TECHNICAL DATA

VIBXPERT® II
The versatile, long-lasting tool for data collection, data analysis, field balancing

db® PRÜFTECHNIK
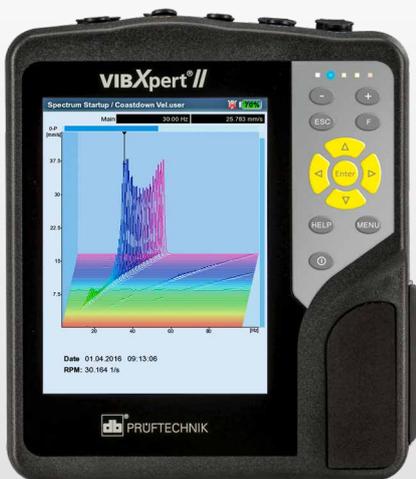
Even as remote condition monitoring grows in importance, route-based maintenance - where technicians physically inspect and monitor assets on the plant floor - remains an essential function for many if not all your machines. You can provide the best care for your machines by investing in the highest-quality data collection and analysis tools.

The VibXpert II from Prüftechnik is an easy-to-use data collector and state-of-the-art vibration analyzer. A handy, customizable troubleshooter, it can be used as a simple data-collector for regular inspection and maintenance routes and as an advanced data analyzer for on-site machine analysis and temporary machine condition monitoring. It can also perform field balancing on one and two planes. All kinds of machine data can be monitored, processed, and analyzed with just this one tool.

Service companies, including Prüftechnik's own condition monitoring services group, have used the VibXpert II for thousands of immediate troubleshooting services on-site. VibXpert II comes in handy in addition to, or as an extension to, any online or remote condition monitoring system to monitor and survey entire assets or single machines. The VibXpert II is a modular, mobile tool that accommodates novice to power users and most industrial environments.

Why VibXpert II

- **Modular power for beginners and experts**
  You can configure the VibXpert II according to your unique require-ments. Equip it with one or several user-friendly application and functionality packages for data collection, data analysis, or field balancing.

- **Interfaces for every environment**
  This tool includes five water and dustproof covered industrial jacks, color-coded for easy identification. The jacks connect to a variety of sensor types and data hubs.

- **Advanced recording feature**
  Leverage the VibXpert II as an online system to record spectrum, orbits, phase, time waveform, and more for fast, simple on-site troubleshoot-ing and precise fault detection. then into the ARC 4.0 PC software.

How vibration measurement helps prolong machine health

Excess machine vibration wears down machines and reduces their performance and longevity. With the VibXpert II, you can promote safety and extend machine life by measuring vibration regularly to track asset status and adapting a maintenance schedule that adjusts to your assets' actual needs. The benefits include:

· Protecting against unexpected downtime and increasing machine reliability
· Saving money on machine labor and lowering the risk of failure and secondary damage
· Reducing the use of spare parts such as bearings, couplings, and sealings

Why field balancing is essential

Rotating shafts create tremendous forces at their ends when unbalanced. It's not hard to understand that bearings, sealings, nozzles, couplings, etc., wear much faster than when appropriately balanced. Along with misalignment, lack of balance is a primary reason for unplanned machine downtime and costly damage.

Correctly balanced machines sustain peak performance much longer. The VibXpert II ensures reliable field-balancing results through a user-friendly, step-by-step guided interface.

The power of modularity

You can use the VibXpert II as a single or multi-purpose tool by adding different modules to meet all your needs. Four packages are available for various applications and functionalities:

· Field balancing on one and two channels
· Data collection on one and two channels
· Data collection and signal analysis on one channel
· Data collection and signal analysis on two channels

Some experts may like to extend their operational range by adding the Operational Deflection Shapes (ODS) firmware. This optional firmware enables ODS analysis directly on the fly.

Create and customize an unbeatable tool for your daily challenges. Changing or adding packages is possible at any time.

