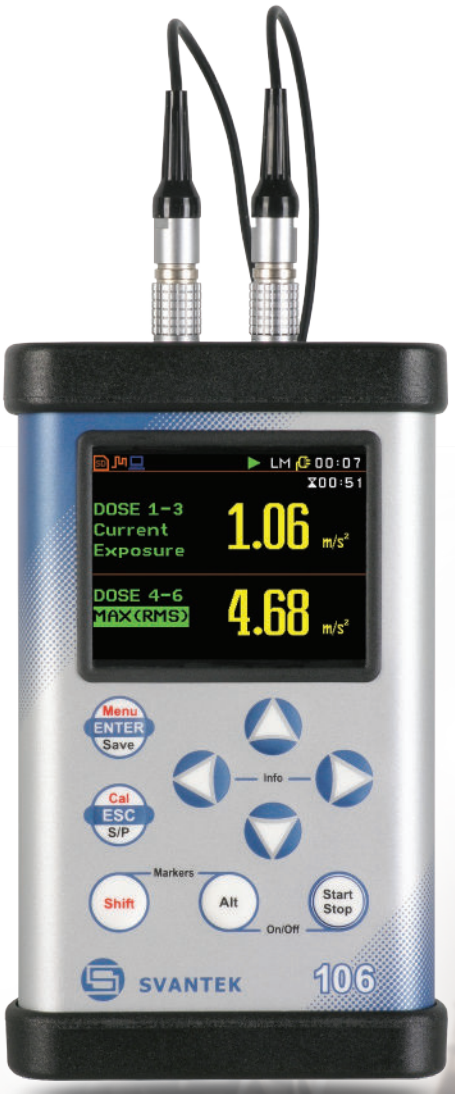
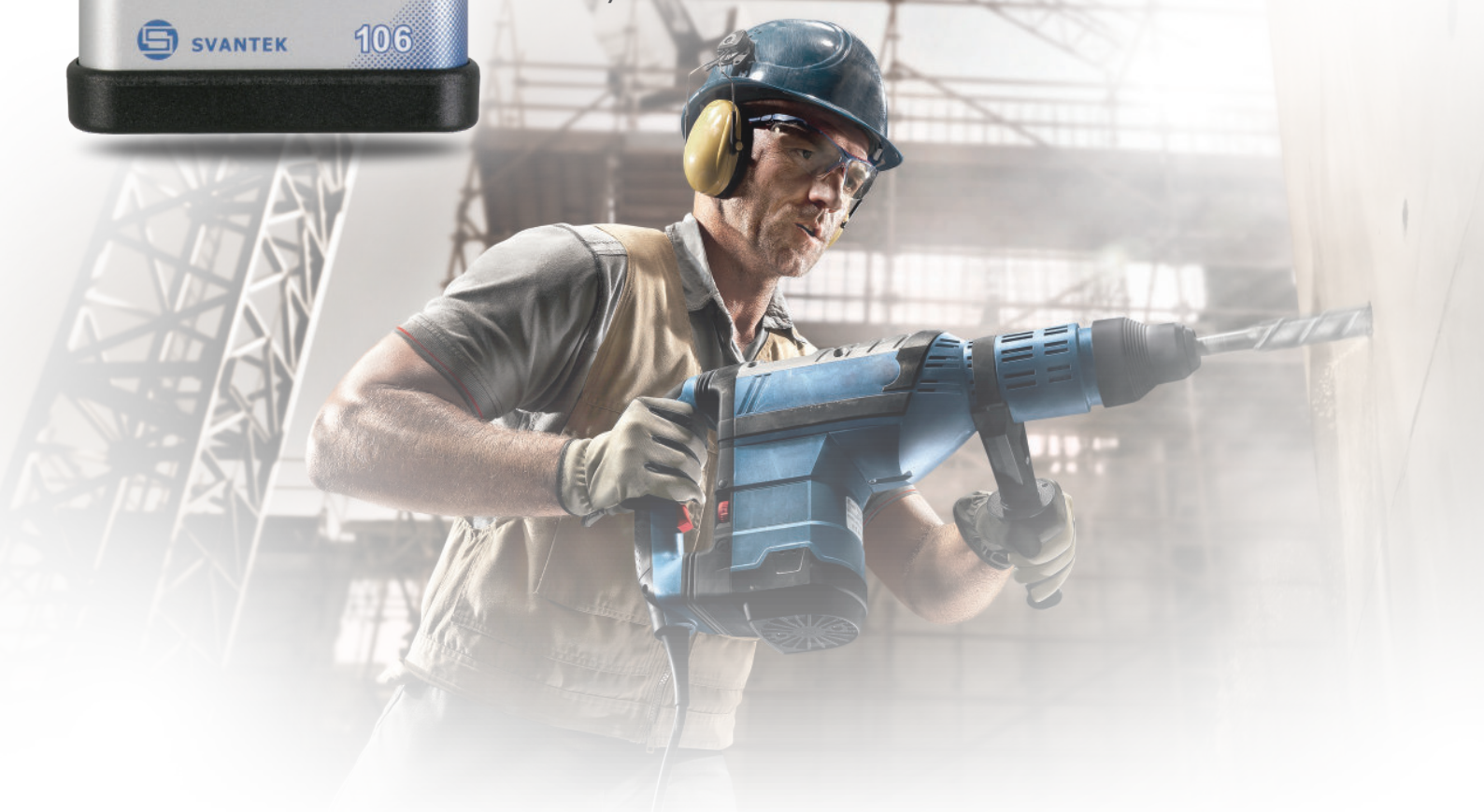
SVANTEK
health and safety

