



MODEL K9145D10

AUTOMATED PORTABLE ACCELEROMETER CALIBRATION

- 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
- Portable Vibration Calibrator Model 9110D may be used separately for in-situ calibrations
- Calibrates both accelerometers and velocity sensors

LABORATORY AND FIELD USE

The Automated 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 Portable Vibration Calibrator Model 9110D 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 Model 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.

FLEXIBLE AND SIMPLE SOFTWARE

As a crucial part of the Model K9145D10 Accelerometer Calibration Workstation, the Windows® compatible control software has been designed to provide accurate calibrations and an easy-to-use graphical user interface, based on the 50+ years of accelerometer manufacturing experience and more than 1 000 000 calibrations performed at PCB Piezotronics.

- 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 measurements for modal applications
- Control sweeps with constant acceleration or constant velocity



Model K9145D10 Software and Calibration Certificates

SPECIFICATIONS	
Performance	
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 V, 50/60 Hz
On-Site Installation and Training ^[3]	Included
Number of Frequency Points Supported	200
Test Reference Frequency	User-Definable

Supplied Accessories
Laptop Controller
9155D Calibration Software
9110D Portable Vibration Calibrator
Data Acquisition Hardware
Database Software
In-line Charge Amplifier
System Verification Sensor
Various Mounting Adaptors and Cables
Manuals and Documentation

- [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.

THE MODAL SHOP

AN MTS COMPANY

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The Modal Shop, Inc. offers structural vibration and acoustic sensing systems and services for various applications in design and test laboratories as well as manufacturing plants. An extensive sound and vibration rental program, precision calibration systems, and both modal and vibration shakers are designed to simplify test phases. Non Destructive Testing Systems help manufacturers provide 100% quality inspection of metal components. The Modal Shop, Inc. is a subsidiary of PCB Piezotronics, Inc., and PCB® is a wholly owned subsidiary of MTS Systems Corporation.

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