Challenging Stability Chamber Results in a Big Win for CSZ

Eli Lilly, a world-leader in pharmaceutical development, contacted CSZ looking for a custom test chamber that would solve several challenging environmental testing requirements in their test laboratories. A test chamber was needed that would limit vibration and noise, while maintaining tight uniformity, temperature and humidity tolerances. This chamber was intended to be used to accommodate testing using their torsion test machines which would operate inside of the environmental test chamber.

Accommodating the strict limitations of the project requirements for performance was challenging as several additional requirements were also requested. To provide an ergonomic environment for their lab technicians, Eli Lilly also requested that the entire door serve as a viewing window. It was also requested that ports were provided in the door which would allow for technicians to reach inside whether they are sitting or standing. To further facilitate their laboratory technicians, a mechanically adjustable stand would also need to be provided which would allow the chamber to be raised and lowered to reduce repetitive motion stresses.

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Eli Lilly contacted CSZ after a quote was already in their possession from one of CSZ's competitors. After painstaking work from the dedicated engineering team and sales representatives from CSZ, a solution was proposed which was able to adequately address all project requirements. CSZ won the order and began work on the custom chamber model: CTH(ST)-67-1-H/RRAC.

Chamber Specifications:

Temperature Range:
0°C (32°F) to 60°C (140°F)

Humidity Range:
20% to 80%

Control Stability:
±1.0°C, ±4% relative humidity at steady state conditions after stabilization

Uniformity:
± 2.0°C temperature uniformity
± 5% RH Uniformity

Performance:
Pulldown from +25°C (+77°F) to 0°C (+32°F) in approximately 120 minutes with a product load of 165 lbs of steel

Airflow:
Approximately 300 CFM in a horizontal pattern, right to left