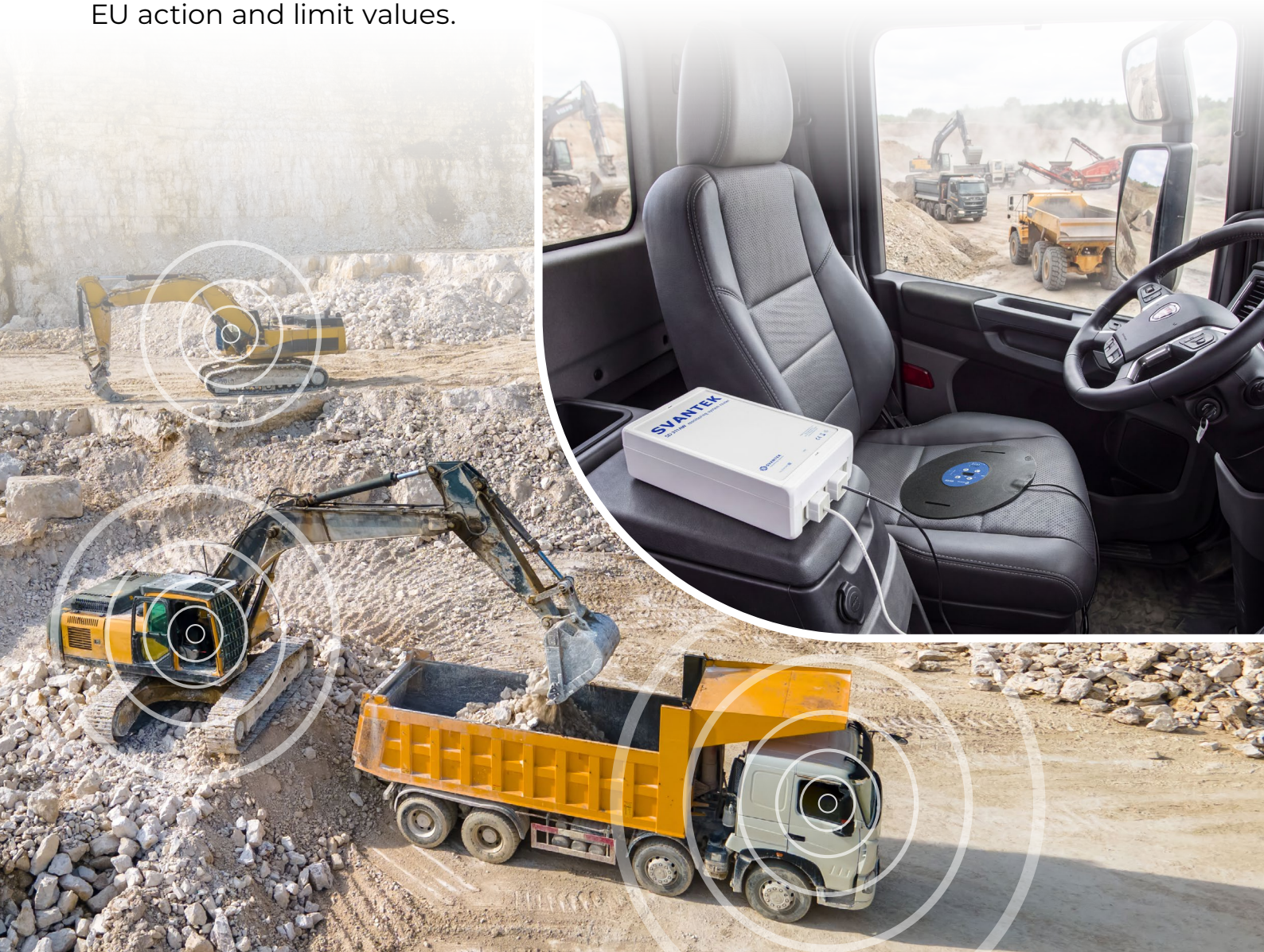
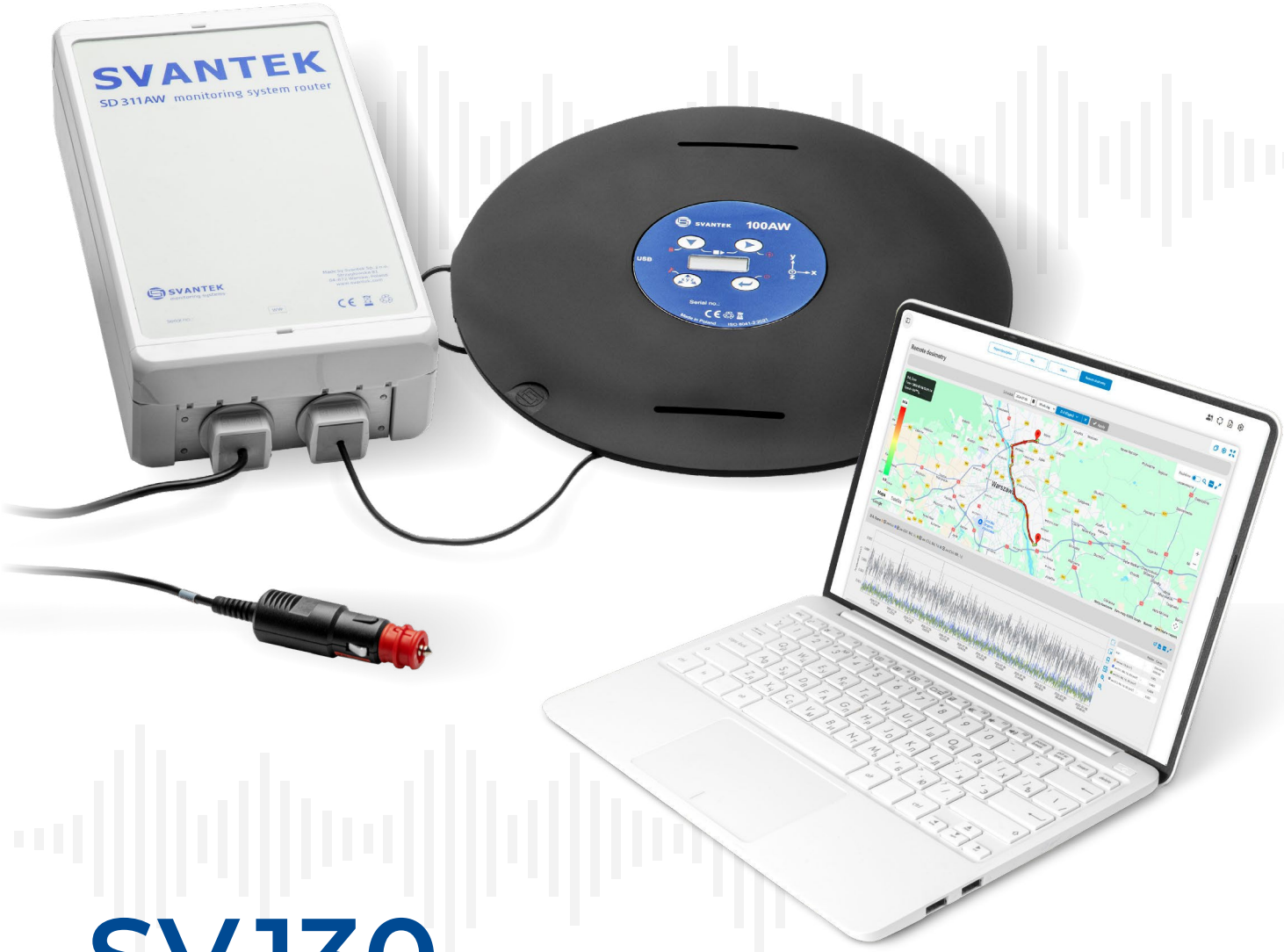
SVANTEK
health and safety

