

Press Release

Date: May 2016

Encl.:

Reference number: PR-0011-CPE-200416-XTRA

Shorter Measuring Times – Greater Productivity

A Higher Level of Optical Sensitivity for Scanning Vibrometers

Laser scanning vibrometry has proven its worth as a non-contact, non-invasive, fast and full-field way of measuring vibrations. Polytec is now offering the tried-and-tested PSV-500 and PSV-500-3D series vibrometers with the “Xtra” option, which significantly increases optical sensitivity. Optical sensitivity defines how powerful a scanning vibrometer is. It not only determines the signal strength and therefore on which surfaces measurements can be carried out, but it is also responsible for the signal-to-noise ratio of the measurement, the maximum achievable stand-off distance and therefore the size of the scannable area too.

The Xtra concept is based on an infrared laser that produces more power without sacrificing the eye-safety that Polytec’s PSV customers have enjoyed for many years. In addition, more of the infrared light is reflected from the surface. This additional light provides a signal that is at least eight times stronger than that produced using the basic model, which is far more resistant to noise as a result.

The signal-to-noise ratio is improved and resonance frequencies in the FFT (Fast Fourier Transform) spectrum become even more clearly visible (Figure 3). This results in more precise data analysis and FE model validation – with shorter measuring times too, since the number of averages that are needed drops significantly. Also, there is no longer any need to treat surfaces or to reposition the instrument from one scan area to another due to the greater measuring distance, saving time and effort. Users can therefore carry out many more measurements per day, while complex product developments can be turned into reality more efficiently. The new PSV-500 Xtra is available both as a complete system and as an upgrade for the basic models.

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Figure 1: A higher level of optical sensitivity translates into a greater measuring distance (between the sensor head and the object) and a larger scan area. Also, the signal-to-noise ratio is improved, measuring times are reduced and productivity increased. (Figure: Polytec)

In the text box: About Polytec

Polytec is an innovative high-tech firm that has been developing, producing and selling measurement technology solutions for research and industry for more than 40 years. Building on its success in the distribution business, Polytec began developing and producing its own laser-based measuring devices in the 1970s. Nowadays, the company – which has its headquarters in Waldbronn near Karlsruhe, Germany – is a world leader in the field of laser vibrometry for optical vibration measurement. The company's now wide range of innovative in-house products also includes speed and length sensor systems, surface metrology solutions, analytical measuring technology and factory automation concepts. Another of Polytec's core skills is in distributing high-tech products from other innovative manufacturers.

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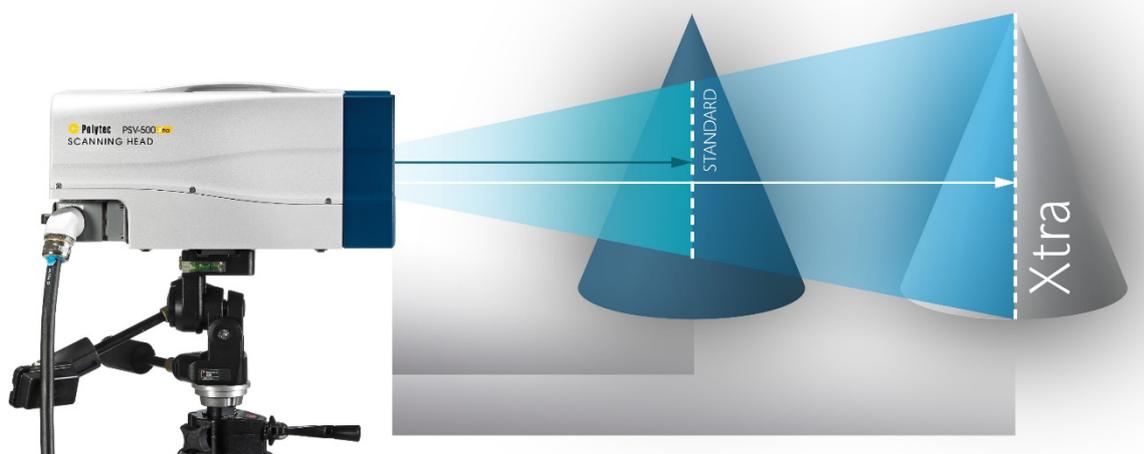
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Figure 1



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