Accelerometer Calibration Package



Shaker | Controller | Reference Sensor | Software | TEDS | Sensor Database

RELIABILITY *MEETS* INNOVATION

VIBRATION RESEARCH

CALIBRATE & VERIFY

RUN VERIFICATION & UPDATE

Perform sensor calibration and verification from the convenience of your lab. With minimal setup and time, you can verify and update the accuracy of IEPE and charge-mode piezoelectric accelerometers, maintaining confidence in your results.

Accurately calibrate your accelerometer, determining its sensitivity at a defined frequency. Vibration Research uses the most convenient and least expensive calibration technique (per ISO 16063-21): the back-to-back comparison method, approved by the International Society of Automation (ISA).

10-MINUTE PROCEDURE

- Preloaded Sine test profile: select, adjust if needed, and run
- Automatically generate a report (customizable template included)
- Compare sensitivities and save new values; VibrationVIEW reads and re-writes to TEDS

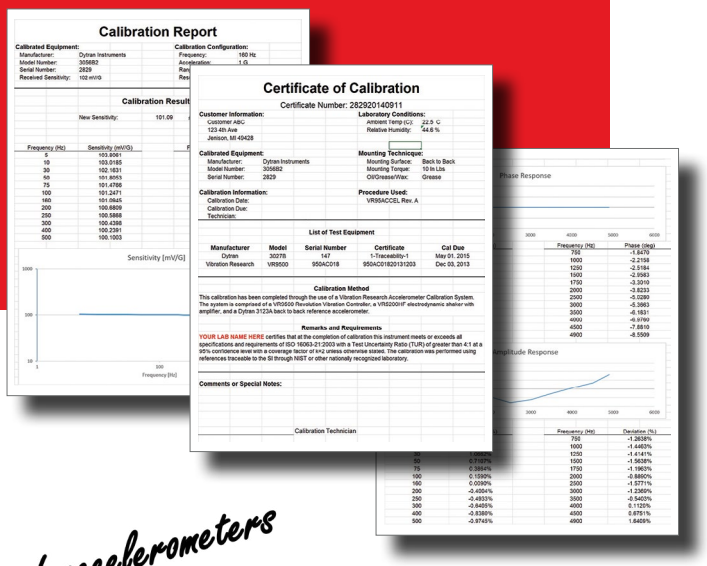
SOFTWARE FEATURES

Writes to TEDS
Upon test completion, write the new sensitivity values to the sensor's TEDS (transducer electronic data sheet).

Automatic Calibration
Automatically compare the sensitivities of reference and DUT sensors at the operating frequency range. The software saves the new values at the end of the test.

Ready-to-use Test Profile
Use the standard calibration test profile, which includes a test report template, or define your own profile.

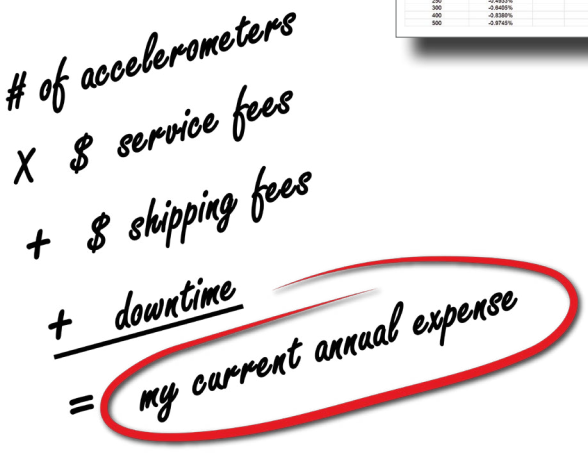
Custom Reporting
Use the standard report template or customize your own using the software's built-in editor or Microsoft® Word/Excel. VR offers one of the most flexible custom reporting packages.



SAVE TIME. SAVE MONEY.

Vibration Research knows your time is valuable. Its accelerometer calibration package eliminates the need to pack and ship each accelerometer to be calibrated, reducing your downtime.

You can use the calibration package on all your accelerometers for one price, time and time again. Simply set up each unit for calibration, run the 10-minute verification procedure, retrieve the report, and continue with your day.



ADVANTAGES OF SENSOR CALIBRATION

- Early detection of incorrect sensor sensitivity
- Identification of potential sensor defects
- Confidence in your test results

VibrationResearch.com/accelerometer-calibration

CONFIGURABLE PACKAGE

BUILD IT YOUR WAY

1. Choose components to complete an existing setup
   OR
2. Purchase a VR turn-key system

SENSOR CALIBRATION SOFTWARE

VR SOFTWARE CAN BE ADDED AT ANY TIME VIA ELECTRONIC KEY

VR9106 Accel Cal Verification (REQUIRES VR9100):
Writes to TEDS 0.9, 1.0, 1.1 | TEDS IEEE 1451.4

VR9100 Sine

9103HF High-freq Sine (OPTIONAL)
50,000 Hz frequency range | 20,000 Hz analysis

CONTROLLER

VR9700
2 inputs
1 output (drive) enabled
Or use any existing VR I/O box

SMALL SHAKER

VR5200HF
13 lbs-f peak
DC to 14,000 Hz
0.5 in max displacement

BACK-TO-BACK ACCELEROMETER

SPECIFIC SENSOR IS SUBJECT TO AVAILABILITY

Accelerometer cable
Sensitivity ±5%: 100 mV/G
Frequency range ±5%: 10 Hz to 10,000 Hz
5 Hz, 10 Hz, and 15 Hz low frequency calibration points included

TYPICAL MEASUREMENT UNCERTAINTY

3 Hz to 20 Hz	2.1%
20 Hz to 100 Hz	2.0%
100 Hz to 2.5 kHz	1.5%
2.5 kHz to 10 kHz	2.8%



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LEARN MORE

CALIBRATING A PIEZOELECTRIC ACCELEROMETER

Accelerometers should be routinely calibrated throughout their service life. Vibration Research offers a turn-key system that allows users to perform accelerometer calibrations within their facility. This course includes calibration instructions and considerations.

VRU COURSE LESSONS

1. Accelerometer calibration: limits & considerations
2. Back-to-back accelerometer calibration
3. How to calibrate piezoelectric accelerometers in VibrationVIEW

Explore the course at vru.vibrationresearch.com/course/calibrate-piezoelectric-accelerometer/

VIBRATION RESEARCH UNIVERSITY

VR UNIVERSITY

vru.vibrationresearch.com

VRU was founded with the goal of disseminating vibration testing theory, insights, and practices within the industry. All courses are free, and additional features such as quizzes are available with an account.

VIBRATION RESEARCH

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