SV 130

Real-Time Whole-Body Vibration Monitor

The SV 130 is a remote dosimetry set for whole-body vibration monitoring of operators in vehicles, compliant with **ISO 2631-1**. Built around the proven **SV 100AW** whole-body vibration dosimeter and the weatherproof **SD 311AW** system controller, it delivers **A(8) daily exposure** in RMS, VDV and Points on the operator's seat. Powered from the vehicle's **12 V supply**, the set is managed remotely through the **SvanNET Schedule Manager**, which defines each operator's measurement schedule and alarms. Data streams live to the **SvanNET** cloud with **GPS route mapping**, color-coded high-vibration segments, and a **Whole-Body Exposure panel** that tracks A(8) against the EU action and limit values.





SV 130

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Scheduled Measurement

Managed in the SvanNET Schedule Manager

Each operator's measurement windows are configured remotely in the SvanNET Schedule Manager — a central hub for workers, schedules, and alarms. Separate shifts (for example night, weekend, and workday) run per operator, and every monitoring node shows its status and current exposure. Schedules can be changed without visiting the vehicle.

Whole-Body Vibration

A(8) Exposure to ISO 2631-1

Based on the SV 100AW dosimeter, the set measures A(8) daily exposure and the vibration total value on the operator's seat, in m/s² (RMS), $m/s^{1.75}$ (VDV) and Points, per ISO 2631-1 and Directive 2002/44/EC. The Whole-Body Exposure panel shows per-axis partial exposures and the time to reach the action value (0.5 m/s²) and limit value (1.15 m/s²).

Live Remote Monitoring

Cloud Data, GPS Tracking and Alerts

The SD 311AW controller streams data live to SvanNET over GSM or Wi-Fi. GPS route mapping marks color-coded high-vibration segments, while alerts trigger on excessive speed, on leaving a defined area, and as an operator approaches the daily dose limit.

Key Functions

Operator Detection System (ODS)

Force sensors detect the operator's presence on the seat pad; when no seat contact is detected the system raises a flag shown on the map, so idle periods are visible and the A(8) reflects real seat time.

