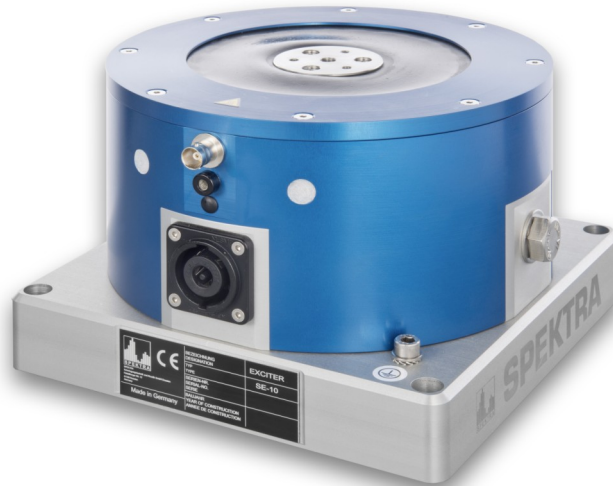


SE-10

Vibration Exciter



Application

- **Vibration testing** in research and development
- **Modal analysis** / Excitation of structures
- **Calibration** of vibration sensors, motion transducers and calibrators
- **Quality Assurance** in sensor manufacturing
- **Educational** demonstrations

Features

- **Light-weight aluminum armature with rugged stainless steel table surface**
- **Efficient electro-dynamic drive**
- **Guidance system with low transverse motions** (according to ISO 16063-21)
- **Force Rating 100 N**
- Usable **Frequency Range** DC up to **10 kHz**
- **High first axial Resonance Frequency** (> 12 kHz)
- **High acceleration amplitudes** (up to $60 g_n$)
- Effective **displacement 10 mm** (0.39 in pk-pk)
- Optional **Internal Reference Accelerometer**

SE-10

Vibration Exciter



Description

The vibration exciter SE-10 with a flexural guidance system is a high-tech product that is a reliable tool for vibration testing in research and development as well as for daily use in calibration laboratories.

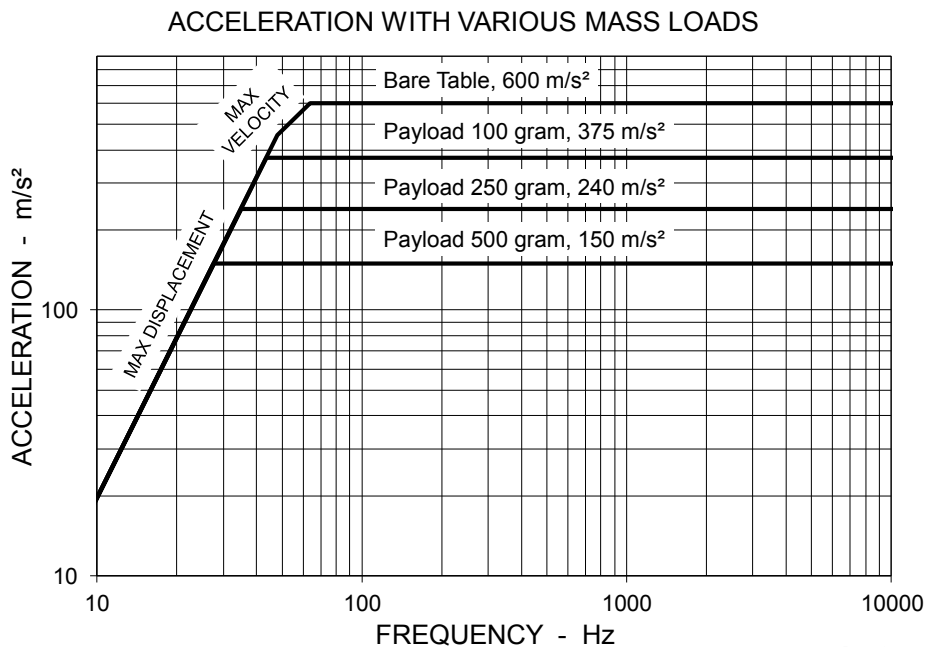
A force rating of 100 N and the high acceleration amplitudes of up to 60 g_n allow for a wide range of applications in vibration tests.

The rugged design, light armature and well-aligned guidance system (with low transverse motions, high radial and low axial stiffness) make the SE-10 a very good choice for the excitation of structures in modal testing.

Users of the SE-10 in calibration laboratories appreciate the faster calibration cycle times with low measurement uncertainties in the frequency range of 3 Hz to 10 kHz - made possible by the optional internal reference standard accelerometer.

Performance

The possible performance charts for vibration measurements with different payloads are exemplified in the following diagram.



SE-10

Vibration Exciter



Technical Data

Vibration Exciter	
Force Rating ¹⁾	100 N (22 lbf)
Frequency Range	DC (3 Hz) ⁴⁾ ... 10 kHz
Axial Resonance Frequency	> 12 kHz
Max. Stroke ²⁾	10 mm (0.39 in)
Max. Velocity	1,5 m/s (59 in/s)
Max. Acceleration ¹⁾	600 m/s ² (60 g _n)
Moving Element Weight	165 gram (0.36 lb)
Max. Payload	500 gram (1.10 lb)
Transverse Motion	typical 3 Hz...7 kHz, < 10 %; 7 kHz...10 kHz, < 25 %
Max. Current Input ¹⁾	13 A rms
Total Weight	9,5 kg (21 lb)
Working Temperature Range	5°C ... +40°C (41°F... 104°F)
Storage Temperature Range	-25°C ... +55°C (13°F... 131°F)
Connectors	
Vibration Exciter	8-pin Speakon [®]
Sensor ⁴⁾	BNC

Options and Accessories

Internal Reference Standard BN-09 ³⁾	
Sensitivity (± 10 %)	1 mV / m/s ² (10 mV / g _n)
Frequency Range	3 Hz ... 50 kHz
Resonance Frequency	approx. 70 kHz
Excitation Voltage	18 V _{DC} ... 30 V _{DC}
Constant Current Excitation	2 mA ... 20 mA
Output Bias Voltage	8 V _{DC} ... 12 V _{DC}
Discharge Time Constant	0,5 s ... 2,0 s
Settling Time (Within 10 % of Bias)	< 5 s
Amplifier PA 14-180	
Handles	

¹⁾ Interval mode of operation

²⁾ Recommended operation range; mechanical stops at 12 mm (0.47 in)

³⁾ All specification are at room temperature unless otherwise specified

⁴⁾ With the optional internal reference standard accelerometer