



MPV-800 Multipoint Vibrometer

Synchronous Optical Vibrometry

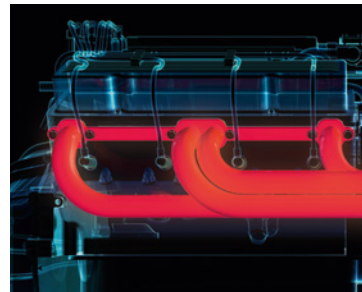
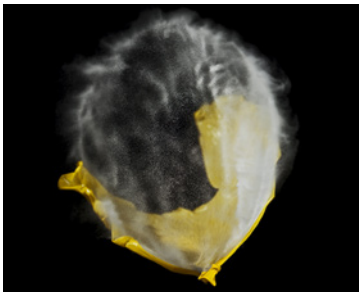
Product Brochure



Perfectly capture the defining moment

The MPV-800 Multipoint Vibrometer takes vibration sensing to a new level, enabling synchronous optical vibration sensing of transient and time-critical events due to multi sensor measuring especially in critical conditions.





On hot and sensitive surfaces or lightweight components, where tactile methods crucially affect the result, the non-contact and reactionless method of the Laser Doppler Vibrometry provides true vibration data of your structure. Laser light picks up signals from any kind of surface.

The time- and frequency resolved deflection shapes of transient and highly dynamic events can now be seen from any possible angle by individually positioning up to 48 optical probes.

The MPV captures non-repeatable events from all perspectives and in all details. The time and space resolved data is displayed in real-time.



First Choice for Multiple Choice

The laser-based MPV-800 Multipoint Vibrometer enables synchronous measurement with multiple channels and reconstructs operational deflection shapes resolved in time and frequency.

With a double optical sensitivity compared to the industry's current gold standard – Polytec OFV-505 – the MPV-800 enables measurements on arbitrary surfaces with low noise and without surface preparation.



Highlights

- Non-contact and reactionless vibration sensing
- Capture transient and non-stationary events in a single synchronous measurement
- Time- and frequency resolved deflection shapes in 3D
- Flexible and user-configurable up to 48 optical channels
- Best optical sensitivity avoids surface preparation
- Eye-safe laser



Explore New Applications

- Full-field evaluation of settling & decay events
- Non-stationary processes (e.g. fluid machines, valves)
- Environmental tests with variable excitation profiles or temperatures
- Run-up of electric drives and combustion engines
- Transient events (e.g. shock, switching, door-slam)

About Polytec

Polytec is the world's leading developer and manufacturer of optical measurement systems for the characterization of vibrations. We are also specialists in the field of optical surface profilometry and non-contact length and speed measurement.

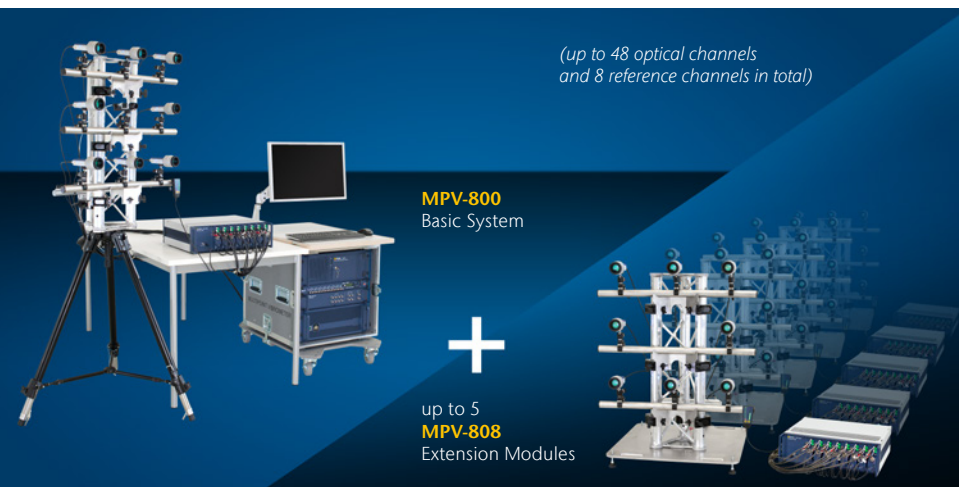
Polytec manufactures a range of laser vibrometers that have become the accepted gold standard for non-contact vibration measurement.

