

VibroGo

**marmatek**<sup>®</sup>  
measurement technologies

 **Polytec**



## VibroGo

Truly portable laser vibration measurement

Preliminary product brochure



VibroGo is the truly portable, battery powered digital laser vibrometer for field studies and quick and easy condition monitoring of machines and facilities on the go.

VibroGo measures vibrations on the go and without contact, covering a wide frequency range of up to 100 kHz. Its outstanding vibrational velocity resolution with high linearity across the entire frequency range provide a handy precision analysis tool. Use VibroGo for a better understanding of dynamics and acoustics in nature and technology - for research, product development and quality assurance.

#### The Polytec company

For more than 50 years and with nearly 500 employees worldwide Polytec develops, produces, and distributes optical measurement systems for research and industry. Our solutions cover vibration measurement, surface metrology, speed and length measurement, process analytics, machine vision as well as optical systems. Our customers obtain products and services through subsidiaries in Europe, North America and Asia and benefit from our worldwide service. Polytec has an excellent reputation thanks to its down-to-earth mentality, high-grade innovation and superior quality.





Zeiss  
VIBROCAM

CON 4



ezimax

CON 3

CON 2

CON 1

# Truly portable laser vibration measurement



## Highlights

- Study acoustics and dynamics with laser precision in field and lab
- Easy to use, with touch screen and auto focus
- Wireless remote control from everywhere within the advanced connectivity concept
- Lightweight, versatile and outdoor-proof (IP64)
- Measure from a safe distance up to 30 m, from DC up to 100 kHz
- Extended velocity range up to 2 m/s
- Additional output signals displacement and acceleration available
- Simultaneous analog and digital signal output
- Optional mobile power supply for up to 3 hours operation

## Point, shoot and measure

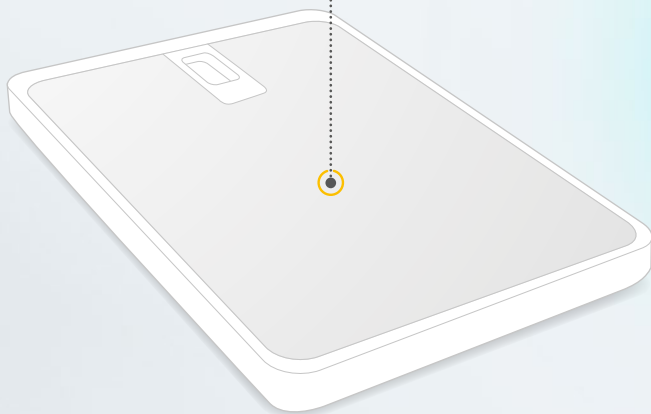
Vibration measurements made simple with VibroGo: Use auto and remote focus for easily aligning the laser beam on your test object and set the measurement range via its touchscreen. Directly retrieve the vibrational velocity, displacement and acceleration. The integrated signal level indicator helps an optimum operation. Select high pass and frequency bandwidth filters to isolate unwanted signals. Thanks to the ASE Adaptive Signal Enhancement, VibroGo measures reliably even on difficult objects (dark, moving, wet or glossy surfaces).

**REMOTE CONTROL  
VIA WEB BROWSER**

\* Device not included



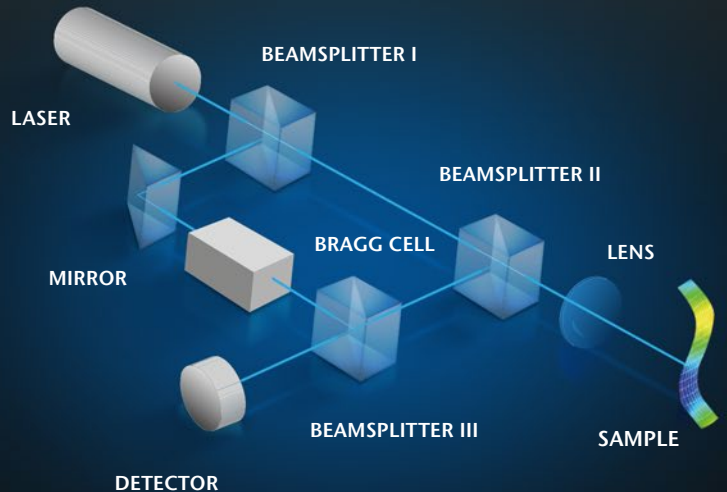
**OPTIONAL MOBILE  
POWER SUPPLY**



**A reliable tool for acoustics and dynamics**

If you are looking for a portable, multi purpose and non-contact vibration sensor system, VibroGo is the ideal solution. Use the lightweight tripod for fast setups. Stay independent with the mobile power supply for 3 hours operation time. Safely measure machinery vibrations on difficult to access or hazardous areas from a distance. Use wireless connection for remote control from everywhere, for comfortable sensor configuration as well as data transfer.