Wired Dosimeter Connection

The SV 100AW connects to the SD 311AW controller through a fixed cable and runs on the vehicle's 12 V supply, keeping the dosimeter linked throughout the shift for long-term in-vehicle deployment.

GPS Route Tracking and Alerts

GPS positioning maps worker movements with color-coded high-vibration segments, and raises alerts on excessive speed or when the operator leaves a defined area.

Scheduled Measurement

Measurement windows are defined per operator in the SvanNET Schedule Manager (workers, schedules, alarms, summary), and can be changed remotely without visiting the vehicle.

12 V Vehicle Power

Powered from the vehicle's 12 V socket (cigarette lighter), for continuous in-vehicle operation with no separate power source.

Frequency Analysis & Logging

Inherits the SV 100AW's time-history logging and optional 1/1 and 1/3 octave frequency analysis, supporting vibration source identification during post-processing.

Key Applications

The SV 130 is optimized for mobile workforces - vehicle operators and field technicians - and is flexible and scalable to fit various industrial needs.

Construction & Mining Vehicles:

Exposure of excavator, loader and haul-truck operators.

Occupational Health & Safety:

Fleet-wide compliance against ISO 2631-1 and Directive 2002/44/EC action and limit values.

Transport & Logistics:

Monitoring in trucks, delivery vehicles and industrial forklifts.

Public Services:

Exposure for bus, municipal and utility-vehicle drivers.

Agriculture & Forestry:

Exposure for tractor and harvester drivers over the working day.

System Workflow

1. Configure Project & Schedule in SvanNET

Create a Remote Dosimetry project, add the operators, and define each measurement schedule and alarm in the Schedule Manager. Select the remote connectivity (Wi-Fi in the SD 311AW settings, or a SIM card).

2. Install & Power in Vehicle

Install the SV 130 in the vehicle and connect it to the 12 V power supply; the operator sits on the SV 100AW seat pad.

3. Scheduled Measurement

Measurement can run within the windows defined per operator in the Schedule Manager — no need for manual start in the vehicle.

4. Live Data, GPS & Post-Processing

Data is streamed to SvanNET, visible LIVE with GPS route mapping and alerts, and stored for later post-processing.

Software

SvanNET

Remote Platform: Schedule Manager, Whole-Body Exposure Panel, GPS, Alerts

SvanNET provides live data, a Remote Dosimetry project, the Schedule Manager (workers, schedules, alarms, summary), and the Whole-Body Exposure panel (per-axis A(8), time to EAV/ELV). It maps GPS routes with color-coded high-vibration segments and issues speed, area, and dose-limit alerts, with reporting from any web browser.

Supervisor

Desktop Analysis

Supervisor software supports data download, instrument configuration and determination of occupational vibration exposure to ISO 2631-1, with results in m/s² and Points comparable to Directive 2002/44/EC limits.

Optional Accessories

SIM Card - for GSM connectivity (not included with the set).

SV 111 Vibration Calibrator - ensures reliable operation of the SV 100AW through simple field calibration checks.

Technical Specification

Set Composition (SV 130)

SV 100AW	Whole-body vibration dosimeter, wired variant (keypad locked, autostart, permanently mounted cable)
SD 311AW	System controller for whole-body dosimetry, based on Teltonika RUT956, in a weatherproof enclosure with cable glands
Power cable	12 V vehicle socket (cigarette lighter)

Controller (SD 311AW)

Platform	Teltonika RUT956
Connectivity	GSM, Wi-Fi (SIM card not included)
Enclosure	Weatherproof, with cable glands
Power Supply	12 V vehicle socket (cigarette lighter)
Startup	Automatic on vehicle power-up (plug & play)

Dosimeter (SV 100AW)

Standards	ISO 8041-2:2021; ISO 8041-1:2017; ISO 2631-1:1997; ISO 2631-2:2003; ISO 2631-5:2018
Meter Mode	aw (RMS WHOLE-BODY), awmax, 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
Filters	Wd, Wk, Wm, Wb (ISO 2631) and corresponding Band Limiting Filters per ISO 8041; Wf motion sickness filter (optional)
Detectors	Digital true RMS & RMQ with Peak detection, resolution 0.1 dB
Measurement Range	0.01 m/s² RMS ÷ 157 m/s² PEAK
Frequency Range	0.1 Hz ÷ 180 Hz
Data Logger	Time-history: meter-mode results and spectra
Time-Domain Recording	Simultaneous x, y, z signal recording (optional)
Analyser	1/1 octave real-time (optional) 0.12–128 Hz; 1/3 octave real-time (optional) 0.1–128 Hz
Accelerometer	Built-in tri-axial MEMS
Operator Detection	Force sensors (ODS)
Memory	8 GB
Interfaces	Permanent wired connection to SD 311AW controller
Dimensions	Ø 235 mm x 12 mm (9.25 in x 0.47 in)
Weight	Approx. 500 g (17.64 oz)