

ACCELEROMETER CALIBRATION WORKSTATION



The Portable Accelerometer Calibration System, Model K9145D10, features accurate back-to-back comparison calibration of accelerometers in accordance with ISO 16063-21 (2003). A derivative of the industry-leading 9155 Accelerometer Calibration Workstation and based on a laptop PC system with a state-of-the-art 24-bit USB dynamic signal analyzer module, the K9145D10 offers a portable, turnkey calibration solution suitable for both laboratory and field portability.

The K9145D10 system supports a variety of accelerometer and velocity transducer types, including ICP® (IEPE), charge piezoelectric and voltage mode transducers. Other common accelerometers, such as piezoresistive and capacitive, can be supported by including additional signal conditioning. The included 9110D Portable Vibration Calibrator provides best-in-class rugged portability and offers simple, elegant usability as a standalone unit for in-situ calibrations.

All system components are selected for optimal portable performance within a secondary calibration system, starting with the industry's most proven reliable portable vibration calibration system shaker, the 9110D, and precision quartz ICP® reference accelerometer. Additional components included with the portable system are a Windows® laptop controller with software, system verification accelerometer, common transducer cabling and a variety of mounting accessories.

BENEFITS:

- Portable system suitable for both field calibrations and laboratory calibrations
- Traceable calibrations to NIST and PTB
- High efficiency operation, calibrations typically performed in less than 5 minutes per axis including setup time
- Includes on-site installation and training
- Conforms to the strict requirements of ISO 16063-21 (2003) and ISO 17025 (2005)
- Entry-level solution for laboratories with a moderate number of sensors
- Model 9110D may be used separately for in-situ calibrations
- Calibrates both accelerometers and velocity sensors



FLEXIBLE AND SIMPLE SOFTWARE SOLUTION

As a crucial part of the Model K9145D10 Accelerometer Calibration Workstation, the Windows 7®-and Windows 8®-compatible control software has been designed to provide accurate calibrations and an easy-to-use graphical user interface, based on the 40+ years of accelerometer manufacturing experience and more than 1,000,000 calibrations performed at PCB Piezotronics.



FEATURES:

- Simple intuitive user interface
- Fully customizable calibration certificate through Microsoft Excel®
- Open SQL database for storing test parameters and calibration results
- Calibrates at up to 200 user-defined frequencies
- Reports calibration data in English or Metric units
- Include phase measurement for modal applications
- Control sweeps with constant acceleration or constant velocity

K9145D10 SPECIFICATIONS:

Frequency Range	7 Hz - 10 kHz
Typical Measurement Uncertainty ¹	3% (7 Hz - 2 kHz) 1 dB (2 kHz - 10 kHz)
Calibration Method	Back-to-back comparison per ISO 16063-21 (2003)
Measurements	Sensitivity, Amplitude, Phase
Accelerometers Supported	ICP®, Charge, Voltage, Capacitive ² , Piezoresistive ² , CVLD ²
Sensors Supported	Acceleration, Velocity
Excitation Type	Stepped Sine, Multi-sine
Acceleration Levels	1 to 10 g _{pk} (9.8 to 98 m/s ² _{pk})
Calibration Data Management	Yes
Automatic Pass/Fail Classification	Yes
Measurement Units	English, Metric
Main Voltage Supply	Universal 100-240 Volts, 50/60 Hz
On-Site Installation and Training ³	Included
Number of Frequency Points Supported	200
Test Reference Frequency	User-Definable

¹ Uncertainty valid for sensors with mass of less than 50 grams (1.75 oz) and sensitivity of 1 mV/g or greater

² Requires additional signal conditioners

³ Excludes travel and living expenses outside the United States

SUPPLIED ACCESSORIES:

Laptop controller
9155 Calibration software
K9110D portable vibration calibrator

Data acquisition hardware
Database software
In-line charge amplifier

System verification sensor
Various mounting adaptors and cables
Manuals and Documentation

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