



## Sensor Calibration and Resonance Testing

November, 2010

The Modal Shop, a PCB Group Company, is in the business of helping its customers improve the performance of their products and processes. Products include calibration systems, test & measurement systems, NDT systems and industrial monitoring systems. The test solution offerings find their application in structural dynamics, machine health condition monitoring, vibration endurance testing, quality control of castings & forging components in automotive, aerospace, continuous process and industrial market.

Structural Solutions Private Limited, an ISO 9001:2008 certified professional engineering company is the sole representative in India for The Modal Shop.

### Calibration Systems

The Modal Shop provides calibration solutions in the following areas:

- **Acceleration**
  - Portable Field Calibrators
  - Handheld battery powered calibrators
  - Gravimetric systems for educational use
  - Turn-key 'back to back' systems for laboratory use
  - Shock calibration systems
  - Calibration Shakers
- **Acoustic**
  - Microphones
  - Preamplifiers
  - Sound sources & piston-phones
- **Force**
  - Instrumented impact hammers
- **Pressure**
  - Turn-key system for dynamic pressure calibration



### Mini Shakers

The Modal Shop now supplies small, portable and powerful permanent magnet electrodynamic exciters for both Modal and conventional vibration applications in handling small and medium sized components in the following force rating:

Smart Shakers™		Modal Shaker		Dual-Purpose Platform Shakers	
Model No.	Force Rating (N) <sub>pk</sub>	Model No.	Force Rating (N) <sub>pk</sub>	Model No.	Force Rating (N) <sub>pk</sub>
K2004E01	20	K2025E013	58	K2075E040	178
K2007E01	31	K2060E030	133	K2075E075	334
		K2100E035	156	K2110E110	489
		K2100E11	156		
		K2060E060	267		
		K2100E100	440		



## NDT Systems

The NDT-RAM Resonant Acoustic Method system with process compensation is designed to help you deliver fully inspected parts, economically and on time, giving you and your customer confidence in the quality of your parts thereby reducing rejects and enhancing your profitability.

### Typical Uses:

- Production - End-of-Line Inspection
- Production - Process Monitor
- Field Service – Troubleshooting
- Quality Control - Spot Checking
- Engineering – Development

### Successful Applications:

- Powder Metal & Small Metal Parts
- Forgings
- Metal Stampings
- Ductile Metal parts
- Aluminium Foundry
- Ceramics & Composites

### NDT Resonant Inspection can detect the following:

- Cracks, chips, and voids
- Porosity
- Nodularity
- Variations in hardness
- Residual stress
- Bonding, welding, or brazing failures
- Machining or heat-treatment processes

### Benefits:

- Ideal for in-line, automated, objective inspection
- No operator intervention needed for inspection
- 100% inspection to test every part prior to shipment
- Fast throughput – several parts per minute
- Confidence that all tested parts are defect free



## NDT-DTF Drop Test Fixture

The innovative Drop Test Fixture (NDT-DTF) Resonant Inspection System makes automation for 100% quality testing of small parts such as medical implement components, compressed gas cylinders, ball bearings, valve seat, cam, airbag vessel etc easy and efficient.

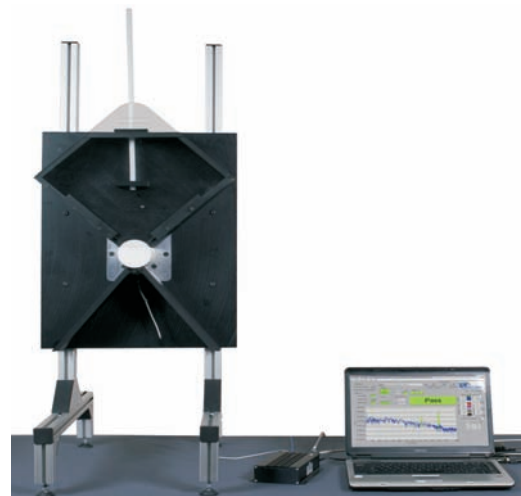
### Successful Applications:

Medical device components  
MIM & PIM parts

### Benefits:

- Ideal for testing small parts
- No operator intervention needed for inspection
- 100% inspection to test every part prior to shipment
- Versatile so you can test many different small parts

SSPL would be pleased to conduct a feasibility study for any specific part's quality inspection or effect of process changes on the product quality.



*Call us today for a site visit!*



For further product & application details please contact:

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