Case Study

Weiss Technik delivers a custom solution to accommodate high heat output of data server racks.

WHY
Support the testing and management of power server racks and data server racks. Solutions were needed to determine how to manage and compensate for the high heat output of server systems.

HOW
Weiss Technik provided a Custom Xceed Walk-In test chamber with front-to-back airflow, specifically designed to accommodate high live loads and simulate real-world heat dissipation and removal.

WHAT
The Xceed FBA Walk-In features on-board cooling fans, R-449A Low GWP refrigerant, and a spacious interior, providing a highly effective environment for testing server racks with live loads up to 70kW.

WHY - the challenge.

A global electronics manufacturing services company required a testing solution for their power server and data server racks. The excessive heat generated by the systems has the potential to compromise performance and reliability. The customer needed a robust testing system to evaluate heat distribution and removal.

The goal was to simulate real-world conditions to develop effective cooling strategies and ensure the systems' operational efficiency and longevity. The challenge was designing a test chamber capable of accommodating high live loads and accurately replicating the thermal environments these systems would encounter in operation.

HOW - the idea.

The Weiss Technik team proposed a tailored solution to meet the company's specific testing needs. The Xceed FBA (front-to-back airflow) test chamber was designed to provide an optimal environment for testing the power server racks under realistic conditions. Featuring a 60 hp single-stage semi-hermetic twin-screw machinery module with a water-cooled condenser and specialized airflow design, this solution provided the unique ability to handle live loads up to 70kW and simulate real-world heat dissipation. The chamber's on-board cooling fans and comprehensive monitoring capabilities ensure precise control over the testing environment, allowing the company to gather accurate data on heat distribution and removal.

Case Study

Weiss Technik delivers a custom solution to accommodate high heat output of data server racks.

WHY
Support the testing and management of power server racks and data server racks. Solutions were needed to determine how to manage and compensate for the high heat output of server systems.

HOW
Weiss Technik provided a Custom Xceed Walk-In test chamber with front-to-back airflow, specifically designed to accommodate high live loads and simulate real-world heat dissipation and removal.

WHAT
The Xceed FBA Walk-In features on-board cooling fans, R-449A Low GWP refrigerant, and a spacious interior, providing a highly effective environment for testing server racks with live loads up to 70kW.

WHAT - the solution.

The Xceed FBA chamber features a spacious interior for large server racks. The chamber's stainless steel interior, bi-parting doors with heated windows, and roll-in floor design enhance usability and durability. Its front-to-back airflow package ensures uniform temperature distribution, with air discharged at the front and returned through vertically mounted blower wheels at the back. The chamber includes multiple stainless-steel ports for flexible configuration and customer cable management, as well as a bolt-on machine pack for easy on-site assembly.

This comprehensive solution provided the global electronics manufacturing services company with the precise testing environment needed to ensure their power server racks and data server racks could effectively manage and dissipate heat, ensuring optimal performance and reliability.

Special Features

- Spacious Interior: 66" width x 72" depth x 98" height clear usable workspace.
- Stainless Steel Construction: Durable 18 ga. stainless steel interior walls.
- Front-to-Back Airflow: Provides uniform temperature distribution for accurate testing.
- Multiple Ports: Thirteen 6" ID stainless-steel ports and one 3" ID port for flexible configurations.
- Emergency Features: Emergency stop push-button and beacon tower light with buzzer for safety.
- Advanced Control: Weiss Technik WEBSeason® controller with a 10" touchscreen.
- Efficient Refrigeration: 60 hp machinery module with R-449A refrigerant for effective cooling.
- Noise Reduction: Machine quiet package maintaining noise levels around 72 dBA.