



Model PVC-5000

PORTABLE VIBRATION CALIBRATOR

Advantages

- Small and completely self-contained, ideal for field check of accelerometers, velocity transducers and proximity probes, rugged and portable
- Reliable device for calibration check of the transducers
- Precise quartz reference accelerometer and conditioning electronics for superior control and stability

Applications

- 4-20 mA vibration transmitters
- Eddy current displacement probes / proximity probes
- Moving coil velocity transducer
- Condition monitoring & vibration protection system
- Portable vibration meters and analyzers

The **PVC-5000** Portable Vibration Calibrator is an ideal tool for checking accelerometers, velocity transducers, and proximity probes over a wide operating frequency and amplitude range. The unit is a compact, and completely self-contained vibration reference source, which can be conveniently used to calibrate individual transducers, vibration switches, and data collectors, as well as to validate the entire measurement & data acquisition of a condition monitoring or vibration protection system. An integrated precise quartz reference accelerometer and closed-loop feedback control system gives the **PVC-5000** enhanced stability and superior vibration calibration over an extended 10-1000Hz, continuously adjustable frequency range.

PVC-5000 vibration calibrator combines sine signal generator, power amplifier, standard reference transducer and a shaker all in one package which is a small volume, high accuracy and easy to operate device. It can be used either in laboratory or on site and in the field.

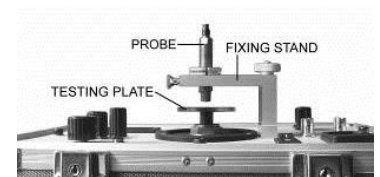
It can be adjusted through potentiometers and has a digital display. Either horizontal or vertical vibration can be generated.

Frequency: adjustable in the range 10 to 1280Hz $\pm 0.01\%$ Unit:

Acceleration : m/s^2 (PEAK)

Velocity : mm/s (RMS)

Displacement : μm (RMS)



Amplitude accuracy:

Acceleration: $30m/s^2$ Pk @ 80Hz, 40-320Hz range: $\pm 0.3dB \pm 1$ digit, 10-1280Hz range: $\pm 0.5dB \pm 1$ digit

Velocity: 25mm/sec Pk @ 80Hz, 40Hz to 320Hz range: $\pm 0.5dB \pm 1$ digit

Displacement: 10 μm Pk-Pk @ 80Hz, 40Hz to 320Hz range: $\pm 0.5dB \pm 1$ digit

Proximity probe linearity

Probe: 5mm and 8mm probes Range: 0~4.0mm

Display: 3 $1/2$ digit display for acceleration, velocity or displacement

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The HVC-500 is a small, self-contained handheld shaker designed for quick and easy checking of accelerometers, vibration monitoring & protection systems and data recorders

Features:

- Switchable 1g RMS Acceleration output
- Drives vibration transducers which weigh up to 150g
- Operates at 159.2 Hz (1000 rad/sec)
- Internal Battery
- CE compliant
- Provides 80 to 1600 calibration cycles, depending on accelerometer weight and is powered by a self contained battery pack. The automatic shut off after a 1.75 minute cycle can be overridden by a switch to provide continuous operation when required.
- Protected against overload by mechanical stops

Description

Model HVC-500 permits accurate adjustment of measuring instrumentation at a standard acceleration level of 10 m/s² (0 –150 g load). The reference signal may additionally be used for velocity and displacement calibration, at 10 mm/s and 10 μm, respectively. The calibrator is as an electromagnetic exciter driven by a crystal oscillator at a frequency of 159.15 Hz with servo feedback via a small accelerometer on the underside of the vibration mandrel which is used to maintain a constant and accurate vibration level independent of the mass of the transducer under test.



Standard Accessories:

Vibration Calibrator Main Unit

Carrying Case

Instruction Manual

Specifications :	
Operating Frequency	159.2 Hz ± 0.5 %
Acceleration Output	10 m/s ² (RMS) ± 3%
Velocity Output	10 mm/s (RMS) ± 3%
Displacement Output	10 μm (RMS) ± 3%
Transverse Output	< 5%
Distortion	< 3%
Maximum Load	150 g
Ramp-Up Time	< 3 Seconds
Operating Conditions	Temperature: -10~40°C Humidity : < 85 %RH
Internal Battery	1x9V 6F22
Size (Diameter x Height)	56 mm x 200 mm
Weight (with batteries)	900 g