# CV-10 Mobile Vibration Calibrator

One-Stop Solution for On-Site Calibration

## Applications
- On-Site calibration of accelerometers, proximity and vibration velocity sensors
- On-Site calibration of vibration meters
- On-Site calibration of vibration test beds
- Vibration test system for small devices

## Selected Data
- Powerful vibration exciter
  - 5 Hz ... 10 kHz
  - 200 m/s² (20 g), max.
  - Up to 900 g (1.9 lb) payload
- Battery operation more than 10 h

## Features
- Integrated signal conditioners
  - Voltage, PE, IEPE, 4 mA...20 mA
  - Amplifier for PR transducers (option)
- Extension port for future options (e.g. special sensor power supplies)
- Rugged case for daily on-site operation
- Traceable to PTB, NIST, ...
- Easy Data Exchange via USB, Ethernet / WiFi (future option)
## Specification

### Technical Data

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
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<tbody>
<tr>
<td><strong>Frequency range</strong></td>
<td>5 Hz…10 kHz (300…600 000 CPM)</td>
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<tr>
<td><strong>Velocity, max. (sine peak)</strong></td>
<td>700 mm/s (27 in/s)</td>
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<tr>
<td><strong>Acceleration, max. (sine peak)</strong></td>
<td>200 m/s² (20.39 gₚ)</td>
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<tr>
<td><strong>Displacement, max. (peak - peak)</strong></td>
<td>5 mm (196 mils)</td>
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<tr>
<td><strong>Temperature range (for operation)</strong></td>
<td>0 °C…+50 °C (32 °F…122 °F)</td>
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<tr>
<td><strong>Payload, max.</strong></td>
<td>900 g (31.7 oz)</td>
</tr>
<tr>
<td><strong>Measurement Uncertainty</strong></td>
<td>5 Hz…1 kHz: 1.5 % ¹) (2.0 %) ²)</td>
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<tr>
<td></td>
<td>1 kHz…5 kHz: 1.5 % ¹) (3.0 %) ²)</td>
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<tr>
<td></td>
<td>5 kHz…10 kHz: 3.5 % ¹) (6.0 %) ²)</td>
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<tr>
<td><strong>Harmonic distortion</strong></td>
<td>&lt; 1 % (&gt; 100 Hz)</td>
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<tr>
<td><strong>Transverse motion</strong></td>
<td>according to ISO 16063-21</td>
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<tr>
<td><strong>Power supply</strong></td>
<td>100 V…240 V, 50 Hz…60 Hz (external)</td>
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<tr>
<td><strong>Rechargeable Battery</strong></td>
<td>Sealed gel lead rechargeable battery (internal) typical battery operation up to 10 hours (100 g payload, 100 Hz, 1 gₚ pk)</td>
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<tr>
<td><strong>Total weight</strong></td>
<td>9 kg (19.8 lbs)</td>
</tr>
<tr>
<td><strong>Dimensions (HxWxD)</strong></td>
<td>170 mm x 350 mm x 300 mm (6.7 in x 13.8 in x 11.8 in)</td>
</tr>
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Nota: Todas las incertidumbres de medición se determinan de acuerdo con el GUM (Guía de expresión de incertidumbre en la medición) con k=2 (factor de cobertura)

1) Under laboratory conditions: (23 ± 5) °C, max. acceleration: 30 m/s², max. payload: 30 g
2) Under worst case conditions: 0 °C…50 °C, max. acceleration: 200 m/s², max. payload: 40 g
CV-10 Mobile Vibration Calibrator  |  Technical datasheet

Accessories (included)

- **Adapter:**
  - 1/4-28 to 1/4-28 mounting stud
  - 10-32 to 1/4-28 mounting stud
  - Adhesive mounting base

- **Power supply with plug adapters**
- **Mounting wrench**
- **USB flash drive with report generation worksheet**
- **PTB traceable calibration certificate (DAkkS)**

Accessories (optional)

- **Proximity probe adapter**
- **Signal conditioner module for PR-sensors**
- **BN-17 IEPE transfer standard accelerometer**
- **Special sensor power supplies (on request)**

You can find more adapters on our website.
## Further data

### Operation Modes / Software

- **Operation Modes (standard):**
  - Manual Operation
  - Stepped Sine Calibration (automatic)
  - Transfer Calibration Mode (calibration / check of the system via calibrated reference transducer)

- **Operation Modes (optional):**
  - Sweep Mode (automatic)

- **PC-Software (optional):**
  - Management of DUT in a database, test setups, protocols and measurement campaigns

### Data Exchange

- **Interfaces:**
  - USB flash storage drive (standard)
  - Ethernet with optional software
  - WIFI with optional hardware

- **Data formats:**
  - CSV text files for sensor data, test setups and calibration results
  - SPEKTRA CS compatible database format via optional PC software