Polytec has been certified according to ISO since 1994, and most recently according to DIN EN ISO 9001:2008. Numerous national and international awards attest to our technological leadership and expertise.



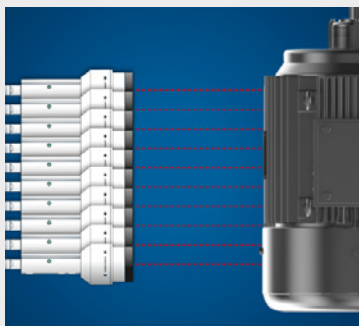
48 eyes are better than one

The modular MPV-800 Multipoint Vibrometer starts with the MPV-800 Basic System including data acquisition workstation. It comes with eight optical vibrometer channels, eight channels for reference signals (e.g. for accelerometers) and a dedicated software suite. The basic system can easily be extended to a 48 optical channel and eight reference channels vibrometer system.



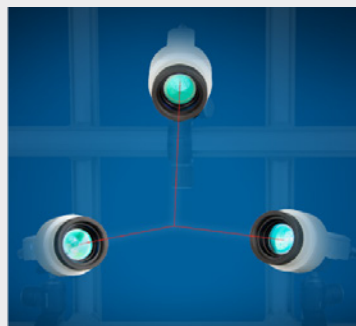
Arrange Individually

The user-configurable array of fiber coupled sensors allows flexible measurements either in a single direction or around a complex shaped object and even provides 3D vibration vector information.



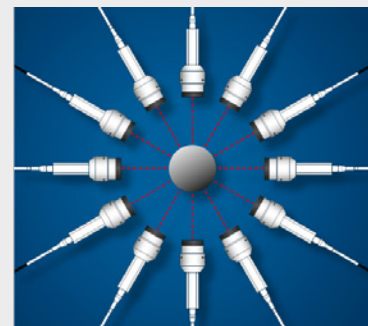
Large field of view

Multiple sensors enable a full-field evaluation of amplitude and phase distribution on large surfaces. For non-repeatable, transient events the Multipoint Vibrometer allows real-time observations on a complete structure.



Multiple 3D observations

Like the well-approved PSV-3D, three sensors focusing on a hot-spot enable the extraction of vibration components in-plane as well as out-of-plane. Measure with 48 single points or 16 3D points or an individual mixture.

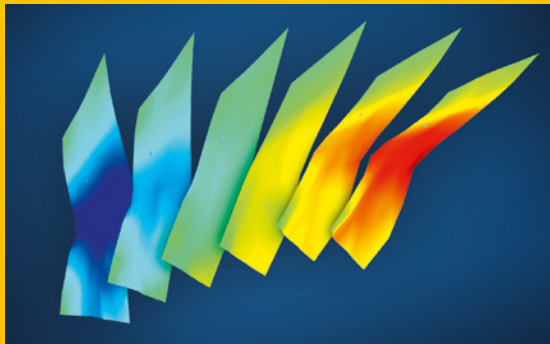


Any perspective possible

Gather new insights with a user-configurable array from any perspective that is relevant for the full understanding of your transient event. Highly flexible fiber-optics allow any constellation around the probe.

Developed to enhance your success

The MPV software is dedicated to the acquisition of multiple channels on a 3D geometry.



Operating deflection shapes resolved in time and frequency.



Working with object geometries by imports from CAD or FE allows for calculating the surface normal vectors or transformation of data from 3D measurement points into the object coordinate system. This offers a direct comparison with simulation data or with acoustic simulations.

