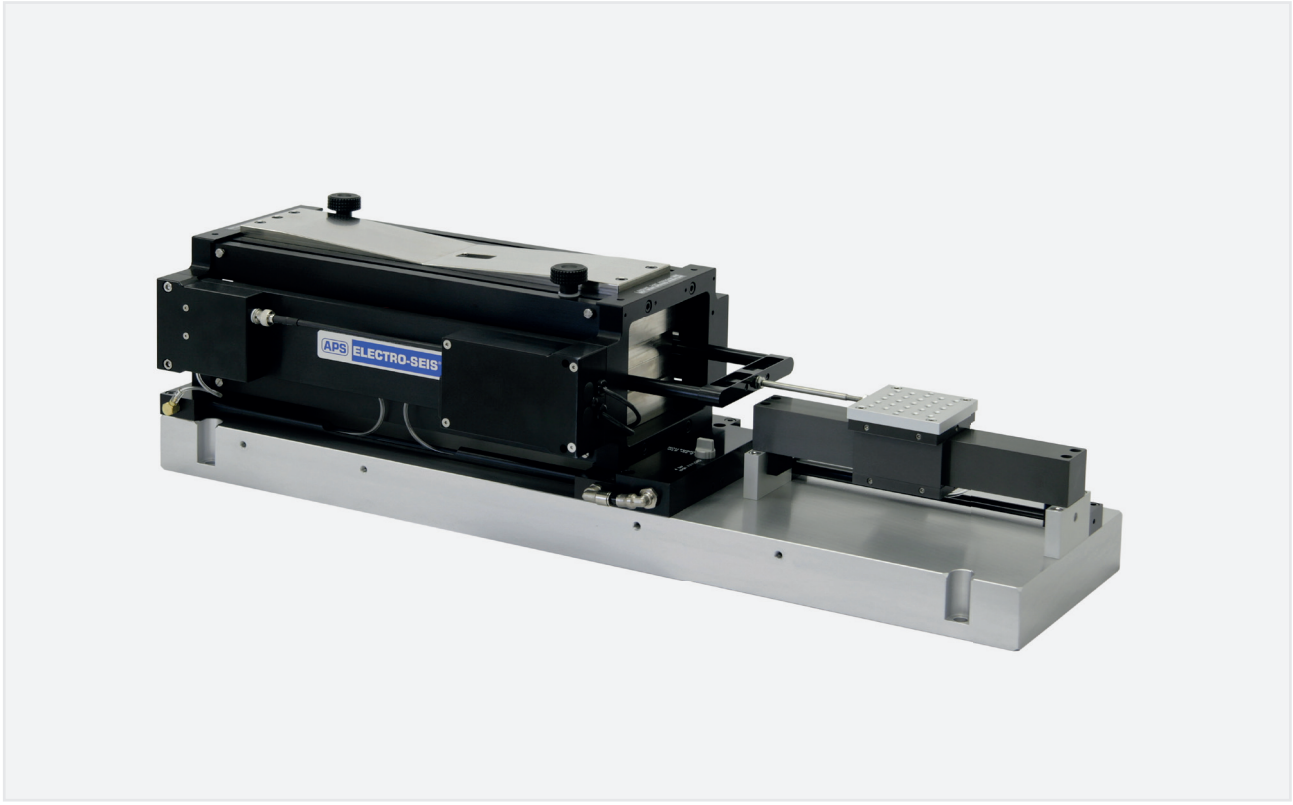
APS 500 ELECTRO-SEIS®

Long stroke shaker with air bearing load mounting table



Applications

- ✓ calibration and test of position and acceleration sensors and other motion transducers

Range of use

- ✓ designed for calibration and evaluation of seismic instruments with higher acceleration levels

Features

- ✓ 95 N (21 lbf) vector force
- ✓ efficient electrodynamic driver produces sine, random or transient waveforms
- ✓ excellent waveform purity
- ✓ air bearing guidance and support system carries up to 3.0 kg (6.6 lb) test load with very low cross-axis motion
- ✓ 79.5 mm x 79.5 mm (3.1 in x 3.1 in) load mounting table

Specifications

The APS 500 ELECTRO-SEIS® air bearing shaker is a long stroke, electrodynamic force generator specifically designed for calibration and evaluation of position and acceleration sensors or other motion transducers. It provides excellent properties for low-frequency excitation of such devices. The model consists of an air bearing driver attached to an air bearing load mounting table that allows payloads up to 3.0 kg (6.6 lb).

Technical data

Force rating [1) 2)]	95 N (21 lbf)
Displacement (peak - peak)	152 mm (6.0 in)
Frequency range	DC…200 Hz
Direction of excitation	horizontal or vertical
Payload, max.	horizontal: 3.0 kg (6.6 lbs) vertical: 1.3 kg (2.9 lbs)
DC coil resistance	1.2 Ω
Air pressure (required)	4 bar…5 bar (58 psig…72 psig)
Air flow (required)	650 l/h (0.4 cfm)
Air quality	ISO 8573.1 Class 3
Weight (net weight)	64 kg (141 lbs)
Armature weight	1.5 kg (3.3 lb)
Dimensions L × W × H	813 mm x 219 mm x 210 mm (32 in x 8.6 in x 8.3 in)
Dimensions armature L × W × H	79.5 mm x 79.5 mm (3.1 in x 3.1 in)
Temperature range (in operation)	+5 °C…+40 °C, ±2 K (+41 °F…+104 °F, ±2 K)

1) Sine peak

2) Interval mode of operation

Accessories (optional)

Power amplifier	PA 500 DM
System interconnect cable	APS 0082-6E
Center position controller for vibration exciters	CPC
Vertical operation kit	APS 5002

Additional accessories available

Description and characteristics

The APS 500 ELECTRO-SEIS® shaker consists of a load mounting table and air bearing assembly driven by an APS 113-AB-LA ELECTRO-SEIS® long stroke air bearing shaker. The shaker imparts transverse 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 APS 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.