SVANTEK
sound and vibration

# SV111

## Portable Vibration Calibrator

SV 111 is a multi-frequency vibration calibrator designed for in-situ checks according to ISO 8041. The SV 111 is suitable for calibration checks of various types of vibration meters at different frequencies from 16 Hz up to 640 Hz. Depending on the selected frequency user may select level of calibration from 1 $m/s^2$ to 10 $m/s^2$. Shaker can be loaded with large weight up to 1 kilogram at 16 Hz.

# SV 111

## Portable Vibration Calibrator

### Multi-frequency calibrator

Calibration at four frequencies 16 Hz, 80 Hz, 160 Hz and 636 Hz

The SV 111 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. Depending on the frequency selected, the user may choose the level of calibration from 1 $m/s^2$ to 10 $m/s^2$.

### Design in accordance to ISO 8041

In-situ checks of seat accelerometers and hand-arm sensors

The SV 111 Portable Vibration Calibrator is designed for in-situ checks in accordance with the ISO 8041 standard - before and after series of measurements. The device is intended for operation in the field to check that an instrument is working correctly, hence the calibrator is housed in a portable hard-case.

### Built-in reference sensor

System detects and signals errors during calibration

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.

## Key Functions

### Multi-frequency calibration

The SV 111 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.

### ISO 8041 specification

Following the requirements of ISO 8041, the calibrator's built-in triaxial reference accelerometer measures the cross-axis (transverse) vibrations to detect any interference to the calibration signal.

### Whole-body vibration

The SV 111 is the perfect solution for calibration checks of whole-body vibration meters and seat accelerometers such as Svantek's SV 100A and SV 38V.

### Hand-arm vibration

Following the requirements of ISO 8041, the SV 111 is the perfect solution for calibration checks of hand-arm vibration meters including Svantek's SV 103 and SV 106D.

### Simple user interface

The calibrator is simple to use. It has three push-buttons for selection of frequency and amplitude and start/stop control. The OLED graphical screen displays information on the selected frequency and vibration level.

### Rechargeable battery

The calibrator has built-in rechargeable batteries that typically allow for 20 hours of continuous operation.

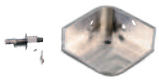
### Robust hardware with 3-year warranty

The device is intended for operation in the field to check that an instrument is working correctly, hence the calibrator is housed in a portable hard-case.

## Optional accessories

*SA 105*
*Calibration Adapter to SV 105 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*

## Related products

*SV 100A*
*Whole-Body Vibration Dosimeter*

*SV 106D*
*Six-Channel Human Vibration Meter*

*SVAN 958*
*Four-Channel Sound and Vibration Analyser*

*SVAN 974*
*Single-Channel Vibration Analyser*

## Technical Specifications

| | | |
|---|---|---|
| **Calibration signal parameters** | | |
| Standards | ISO 8041-1:2017 | |
| Vibration Accelerations (RMS in m/s²) | 1 (at 15.92 Hz)<br>1; 2; 3; 4; 5; 6; 7; 8; 9; 10 (at 79.58 Hz)<br>1; 2; 3; 4; 5; 6; 7; 8; 9; 10 (at 159.2 Hz)<br>1 (at 636.6 Hz) | |
| Vibration Velocities (RMS in mm/s) | 10 (at 15.92 Hz)<br>2, 4, 6, 8 10, 12, 14, 16, 18, 20 (at 79.58 Hz)<br>1; 2; 3; 4; 5; 6; 7; 8; 9; 10 (at 159.2 Hz)<br>0.25 (at 636.6 Hz) | |
| Vibration Displacement (RMS in µm) | 100 (at 15.92 Hz)<br>4, 8, 12, 16, 20, 24, 28, 32, 36, 40 (at 79.58 Hz)<br>1; 2; 3; 4; 5; 6; 7; 8; 9; 10 (at 159.2 Hz)<br>0.0625 (at 636.6 Hz) | |
| Amplitude Error | Less than ± 3% | |
| Frequency Error | Less than ± 0,5% | |
| Transverse Vibration | Less than 10% of the main direction | |
| Harmonic Distortion | < 5 % (at 15.92 Hz)<br>< 3 % (at 79.58 Hz)<br>< 3 % (at 159.2 Hz)<br>< 3 % (at 636.6 Hz) | |
| **General Information** | | |
| Maximum Weight of Calibrated Object | 1000 grams (at 15.92 Hz)<br>300 grams (at 79.58 Hz)<br>200 grams (at 159.2 Hz)<br>200 grams (at 636.6 Hz) | |
| Power Supply | Rechargeable battery 6 V / 12 Ah<br>Charging Time<br>Power Supply for Charger | operation time up to 20 hours<br>less than 10 hours<br>SA 33 (12V / 1A) or 15W 8 ÷ 24V |
| Environmental Conditions | Temperature<br>Humidity | from -10 °C to 50 °C (14 °F to 122 °F)<br>25 % ÷ 85 % % RH, non-condensed |
| Dimensions | 395 x 270 x 194 mm | |
| Weight | 8,2 kg (incl. battery) | |

*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.

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