

Delphi Kokomo Technical Center Dynamics Testing

Utilizing the latest technology, Delphi offers comprehensive dynamics testing services. Our experienced engineers develop testing programs for many different types of products, including:

- Complex engine controllers
- Hybrid vehicle battery assemblies
- Radar systems
- Sensors
- Entertainment products
- Other Non-Automotive products

► Capabilities

- **Test Fixture Design Engineering and Fabrication**
- **Buzz, Squeak and Rattle (BSR) Testing**
 - Semi-anechoic room
 - Length: 21 ft. (6.4 meters)
 - Width: 25 ft. (7.62 meters)
 - 500 lbf with slip table
 - Vibration input methods:
 - Sine
 - Random
 - Long waveform replication
 - Analysis metrics:
 - Sound pressure level (SPL)
 - Zwicker loudness
- **Combined Vibration/Temperature/Humidity Testing**
 - Chamber size: Up to 144 ft.³ (4.1 meter³)
 - Table sizes up to:
 - Length: 5 ft. (1.52 meter)
 - Width: 5 ft. (1.52 meter)
 - Temperature range: -40K°C to 130K°C
 - Rate of temperature change: 8K°C/minute
 - Humidity range: 10% to 95% relative humidity
 - Shaker force: up to 15,000 lbf, 3 in double amplitude (DA) stroke
 - Vibration input methods:
 - Sine
 - Random
 - Sine-on-random
 - Kurtosis control
 - Classical shock



BSR/noise



Combined Environment System

- **Component Engineering Evaluation Shaker**
 - Slip table size:
 - Length: 16 in. (0.41 meter)
 - Width: 20 in. (0.51 meter)
 - Force: 1,500 lbf, 1 in DA stroke
- **Shock Testing**
 - Size: 27 ft³ (0.76 meter³)
 - Temperature range: -40K°C to 130K°C
 - Rate of temperature change: 10K°C/minute
 - Humidity range: 10% to 95% relative humidity
 - Shock pulse range:
 - 10 g, 5 to 20 ms
 - 1400 g, 0 to 0.5 ms
- **Drop Testing**
 - Drops shipping totes up to 84 inches (2.13 meters) while maintaining orientation

▶ Contact Information

For more information on the dynamics testing services listed above, please contact:

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**Combined Environment System:
 Vibration (15,000 Lbf) / Temperature /
 Humidity**



Shock Test Facility



Drop Test Facility