**MT-160 Modal Thruster**

**GENERAL DESCRIPTION**

The MT-160 thruster’s compact size, long stroke and lightweight armature make it well suited for all types of modal testing. The thruster has a compression collett and features a central through-hole suitable for modal stinger and pre-tensioned wire testing applications. The standard shaker trunnion allows the shaker to be operated in any axis from vertical to horizontal as well as easily mounted in wire tensioning tripods. The trunnion base also facilitates bolting the shaker in place for rigid applications or the use of adjustable mounting feet.

Reliability is assured through the use of the latest composite materials in the unique, all flexure, armature suspension design. The design provides for low axial stiffness while retaining high lateral stiffness and has no rolling or sliding components to wear out or produce unwanted harmonics or distortion. When combined with the correct Labworks linear power amplifier, the system is unmatched for reliability, performance and cost.

- **60 lbf. pk Sine**
- **1.4 Inch Stroke**
- **.005 to .188” Dia. Collett**
- **Stinger and Wire Through Hole**
- **Trunnion Mounting Base**

**MT-160 SPECIFICATIONS**

**STANDARD FEATURES**

- Air Cooled
- Permanent Magnet Design
- High Lateral Stiffness Armature Suspension
- Universal Collett Stinger Attachment
- Multi Axis Trunnion

**PERFORMANCE**

- **Sine Force**
  - Natural Cooling: 30 lbf pk
  - With Cooling Vacuum: 60 lbf pk
- **Max. Displacement**
  - Continuous pk-pk: 1.4 in.
  - Between Stops: 1.5 in.
- **Maximum Velocity**
  - 100 ips pk
- **Maximum Acceleration**
  - Bare Table: 120 g pk
  - 1 lb load: 40 g pk
  - 5 lb load: 11 g pk
- **Resonant**
  - 200 g pk

**PHYSICAL**

- **Armature Weight**
  - 0.5 lb
- **Suspension Stiffness**
  - 20 lb
- **Rated Drive Current**
  - Natural Cooling: 9 A
  - With Cooling Vacuum: 18 A
- **Frequency Range**
  - DC - 10,000 Hz
  - 5000-6000 Hz
- **Fundamental Resonance**
  - 1.5” above collett: < 15 Gauss
  - 1.0” from body: < 20 Gauss
- **Stray Magnetic**
  - < 15 Gauss
- **Cooling Air**
  - 100 cfm/15 in H2O
- **Dimensions**
  - 10.4”H x 7.4”W x 6.5”D
- **Shaker Weight**
  - 28 lbs

**OPTIONS**

- **C-146 Cooling Vacuum:**
  - Required for operation above 30 lbf.
  - Recommended for continuous operation above 25 lbf.
- **SI-160 Vibration isolation mounts**
- **MS-129-160 Modal Stinger Kit**

**Collet Chuck adjustable:**

- .005 dia to .125 dia
- Thruster thru hole Clearance: .170 dia min.

**Input connector**

**Specifications subject to change without notice. Contact the Labworks Inc. for current information.**

1. Please see systems ratings for additional specifications.
2. Load dependent