

# FULL SERVICE SEISMIC and SHIPBOARD VIBRATION FACILITY

GR-63-CORE MIL-STD-167-1

Innovation.  
Integrity.  
Dependability.



*Dayton T. Brown, Inc.'s vibration facility meets the requirements for the GR-63-CORE specification and the Mechanical Vibrations of Shipboard equipment per MIL-STD-167-1.*

## SYSTEM CAPABILITIES

- Dynamic Design Analysis Method (DDAM) NAVSEA 0908-LP-000-3010 Rev1. (Navy Spec.)
- Capable of replicating a Zone 4 seismic event
- Testing payloads greater than 6000 lbs. with a center of gravity 5 feet above the table
- Dynamic force ratings to 32,000 lbs. horizontal; 32,000 lbs. vertical
- Table size 6 feet x 8 feet horizontal; 6 feet x 6 feet vertical
- Full rated performance to 100 Hz
- Dynamic displacement 10.5 inches, overall displacement 12 inches
- Maximum velocity of over 40 inches/second

**[www.dtbtest.com](http://www.dtbtest.com)**

*A World of Engineering and Testing Under One Roof™*



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Under One Roof™



\* Accredited Test Lab  
767.01, 767.02, 767.03

ISO 9001:2008  
Registered



\* NVLAP LAB CODE  
200422-0

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Visit our web site at: [www.dtbtest.com](http://www.dtbtest.com)

\* Please visit [www.dtbtest.com](http://www.dtbtest.com) for testing covered under our scopes of accreditation.

Dayton T. Brown, Inc. is a 300,000 sq.ft. independent engineering and test organization whose existing management system was developed to accommodate over 2,000 programs per year. These projects range from a brief test or evaluation to a complex support engineering, research and development program of many years' duration. Dayton T. Brown, Inc. provides complete "cradle to grave" integrated product support services encompassing engineering design and analysis, prototyping, fabrication, test and evaluation, test equipment development, and support and documentation development and support.

### TESTING

- Simulate and record natural and induced environments on units under test.
- Test to Government, military and commercial specifications and standards.
- Perform nondestructive and destructive testing.
- Operate unit under test and verify its performance.
- Develop control plans, test plans, test procedures.
- Analyze test data and document in a formal test report.

Climate/Atmospheric Simulations  
 High/Low Temperature  
 Combined Environments  
 Wind & Rain  
 Salt Fog  
 Explosive Atmosphere  
 Sand & Dust  
 Humidity  
 Fungus  
 Icing/Freezing Rain  
 Solar Radiation  
 Thermal Vacuum  
 Altitude

Optical Testing  
 Distortion Analysis  
 Luminous Transmittance  
 Reflectance  
 Prism Measurements  
 Laser Power  
 Spectrophotometric Analysis  
 Haze  
 Diffuse Transmittance  
 Spherical and Cylindrical Power  
 Neodymium Laser (1.06u)  
 Light Intensity  
 Chromaticity

Electromagnetic Environment Simulation  
 Electromagnetic Compatibility (EMC)  
 Electromagnetic Interference (EMI)  
 Radiated Frequency Interference (RFI)  
 Electromagnetic Pulse (EMP)  
 Electromagnetic Vulnerability (EMV)  
 Radiation Hazard  
 FCC  
 Lightning  
 Transients  
 Electrical Disturbance  
 Electrostatic Discharge (ESD)  
 Low Level Swept Coupling  
 Bulk Current Injection  
 TEMPEST

Dynamic Simulation  
 Vibration: Electrodynamics,  
 Electrohydraulic, Mechanical  
 Acceleration  
 Inclination  
 Acoustic Noise  
 Shock: Classical, Pyro, Gunfire,  
 Hammer (Light & Medium Weight),  
 Windblast, Catapult

Hydraulic/Pneumatics Testing  
 Proof Pressure  
 Contamination  
 Leakage  
 Hydrostatic Burst  
 Flow  
 Soak/Deterioration

Mechanical Testing  
 Fatigue  
 Stress  
 Magnetic Particle  
 Liquid Penetrant  
 Tensile

### ENGINEERING

Site Surveys  
 Quality Audits  
 Failure Analysis  
 Software Testing  
 Reverse/Re-Engineering  
 Software Development  
 ATE Software Design & Development  
 Data Acquisition & Interface

Prototype Design & Fabrication  
 Failure Modes & Effects Analysis  
 Test Facility Design & Development  
 Performance Test Equipment Design & Fabrication  
 Reliability/Maintainability Modeling  
 Product Improvement & Validation  
 Development and Validation of Procurement Packages  
 Hardware Standardization Programs



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**DAYTON T. BROWN, INC.**  
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