



Laser vibrometers

Optical measurement solutions for vibration

Product brochure





Laser Doppler vibrometry

Single point vibrometers



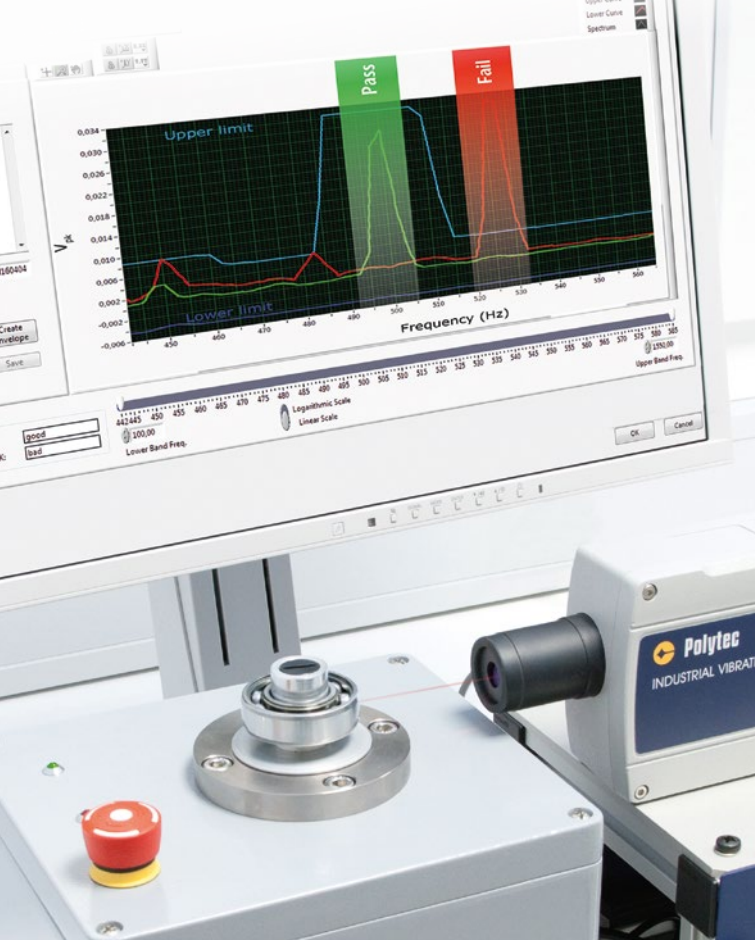
VibroFlex

- Modular sensor solution that grows with your needs
- Resolve sub-pm vibration and velocities up to 30 m/s
- Configurable front-end from DC to 24 MHz
- Choose from sensor heads with highest sensitivity, compact design or fiber-optics for hard-to-reach areas



CLV Compact Laser Vibrometer

- Compact lightweight sensor head with remote controller for frequencies from near DC up to 3.2 MHz
- Integrated camera for visually monitoring the test structure (optional)



Polytec has been providing light in the darkness for more than 50 years. With nearly 500 employees worldwide, the company develops, produces, and distributes optical measurement systems for research and industry. The products enjoy an outstanding reputation in the international professional world.

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

The laser Doppler vibrometer is a precision optical sensor used for determining vibration velocity and displacement at a fixed point. The technology is based on the Doppler effect, sensing the frequency shift of back scattered light from a moving surface.

Whether the application is for 100% Q.A. inspection of motors or bearings on a production line, optimizing of ultrasonic tools, confirming the characteristics of MEMS resonators and other microstructures or identifying torsional modes in a vehicle's drive-train and many more, there is a Polytec system that can provide the measurement solution.



