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**Enhanced parallelism measurement accuracy with the XK10 alignment laser system for machine tool builders**

Global engineering technologies company, [Renishaw](https://www.renishaw.com/en/renishaw-enhancing-efficiency-in-manufacturing-and-healthcare--1030?utm_source=Stone+Junction&utm_medium=HN&utm_campaign=REC637) is showcasing a version of software for its [XK10 alignment laser system](https://www.renishaw.com/en/xk10-alignment-laser-system--44377?utm_source=Stone+Junction&utm_medium=HN&utm_campaign=REC637) at International Manufacturing Technology Show (IMTS) 2022, which allows users to perform point-to-point parallelism measurements. This functionality enables users to make precise adjustments to machine parallelism to a level that has previously been impossible using traditional measurement techniques.

The XK10 alignment laser system provides a fast, precise and efficient measurement tool for straightness, squareness, rotational parallelism, rail parallelism flatness, and level, as well as assessing spindle direction and coaxiality of rotary machines. It is a powerful tool for diagnosing the source of errors following a rebuild or as part of regular maintenance.

The traditional method for parallelism measurement has previously been achieved by using a bridge plate and master rail, in combination with a dial gauge and level meter. This method is time-consuming and is prone to error as the measurements are recorded manually. The XK10 uses laser measurements to capture two points on each rail, allowing the angle between the two rails to be determined and recorded digitally.

“This latest release of software enables the XK10 to take measurements at multiple points along each rail,” explained Andy Deacon, Calibration Product Manager at Renishaw. “The benefit of an increased number of measurement points is that the straightness of each rail is also measured at the same time. Parallelism between the rails can then be determined by looking at the difference in straightness at each point, giving a more accurate picture than a measurement of the overall angle between rails.

“The XK10 is supplied with fixturing solutions to reduce set up time and can be used with the optional parallelism optic designed specifically for this application,” Deacon continued. “Making measurements where no rails are present is significantly improved using the included magnetic reference mount to easily slide the detector along the edge of a casting.”

Renishaw's calibration products, including the [XL-80 laser interferometer](https://www.renishaw.com/en/xl-80-laser-system--8268?utm_source=Stone+Junction&utm_medium=HN&utm_campaign=REC637), [QC20 ballbar](https://www.renishaw.com/en/qc20-w-ballbar-system--11075?utm_source=Stone+Junction&utm_medium=HN&utm_campaign=REC637) and [XM-60 multi-axis calibrator](https://www.renishaw.com/en/xm-60-and-xm-600-multi-axis-calibrator--39258?utm_source=Stone+Junction&utm_medium=HN&utm_campaign=REC637), are essential tools to gain a greater understanding of a machine’s capability. Regular maintenance checks of the condition of a machine, with powerful diagnosis of the source of any errors, minimises reactive maintenance effort and focuses resources on valuable preventative work. [CARTO software suite](https://www.renishaw.com/en/carto-software-suite--31845?utm_source=Stone+Junction&utm_medium=HN&utm_campaign=REC637) provides data capture, analysis and compensation applications, simplifying the process for monitoring and improving position performance.

From September 12th – 17th, visitors will be able to see the XK10 system demonstrated on stand 135509, on Renishaw’s Quality Assurance stand at IMTS 2022.

Discover more at [www.renishaw.com/xk10](https://www.renishaw.com/en/xk10-alignment-laser-system--44377?utm_source=Stone+Junction&utm_medium=HN&utm_campaign=REC637)

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**Notes to editors**

**About Renishaw:**

UK-based Renishaw is a world leading engineering technologies company, supplying products used for applications as diverse as jet engine and wind turbine manufacture, through to dentistry and brain surgery. It has over 5,000 employees located in the 36 countries where it has wholly owned subsidiary operations.

For the year ended June 2020 Renishaw recorded sales of £510.2 million of which 94% was due to exports. The Company’s largest markets are China, the USA, Japan and Germany.

Throughout its history Renishaw has made a significant commitment to research and development, with historically between 13 and 18% of annual sales invested in R&D and engineering. The majority of this R&D and manufacturing of the Company’s products is carried out in the UK.

The Company’s success has been recognized with numerous international awards, including eighteen Queen’s Awards recognising achievements in technology, export and innovation.

Further information at [www.renishaw.com](http://www.renishaw.com/)