

## RENOVATIONS

Darwin Chambers Company can renovate or refurbish reach-in chambers and rooms from a variety of manufacturers for a wide array of applications.

With documented experience turning out-of specification /older/poorly designed systems into validated stability chambers, Darwin Chambers can provide solutions when all-new construction is neither feasible nor recommended.

Walk-In rooms that do not meet uniformity (or other) requirements, can often be retro-fitted with newer equipment, controls, or design changes, in order to meet specifications that—in many instances—greatly exceed the OEM requirements (if there were any, to begin with). Whether the project is a drywall/stick-built 25°C/60% ICH room, or a 20-year-old panelized room (provided by a manufacturer that is no longer in business); solutions can be implemented to vastly increase reliability, accuracy, uniformity, and efficiency of the chamber.

Utilizing newer technologies and designs, many of the problems inherent in older systems; such as inefficient steam-boilers, insufficient air-flow, inadequate insulation, poor wiring, leaking refrigeration components, poor controls, etc., can be eliminated. Upon completion of work, documentation, warranties, performance, efficiency, and peace of mind will be provided to take the place of what is often a huge headache.



### Here are a few examples of the solutions we offer:

- 4" insulated panel rooms: In most cases, near to brand-new results can be obtained with the addition of our systems and controls. The result is often a quick turn-around time, cost savings, and excellent performance.
- Drywall/stick-built rooms: It is possible in some cases, to increase performance and to comply with FDA/GMP / ICH standards. While this style of construction is by no means the best, recommended method to maintain tight temperature and humidity requirements, some performance specifications can be met with the correct application of newer equipment and controls. Darwin Chambers has the proven capability to take rooms that are often giant problems and turn them into sustainable solutions that meet your specific needs.
- Older reach-in chambers: Often, the enclosures are in good condition, but the equipment is very out-of-date. Darwin Chambers can modify and/or replace any components necessary to meet requirements. Typical changes include: newer refrigeration systems, thermoelectric cooling, ultrasonic humidification, dehumidifying/drying systems, PID controls alarms, BMS connectivity, security enhancements, etc.
- Custom chambers: Specification and design assistance services are available to enable custom enclosures, and to meet more stringent requirements. Darwin Chambers technicians and engineers are experienced with a wide variety of control applications, and are available to provide any level of assistance needed.

### Chamber Validation Services

- Validation/Qualification services typically include single point validation, documented validation protocol specific to (each) chamber, and execution of the protocol. Personalized protocols are encouraged.

### 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.