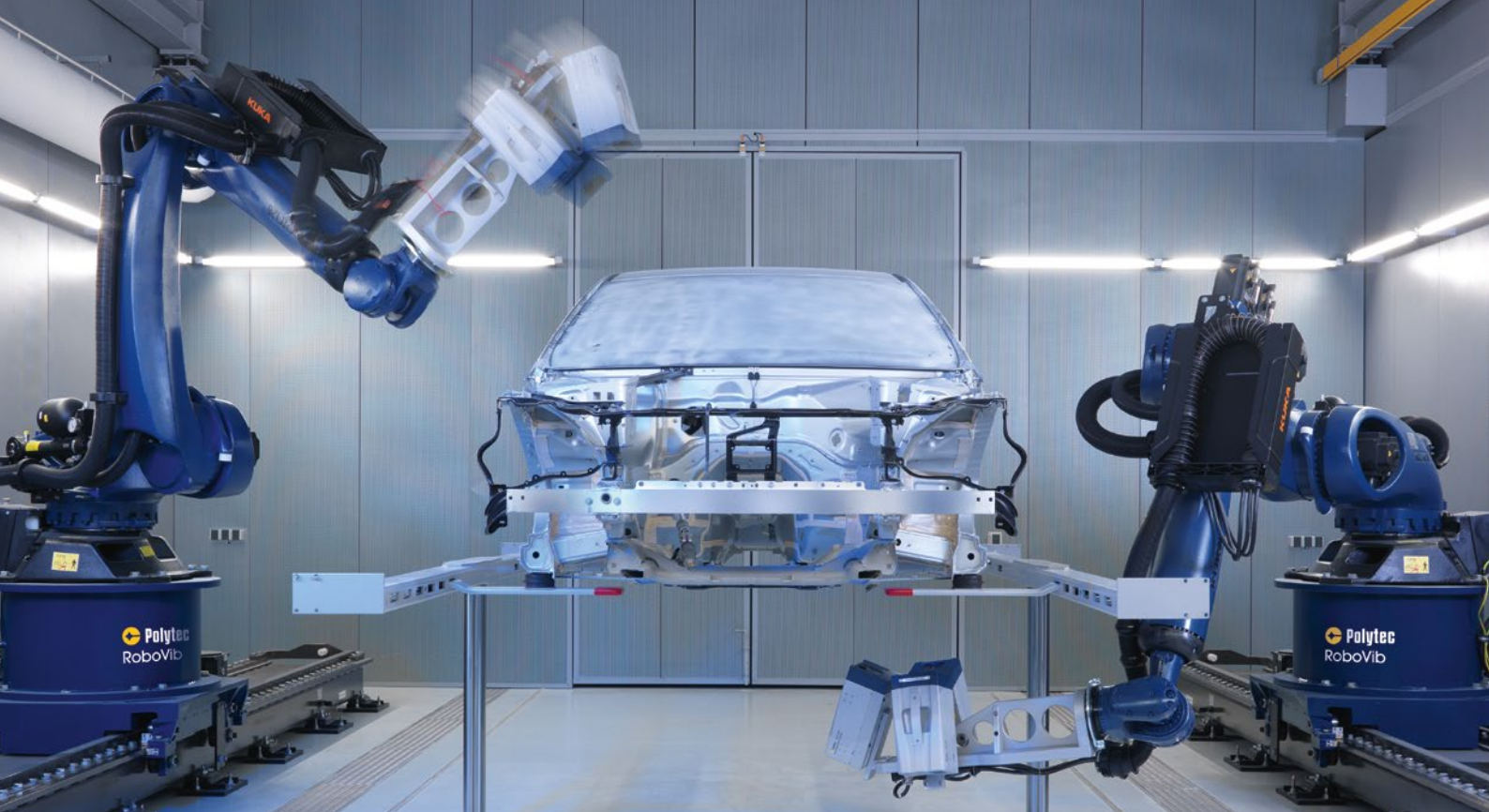
IVS Industrial Vibration Sensor

- Robust and wear-free sensor for vibro-acoustic quality inspection in-line
- Clear pass/fail decisions for production testing based on reliable vibration measurement
- Best signal quality and flexible working distances with auto and remote focus

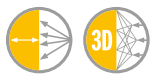


VibroGo

- Truly portable, compact laser sensor enabling non-contact vibration analysis
- For condition monitoring, research and vibration analysis in the field