VibCode: the plug and play sensor head

Time is money, so you shouldn't waste it searching for the right sensor head position on painted, untidy, or hardly accessible measurement points. VibCode is a permanently installed, pre-coded sensor head system for the VibXpert II that enables quick, comprehensive measurements delivering highly reliable data.
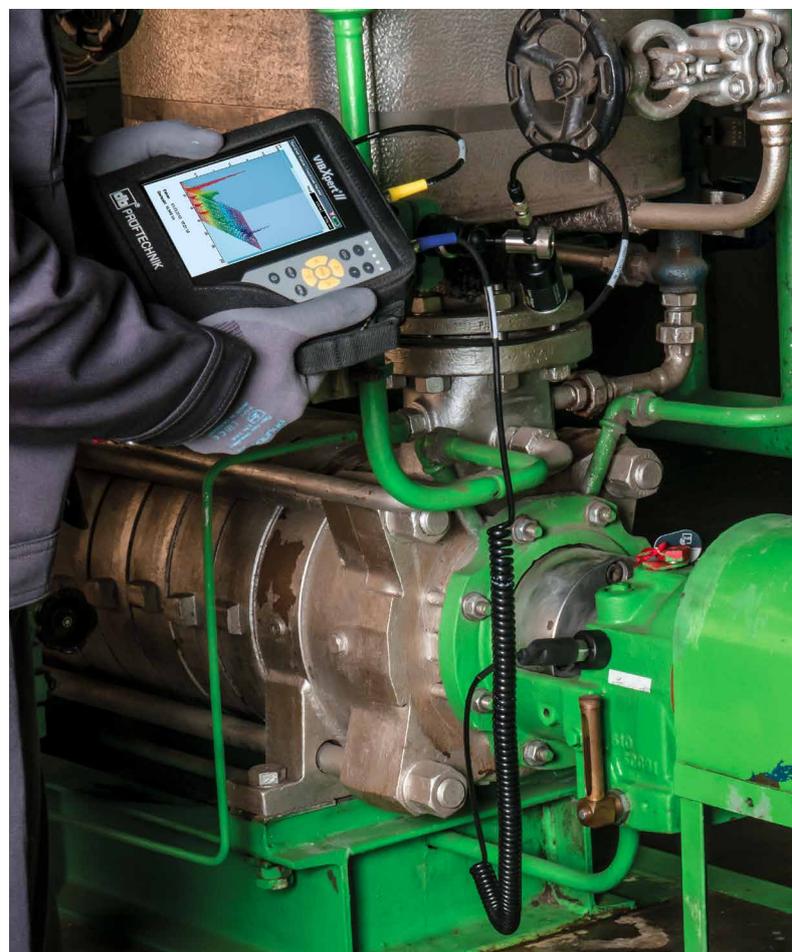
The VibCode doesn't sacrifice data quality due to external factors such as heat/cold, dirt, non-magnetic housing, surface issues, or narrow, tiny places. Together, the VibXpert II and VibCode are the perfect match for route-based maintenance programs. Here's why:

- Easily install VibCode, and the VibXpert II is ready to use
- With VibCode, the VibXpert II automatically finds the right measurement point on the route
- Pre-coding contains all relevant data about the machine and the measuring point
- Permanent installation eliminates guesswork about the right sensor head position
- Data transmission is loss-free

The solution for hard-to-reach areas

For fast, error-free data collection at difficult to reach measurement locations, consider making your VibXpert II a mobile online system, using the VibRonet Multiplexer as an automatic switch box for the instrument.

Record up to 54 measurement locations by a single button push. The Multiplexer solution is also suitable as an intrinsically safe tool for hazardous environments.

Professional data trending and storage

Using the VibXpert II on your route, you can transfer the measurement data into the OmniTrend Center software – for in-depth analysis, historical trending, data storing in the database, and final reporting. If you're working in a remote area, you may want to keep your measurement data on the 2GB inherent data storage or export these to a USB drive for later transmission to the database.

Leveraging OmniTrend software with the VibXpert II advances your predictive maintenance program. Discover the best time for powering down assets without losing significant production or quality, so you can efficiently maintain or upgrade machines with spare parts delivered just in time.

