

**102,400 LINES  
OF RESOLUTION**



# VIBXPERT®

## 2-Channel Vibration Analyzer



**Weighs only 2.2 lbs.**

**Simple joystick operation**

**Signal post processing**

**Bearing databases**

**Machine fault frequency markers**

**Graph-based route**



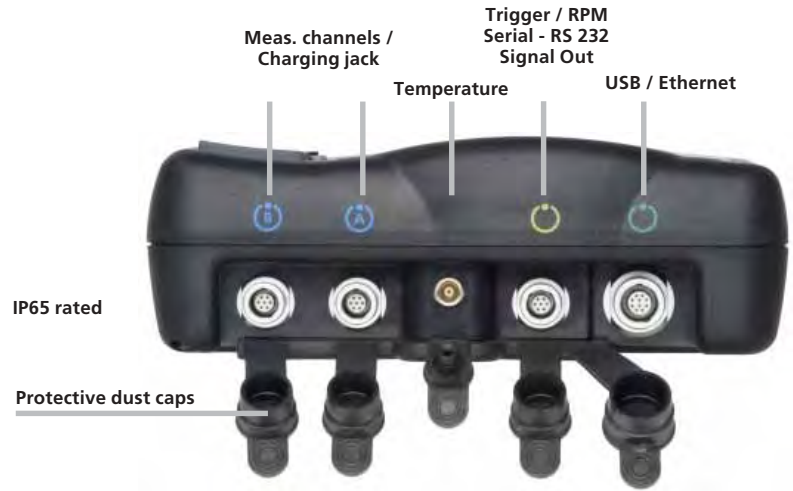
**VIBCODE®  
compatible**

# Powerful, yet intuitive

The VIBXPERT® vibration data collector and signal analyzer combines route-based data collection with machine diagnostics in one tool.

VIBXPERT® excels in

- Fast data acquisition
- Complete data analysis on-site
- Useful knowledge-based setups
  - Intuitive for beginners
  - Powerful for experts
- Connections support almost all sensor types



**The best connections!**  
5 robust color-coded connectors on the upper side of the device are stable, cannot be confused and are dustproof.



**Simultaneous!**  
Carries out two measurements at the same time – with or without trigger/RPM as required.

- Dual channel measurements for diagnosis and correction
  - orbit
  - cross phase
  - coast down
  - 2-plane balancing
- Independently selectable dual channel measurement tasks.



**VIBCODE®**  
Automatic measurement location identification by VIBCODE® 'fingerprint' – the coded ring!

- No mix up of measurement locations
- Reproducible measurements
- Stable connection
- Defined contact pressure
- Defined measurement direction



**Portable!**  
Lightweight design with carrying strap, ideal for machinery survey.

## VIBXPERT® is versatile

• Overall values include machine vibration, shock pulse, temperature, RPM



• Process parameters



• Visual inspection data (only in Route mode!)



• Diagnosis

• Signal processing



• Roller bearing database

• Balancing 1 or 2 plane (optional)



• Built-in ISO standards



## VIBXPERT® at a glance

VIBXPERT® with its comprehensive measurement and analysis functions and intuitive user operation is ideal for routes.

Together with the OMNITREND® PC software, VIBXPERT® provides an important contribution to condition-based maintenance for preventing unforeseen machine breakdowns and expensive production losses.

### Single-handed operation

Instinctive joystick operation with ergonomically arranged keys.

### VIBXPERT® lights up

If it's too dark, VIBXPERT® automatically switches on the keyboard illumination. The lighted display allows work day or night.

### Clear display

The high-contrast backlit display (1/2 VGA) is easy to read – even in broad daylight.

### Alarm display to ISO standards

Four indicator LEDs on the display indicate 'Everything OK' (blue) 'Prewarning' (green) 'Warning' (yellow) 'Alarm' (red).

### Expandable memory

Replaceable flash card provides virtually unlimited memory (standard 64MB).



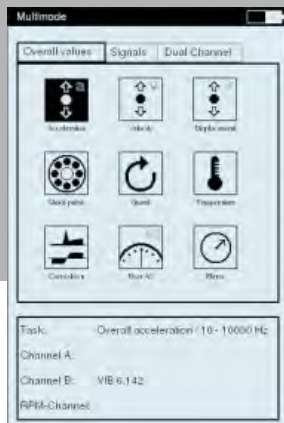
# VIBXPERT® really measures up!

