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_n), max.
  - Up to 900 g (2.0 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 options)

Specification

Technical Data

Frequency range	5 Hz…10 kHz (300 … 600 000 CPM)	
Velocity, max. (sine peak)	700 mm/s (27 in/s)	
Acceleration, max. (sine peak)	200 m/s² (20.39 g_n)	
Displacement, max. (peak - peak)	5 mm (196 mils)	
Temperature range (for operation)	0 °C … +50 °C (32 °F …122 °F)	
Payload, max.	900 g (31.7 oz)	
Measurement Uncertainty (for accelerometer calibration and vibration generation)	5 Hz…1 kHz 1 kHz…5 kHz 5 kHz…10 kHz	1.5 % [1] (2.0 %) [2] 1.5 % [1] (3.0 %) [2] 3.5 % [1] (6.0 %) [2]
Harmonic distortion	< 1 % (> 100 Hz)	
Transverse motion	according to ISO 16063-21	
Power supply	100 V…240 V, 50 Hz…60 Hz (external)	
Rechargeable Battery	Sealed gel lead rechargeable battery (internal) typical battery operation up to 10 hours (100 g payload, 100 Hz, 1 g_n pk)	
Total weight	8.5 kg (18.7 lbs)	
Dimensions (HxWxD)	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/s², max. payload: 30 g

2) Under worst case conditions: 0 °C ... 50 °C, max. acceleration: 200 m/s², 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

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