



EMI, DYNAMICS, NUCLEAR

The Element Huntsville campus is a massive 238,196 square foot laboratory, which specializes in large-scale and custom testing for the defense, nuclear, commercial, telecommunications, transportation, space, and aerospace sectors. Our 115.6 acre facility has qualified more equipment than any other company in the industry and is home to:

- Element Materials Technology Huntsville Nuclear - a Center of Excellence
- 50+ Environmental Simulation Chambers/Systems
- EMI/EMC Testing to EPRI, Nuclear Regulatory, FCC, and DoD Standards
- 50+ Environmental Simulation Chambers/Systems
- Advanced Dynamics & Structural Load Testing
- High-Flow Steam & Water Capabilities
- Acoustic Noise Chamber Testing, Design, Refurbishment
- Advanced Calibration Services

A HIGHER STANDARD FOR EMI/EMC TESTING

Key services:

- Radiated Susceptibility ~ 200 V/m, Frequency Range 10 kHz to 40 GHz,
- HIRF Testing 100 MHz – 18 GHz to 7200 V/m pk
- Radiated Emissions ~ 30 Hz to 40 GHz
- Large Semi-Anechoic Screen Room
- High Temperature Vehicle Exhaust System
- Five MIL/AERO Semi-Anechoic Chambers
- Extended Ground Plane Test Beds
- Indirect Lightning-Single Stroke, Multiple Stroke, Multiple Burst, Level 5 DO-160
- AC & Telecom Port Surge, Electrical Fast Transients, Ring-wave, and Bust Testing
- Electrical Power Characteristics Testing
- Airborne Acoustic Noise and Structure-Borne Noise
- Antenna Characterization
- Shielding Effectiveness, Transfer Impedance
- Electrostatic Discharge to 30 kV
- Electromagnetic Pulse (EMP) to 50 kV/m
- HERO
- RADHAZ Analysis
- AC Power Fault

ADVANCED DYNAMICS AND STRUCTURAL TESTING

When it is time to verify that products are ready for real-world applications, you can count on a wide selection of advanced dynamics and structural testing services. This is particularly beneficial for mass-produced motorized products such as components intended for use in vehicles, aircraft, and other machines where reliability is critical. Regardless of your industry, you can get expert services in the following areas:

- Vibration: Electrodynamics, Electrohydraulic (Uniaxial, Biaxial, and Triaxial, Payloads to 75,000 Pounds)
- Shock: Classical shock, Shock synthesis, MIL-S-901D Light Weight Shipboard High Impact Shock
- Pyroshock: Ordnance to 50kg and 20,000 Hz, Electrodynamic to 2kg and 10,000 Hz
- Drop and Pre-Accelerated Drop: Half-Sine, Terminal-Peak Sawtooth, Square Wave 3,000g Amplitude, 100 MS Envelope, 4' x 4' Specimen
- HALT / HASS
- Parallel Pendulum: Half-Sine, Terminal Peak Sawtooth, Square Wave 100g Maximum Amplitude, 60 MS Envelope, 8' x 8' Specimen Footprint
- Acceleration
- Structural Load Testing

DELIVERING INNOVATIVE PRODUCT TESTING AND CERTIFICATION SOLUTIONS

ACOUSTIC NOISE CHAMBER TESTING, DESIGN, AND REFURBISHMENT

The engineers at the Huntsville laboratory specialize in a wide range of acoustics testing, including high intensity acoustic noise and progressive wave acoustic noise. The engineers at the lab provide support, testing, and engineering services for the design of specialized test equipment, including the WAS 3000 and WAS 5000 Acoustic Noise Generators. Many industries require the accurate measurement of the level of sound that products emit in order to adequately protect technicians, users and others in close proximity to the noise the equipment produces.

We conduct acoustic noise testing to meet the requirements of regulatory bodies like OSHA, telecommunications companies like AT&T and Verizon, medical equipment regulators, and business equipment regulators. We also help companies comply with the standardization of military and defense equipment.

Industry standards that cover acoustic noise testing include:

- ISO 9296
- ISO 3744
- ETSI EN 300 753
- MIL-STD-1474D (previously MIL-STD-740)
- ISO 7779
- GR-63-CORE
- IEC 60601

HIGH-FLOW STEAM, WATER, AND AIR

At Element Huntsville, we offer a comprehensive selection of services including engineering, analysis, and robust testing of equipment, such as motor operated valves (MOVs) intended for use in operating environments of high-flow steam and water. Fluid flow capabilities at the laboratory encompass wide range of areas, including pneumatic, hydraulic, fuels, steam, cryogenics, and more. With testing expertise that can help you throughout the entire lifecycle of your products, you get everything from evaluating prototypes for OEM qualification to troubleshooting high-flow steam and water valves already in use. Contact us today—and learn how you can get the expert testing you need.

CALIBRATION SERVICES

We provide calibration and metrology services, including the operation of a Type 1 Metrology Laboratory for NASA. Key calibration services include:

- Accelerometers, Humidity/Temperature, Pressure, DC/Low Frequency, Dimensional/Frequency, Mass/Resistance, pH/Torque
- 10CFR50 appendix B compliance
- ANSI/NCSL Z540-1-1994
- NIST Traceable

INTERNATIONAL APPROVALS AND CERTIFICATION

Getting your product into international markets can be difficult with geopolitical dynamics fundamentally impacting the type of markings you might need to get your product into a new country. Our team of experts is dedicated to helping you secure regulatory approval in global markets with a streamlined process designed to avoid delays and duplicative testing. Our international approval services include:

- A Single-Point-of-Contact for 180 Countries
- In-Country Representation
- In-country Testing and Approvals
- On-going Compliance Tracking
- Globally Recognized Test Reports
- Compliance Strategy for Faster Certification

