SV 110 & SV 111

Vibration Calibrators

SVANTEK

INSTRUMENTATION FOR SOUND & VIBRATION MEASUREMENTS

SV 110 Hand-Held Vibration Calibrator

The SV 110 is a hand-held vibration calibrator designed for on-site checks of hand-arm vibration meters in accordance to ISO 8041 both at 80 Hz and 160 Hz. The menu is simply operated by three push-buttons and a small OLED display. Depending on a chosen frequency, a user may select a calibration range from 1 m/s² to 10 m/s².
The SV 110 is a perfect solution for calibration checks of hand-arm vibration meters including Svantek's SV 103 and SV 106. Following the requirements of ISO 8041, the calibrator's built-in tri-axial reference accelerometer measures the cross-axis (transverse) vibrations to detect any interference to the calibration signal. Faults caused by transverse vibrations are indicated by LED on the calibrator's housing. This unique solution ensures stability of both calibration level & frequency, independent from the mass of the test object.
A small size of the SV 110 makes it very useful for calibration checks of various types of machine vibration accelerometers. The calibrator menu provides selection between both metric systems 'g' and 'm/s²' as well as choice of frequency unit between Hertz (Hz) and Cycle Per Minute (CPM). Accelerometers are conveniently attached using a mounting stud, a mounting disc or a dedicated adapter.
The calibrator has a built-in rechargeable batteries that typically allows for 12 hours of continuous operation.

SV 110 is hand-held vibration field calibrator designed in accordance to ISO 8041 for in-situ checks of hand-arm vibration meters.

The calibrator operates on two frequencies **80 Hz or 160 Hz** enabling in-situ checks of hand-arm vibration meters as well as machine vibration meters.

Titanium shaking table and **POWERFUL SHAKER** enable calibration of sensors with mass up to 300 g at 80 Hz.

The built-in **RECHARGEABLE** battery typically provides enough power for 12 hours of continuous operation.

Two conveniently located **LED DIODES** show the current status during the calibration process.

The calibrator aluminum housing is **ROBUST** and additionally protected with rubber covers on both ends.

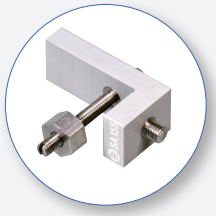
The **LEATHER COVER** gives comfort of a secure grip to the user.

The calibrator is simple in use. It has three **PUSH-BUTTONS** for selection of frequency and amplitude and start/stop control.

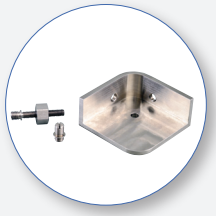
The **OLED** graphical screen displays information on selected frequency and vibration level.

Optional accessories to SV 110

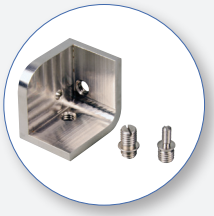
SA 105
Calibration Adapter to SV 105, SV105F and SV 107 Accelerometers



SA 155
Calibration Adapter to SV 150 and SV 151 Accelerometers



SA 40
Calibration Adapter to SV 3233A Accelerometer



SA 44
Calibration Adapter to SV 50 Accelerometer

SV 111 Vibration Calibrator

The SV 111 vibration calibrator is designed for in-situ checks in accordance with the ISO 8041 standard. The device is intended for operation in the field to check that an instrument is working correctly. The calibrator is based on a built-in tri-axial reference accelerometer and digitally-controlled shaker. In accordance with ISO 8041 requirements the reference accelerometer will measure cross-axes / transverse vibrations to detect any interference to the calibration signal. Three LEDs will light up on the calibrator panel whenever a fault caused by transverse vibrations is detected. This unique feature ensures the stability of the calibration level & frequency independently of the object being tested. The SV 111 is designed to calibrate a variety of vibration meters at different frequencies from 16 Hz up to 640 Hz. Depending on the frequency selected, the user may choose the level of calibration from 1 m/s^2 to 10 m/s^2.
The shaker can be loaded with up to 1 kilogram. Any improper object fixing is automatically detected and indicated by LEDs on the control panel giving information about the axis that needs correcting.
A set of adapters is available for calibration checks on tri-axial sensors including a special adapter for Svantek whole-body sensors (seat-pads), which can be directly mounted onto the shaker. Other types of vibration transducers can be easily attached using a mounting stand, a mounting disc or adapter.

SV 111 is a vibration field calibrator designed in accordance to **ISO 8041** for in-situ checks of whole-body and hand-arm vibration meters.

Calibrator is suitable for all types of vibration transducers for **ACCELERATION, VELOCITY and DISPLACEMENT** at 15.92 Hz; 79.6 Hz; 159.2 Hz and 636.6 Hz.

The shaker can be loaded with maximum payload of **1 kg at 15.92 Hz** enabling calibration of a complete seat-pad or building vibration sensors.

