TECHNICAL DATA

VIBSCANNER® 2 EX
High-speed vibration measurement that meets intrinsically safe standards

db® PRÜFTECHNIK

Boost efficiency and data quality with the new VIBSCANNER 2 EX

The new VibScanner 2 EX is a next-generation, intrinsically safe system for vibration monitoring in hazardous environments. With vibration measurements taken simultaneously on three axes, the VibScanner 2 EX sets the benchmark for fast and accurate vibration measurements of machine, gear, and bearing issues.

The VibScanner 2 EX is the ultimate tool for fast and accurate machine vibration monitoring when you need an intrinsically safe device. It heightens efficiency and data quality. In just a quarter of the time of a standard data-collector, it precisely measures available data in three axes. Equipped with a triaxial sensor, the VibScanner 2 EX requires only one measurement point and the click of a button to begin collecting machine data.

This device is ideal for route-based maintenance jobs in environments where explosion protection standards are required. The triaxial sensor's rugged magnetic foot fits perfectly on the housing of any motor, pump, fan, or other rotating device, detecting vibration right near the source.

Key benefits of the VIBSCANNER 2 EX

- **Quick, accurate measurements**
  This system delivers vibration measurements up to four times faster than the industry standard.

- **Easy to use**
  Users get a highly intuitive interface with a simple one-button-push to collect machine data.

- **Explosion protected**
  The VibScanner 2 EX is certified as being intrinsically safe for use in potentially hazardous environments where a mixture with air or flammable substances – in the form of gas, dusts, fibers and flyings – is likely to occur during regular operation.
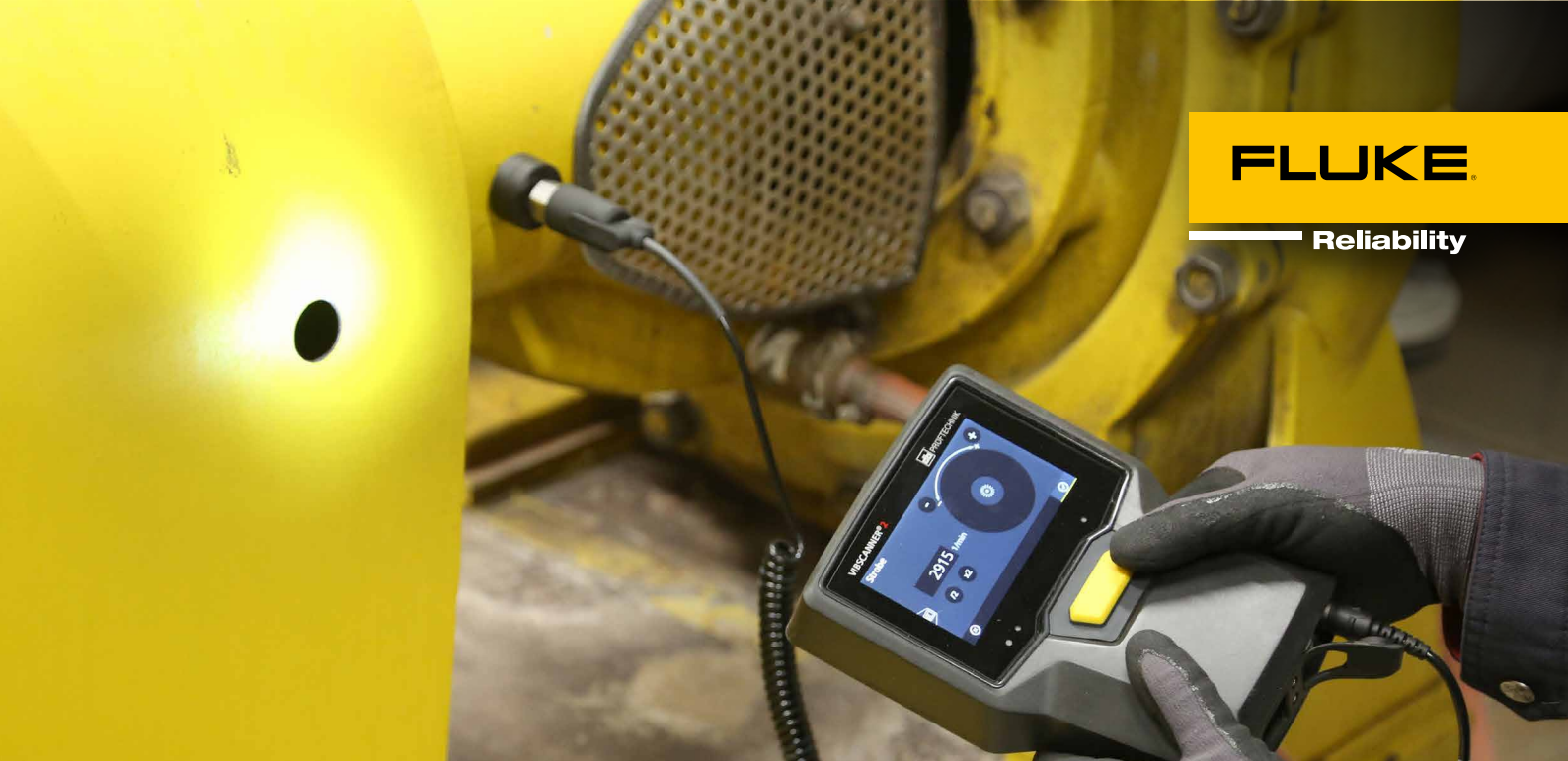
The benefits of vibration measurement