Full-field vibrometers



PSV Scanning Vibrometer 1D & 3D

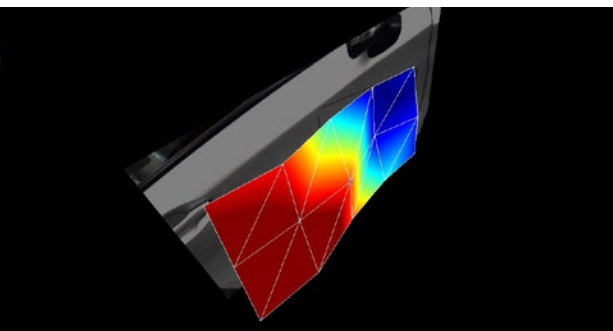
- For comprehensive, full-field analysis for NVH, acoustics, structural dynamics, ultrasonics and FEM validation up to 25 MHz
- PSV Software package provides detailed vibration data analysis and 3D animation of deflection shapes with full export compatibility
- Available as compact notebook-based model, 1D or 3D rack type and as fully automated structural test station RoboVib®
- Xtra upgrade option for optimum measurement signal even on large stand-off distances or difficult to prepare surfaces
- Powerful accessories like the geometry scan unit for direct detection of geometry data or the optical derotator enabling measurements on rotating parts



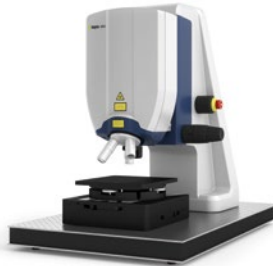


MPV Multipoint Vibrometer

- Capture transient and non-stationary events in a single synchronous measurement
- Gather time- and frequency-resolved deflection shapes in 3D
- Flexible and user-configurable sensor array with up to 48 optical channels plus 8 reference channels for other sensors

