

FROM SINGLE POINT MEASUREMENT...

OFV Modular Laser Vibrometer

This flexible, baseline system was designed as an upgradeable solution, ideal for research, development and general vibration measurements



- The latest design adds digital processing with a range of new features that make non-contact vibration analysis more precise, simple, flexible and rewarding
- The system comprises
 - an OFV-5000 controller
 - decoder modules
 - a sensor head (OFV-505/503 standard single point, OFV-551/552 fiber single point or differential fiber sensors)
- Various analog and/or digital decoder options seamlessly cover
 - the entire velocity range up to ± 10 m/s
 - displacements from the sub-nanometer to the meter range
 - frequencies from DC to 20 MHz
- Designed for flexibility – the system can be extended to a full field scanning vibrometer or microscope vibrometer system

...SCANNING OF SURFACES...

PSV-400 Scanning Vibrometer

The new PSV-400 Scanning Vibrometer is a fast and intuitively operated full field vibration measurement and imaging system

- For investigating noise and vibration issues in industrial and R&D markets, specifically automotive and aerospace
- Complete PSV Software Package provides detailed vibration data analysis including graphing, animation of 2-D and 3-D color maps, FRFs, and data export



...TO COMPLETE 3-D VIBRATION MEASUREMENT

PSV-400-3D Scanning Vibrometer

The new Polytec PSV-400-3D Scanning Vibrometer is the perfect measurement instrument for gathering 3-dimensional vibration data from both simple and complex structures

- Simultaneous, high spatial resolution measurement using three independent PSV-400 scan heads
- Intuitive 3-D animation of measurement results
- Clearly displayed separation of out-of-Plane and in-Plane vector components
- Data interface to Modal Analysis and FEM Software

MSV-300 Microscope Scanning Vibrometer

This award winning system delivers full-field characterization of out-of-plane motion for MEMS microstructures using standard microscope optics

- Frequencies up to 20 MHz
- sub picometer displacement resolution
- Velocities up to 10 m/s



PMA-300 Planar Motion Analyzer

The PMA-300 delivers in-plane microstructure motion analysis at frequencies up to 1 MHz and with resolution better than 10 nm

- Fully integrated, high performance imaging system using specialized stroboscopic video microscopy



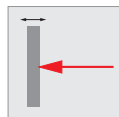
MMA-300 Micro Motion Analyzer

Complete 3-dimensional motion analysis of microstructures is derived from the modular combination of MSV-300 and PMA-300



- Proven performance on MEMS/ MOEMS, medical/bio and other microstructures with scan areas down to $70 \mu\text{m} \times 70 \mu\text{m}$
- Compatible with most optical microscopes and wafer-level probe stations

Portable and Industrial Vibrometers and Velocimeters



IVS Industrial Vibration Sensors

- Ideal for production line quality control
- Robust and integrated single-box design
- Available digital signal processing for accurate and repeatable measurements from uncooperative surfaces



PDV-100 Portable Digital Vibrometer

- The first truly portable, self-contained digital vibrometer for condition monitoring



CLV Compact Laser Vibrometers

- Ideal for general production test/R&D work
- Compact lightweight sensor head design with remote controller and near DC to 350 kHz frequency response



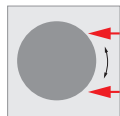
LSV Laser Surface Velocimeters

- Accurate, non-contact measurement of speed and length of moving surfaces

- Robust, industrial design performs continuously in harsh environments
- Proven performance on coils, strips, tubes, paper and hot steel

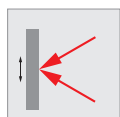


Special Vibrometers



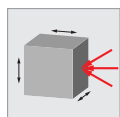
Rotational Vibrometers

- For torsional vibration and rotational speed variation measurement, e.g. automotive engine and drivetrain torque, motors and pumps, etc.
- Provides angular velocity, displacement and rpm outputs



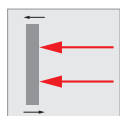
In-Plane Vibrometers

- For transverse (in-plane) vibration measurement
- Provides lateral velocity (DC) and velocity



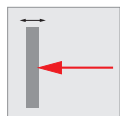
3D-LV Tri-Axial Vibrometer

- Simultaneous non-contact measurement of vibration along 3 axes
- Separate analog velocity outputs: v_x , v_y and v_z



HSV High-Speed Vibrometers

- For high speed engine valve dynamics, explosion, shock impact and other high speed vibration test applications
- Single and differential velocities up to ± 30 m/s



VDD Digital Vibrometers

- For applications where the highest accuracy and resolution are required, e.g. transducer calibration, micro device measurement (1 pm displacement measured in a 2 MHz bandwidth)
- Can be certified as a primary calibration standard by the German National Standards Lab (PTB)

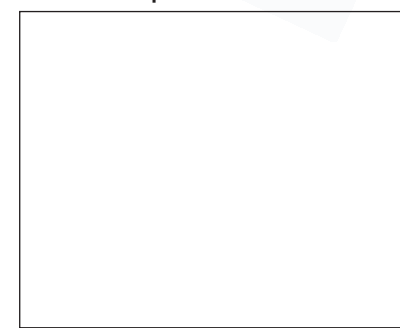
Laser Doppler Vibrometry

Polytec manufactures a range of laser vibrometers that have become the accepted gold standard for non-contact vibration measurement.

No matter whether the application is the 100% inspection of motors on a production line, optimizing an ultrasonic cutting tool, confirming the characteristics of a MEMS microresonator, or identifying torsional modes in a vehicle's drivetrain, there is a Polytec system that can provide the measurement solution.

Technical specifications are subject to change without notice. LM_BR_ProductFlyer_2004_01_E

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Laser Vibrometers

Solutions for every
Vibration Measurement Need



*non-contact,
remote, rapid and
accurate vibration
measurement*