Excess machine vibration runs down machines and reduces their performance and longevity. With the VibScanner 2 EX, you can promote safety and extend machine life in hazardous areas by:

- Measuring vibration regularly to track asset status
- Adapting a maintenance schedule that adjusts to the actual needs of your assets
- Protecting against unexpected downtime
- Saving money on machine labor and lowering the risk of failure
- Reducing the use of spare parts such as bearings, couplings, and sealings

Explosion protected: What does this mean?

The VibScanner 2 EX from Prüftechnik is explosion protected, which means it is designed with extra protection for safe use in high-risk environments.

- No hot working permit is required
- No further tools, staff, and equipment required to deploy safety on site
- You can start working immediately in any ATEX/IECEx/U.S./Canada Zone 2/22 or Class I, Div. 2, Class II, Div. 2, Class III, Div. 2 rated environment

The VibScanner 2 EX saves companies time and money since no hot working permit is required for its use.

Due to its rugged but handy design, you can take it to any place to monitor your machine condition – even those outside hazardous zones.

The 'Triax-Effect'

The VibScanner 2 EX will reduce your concerns about finding the right vibration measurement points on the machine. Because it features a Prüftechnik triaxial sensor, just one measurement point is required instead of three separate points. As a result, VibScanner 2 EX saves considerable time without sacrificing data quality. The "Triax-Effect" lets you make vibration measurements up to four times faster than the industry standard while achieving new levels of data quality.

Speed – the root cause of all fault patterns

A unique speedfinder tool is an exclusive feature of the VibScanner 2 EX. This tool directly evaluates the exact rotational speed of any machine from the raw measurement data. Rotational speed is crucial to determining fault patterns, particularly when operating on assets with variable rotational speeds. With the speedfinder tool, no additional measurements are necessary. Time is saved on-site, and the vibration analysis specialist has the exact machine speed available in their analysis.

Stay on track with helpful RFID tags

RFID tags on the assets help you find the right machine. Each asset has a unique RFID tag. After scanning the RFID, VibScanner 2 EX jumps directly to the machine requiring a measurement. The graphical machine view will indicate the point to measure. RFID, combined with the graphical machine view, delivers fast and error-free vibration monitoring.

Let the experts do the rest

Once the on-site route is finished, all machine data can be easily transferred from the handheld device to a PC via USB connection. However, machine data analysis is a job best suited for experts. Prüftechnik not only trains these specialists worldwide but also offers services to read and analyze machine data and provide advice on specific issues. Prüftechnik provides global machine vibration monitoring experience by using the knowledge and know-how of its ISO CAT I–IV specialists.

Here's how to keep it simple: You measure and have Prüftechnik evaluate your data.