The built-in **RECHARGEABLE** battery provides up to 20 hours of continuous operation.

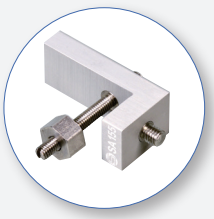
The **OLED** colour graphical screen displays information on selected frequency and vibration level.

The calibrator is simple in use. It has three **PUSH-BUTTONS** for selection of frequency, amplitude and start/stop control.

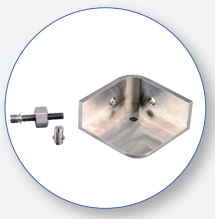
The **BUILT-IN REFERENCE TRANSDUCER** detects errors during calibration process and ensures calibration stability.

Optional accessories to SV 111

SA 105
Calibration
Adapter
to SV 105
Accelerometer

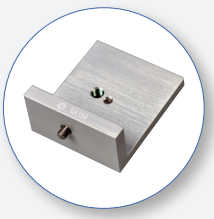


SA 155
Calibration
Adapter to SV 150
and SV 151
Accelerometers



SA 40
Calibration
Adapter to
SV 3233A
Accelerometer

SA 44
Calibration
Adapter to SV 50
Accelerometer



SA 154
Calibration
Adapter to SV 84
Accelerometer

Technical Specifications

SV 110

SV 111

	SV 110	SV 111
Calibration signal parameters		
Vibration Accelerations (RMS in m/s²)	1; 2; 3; 4; 5; 6; 7; 8; 9; 10 (at 79.58 Hz) 1; 2; 3; 4; 5; 6; 7; 8; 9; 10 (at 159.2 Hz)	1 (at 15.92 Hz) 1; 2; 3; 4; 5; 6; 7; 8; 9; 10 (at 79.58 Hz) 1; 2; 3; 4; 5; 6; 7; 8; 9; 10 (at 159.2 Hz) 1 (at 636.6 Hz)
Vibration Velocities (RMS in mm/s)	2, 4, 6, 8 10, 12, 14, 16, 18, 20 (at 79.58 Hz) 1; 2; 3; 4; 5; 6; 7; 8; 9; 10 (at 159.2 Hz)	10 (at 15.92 Hz) 2, 4, 6, 8 10, 12, 14, 16, 18, 20 (at 79.58 Hz) 1; 2; 3; 4; 5; 6; 7; 8; 9; 10 (at 159.2 Hz) 0.25 (at 636.6 Hz)
Vibration Displacement (RMS in µm)	4, 8, 12, 16, 20, 24, 28, 32, 36, 40 (at 79.58 Hz) 1; 2; 3; 4; 5; 6; 7; 8; 9; 10 (at 159.2 Hz)	100 (at 15.92 Hz) 4, 8, 12, 16, 20, 24, 28, 32, 36, 40 (at 79.58 Hz) 1; 2; 3; 4; 5; 6; 7; 8; 9; 10 (at 159.2 Hz) 0.0625 (at 636.6 Hz)
Amplitude Error Frequency Error Transverse Vibration Harmonic Distortion	Less than ± 3% Less than ± 0,5% Less than 10% of the main direction < 3 % (at 79.58 Hz) < 3 % (at 159.2 Hz)	Less than ± 3% Less than ± 0,5% Less than 10% of the main direction < 5 % (at 15.92 Hz) < 3 % (at 79.58 Hz) < 3 % (at 159.2 Hz) < 3 % (at 636.6 Hz)
General information		
Maximum Weight of Calibrated Object	300 grams (at 79.58 Hz) 200 grams (at 159.2 Hz)	1000 grams (at 15.92 Hz) 300 grams (at 79.58 Hz) 200 grams (at 159.2 Hz) 200 grams (at 636.6 Hz)
Sensor Mounting	Thread M5 x 6 mm	Thread M5 x 12 mm
Working conditions		
Temperature Range Humidity Range	-10 °C ÷ 50 °C 25 % ÷ 85 %	-10 °C ÷ 50 °C 25 % ÷ 85 %
Power supply		
Battery Type Continuous Operating Time Charging Time Power Supply for Charger	Rechargeable 7.2 V / 2 Ah up to 12 hours 5 hours (with SA 54) or 10 hours (with USB) SA 54 (5V / 1A) or mini USB 500 mA HUB	Rechargeable 6 V / 12 Ah Up to 20 hours Less than 10 hours SA 33 (12 V/ 1A) or15 W; 8÷24 V
Overall weight and dimensions		
Weight Dimensions	1200 g (incl. battery) 170 x 65 x 65 mm	8.2 kg (incl. battery) 395 x 270 x 194 mm

*Sensors shown on photos are not included in the kit.

The policy of our company is to continually innovate and develop our products. Therefore, we reserve the right to change the specifications without prior notice.

Proudly distributed by: