

# 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/s<sup>2</sup> (20 g<sub>n</sub>), 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

<b>Frequency range</b>	5 Hz...10 kHz (300 ... 600 000 CPM)	
<b>Velocity, max. (sine peak)</b>	700 mm/s (27 in/s)	
<b>Acceleration, max. (sine peak)</b>	200 m/s <sup>2</sup> (20.39 g <sub>n</sub> )	
<b>Displacement, max. (peak - peak)</b>	5 mm (196 mils)	
<b>Temperature range (for operation)</b>	0 °C ... +50 °C (32 °F ... 122 °F)	
<b>Payload, max.</b>	900 g (31.7 oz)	
<b>Measurement Uncertainty</b> (for accelerometer calibration and vibration generation)	5 Hz ... 1 kHz	1.5 % <sup>1)</sup> (2.0 % <sup>2)</sup>
	1 kHz ... 5 kHz	1.5 % <sup>1)</sup> (3.0 % <sup>2)</sup>
	5 kHz ... 10 kHz	3.5 % <sup>1)</sup> (6.0 % <sup>2)</sup>
<b>Harmonic distortion</b>	< 1 % (> 100 Hz)	
<b>Transverse motion</b>	according to ISO 16063-21	
<b>Power supply</b>	100 V...240 V, 50 Hz ... 60 Hz (external)	
<b>Rechargeable Battery</b>	Sealed gel lead rechargeable battery (internal) typical battery operation up to 10 hours (100 g payload, 100 Hz, 1 g <sub>n</sub> pk)	
<b>Total weight</b>	9 kg (19.8 lbs)	
<b>Dimensions (HxWxD)</b>	170 mm x 350 mm x 300 mm (6.7 in x 13.8 in x 11.8 in)	

All measurement uncertainties are determined according to GUM (ISO Guide to the expression of uncertainty in measurement) with k=2 (coverage factor)

1) Under laboratory conditions: (23 ± 5) °C, max. acceleration: 30 m/s<sup>2</sup>, max. payload: 30 g

2) Under worst case conditions: 0 °C ... 50 °C, max. acceleration: 200 m/s<sup>2</sup>, max. payload: 40 g



## ⊕ Accessories (included)

- ✓ **Adapter:**
  - 1/4-28 to 1/4-28 mounting stud
  - 10-32 to 1/4-28 mounting stud
  - Adhesive mounting base
- ➡ [You can find more adapters on our website.](#)
- ✓ 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)





## ⊕ Further data

<b>Operation Modes / Software</b>	<ul style="list-style-type: none"><li>✓ <b>Operation Modes (standard):</b><ul style="list-style-type: none"><li>• Manual Operation</li><li>• Stepped Sine Calibration (automatic)</li><li>• Transfer Calibration Mode (calibration / check of the system via calibrated reference transducer)</li></ul></li><li>✓ <b>Operation Modes (optional):</b><ul style="list-style-type: none"><li>• Sweep Mode (automatic)</li></ul></li><li>✓ <b>PC-Software (optional):</b><ul style="list-style-type: none"><li>• Management of DUT in a database, test setups, protocols and measurement campaigns</li></ul></li></ul>
<b>Data Exchange</b>	<ul style="list-style-type: none"><li>✓ <b>Interfaces:</b><ul style="list-style-type: none"><li>• USB flash storage drive (standard)</li><li>• Ethernet with optional software</li><li>• WIFI with optional hardware</li></ul></li><li>✓ <b>Data formats:</b><ul style="list-style-type: none"><li>• CSV text files for sensor data, test setups and calibration results</li><li>• SPEKTRA CS compatible database format via optional PC software</li></ul></li></ul>