The attractive external design of VIBXPERT® is also reflected in its internal structure: intuitive, graphical user interface, straightforward user guidance and a constantly available help function allow not only skilled experts, but also an inexperienced novice to quickly achieve reliable results.

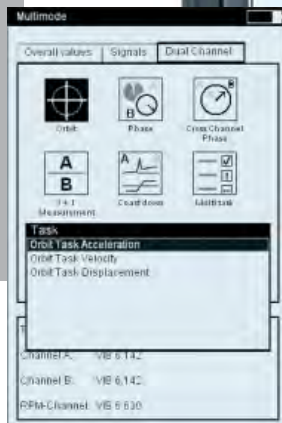


File Manager with 'Windows' design

## Intuitive operation



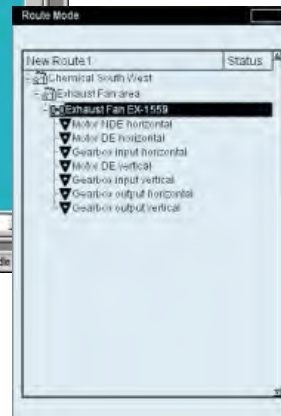
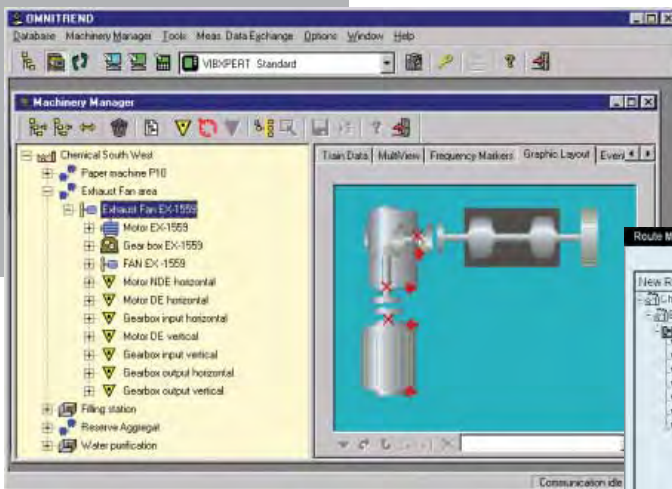
Icon driven menu



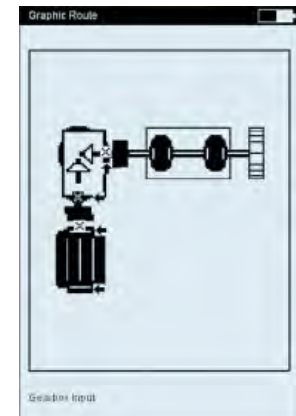
Measurement task selection

## Route options

Route composition in OMNITREND®



Measurement location selection in the trees view...



... or using the machine graphic

## Functionality

Windows-style File Manager for non-route data storage. Easily transferred to OMNITREND® PC software. Icon guided navigation with easy task selection.

## See, click - measure!

Visual route guidance using machine graphics provides a high degree of convenience for the user. VIBCODE® recognizes the measurement position automatically.

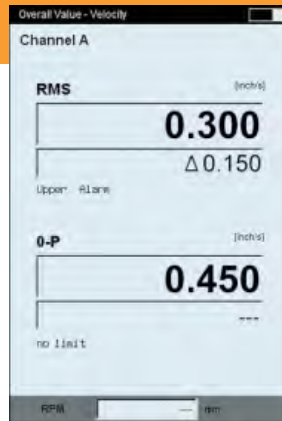
## Evaluation

### Condition monitoring

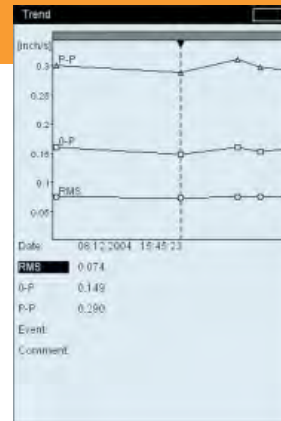
Regular recording of measurement values provides a clear picture of the machine condition trend.