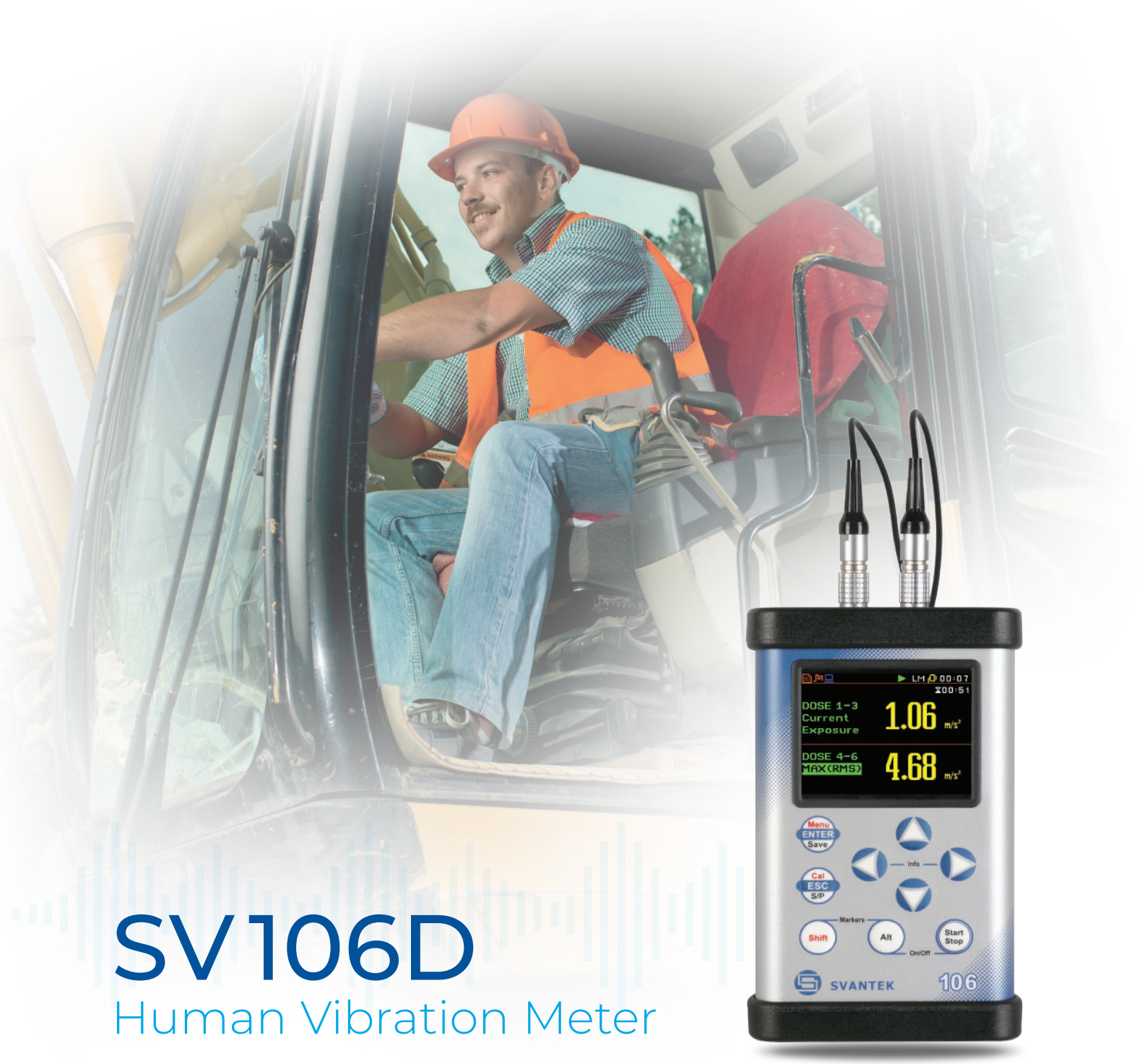


SV 106D

Six-Channel Human Vibration Meter

The SV 106D Six-channel Human Vibration Meter and Analyser meets the requirements of the ISO 8041-1:2017 standard and it is an ideal choice for measurements according to ISO 2631, ISO 5349 and Directive 2002/44/EC of the European Parliament and of the Council. This revolutionary, pocket-size instrument allows simultaneous measurements with two triaxial accelerometers (e.g. both-hands vibration or the triaxial transmission of vertical vibration through a vehicle seat).





SV 106D

Human Vibration Meter

Six Channels

Two inputs for connection of triaxial sensors

The SV 106D is equipped with two 3-axial inputs for IEPE or MEMS sensors. It allows simultaneous measurements with two triaxial accelerometers (e.g. both-hands vibration or triaxial SEAT vibration transmission).

Hand-Arm Vibration

3-axial hand-arm accelerometer with adapters

According to ISO 5349, hand-arm vibration should be measured in place, or at the point of contact with the hand tool. SV 106D uses dedicated MEMS sensors to measure vibrations on a tool handle or directly on a hand.

Whole-Body Vibration

Measurement on a seat pad and seat back

The whole-body vibration measurement is easier thanks to SV 38V seat-accelerometer which can be placed directly on the seat cushion, floor or fixed to the back of the seat. The triaxial SEAT transmission measurements are also possible.

Key Functions

The No.1 reference human vibration meter

The SV 106D is suitable for vibration exposure measurements in accordance with the ISO 5349 as well as ISO 2631 standards. The A(8) vibration exposure is calculated in real time and results from both sensors are displayed simultaneously in VDV and RMS units or points.

Low frequency measurements