**LASER DOPPLER VIBROMETRY**



**How it works**

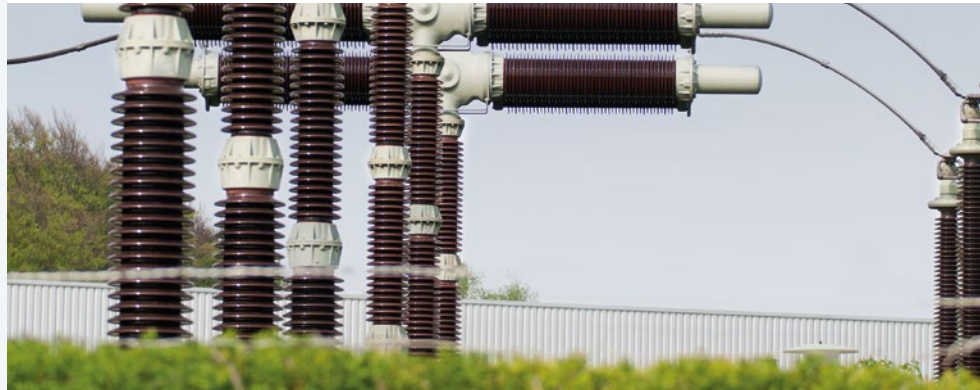
If a light beam is reflected by a moving object, the frequency of the light is shifted proportional to its velocity, a phenomenon referred to as the Doppler shift. Through this process, the velocity information becomes coded in the frequency of the light and is subsequently used by the laser Doppler vibrometry to measure the vibration. A precision interferometer and digital decoding electronics transform the frequency shift into a voltage signal that can be processed by standard data acquisition systems. A significant property of the technology, the velocity information is independent of the intensity of the reflected light; hence, the robust measuring principle works well even for objects with low reflectivity surfaces.

# Vibration analysis in the field

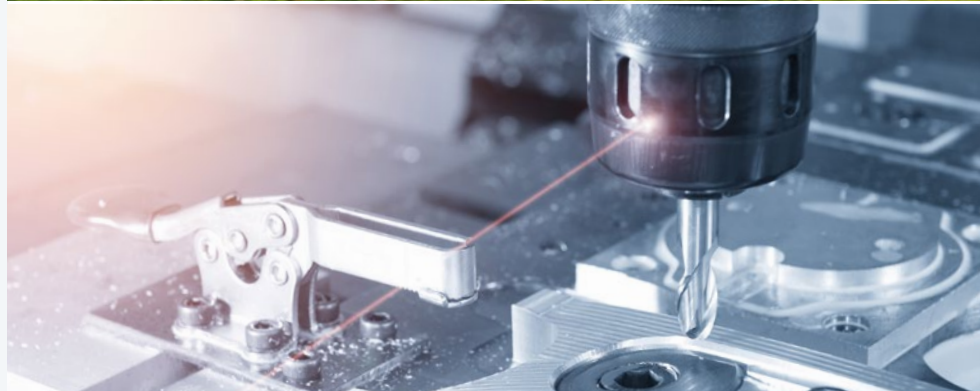
*VibroGo enables a reliable and precise vibration analysis, e.g. for condition monitoring, predictive maintenance of machinery, civil engineering studies and quality control.*



*Condition monitoring in the field at distances up to 30 m especially for hard-to-access areas or from safe distances.*



