Liebherr-Aerospace Toulouse SAS

Support Solutions for Development and Qualification Tests
Advanced Original Equipment Manufacturer (OEM) Testing Capabilities at Liebherr-Aerospace in Toulouse

Direct access to OEM expertise and experience
• Dedicated Center of Excellence hosting comprehensive test facilities to address the highest acoustics, altitude and vibration international standards
• Skilled and experienced staff guaranteeing highest levels of expertise to support R&T, development or qualification phases
• Tests according to state-of-the-art civil and military aviation, automotive, railway vehicles industry and industrial regulation standards

Development and qualification test rigs on 9 000 m²
Long experience in the performance of combined tests reproducing engine or fuselage conditions (mechanical, pneumatic, climatic, electrical)
• Comprehensive tests capabilities and state-of-the art measurement accuracy for equipment or systems
• Vibration shakers
• Anechoic chamber
• Altitude chambers

Innovative approach to anticipate the system behavior in operation
• Combination of air, temperature, pressure, hygrometry and electrical supply for the most realistic conditions
• Latest measurement technologies
• Wide range of tailored tests to simulate the system operational performance and reliability

Tailored approach to stay one step ahead
• Optimal test conditions guaranteeing test confidentiality
• Standard to specific package support and services along with tailored recommendations
• Expertise to reduce development costs and time to market
Acoustics
The anechoic chamber provides 450 m³ with full and hemi-anechoic configuration combining, if required, air supply/extraction and cooling capability to address latest regulations.

Adapt the anechoic chamber to your needs
- Dimensions: 7.5 x 7.5 x 8.0 m
- Cut off frequency: 90 Hz
- Background noise: <20 dB(A); <50 dB(A) (with air)
- Air extraction: 9 kg/s at 160 °C
- Air supply: 7 bar
- Air supply temperature: -55 °C to +300 °C
- Air supply pressure: 6 and 24 bar
- Flow: up to 3 kg/s
- Electrical power supply: 100 kW

Vibration
Unique vibration benches perform the most representative development and qualification tests.
- Force: 90 kN to 180 kN
- Maximum acceleration: 140G peak (market standard: 100G peak) and 135G RMS
- Frequency range: 5 to 2 500 Hz
- Slip table dimensions: 600 mm to 1 500 mm
- Air supply temperature: -55 °C to +600 °C
- Air supply pressure: 6 and 24 bar
- Flow: up to 2 kg/s
- Electrical power supply: 100 kW

Altitude
Two altitude chambers are equipped to run the most rigorous testing procedures matching the highest required standards in the most realistic conditions.
- Volume: from 2 m³ to 190 m³
- Pressure: up to 60 000 ft.
- Vacuum: up to 8.5 kg/s on ground
- Ambient temperature range: -55 °C to +250 °C
- Air supply temperature: -55 °C to +250 °C
- Air supply pressure: 6 and 24 bar
- Flow: up to 2 kg/s
- Electrical power supply: 100 kW

Customized support and solutions
- Delivery of adjusted offers sized to testing needs
- Modulated support from testing capabilities to complete management of the test campaign by Liebherr test engineering teams
Wide Product Range
The Liebherr Group is one of the largest construction equipment manufacturers in the world. Liebherr’s high-value products and services hold a high reputation in many industries. The wide range includes domestic appliances, aerospace and transportation systems, machine tools and maritime cranes.

Exceptional Customer Benefit
Every product line provides a complete range of models in many different versions. With both their technical excellence and acknowledged quality, Liebherr products offer customers the highest benefits in practical applications.

State-of-the-art Technology
Liebherr attributes great importance to the product areas of core technology and components, in order to achieve its consistent, top-quality products. Important modules and components are developed and manufactured in-house, for instance the entire drive and control technology for the construction equipment and mining trucks.

Worldwide and Family-Owned
Hans Liebherr founded the Liebherr family company in 1949. Since that time, the enterprise has steadily grown to a group of more than 130 companies with over 41,000 employees located on all continents. The corporate headquarters of the Group is Liebherr-International AG in Bulle, Switzerland. The Liebherr family is the sole owner of the company.

www.liebherr.com