SV 106D is capable of measuring vibration frequencies from 0.1 Hz, which makes it suitable for motion sickness measurements in accordance with ISO 2631-1. The low frequency vibrations are measured on a vertical axis with the Wf weighting filter.

Real-time frequency analysis

Frequency analysis such as 1/3 octave provides information on dominant frequencies and harmonics, which may help engineers to identify an effective vibration control measure as well as detection of artefacts. It can be activated at any time, by ordering an activation code.

WAV Recording

To meet the requirements of ISO 2631-5, the SV 106D offers a possibility of recording the raw time domain signal to the WAV format. The standard mentioned describes the dose calculation from the time domain signal in the case of multiple shocks. It can be activated at any time, by ordering an activation code.

Time-history logging

The RMS, Peak, Peak-Peak, VDV, MTVV or dose results such as A(8) and Vector with all required weighting filters for human vibration measurements are stored on a microSD card.

Low power consumption

One of the biggest advantages of using the SV 106D is its power efficiency. It can run up to 16 hours on one set of AA rechargeable batteries.

PC software

Supervisor is a software package for health and safety specialists. The package supports all Svantek instruments for the health and safety market.

Supervisor software supports data download, instrument configuration and provides a complete set of tools for determination of hand-arm and whole body vibration exposure. The measurements are recorded in m/s^2 and are directly comparable to the limits laid down by European Directive 2002/44/EC. It is also possible to convert these units into Points, which are widely used within the health & safety sector. All the information displayed within the panel window can be printed in the report.

