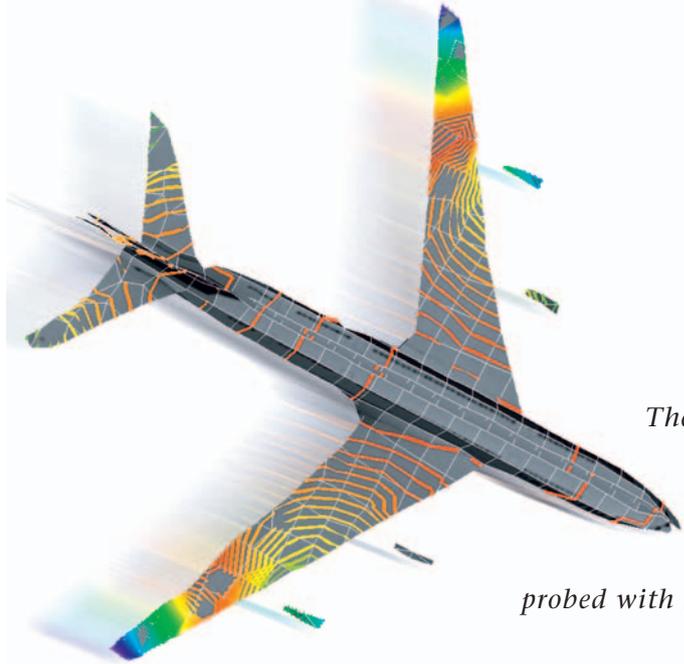


Polytec Scanning Vibrometers



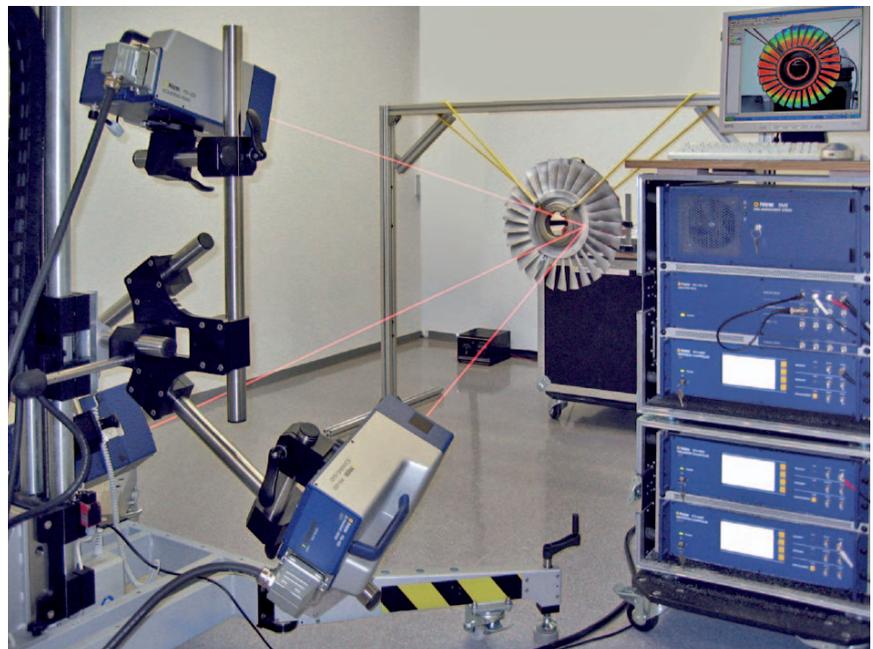
The PSV-400 and PSV-400-3D Scanning Vibrometers provide cutting edge measurement technology for the analysis and visualization of structural vibrations up to 20 MHz. Entire surfaces can be rapidly scanned and automatically probed with flexible and interactively created measurement grids, with no mass loading or added stiffness and no time.

Vibrations Made Visible

At the heart of every Polytec Scanning Vibrometer system is the laser Doppler vibrometer – a very precise laser-based, single-point transducer used for determining the vibration velocity and displacement by sensing the frequency shift of back scattered light from a moving surface.

Traditional multi-point vibration measurement methods use many fixed contact transducers making experimental modal and deflection shape analysis difficult and time consuming. However, through the use of dual-axis galvo scanners, the positioning of the laser vibrometer transducer spot can be automated. This is a great simplification for deflection shape, modal analysis and frequency response function measurements.

