

Vibration, Shock, & Acceleration Testing Services

Impact or High G Shock Testing

Multiple Shock and Impact Capabilities with Drop Tower and AVCO Pneumatic Shock Machine.

Impact Capabilities:

- Maximum Impact Velocity of 250 in/sec
- Impact Head Weights of 1 lb to 50 lb
- Maximum Impact Energy of 3,600 in-lb
- Many differently shaped impact heads available

High G Shock Capabilities:

- Accelerations of 5,000 G and higher with shock amplifier
- Shock Pulse Duration Range of .2 Msec to 60 Msec
- Sine, Square, and Saw-Tooth Shock Waveforms

Combined Temperature and Vibration Testing

Constant or Cyclic Temperature Profiles can be combined with Vibration and Shock Testing simultaneously.

Equipment Capabilities:

- Temperature range from -80°C to $+180^{\circ}\text{C}$ (-112°F to $+356^{\circ}\text{F}$)
- Temperature rate of change up to $20^{\circ}\text{C}/\text{minute}$
- Up to 9 cubic feet interior work space
- Vibration and Shock Capabilities using ED Shaker Systems

Centrifuge (Constant Acceleration) Testing

Large Centrifuge for Constant Acceleration Testing with 8 Foot Diameter Arm

Equipment Capabilities:

- Maximum 100G Force
- Slip Rings available for operating and monitoring test item

Vibration and Mechanical Shock Testing

Typical Tests Include:

Reliability Testing, Accelerated Life Testing, Shock Loads, Transportation Load Simulation, Production Stress Screening, Squeak & Rattle Testing, Package Testing, Product Development, Fatigue due to Vibration, Fragility

Multiple Electrodynamic Shaker Systems Capable of:

- Slip tables for 3 Axis testing
- Up to 3,000 Hz Frequency Range
- Over 100g's peak acceleration
- Vibration: Sine, Random, Sine on Random, Random on Random
- Shock: Haversine, Half-Sine, Saw-Tooth, & Trapezoid
- Replication of Measured Field Data
- Gunfire Vibration
- Shock Response Spectrum



Pyroshock

Pyroshock (Pyrotechnic Shock) or Ballistic Shock are tests that simulate shock forces from the firing of projectiles, missiles or rockets.

Equipment Capabilities:

- Mid-field pyroshock with Mechanical Impulse Pyroshock Simulator (MIPS)
- Far-field pyroshock with ED Shaker or MIPS Simulator
- Frequency control up to 10,000 Hz
- Shock Response Spectrum (SRS) analysis

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