

Renishaw focuses on machine tool and CMM utilisation at EMO 2009

New touch probes and probe software that increase machine tool automation, improve process control and allow advanced on-machine part verification, will be a major feature of Renishaw's stand at EMO Milan. For visitors sourcing off-line measurement products, there will also be the opportunity to discuss Renishaw's new retrofit service for co-ordinate measuring machines (CMMs), including MODUS™ the company's first metrology software, and a new high-speed solution for valve seat and guide measurement. There will also be a range of new motion control products, including a true absolute optical encoder for rotary and linear applications, and unique track-mounted linear encoder scale system.

Renishaw is making waves at EMO Milan with the introduction of new touch probe systems that use its unique frequency hopping spread spectrum (FHSS) probe signal radio transmission technology to allow automated job set-up and in-process measurement on all sizes of CNC machine tools.



RMP40 ultra-compact radio transmission touch probe



REVO® five-axis system performing valve seat measurement

The new ultra-compact RMP40 probe is especially suited to multi-axis and mill-turn applications, whilst its variant, the RLP40 touch probe, is specifically designed for more hostile turning environments. A transmission only module RMP40M is also being introduced.

Measurement on multi-axis machine tools is set to take a great leap forward with the introduction of a new version of Renishaw's Productivity+™ suite of PC-based probing software. A key improvement is a new multi-axis option that allows more creativity and efficiency in machining processes, which supported by Renishaw's high accuracy Rengage™ 3D technology-based touch probes and new ultra-compact radio probes, gives process engineers and machinists a wide choice of flexible process solutions. The Productivity+™ multi-axis option will be launched at EMO 2009 as a free Technology Evaluation for new customers and maintenance subscribers using table-table machine configurations.

Renishaw has also released a new version of its Renishaw OMV Pro software, a powerful package that works with touch probes to give advanced on-machine part verification and machine simulation capabilities. Now supporting Microsoft® Windows Vista®, Renishaw OMV Pro 2.02 adds more advanced co-ordinate measuring machine (CMM) style capability with an extended range of geometric dimensioning and tolerancing (GD&T) functionality, plus the ability to work with multiple alignments in a single program, useful for users of complex multi-axis machine tools. Like the more basic Renishaw OMV software, the new version of Renishaw OMV Pro allows users of machine tool touch probes to quickly verify the accuracy of free-form and prismatic parts with a crystal-clear reporting format that makes the software accessible to shop-floor staff.

Renishaw is also focusing on manufacturers who are suffering from inspection bottlenecks that tie up staff and expensive machines whilst waiting for vital measurement results. Visitors to EMO Milan will be able to see Renishaw offers cost-effective CMM retrofits for all budgets and applications, from touch trigger probing and 3-axis scanning, through to the latest ultra-fast REVO® five-axis measurement system. The company offers a 'one-stop shop' upgrade solution, from its new MODUS™ metrology software and universal CMM controller, through to sensors and machine calibration.

The measurement of valve seat and guides has traditionally been very challenging, involving time-consuming methods that are often a compromise and not capable for the task. Renishaw's latest five-axis measurement technology is now making it possible to very quickly collect large amounts of data using helical scans and adaptive scanning techniques. Within REVO® compatible metrology software packages, automated analysis provides a range of attribute data including valve seat form error, seat circularity profile at any specified height, runout of the seat to the guide bore axis, and concentricity of the guide and seat.

RESOLUTE™ is a true absolute optical encoder system that has excellent dirt immunity, and an impressive specification that breaks new ground in position feedback. Visitors to EMO 2009 will see that it is the world's first absolute encoder capable of 27-bit resolution at 36,000 rpm, giving an astonishing market-leading resolution of just 1 nanometre at 100 m/s for both linear encoder and angle encoder applications. Large set-up tolerances enable easy installation and high reliability, whilst low jitter and SDE (Sub-Divisional Error) meet the demands of high precision stages.



RESOLUTE™ true absolute optical encoder

Visitors to EMO Milan sourcing position feedback products can also see FASTRACK™, a revolutionary track-mounted linear encoder scale system from Renishaw that combines $\pm 5 \mu\text{m/m}$ accuracy, with the ruggedness of stainless steel, and the quick and easy installation of a carrier-type encoder system. Designed for applications that demand high accuracy and easily removable scale, the FASTRACK™ scale system consists of two miniature guide rails that securely retain Renishaw's new low-profile scales and allow them to freely expand at their own thermal expansion coefficient with almost zero hysteresis. If damaged, the scale can be pulled out of the guide rails and quickly replaced, even where access is limited, thus reducing machine downtime.

For further information visit www.renishaw.com/emo