- Save space for spare parts storage
- Save inspection time
- Save money

Meant for the long haul

The VibXpert II can withstand an eight-hour workday in full operation mode with only one battery charge. The real beauty of this tool, however, is how long it serves you. Even after a decade in use, you'll find that it still handles your daily business needs with ease and efficiency, bolstering your return on investment.

Start thinking sustainably by integrating VibXpert II into your daily maintenance program.

Let the experts help you

Machine data analysis is a job best suited for experts only. Prüftechnik trains specialists worldwide and offers services to read and analyze machine data and advise on how to proceed regarding specific issues.

Prüftechnik offers machine vibration expertise globally by using the knowledge and experience of its ISO CAT I–IV specialists. Here's how to keep it simple: You measure and then have Prüftechnik evaluate your data. Ask about our unique programs – and what's available in your region.

VIBXPERT II instrument

General specifications

Input	Analog, Vibration, 2x	Voltage (AC/DC, ±30 V max.) Current (AC/DC, ±30 mA max.) IEPE-type accelerometer (2 mA, 24 V max.) Current Linedrive (CLD) accelerometer (10 V, 10 mA max.)
	Frequency range	DC ... 51.2 kHz (Acceleration from 0.5 Hz)
	Dynamic range	96 dB (measurement) / 136 dB (total)
	Sampling frequency	up to 131 kHz per channel
	Impedance	90 kOhm, with cable VIB 5.433
	Analog, Temperature, 1x	Thermocouple (type K)
	Digital, Pulse/ Tacho, 1x	RPM, Trigger, Keyphaser with pulse and AC signals: 0 V ... +26 V or –26 V ... 0 V
	Max. input voltage	± 26 V
	Switching threshold for 0 V ...+26 V signal	max. 2.5 V rising, min. 0.6 V falling
	Switching threshold for –26 V ...0 V signal	min. –8 V rising, max. –10 V falling
	Pulse width	< 0.1 ms
Output	Stroboscope control	TTL
	Frequency range	0 – 500 Hz
	Resolution	0.05 Hz
	Signal-Out	Connection for headphones to listen to the analog input signal; signal processing (oscilloscope)
	Frequency range	0.5 Hz - 40 kHz
	Output impedance	100 Ohm
Measurement range / Accuracy	Vibration acceleration	depends on the sensor connected
	Shock pulse	–10 ...80 dBsv / ± 3dBsv
	RPM	10 ... 200 000 min-1 / ±0.1‰ or ± 1 min-1 (the lower accuracy is applicable)
	Temperature, type K	–50 ... +1000°C / 1% or ±1°C (the lower accuracy is applicable)
	Standards fulfilled	Frequency response acc to ISO 2954
Display	Type	TFT-LCD, backlit
	Pixel area	116 x 87 mm
	Resolution	VGA (640 x 480 pixel) with 140 ppi
	Color depth	18 bit (262144 colors)
Power supply	Battery type	Li Ion rechargeable battery pack (7.2V / 4.8Ah – 34 Wh)
	Charging time	< 5 hours in the instrument
	Charger, input	110-240 V / 50-60 Hz
	Charging temperature	0°C ... +50°C [32 °F ... 122°F]
Computer	Processor	ARM CPU 800 MHz
	Keyboard	1 navigation pad and 7 keys (Zoom, Escape, Function, Help, Menu, On/Off); Keyboard illumination controlled by ambient light.
	Memory	Internal: 128 MB DDR RAM; built-in CF card, has a capacity of 4GB, of which 2.7 GB is available for user data (non-removable)
	Serial interface	RS 232, <115 kBaud
	USB interface	USB 2.0
	Ethernet interface	100 Mbit (100Base T), 10 Mbit (10Base T)
Environment / General	Connectors	Analog / Digital channels: MiniSnap socket Thermocouple (type K): QLA socket; all compatible to VIBSCANNER
	Housing	ABS plastics
	Dimensions	186 x 162 x 52 mm (LxWxH), [7 5/16" x 6 3/8" x 2 1/16"]
	Weight	approx. 1.1 kg [39 oz]
	Temperature range	–10°C ... +60°C (Operation), [14 °F ... 140°F] –20°C ... +60°C (Storage), [–4 °F ... 140°F]