### Alarms & diagnosis

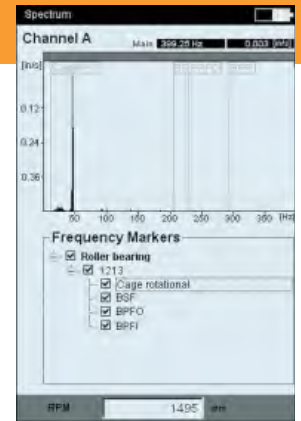
If there is an alarm, narrow band monitoring in the frequency spectrum shows the damaged component. Frequency markers support identification of characteristic frequencies typical for specific types of damage. Additional functions for diagnosis can be called up via a menu.



Measurement values and alarm violation



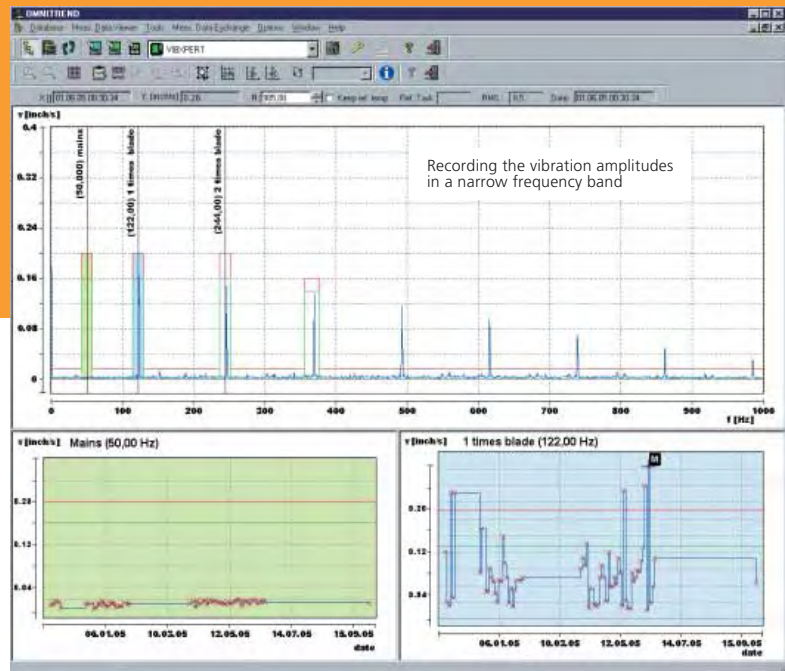
Trend graph with alarm limits



Identification of damage frequencies

## OMNITREND<sup>®</sup> PC software

OMNITREND<sup>®</sup> manages machine data, programs measurement tasks and routes, and archives the results in a database (MS Access, Oracle\*, MS SQL\*). Comprehensive functions are available for evaluation and documentation: alarm check, trend preview, multiview, band analysis, waterfall display, frequency markers and various cursors.



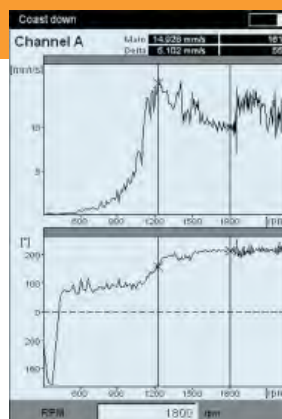
Barely increased measurement values at 50 Hz (electrical failure)

High vibration level at 122 Hz (= 1st impeller passing frequency)

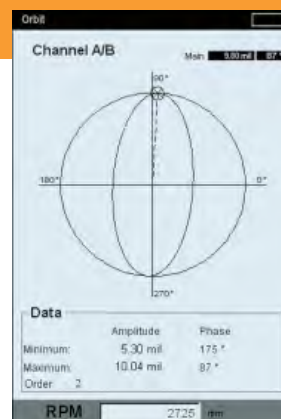
\*optional

## Signal Analysis

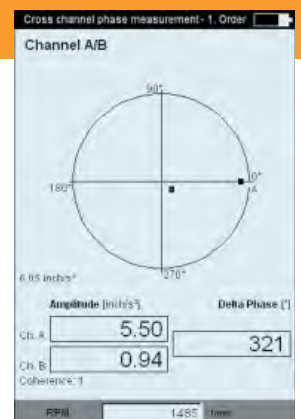
The 2-channel VIBXPRT<sup>®</sup> comes equipped with phase measurement, coast down measurement, orbit, cepstrum, etc.



