Case Study

Weiss Technik plans and implements airflow technology for testing IT network equipment

WHY
Support the manufacture and testing of IT network hardware. Testing needs include subjecting the products to various environmental conditions to ensure reliability and reduce warranty costs.

HOW
Custom Walk-In test chamber with front-to-back airflow design is specifically tailored to meet the customer's rigorous testing requirements for telecommunications equipment.

WHAT
One custom Xceed Walk-In Model features two remote-cooled condensors and bi-parting doors with heated windows, offering a spacious and controlled test environment.

WHY - the challenge.

A global leader in telecommunications, information technology, and consumer electronics has expanded their manufacture of IT networking equipment. To support this expansion, they needed to increase their testing capacity. The chamber must be equipped to handle a significant static load of 2,500 lbs of aluminum and a 60 kW live load, accomodate rapid temperature changes, and provide precise temperature control and airflow uniformity. The customer's test requirements include subjecting the equipment to controlled, real-world environmental conditions and identifying potential failure points to minimize warranty costs.

HOW - the idea.

Thanks to the collaboration between project partners, it was possible to develop an optimal design concept with front-to-back airflow. In this design, the supply air is discharged at the front of the chamber from the left- and right-side walls with full height double deflection adjustable grills. The return air from the chamber workspace is drawn into air circulation blower wheels mounted vertically and centered on the back wall of the workspace. This configuration provides unparalleled uniformity within the test space.

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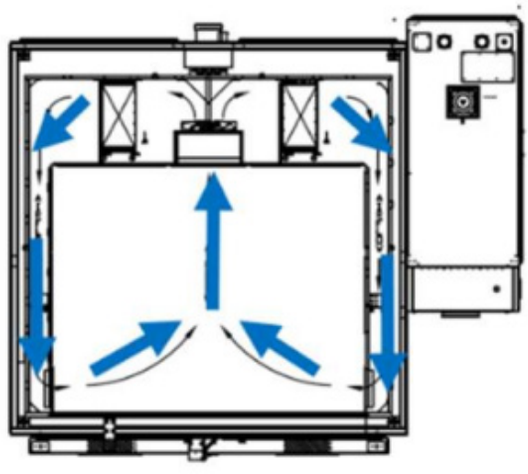
WHAT - the solution.

The Xceed Walk-In Model FBA chamber incorporates a unique front-to-back airflow design, facilitating precise temperature control and uniform distribution throughout the workspace. With dual single-stage refrigeration systems and remote-cooled condensers, this chamber can achieve a linear ramp rate of 1°C per minute from 55°C to -10°C, meeting the customer's testing requirements.

Product Selected: Custom Xceed Walk-In

Special Features

- Unique front-to-back airflow design
- Rapid linear ramp rate of 1°C per minute
- Dual single-stage refrigeration system
- Remote-cooled condensers for optimal temperature control
- Bi-parting doors with heated windows for visibility
- Stainless-steel interior walls for durability
- Customizable instrument panel with touchscreen controller
- Emergency stop push-button and beacon tower light for safety
- Environmentally-conscious refrigerant (R-449A)