

## PORTABLE VIBRATION CALIBRATION SYSTEM

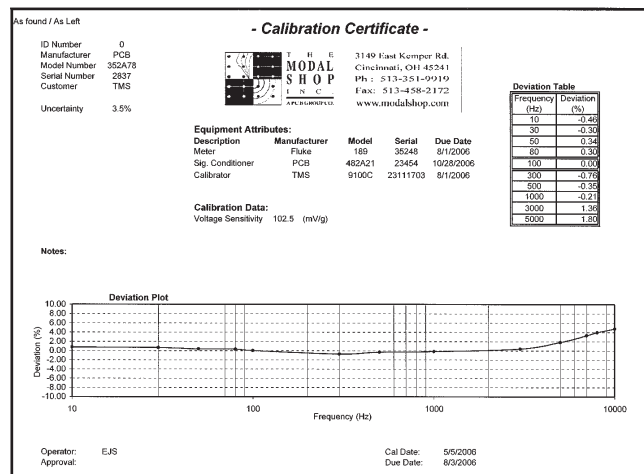


The 9100C Portable Vibration Calibration System is the perfect tool to field calibrate accelerometers over a wide frequency and amplitude range. Conveniently use the system to test accelerometers, velocity sensors and displacement sensors in the field without having to send them offsite to be calibrated. The K9100C kit adds a Fluke 189 digital multimeter with data logging and Visual Basic macro for Microsoft Excel for producing NIST traceable vibration sensor calibration reports that comply with ISO 17025 / A2LA requirements. The 9100C is designed to calibrate most vibration sensors in a bandwidth from 10 Hz to 10 kHz and weighing up to 500 grams.

In contrast to more elaborate laboratory style systems, the Model 9100C is portable, making it ideal for testing in the field or at a customer's site. The self-contained 9100C calibrator unit is equipped with it's own rechargeable power source, which makes the system an excellent choice for any fieldwork where power is not available. An external charger/power supply provides charging and operational current when used in the lab.

### BENEFITS:

- Easily perform NIST traceable calibrations over a wide frequency and amplitude range
- Quickly create calibration certificates by entering calibration data in Visual Basic macro for Microsoft Excel
- Reliable hardware from trusted names like Fluke and The Modal Shop
- Flexible calibration of acceleration, velocity or displacement sensors in either English or metric units





## MODEL 9100C

The Portable Vibration Calibration System allows the user maximum flexibility when adjusting frequency ranges (10 Hz - 10 kHz) and amplitude settings (Acceleration, Velocity, Displacement). The LCD readout of the shaker amplitude and frequency can either be displayed in English or Metric units. To ensure the accuracy and reliability of the test readings, an integrated NIST traceable reference accelerometer is included. Due to a unique suspension, the Model 9100C can support sensors that weigh up to 500 grams without the aid of an external support mechanism.

Model K9100C includes model 9100C and adds a Fluke 189 DMM and MS Excel Visual Basic macro for automated report generation. The only items required for calibration are user supplied signal conditioning and sensors.

### SPECIFICATIONS:

#### GENERAL:

Frequency Range	10 Hz - 10 kHz
Maximum Amplitude at 100 Hz <sup>1</sup>	10g (98 m/s <sup>2</sup> ) 6.2 in/s (0.16 m/s) 19 mil (0.48 mm)

#### ACCURACY:

Acceleration (35 Hz to 2 kHz) <sup>2</sup>	±3%
Acceleration (2 kHz to 10 kHz)	±10%
Velocity (35 Hz to 400 Hz)	±3%
Displacement (35 Hz to 150 Hz)	±3%
Amplitude Linearity	±1% (100 gram load)
Waveform Distortion	5% max (100 gram load at 35 Hz - 2 kHz)

#### POWER REQUIREMENTS - 9100C CALIBRATOR

Internal Batteries	12 VDC, 4 Amp Hours
AC Power	110 VAC at 60 Hz or 220 at 50 Hz (specify with order)

#### POWER REQUIREMENTS - FLUKE 189 MULTIMETER (K9100C)

AC Power	100/120/220/240 VAC at 45/66 Hz or 360/440 Hz
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#### TEMPERATURE

Operating	32° - 122° F (0° - 50° C)
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#### MECHANICAL - 9100C CALIBRATOR

Dimensions (H x W x D)	12" x 7" x 12" (30.5 cm x 18 cm x 30.5 cm)
Weight	20 pounds (9.1 kg)

#### MECHANICAL - FLUKE 189 MULTIMETER (K9100C)

Dimensions (H x W x D)	8" x 4" x 2" (203 mm x 100 mm x 50 mm)
Weight	1.2 pounds (545 grams)

#### INCLUDED ACCESSORIES (K9100C)

Software	MS Excel template for ISO 17025 compliant report generation
Digital Multimeter	Fluke 189 DMM

#### CERTIFICATION

NIST	Traceable to NIST at 100 Hz to 5 g's
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#### OTHER TMS CALIBRATION SYSTEM PRODUCTS

Model 9105C	Transfer standard system for on-site calibration of 9100C
Model 9155C	Turnkey Precision Accelerometer Calibration Workstation
Model 9350C	Turnkey Precision Acoustic Calibration Workstation
Model 9963C	Structural Gravimetric Calibrator For Accelerometers, Force Sensors, and Impulse Hammers
Model 9130C	Accelerometer Transverse Sensitivity Calibrator

<sup>1</sup> Max Amplitude is for sensors less than 100 grams mass.

<sup>2</sup> Frequencies below 30 Hz are for reference only and carry no accuracy statement.



The Modal Shop [www.modalshop.com](http://www.modalshop.com)

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