

## VIBRA-series

### VIBRA, VIBRA<sup>+</sup>

**Pile driving, construction, road or rail traffic, demolition work and blasting can create vibration nuisance or cause damage to buildings and sensitive equipment. These vibrations are instantly measured, saved and displayed with a system of the Profound VIBRA-series. Combine a sensitive 3D sensor with a compact unit, include high-performance processing, and the result will be unmatched performance in monitoring vibrations.**

#### Advanced

During each time interval the *VIBRA* measures, directly displays and records both the maximum vibration levels and the vibration frequencies in x-, y- and z-direction. In addition every hour full measuring signals of the highest peak values are recorded. The *VIBRA*'s digital signal processing guarantees measurements of a high quality and accuracy.



The top model, the *VIBRA*<sup>+</sup>, also features a PC Trace Recorder, smart frequency and building category dependent alarms and acceleration and displacement alerts.

#### Monitoring according to standards

Depending on the chosen model, the system complies with national and international standards, such as DIN 4150-2 and -3, BS 5228-2, BS 7385-2, SBR, SS 460 48 66/61, AS 2187.2 and is according to DIN 45669-1. The measuring values for vibrations in buildings as well as for the effects on persons are shown simultaneously on the display of a *VIBRA*<sup>+</sup>. Every *VIBRA* determines the dominant frequency in accordance with the advanced FFT-method.

#### Compact system for long-term monitoring

- IP65 watertight robust housing
- Low mass and easily portable
- Lightweight 3D geophone with precise orientation
- Rechargeable, integrated battery with long life span
- Flexible and fast charging options
- Magnetic waterproof USB connection
- Integrated 4G modem with multiple fall back options
- Optimum signal receipt by state-of-art antenna geometry

#### Efficient operation

Performing a measurement is straightforward: attach the 3-dimensional geophone to the structure to be monitored, program the system and start measuring. While measuring, all relevant information appears on the *VIBRA*'s display, such as time, time interval and the vibration peak values including frequency in all 3 directions. You can also immediately check the overall maximum values.



An alarm level can be set for velocity whereby an external wireless alarm beacon can be used to warn on-site and remotely via SMS. The *VIBRA*<sup>+</sup> model also features a smart frequency-dependent velocity, acceleration and displacement alarm, and can send alerts via SMS and e-mail.

#### Real-time monitoring and analysis

The *VIBRA* can transmit data and system status information directly to [vibramonitoring.com](http://vibramonitoring.com) via the integrated modem. In addition the *VIBRA* transmits instant alarms via SMS to multiple recipients.

With a *VIBRA*<sup>+</sup> you can also choose to send the data to an e-mail account or upload the data to your own server. As an alternative for the direct upload to your server, Profound can also offer you an alternative turnkey monitoring solution: [vibramonitoring.com](http://vibramonitoring.com).

The *VIBRA* can be connected to your PC via USB for data retrieval, even while measuring. With the PC software supplied together with the system, data are directly presented in graphs for detailed reporting. You can also simply export data to a csv-file. With the PC Remote Control software it is possible to log in remotely to your *VIBRA* system.

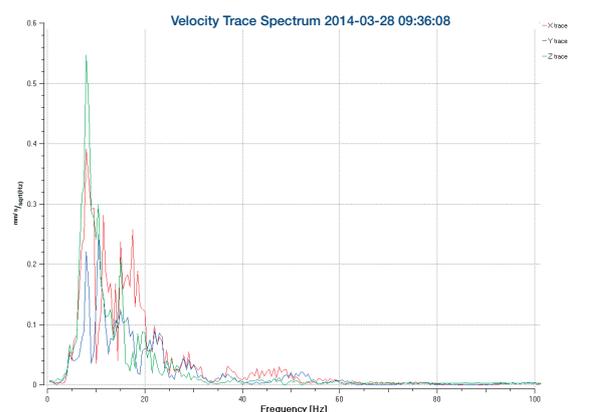
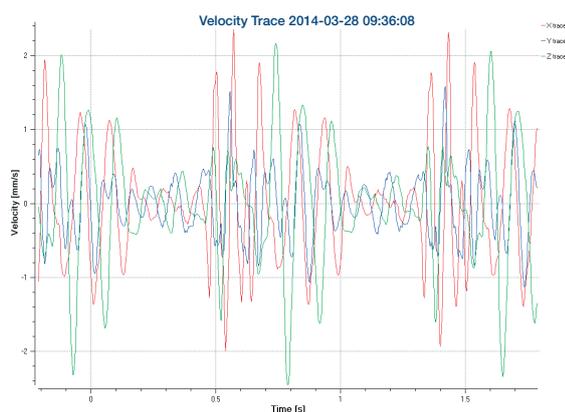
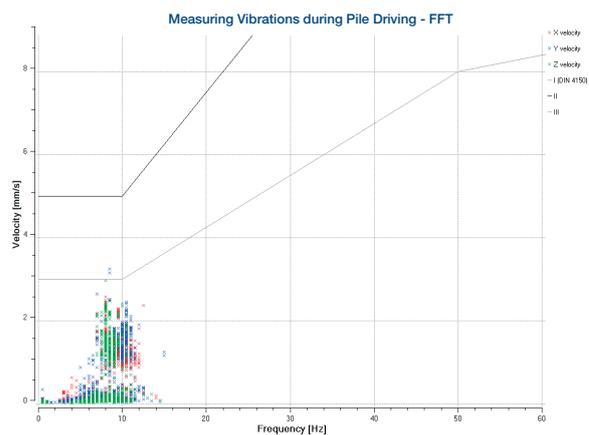
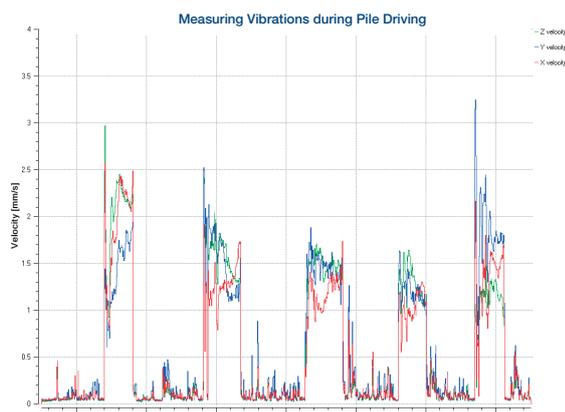


Over 25 years Profound has been the leading supplier of vibration measurement equipment. With a Profound *VIBRA* system you have a unique and reliable instrument to measure vibration continuously and accurately.

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## Specifications VIBRA, VIBRA+

Velocity (PPV), frequency and acceleration (PPA)	: In x, y, z-direction per time interval
Displacement	: In x, y, z-direction per time interval
Frequency accuracy	: According to DIN 45669-1
Frequency characteristic	: Lower limit: 1 Hz Upper limit I: 80 Hz Upper limit II: 315 Hz
Dominant frequency determination	: FFT and Zero Crossing Method
Velocity range	: 0 - 100 mm/s (depending on geophone model)
Data measurement and processing	: According to DIN 4150-2 According to DIN 4150-2 and -3 (VIBRA+ only)
$KB_{FT}$ and $KB_{max}$	: In x-, y-, z-direction according to DIN 4150-2 (VIBRA+)
Extensive technical specifications available	



With the VIBRA PC software the measurement data are shown directly in accordance with DIN guidelines. The above graphs show the measured peak values against time, the peak values against frequency (in accordance with FFT method) and the continuous measurement signal (trace) with the accompanying spectrum.

FOR FURTHER INFORMATION

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