darwinchambers.com



www.nycominc.com

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 $+60^{\circ}\text{C}$, as well as humidity as low as 5% RH and up to 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: $\pm 0.2^{\circ}\text{C}$
- 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

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.

INCUBATOR / WARM ROOMS

Our walk-in incubators offer reliable, efficient environmental controls for a variety of applications, including: microbiology, life science, drosophila-rearing, mosquito rearing, insect Incubation, stock storage, biologic culture incubation and ALAAC, OLAW, USDA, NIH-compliant vivariums.



Benefits

- Temperature conditioning system can be serviced or relocated quickly, due to a pre-charged and self-contained design.
- Available high temperature decontamination.
- Heat provided to incubators through one of three ways: ambient heat, hot-gas bypass refrigeration, or electric heat.
- Temperature ranges from 5° C to 60° C, 15° C to 37° C, 32° C to 60° C, etc.
- 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.
- ADA compliance available with no additional cost to the customer.
- Conditioning System Features: quick installation, extended reliability, efficient operation, precision control, simple servicing, low GWP, and low total cost of ownership.

Standard Features

- 4-6" Polyurethane Insulated Panels
- 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
- Controls with Auto-tuning, Fuzzy Logic

Optional Features

- Humidity Control At Sensor: $\pm 0.5\%$.
- 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
- Stainless Steel Construction
- 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
- Touch Screen Control Interface
- Electronic Door Lock with Data-Logged Access
- High Temperature Decontamination

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.

COLD ROOMS

Our walk-in cold rooms offer reliable, efficient environmental controls for a variety of applications; including: GMP Storage and Cold Storage for Seed and Agricultural Products, Nutritional Supplements, and more. Our cold rooms are typically supplied with desiccant or refrigeration based dehumidification in order to maintain a low dew-point and prevent ice accumulation on both product and equipment surfaces. Typical temperatures for our cold rooms range from of 0° C to 10° C.



Benefits

- Tight temperature control for reliability and accuracy
- Tight temperature uniformity of $\pm 0.5^{\circ}\text{C}$ or better throughout the room.
- Work with any space constraints, flexible custom applications.
- Conditioning system can be replaced or relocated quickly due to simple water-type connections.
- Precision Fluid Temperature Control Unit cooling system utilizes a combination of refrigerant technologies and glycol/water heat exchange technologies
- Eco-friendly and typically require fewer than 1000 Watts to operate
- System can be restored by a technician with no down time on the chamber.
- Special accessories that allow uninterrupted operation and great convenience.
- ADA compliance available with no additional cost to the customer.
- Simple, easy-to-use, easy-to-service control systems.
- Oversize evaporator fan coil eliminates the need for a defrost at 4°C or more.
- Smooth ceiling, aluminum or steel, for optimal performance over competitors who use egg crate ceiling. Egg crate ceilings promote mold growth, difficult to service equipment, difficult to clean, and interfere with lighting and airflow.
- 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.

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

Optional Feature

- 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.