

ACE5003 Vibration Calibrator User Manual



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12/2025

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1. Overview

The ACE5003 Vibration Calibrator generates stable vibration signals of a specific frequency and amplitude for sensitivity calibration of vibration sensors or vibration measurement systems

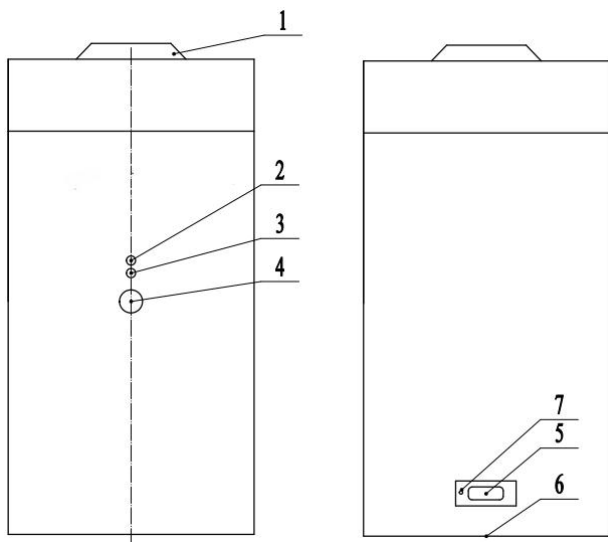
2. Major technical specifications

- (1). Vibration frequency: 159.2 Hz $\pm$ 1%
- (2). Acceleration (RMS): 10 m/s² $\pm$ 3%
- (3). Acceleration waveform distortion: < 3%
- (4). Transverse vibration ratio: < 5%
- (5). Acceleration amplitude stability: < 1%
- (6). Maximum load capacity: 100 g
- (7). Sensor mounting thread: M5
- (8). Power supply: 4.5 Wh lithium-polymer battery
- (9). Operating cycle: 120 S
- (10). Dimensions: Ø65 × H125
- (11). Weight: 510 g
- (12). Stabilization time under different loads:

Load Weight	0-60 g	60-90 g	90-100 g
Stabilization Time	About 20 s	About 30 s	About 40 s

(13) . Standard Reference: JJG 1062-2010 Portable Vibration Calibrators.

3. Structural features



1	Sensor Mount	Fixed Sensors Awaiting Calibration
2	Low Voltage Indicator (Red)	When lit, this indicates that the battery is low and needs to be charged.
3	Operational Status Indicator (Green)	When lit, the speed control value is stable
4	Power Switch	Start/Pause
5	Type-C Charging Port	Charging
6	Rating Plate	Display product information
7	Charging Indicator	Lit indicates charging; off indicates fully charged

4. Instructions for Use

Secure the vibration sensor to the mounting surface, press the power button, and wait until the stable operation indicator lights up before proceeding with calibration.

Precautions:

1. Please use a Type-C charger. A full charge takes 3 hours, and the device has a continuous operating time of 2.5 hours.
2. The instrument contains a magnet that attracts ferromagnetic materials. Therefore, the working environment must be clean, and iron filings, iron powder, fine iron wire, and similar particles must not be allowed to enter the instrument.
3. The recommended installation torque range for the sensor is 2.0–3.0 N·m. Simply ensure the sensor is firmly pressed against the work surface; do not apply excessive force, as exceeding the upper limit of the installation torque range may damage the internal suspension.

5. Packing List

No.	Name	Quantity
1	ACE5003 Vibration Calibrator	1
2	User Manual	1
3	Charger (5V 1A)	1

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