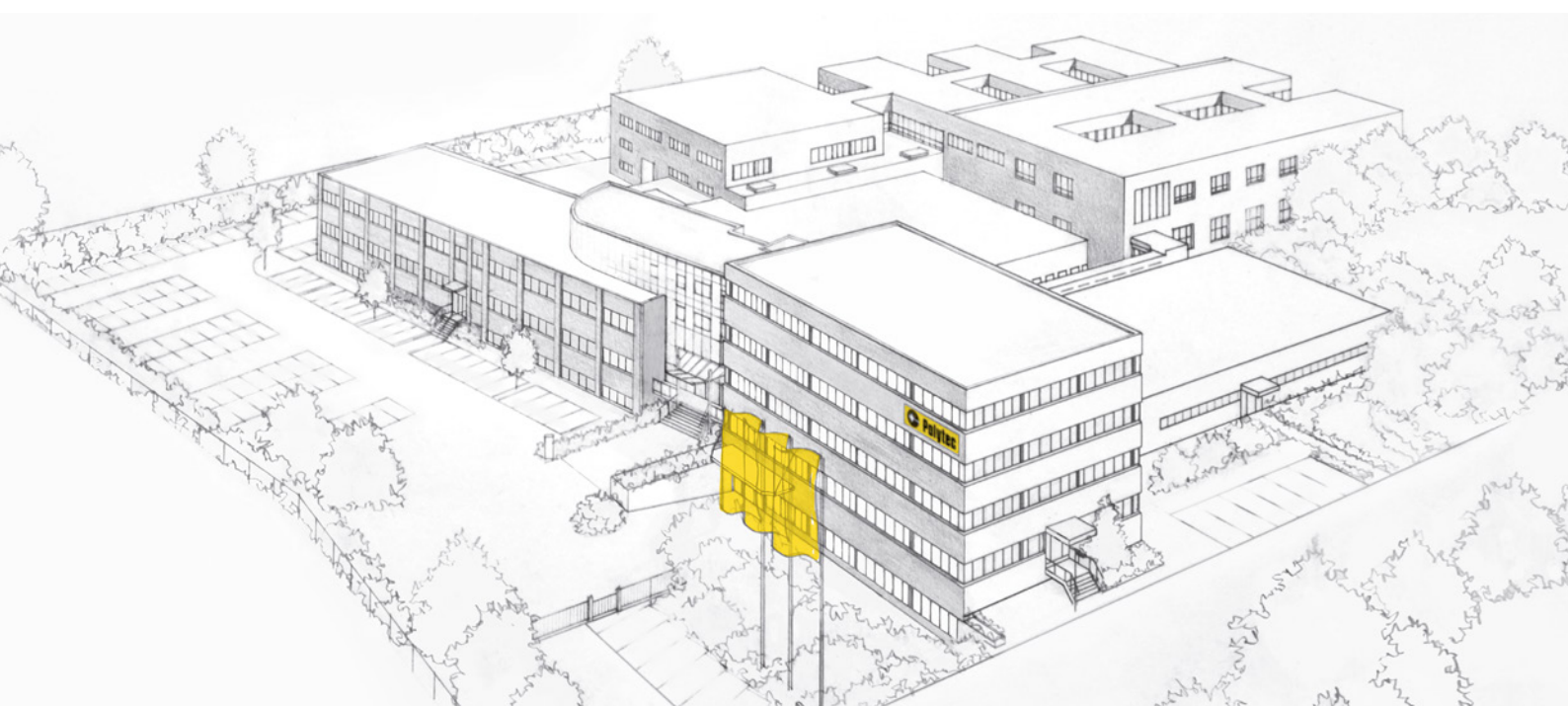
The software offers a convenient configuration of the acquisition settings of all channels including the reference channels and the optional signal generator.

For analysis, the deflection shapes in time and frequency domain are displayed in a 3D representation superimposed to the object geometry. Various export filter formats are available for post processing and documentation.



Software Highlights:

- Geometry import from CAD or FE
- Channel management in sensitivity and signal level
- Combination of 3D channels
- Sensor geometry setup in an object coordinate system
- Channel identification by image processing
- Time- and frequency resolved 3D deflection shapes



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