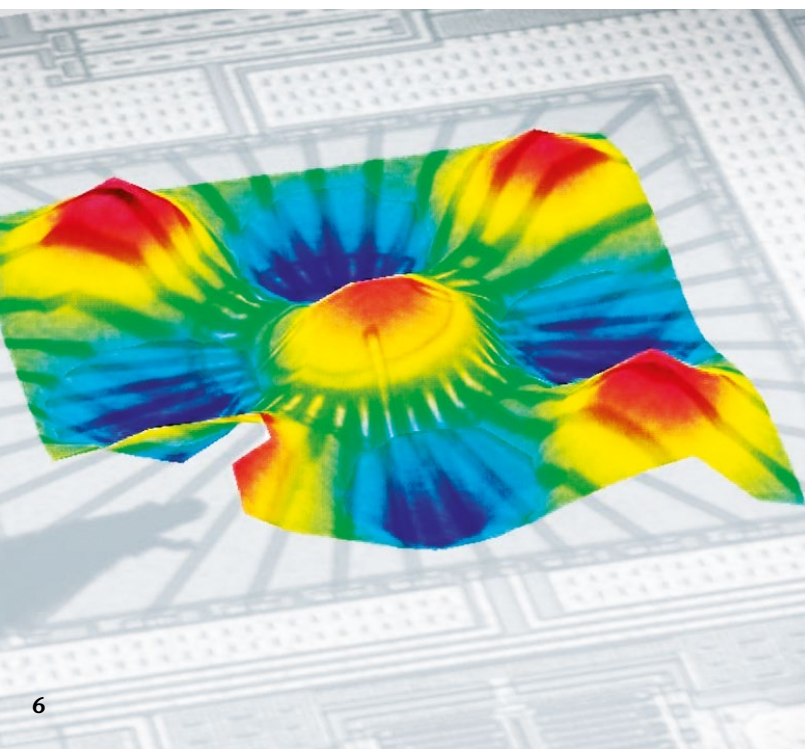


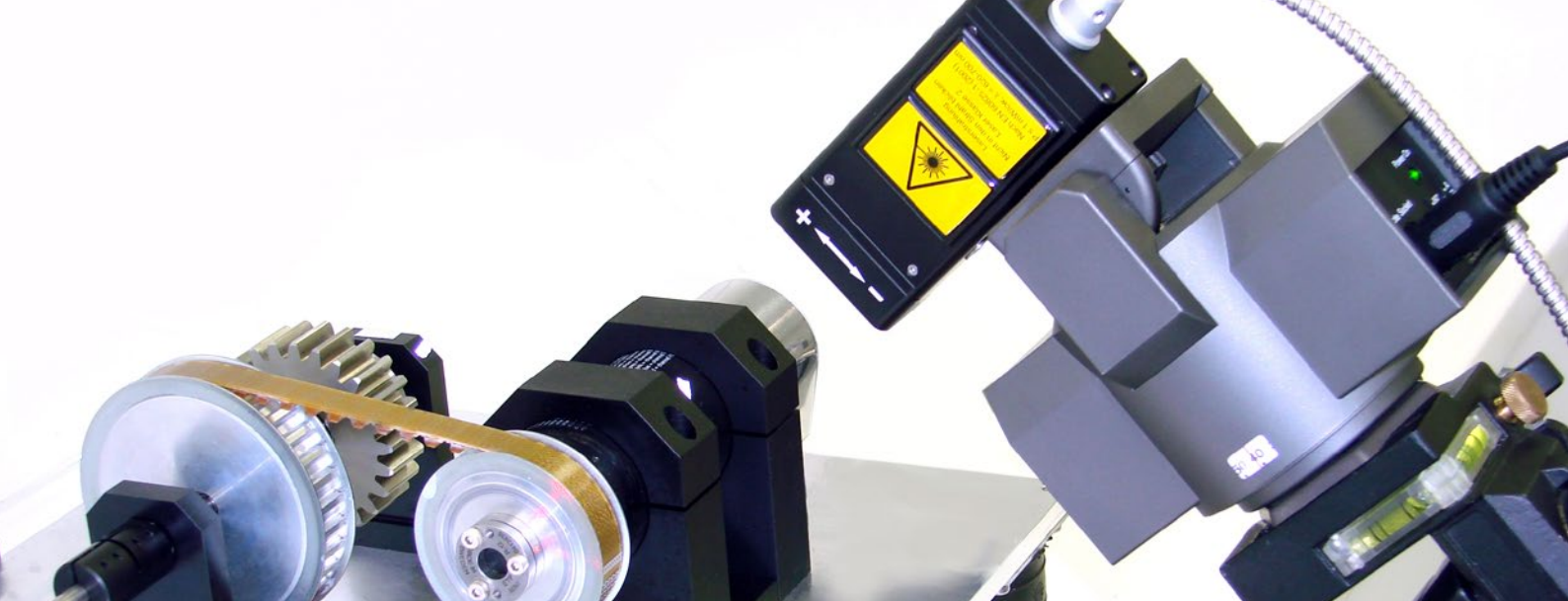
Microscope-based vibrometers



MSA Micro System Analyzer

- Microscope-based vibrometers for a reactionless characterization of microsystems, MEMS, BAW/ SAW, biological probes, etc.
- From intuitive entry-level to combined vibration and topography measurement systems, 3D vibration mapping to ultra-high frequency systems with 2.5 GHz
- For measuring dynamics, securing microsystems functionality, modal analysis or FE model updating
- Integrated microscope optics for highest lateral resolution and image quality





Special application vibrometers



RLV Rotational Laser Vibrometer

- 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



RSV Remote Sensing Vibrometer

- Robust and portable vibrometer for mobile outdoor measurements over long distances with high sensitivity
- Also for challenging measurements in the R&D lab using optional short range lenses



