**ET-139 Electrodynamic Transducer**

**GENERAL DESCRIPTION**

The ET-139 shaker's compact size, long stroke and lightweight armature make it equally well suited for modal as well as general vibration testing. The shaker has a large 3.25 inch diameter mounting surface and a rugged suspension system which minimizes test fixture requirements and related fixture guidance problems. The shaker trunnion allows the shaker to be operated in any axis from vertical to horizontal and is easily positioned for modal applications. It also facilitates bolting the shaker in place either with or without vibration isolation mounts.

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

- 75 POUNDS PK SINE FORCE
- 1.0 INCH STROKE
- 3.25 INCH DIAMETER TABLE
- 75g ACCELERATION, BARE TABLE
- TRUNNION MOUNTING BASE
STANDARD FEATURES

- AIR COOLED
- PERMANENT MAGNET DESIGN
- HIGH LATERAL STIFFNESS
- ARMATURE SUSPENSION

ET-139 SPECIFICATIONS

PERFORMANCE

Sine force
- Natural cooling: 35 lbf pk
- With blower: 75 lbf pk

Random force
- Natural cooling: 25 lbf rms
- With blower: 50 lbf rms

Shock force
- 150 lbf pk, 50 msec

Max displacement
- Continuous pk-pk: 1.0 in
- Between stops: 1.03 in

Maximum velocity
- 70 ips pk

Acceleration
- Bare table: 75 g pk
- 1 lb load: 35 g pk
- 5 lb load: 12 g pk

Maximum acceleration
- Resonant: 120 g pk
- Peak shock: 150 g pk

PHYSICAL

Armature weight
- 1.0 lb

Suspension stiffness
- 60 lb/in

Rated armature current
- Natural cooling: 11 A rms
- With blower: 22 A rms

Frequency range
- DC-6,500 Hz

Fundamental resonance
- 4,000-5,000 Hz

Stray magnetic field
- Measured 1.5” above table: <15 gauss
- Measured 1.0” from body: <20 gauss

Cooling
- 100 CFM/15 in H₂O

Dimensions
- 10.4” H x 7.4” W x 6.5” D

Shaker weight
- 28 lbs

OPTIONS

Cooling blower: Required for operation above 40 lbf. Recommended for continuous operation above 35 lbf pk.

Vibration isolation mounts.

Modal stingers and mounts.

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

Specifications subject to change. Consult factory for latest specifications.