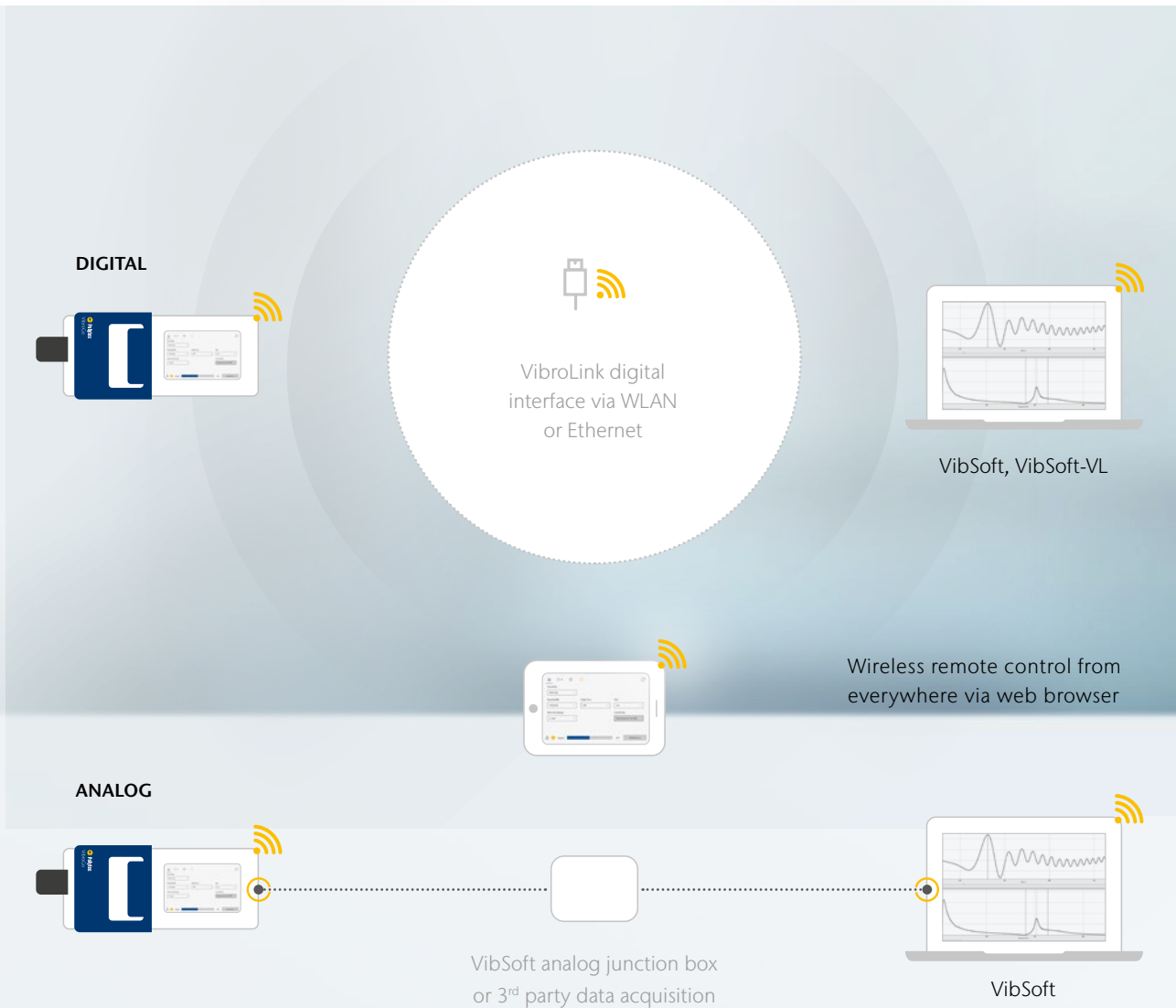
*Predictive maintenance of machinery, tools and installations in challenging industrial environments.*



*Non-contact vibration analysis without influencing sensitive or biological samples, e. g. studying insect communication and behaviour.*



# VibroGo and VibSoft – advanced connectivity



**VibroGo's latest generation FPGA-based signal processing decodes raw measurement data in displacement, velocity or acceleration and allows signal conditioning and data interfacing – analog and digital.**

VibSoft provides both data acquisition and profound analysis of vibration measurement results. For data transfer, choose between the comfortable digital and the classic

analog way: VibroLink is Polytec's interface for direct and fully digital data acquisition via Ethernet or WLAN and control of all measurement settings with the software package VibSoft-VL. Alternatively connect 3<sup>rd</sup> party DAQ to the analog interface or use a VibSoft junction box, which allows connecting further analog inputs like other sensors and reference signals. Control the settings of the VibroGo comfortably and remotely via WLAN or Ethernet from almost any device with a web browser-based user interface.



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