Optional accessories

SV 105
Tri-Axial Hand-Arm Vibration MEMS Acclerometer

SV 105F
Tri-Axial Hand-Arm Vibration Acclerometer with Force Detection

SV 150
Tri-Axial Hand-Arm Vibration MEMS Accelerometer

SV 38V
Whole-Body Vibration MEMS Accelerometer

SV 151
Tri-Axial SEAT Vibration MEMS Accelerometer

SA 146
Carrying Case for SV 106D and accessories

SV 110
Hand-Arm Vibration Calibrator

SV 111
Hand-Arm and Whole-Body Vibration Calibrator

Technical Specifications

Standards	ISO 8041-1:2017; ISO 2631-1:1997; ISO 2631-2:2003; ISO 2631-5:2004; ISO 5349-1:2001; ISO 5349-2:2001	
Meter Mode	ahw (RMS HAND-ARM), ahv (VECTOR HAND-ARM), aw (RMS WHOLE-BODY), awmax (RMS MAX WHOLE-BODY), VDV, MaxVDV, awv (VECTOR WHOLE-BODY), A(8) Daily Exposure, ELV Time (TIME LEFT TO LIMIT), EAV Time (TIME LEFT TO ACTION) MTVV, Max, Peak, Peak-Peak	
Profiles per Channel	2	
Filters in Profile (1)	HP, KB, Wd, We, Wk, Wm, Wb, Wc, Wj, Wg, Wf (ISO 2631), Wh (ISO 5349)	
Filters in Profile (2)	HP, Wp, Vel3 (for PPV measurement), Band Limiting Filters according to ISO 8041:2017	
RMS & RMQ Detectors	Digital true RMS & RMQ detectors with Peak detection, resolution 0.1 dB	
Measurement Range	Transducer dependent: 0.01 m/s² RMS ÷ 50 m/s² Peak (with SV 38V and Wd filter) 0.1 m/s² RMS ÷ 2000 m/s² Peak (with SV 105 and Wh filter)	
Frequency Range	0.1 Hz ÷ 2 kHz (transducer dependent)	
Data Logger	Time-history data including meter mode results and spectra	
Time-Domain Recording	Simultaneous 6-channel time-domain signal recording, sampling frequency 6 kHz (optional)	
Analyser	6-channel 1/1 octave real-time analysis with centre frequencies from 0.5 Hz to 2000 Hz (optional) 6-channel 1/3 octave real-time analysis with centre frequencies from 0.4 Hz to 2500 Hz (optional)	
Accelerometer (optional)	SV 38V integrated tri-axial accelerometer for Whole-Body measurements SV 105 integrated tri-axial accelerometer including hand straps SV 105F integrated tri-axial accelerometer with force sensors including hand straps SV 150 integrated tri-axial accelerometer with adapter for irect attaching to hand-held power tools SV 151 integrated tri-axial accelerometer for SEAT transmissibility measurements	
Input	2 x LEMO 5-pin: six channels Direct or IEPE type and 2 channels for force transducers	
Dynamic Range	90 dB	
Force Range	0.2 N ÷ 200 N (only with an optional SV 105F)	
Sampling Rate	6 kHz	
Display	Blanview TFT-LCD 2.4" colour display (320 x 240 pixels)	
Interfaces	USB-C, Extended I/O - AC output (1 V Peak) or Digital Input/Output (Trigger - Pulse)	
Power Supply	Four AA batteries (alkaline) Four AA rechargeable batteries USB interface	operation time > 12 h[1] operation time > 16 h (4.8 V / 2.6 Ah)[1] (not included) min. 500 mA HUB
Memory	MicroSD card 32 GB (removable & upgradeable up to 128 GB)	
Environmental Conditions	Temperature Humidity	from -10 °C to 50 °C (14 °F to 122 °F) up to 90 % RH, non-condensed
Dimensions	140 x 83 x 33 mm (without accelerometer)	
Weight	Approx. 390 grams including batteries (without accelerometer)	

[1] typical operational time is dependent on the instrument operation mode, and battery type

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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