Now the geometry of the object and the location of the measurement points can be programmed through a computer's user interface greatly simplifying the measurement process and improving accuracy. To measure a deflection shape, just define the geometry and scan grid, and initiate a measurement. When the automatic scan is complete, display and animate the deflection shape in several convenient 2-D and 3-D presentation modes. These on-screen displays are extremely effective, intuitive tools for understanding the details of the structural vibration. Find more information on www.polytec.com/usa/psv400.



A Powerful Development Tool

The PSV-400 is a powerful data acquisition platform that can seamlessly integrate into the engineering workflow and the IT environment. The system can import geometry data directly from CAE and FEM packages or experimentally measure the geometry using the convenient Geometry Scan Unit (scanning laser range finder). All measurement results are available to third party applications through various export filters and PolyFileAccess, an open data interface. A powerful post processor is integrated in the software to apply various mathematical operations to the measured data.

Get the Complete 3-D Vibration Vector Information

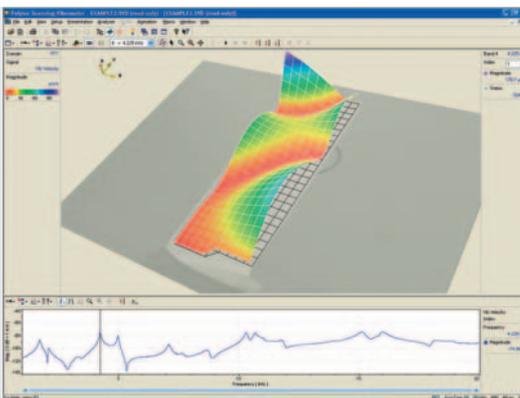
The PSV-400-3D Scanning Vibrometer has three independent sensor heads that extend scanning vibrometry to three dimensions. It enables intuitive 3-D animation of operational deflection shapes with clear separation of out-of-plane and in-plane vector components. The PSV-400-3D has 8 simultaneous measurement channels and the integral Geometry Scan Unit for quick and easy acquisition of 3-D geometry data directly from the structure under test.

www.polytec.com/usa/psv3d

Polytec Scanning Vibrometers:

Benefits for Aerospace Testing

- Dramatically increases throughput while lowering measurement costs
 - Simplifies frequency response measurements, calculation of deflection shapes and modal analysis
 - Efficient large-scale vibration data acquisition and management
 - Large stand-off distance for vibrometer and Geometry Scan Unit, up to 50 m for measuring typical surfaces of large objects
 - High spatial and frequency resolution (0.001 Hz) e.g. for modal analysis on turbine blades
- Test data can be measured directly at FE nodes
 - Fatigue testing at very high vibration levels up to 20 m/s
 - Measurement of rigid body modes (including in-plane motions)
 - Smooth transfer of measured data to modal analysis software and processing of multiple references for MIMO measurements
 - Partial measurements on large structures can be grouped together (stitched) to form a global data set of 3-D geometry and 3-D vibration data



Proud to Be Number One

Polytec is a global enterprise with corporate facilities in Europe, North America and Asia. A strong Polytec team of sales managers, application engineers and skilled representatives delivers Polytec technology to all parts of the world.

Founded in 1967, Polytec GmbH is an ISO-9000 certified manufacturer supplying customers with the gold-standard in laser Doppler measurement solutions. All of our vibrometer systems are developed, engineered and manufactured to the highest standards and specifications. Engineering such a sophisticated product requires a truly multi-disciplined company. Polytec's long-standing reputation and undisputed performance advantages are well known. We are very proud of the Polytec Scanning Vibrometer. Its design and construction demonstrate our expertise in opto-mechanics, electronics, computer hardware & software, as well as applications knowledge in the field of mechanical engineering.

Polytec At Your Service

Our market-leading position is built on innovative technology, high-quality products, engineering excellence, expert technical advice and thousands of satisfied customers worldwide. Polytec offers world-class products, technical support, measurement services, system rentals and training classes to support customers at every level in solving their measurement challenges.

Contact Us

If you would like any further information, please contact your local sales/application engineer or e-mail to info@polytec.com (for North America) or LM@polytec.de (all other regions).

Visit our website www.polytec.com for up-to-date technical information and future events, seminars and training classes.

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