Coast down measurement indicates the resonance points

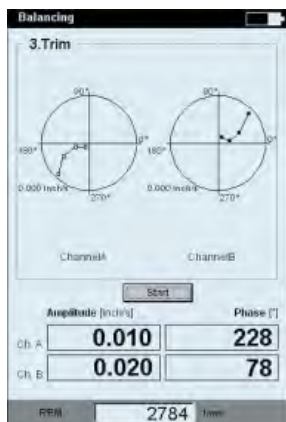


Shaft displacement as orbit

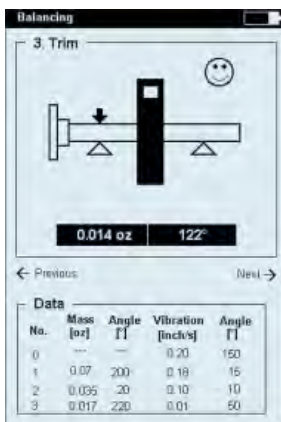


Cross-channel phase measurement

## Balancing (optional)



Balancing in one or two planes



'Smiley' appears when ISO Balancing Grade Tolerances are met



Graphically assisted program for intuitive operation. Trial weight estimator suggests appropriate weight and placement. Single or dual vector display with a running history of the job. Built-in ISO tolerances.

The VIBXPert® case is robust with its customized foam inlays, guarantees optimum transport protection for the components and numerous accessories. Compact dimensions and the low overall weight makes it a handy companion.

## VIBXPert® technical data

### Measurement channels

- 2 analog channels (A & B), selectable:
  - Voltage (AC/DC, ±30 V max.)
  - Current (AC/DC, ±30 mA max.)
  - ICP® signal (2 mA, 24 V max.)
  - LineDrive signal (10 V, 10 mA max.)
  - PT100 (four & two wire)
  - Strain gages (full & half bridge)

1 analog channel: temperature measurement sensor (NiCrNi)

1 digital channel: 1+1 pulse/tacho (RPM, trigger, key phaser). Pulse & AC signals (± 26 V)

### Parameters - analog measurement channels (A & B)

- Frequency range: 0.5 Hz to 40 kHz
- Dynamic (measured/total): 96 dB / 136 dB
- Sampling rate: ≤ 131 kHz per channel

### Outputs

- Stroboscope control: TTL
- Signal out: for headphone and signal processing

### Measurement range / Accuracy

RPM: 10...200 000 rpm / ±1% / ±1rpm

Temperature: -50...+1000°C (NiCrNi) / ±1% / ±1°C

Displacement\*: 6000 µm (p-p) / ±5%\*\*

Velocity\*: 6000 mm/s (p-p) / ±1%

Acceleration\*: 6000 m/s<sup>2</sup> (p-p) / ±1%

### FFT

F<sub>min</sub>: 0 Hz ... max. freq, selectable

F<sub>max</sub>: 1 Hz ... 40 kHz, selectable

Lines: 100 ... 102400

Window: Rectangular, Hanning, Hamming, Blackman, Bartlett, Flattop, Kaiser

### Operating modes

- Multimode (non-route)
  - Overall values: vibration (acceleration, velocity, displacement), current, voltage(AC / DC), shock pulse (roller bearing condition), temperature, RPM
  - Signals: spectrum (amplitude, envelope), time signal, phase & cross-channel phase, orbit, coast down measurement.

### Data acquisition (Route)

- Guidance via tree view or machine graphic
- Process optimization for quick data acquisition

### Balancing (optional)

- Dynamic balancing in 1 or 2 planes

### Memory

RAM, internal: 256 MB  
CompactFlash, exchangeable 256 MB ... 1 GB

### Display

LCD, illuminated, 480x320 pixels (1/2 VGA)

### Supply

Lithium-Ion battery, exchangeable (7.2V / 4.6Ah).  
Chargeable in device. charge time < 5 hours

### Temperature range

Storage: -4°F...+158°F  
Operation: 14°F...+140°F

### Protection class

IP65, dustproof and waterproof

### Dimensions

7.1 x 6.3 x 2 inches (LxWxH)

### Weight

2.6 lbs.



Further technical data is given in the VIBXPert® Product Catalog, available for download as a PDF on our website.

\* Current LineDrive transducer (1µA/ms<sup>-2</sup>) and sensor with voltage output (100mV/g); Reference: 159.15 Hz

\*\* with 2 Hz filter and 2x integration

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Productive maintenance technology