

Dynamics & Vibration Testing



Validate Durability. Verify Performance. Reduce Risk.

DTB simulates the vibration, shock, acceleration, acoustic, and environmental stresses products encounter in operation, transportation, and extreme events. By replicating real-world dynamic environments, DTB ensures products can withstand the mechanical demands of their intended application.

Why DTB?

- Vibration, Shock, Acoustic, Seismic & Acceleration Testing
- MIL-STD-810, RTCA/DO-160, MIL-STD-167, MIL-S-901 & Customer Specifications
- Navy-Approved Shock Testing Facilities
- Integrated Engineering Support & Data Acquisition
- Fast Turnaround & Flexible Scheduling
- One of the Largest, Independent Testing Laboratories in the U.S.
- 75+ Years of Testing & Engineering Experience



Dynamics & Vibration Testing at Scale

- 15 Electrodynamic & Hydraulic Shaker Systems
- 15,000 to 55,000 Force-Lbs. Vibration Capacity
- Up to 100,000 Lbs. Shock Capability
- Acceleration Testing up to 200 G
- Payloads Exceeding 6,000 Lbs.
- DFAN, Seismic & Shipboard Testing Capabilities
- Combined Vibration, Temperature & Humidity Testing

Tested to Leading Standards

MIL-STD-810
MIL-STD-167

MIL-STD-202
MIL-S-901D

MIL-DTL-901E
RTCA/DO-160

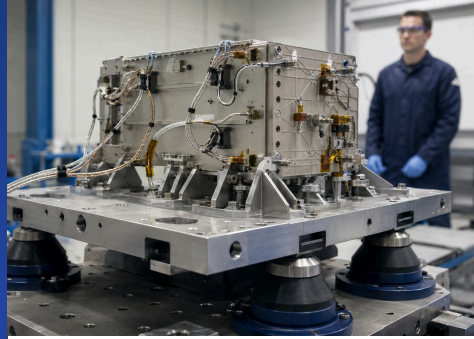
Telcordia GR-63-CORE
NASA Standards

Dynamics & Vibration Testing Capabilities



Vibration Testing

Evaluate product durability and performance under real-world vibration conditions. DTB performs sinusoidal, random, transient, and combined environment vibration testing using industry-leading electrodynamic and hydraulic shaker systems.



Shock Testing

Validate survivability under extreme impact and shock events. Capabilities include hammer shock, pyrotechnic shock, and high-G mechanical shock testing for military, aerospace, and shipboard applications.



Low Frequency & Seismic Testing

Simulate shipboard vibration and seismic events to verify structural integrity and operational performance under low-frequency dynamic loading.



Acceleration Testing

Assess performance under sustained inertial loads, crash conditions, and extreme maneuvering forces using advanced centrifuge facilities capable of testing up to 200 G.



Acoustic Noise Testing

Evaluate the effects of airborne and structure-borne noise, including Direct Field Acoustic Noise (DFAN) testing for aerospace, space, and defense applications.



Combined Environment Testing

Replicate real-world operating conditions by combining vibration with temperature, humidity, and other environmental stressors to evaluate long-term reliability.

Markets Served

Defense

Aerospace

Space

Naval & Shipboard Systems

Transportation

Industrial Equipment

Electronics

Need Dynamics & Vibration Testing You Can Trust?

Whether you're validating a new design, qualifying mission-critical equipment, or preparing for certification, DTB provides the advanced testing capabilities and engineering expertise to move forward with confidence.



Contact DTB

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