

APS 500 ELECTRO-SEIS®

Long Stroke Shaker with Air Bearing Load Mounting Table



The **APS 500 ELECTRO-SEIS®** Long Stroke Shaker is a force generator specifically designed to be used for calibration and evaluation of accelerometers and other motion transducers. It provides excellent properties for low frequency excitation of such devices. This model has a horizontal air bearing table coupled to the vibration that allows payloads up to 2,7 kg.

Applications

- Calibration and test for seismic instruments like geophones and heavy seismic sensors
- Seismic simulation for components
- Excitation of manufactured equipment in the factory or installed in the field to demonstrate compliance with seismic specification criteria

Features

- 20-lb, 90-N vector force
- 3.13 x 3.13-in, 79.5 x 79.5-mm load mounting table
- Air bearing guidance and support system carries up to 6-lb, 2.7-kg test load with very low cross-axis motion
- Efficient electrodynamic driver produces sine, random or transient waveforms
- Excellent waveform purity, typically less than 1 % THD

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Description and Characteristics

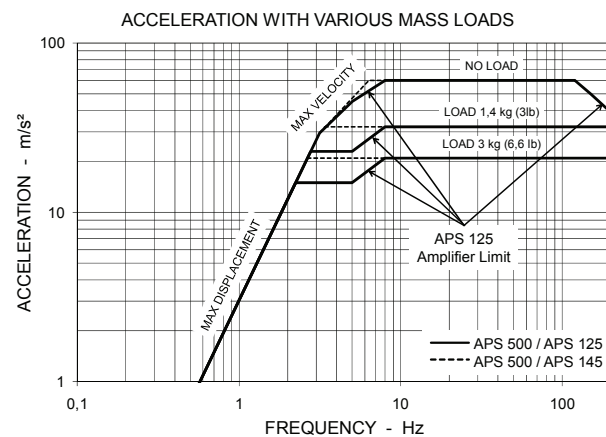
The Model 500 Horizontal Shaker consists of a load mounting table and air bearing assembly driven by a Model 113-AB-LA **ELECTRO-SEIS®** long stroke air bearing shaker. The shaker provides horizontal base excitation to items mounted on the table.

Static and dynamic transverse loads are transferred through a large area precision air bearing to a rigid guide bar of square cross section. The driver unit and guide bar are mounted on a common rigid base, ensuring correct alignment of all moving parts. The standard hole pattern consists of 25 threaded holes in a 5 x 5 array. Optional metric threads and spacing are available.

The Model 113-AB-LA driver unit uses permanent magnets and is configured such that the armature coil remains in a uniform magnetic field over the

entire stroke range ensuring a high degree of linearity. The self-cooled armature coil requires power from a matching electronic power amplifier.

Performance



Specifications

| Model | APS 500 |
|-----------------------------|--|
| Force (Sine Peak) | 95 N (21 lbf) |
| Stroke (Peak - Peak) | 152 mm (6.0 inch) |
| Frequency Range | DC ... 200 Hz |
| Operation | horizontal or vertical |
| Armature Weight | 1.5 kg (3.3 lb) |
| Max. Payload | Horizontal: 3.0 kg (6.6 lb) Vertical: 1.3 kg (2.9 lb) |
| Impedance | 1.2 Ω |
| Air Pressure Required | 4 bar ... 6 bar (60 psig ... 90 psig) |
| Air Flow Required | 650 l/h (0.4 cfm) |
| Total Shaker Weight | 64.0 kg (141.1 lb) |
| Overall Dimension L x W x H | 813 x 219 x 210 mm (32 x 8.6 x 8.3 inch) |
| Load Table Size L x W | 79.5 x 79.5 mm (3.1 x 3.1 inch) |
| Operating Temperature | 5 ... 40 degrees C |
| Storage Temperature | -25 ... 55 degrees C |

Accessories (optional)

| Model | APS 500 |
|---|-------------|
| Power Amplifier | APS 125 |
| System Cable for Connection Shaker to Amplifier | APS 0082-6E |
| Zero Position Controller for Vibration Exciters | APS 0109 |
| Vertical Mounting Kit / Vertical Operation Kit | APS 5002 |

Additional accessories available

All data are subject to change without notice