IPV In-Plane Vibrometer

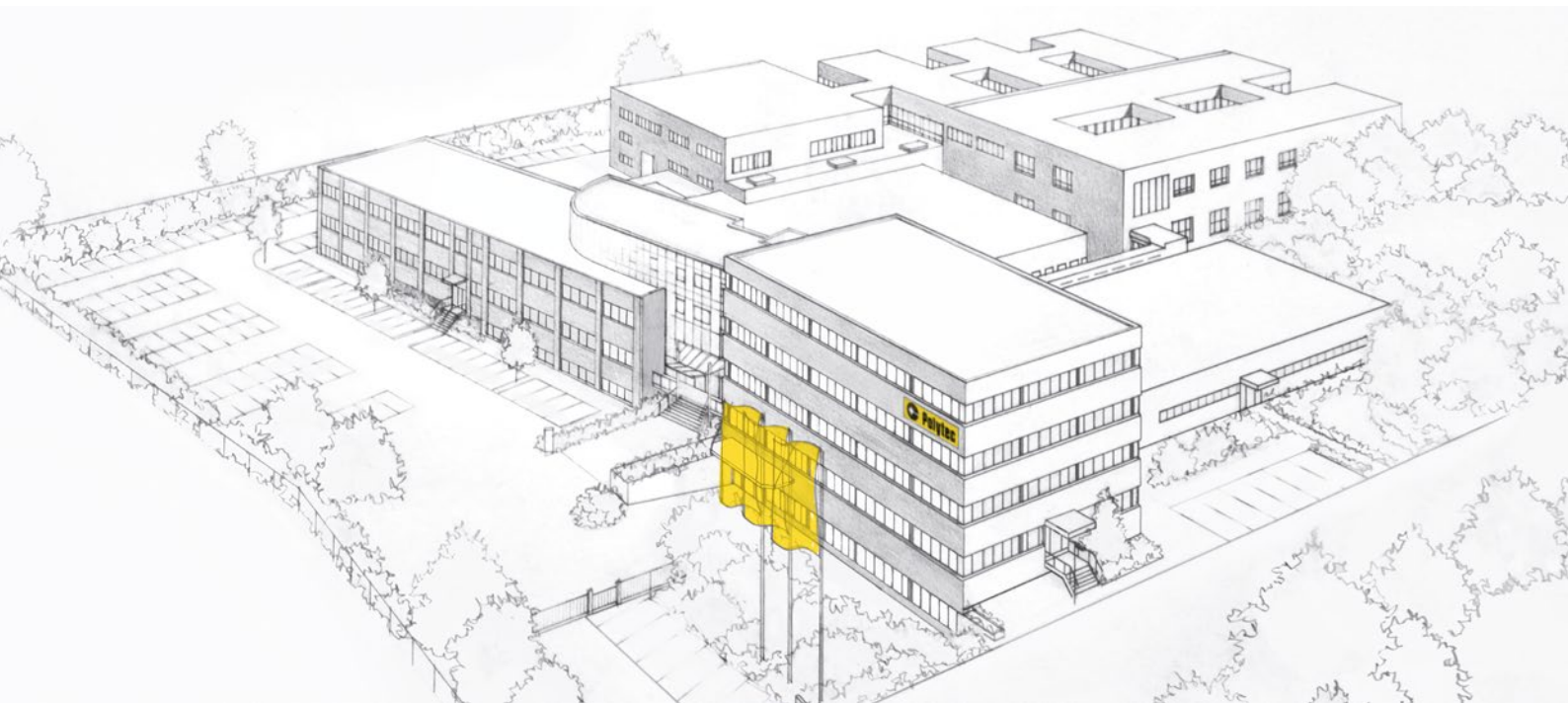
- Transverse (in-plane) vibration measurement
- Lateral examination of stroke movements



Differential Vibrometers

- Optical subtraction of ambient vibrations
- Specially suited for microsystems and material science (e.g. piezoelectric materials)
- High-speed (up to 40 m/s) and multi-channel measurements of valve train dynamics





Shaping the future since 1967

High tech for research and industry.
Pioneers. Innovators. Perfectionists.

Find your Polytec representative:
www.polytec.com/contact

Polytec GmbH · Germany
Polytec-Platz 1-7 · 76337 Waldbronn