VIBSCANNER 2 EX

General specifications		
Measurement Channels	Number	3 synchronous analog channels (X/Y/Z)
	Z channel (0 … 50 kHz)	–20 .. +20 V, input impedance: 78 kOhm IEPE Current Linedrive
	X/Y channel (0 … 10 kHz)	–20 .. +20 V, input impedance: 78 kOhm IEPE
	Dynamic range	109.5 dB (total)
	Sampling rate	up to 131 kHz per channel
	Signal processing	3 x 24 bit ADCs
	Measuring range / Accuracy	Vibration acceleration: dependent on used sensor Shock pulse: –10 dBsv to 80 dBsv +/- 2 dBsv
	Fulfilled standard	DIN ISO 2954:2012 (2–1 kHz, 10 Hz –1 kHz, 10–10 KHz)
Display	Type	Capacitive touchscreen Optically bonded for high contrast and increased shock resistance
	Active area	95 x 54 mm (3 3/4” x 2 1/8”)
	Size	10.9 cm (4 1/3”)
	Color depth	16 million colors
	Viewing angle	< 140°
	Operation	Multi touch – gesture control Glove–compatible
	Illumination	Background lighting, adjustable
	Ambient light sensor	Yes
Supply	Type	Li ion rechargeable battery
	Nominal voltage	7.3V
	Energy density	50 Wh
	Charge time, typical	3.5 h (0 … 100 % @ 25 °C / 77 °F) 2.5 h (0 … 80 % @ 25 °C / 77 °F)
	Charging temperature	10 °C … 40 °C [50 °F … 104 °F]
	Operating time, typical	10 h (cont. operation, rech. battery 100 %) 5 h (cont. operation, rech. battery 50 %)
	Power adapter	100–240 V~, 50–60 Hz (input) 12 V 3 A (output)
	Energy saving mode	Yes
Computer	Processor	ARM A9 - Quadcore 1 GHz
	Operating elements	Touchscreen, ON/OFF key, Enter key
	Memory	microSD card, 32 GB for measurement data, permanently installed 2 GB RAM
	USB	1 x USB 2.0, device interface
	RFID	RFID reader module for PRÜFTECHNIK transponder: ALI 50.628 EXO–25 Complies with ISO 14443a and ISO 15693 Reading distance: 2…3 cm (13/16” … 1 3/16”)
	WiFi	IEEE 802.11a/b/g/n/ac Throughput: < 200 Mbps Security: WPA2
	Stroboscope	Frequency range: 0.1 – 1000 Hz Resolution: 0.06 1/min. LEDs: Risk group 1 per IEC 62471
	LED	1x RGB LED (display for battery status and charging process)

General specifications		
Environment / mechanical system	Connections	Socket for power adapter Micro USB for data cable Plug-in connector (8–pole) for signal cable
	Housing, EX device	Housing: PC Sheath: TPE, black, antistatic, conductive
	Dimensions	203 x 143 x 76mm (LxWxH) (8 x 5 5/8 x 3”)
	Weight	approx. 1.0 kg (35.3 oz)
	Degree of protection	IP55
	Temperature range	Operation: 0°C … +50°C [32 °F …122 °F] Storage: –20 °C … +60 °C [–4 °F … +140 °F]
	Air humidity	0 … 90 %, non-condensing
	Certifications	CE, RoHS, FCC, FCC/IC, ATEX, IECEx, NEC 500/505, CEC Annex J18, CEC sect. 18

Operation in the Ex–zone

General specifications		
Ex-Data CSA – only for U.S. and Canada	CSA certificate number:	CSA20CA80035102X
	Install per control drawing:	LIT 52.300.EN
	Marking of the device:	Ex ec [ic] IIC T4 Gc Ex tc [ic] IIIB T135°C Dc Class I, Zone 2, AEx ec [ic] IIC T4 Gc Zone 22, AEx tc [ic] IIIB T135°C Dc Class I, Div. 2, Groups A, B, C, D T4 Class II, Div. 2, Groups F, G, T4, Class III, Div.2 Associated equipment for Class I, Division 2, Groups A, B, C, D Associated equipment for Class II, Division 2, Groups F, G Associated equipment for Class III, Division 2
Ex-Data ATEX, IECEx	ATEX certificate number:	EPS 19 ATEX 1 119 X
	IECEx certificate number:	IECEx EPS 19.0057X
	Marking of the device:	⟨Ex⟩ II 3G Ex ec [ic] IIC T4 Gc
		⟨Ex⟩ II 3D Ex tc [ic] IIIB T135°C Dc