

Renishaw expands creative machining process possibilities with new multi-axis development for its Productivity+™ probe software

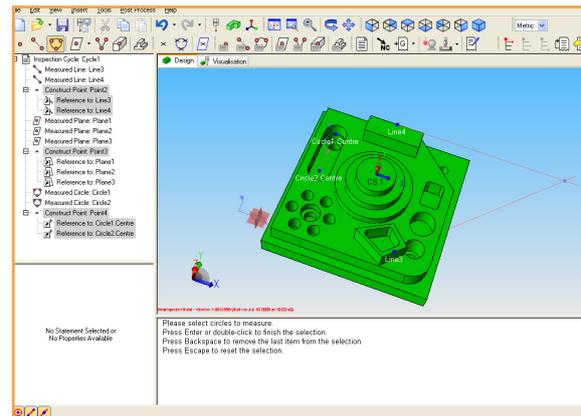
Measurement on multi-axis machine tools is set to take a great leap forward with the introduction of a new version of Renishaw's Productivity+™ suite of PC-based probing software. A key improvement is a new multi-axis option that allows more creativity and efficiency in machining processes, which supported 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.

Multi-axis machine tools add extra dimensions to machining possibilities, and the PC-based Productivity+™ software now allows users to take full advantage of data from multi-dimensional probe moves. From the moment a component is first loaded, Productivity+™ software can be used to perform logical tests on the part to ensure that the set-up is correct, and then accurately update process parameters before cutting starts. Then, during a cutting operation, it can be used to fine-tune machine variables such as work offsets, or to make process decisions according to the exact conditions found on the machine. Simply put, Productivity+™ helps machining processes adapt to natural variations.

The Productivity+™ multi-axis option will be launched at the EMO 2009 exhibition as a free technology evaluation for new customers and maintenance subscribers using machine configurations where up to two rotary axes are mounted on the machine's table.



RMP600 touch probe multiaxis



Productivity+™ Constructed Point

Says Derek Marshall, Machine Tool Software Manager at Renishaw, "We want to encourage the creative use of probing by all our users, so we're inviting them to try out the new functionality and see the benefits it can provide". Over time, the technology will expand to provide process control benefits on a wide variety of machine configurations.

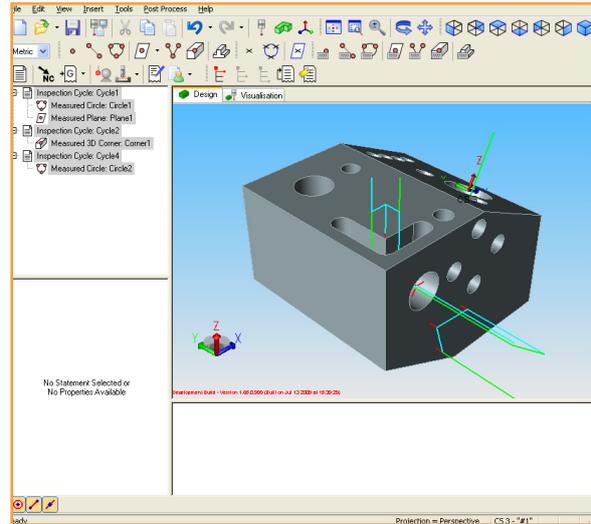
Marshall continues, "Encouraging innovation and creativity in machining processes is what Productivity+™ is all about, so we will also introduce a wide range of other features at EMO Milan, including 'Custom Macros' which allow complex logic or existing macro programs to be embedded into Productivity+™ code, and a further expansion of the software's powerful constructed features capability." Despite these increasingly powerful abilities, Productivity+™ code can still be run entirely on a machine tool controller without the need for an external PC or server, so shop floor managers can improve their processes in confidence, without needing extra hardware or worrying about the communications problems inherent with other systems.

Components produced on multi-axis machine tools demand a high level of accuracy for every measurement direction, and that's what Renishaw's Rengage™ 3D strain gauge technology provides. Using a patented sensing mechanism and advanced electronics, both the OMP400 touch probe and RMP600 touch probe allow sub-micron 3D probe performance on contoured surfaces, even with long styli.

Of special interest to multi-axis machine users is the RMP600 touch probe which features Renishaw's proven frequency hopping spread spectrum (FHSS) radio transmission for probe signals. This allows the probe to operate even when it is completely out of sight of the signal receiver; a common circumstance in multi-axis machining. The RMP600 also provides an innovative "Auto-Reset" function that can compensate for stylus forces, generated by changes in probe orientation, which can cause the probe to false-trigger. This functionality allows the probe to operate efficiently even on nodding-head type machines. The first strain-gauge probe to combine radio transmission, Rengage™ 3D technology, and the Auto-Reset technology, the RMP600 is the ideal partner for accurate multi-axis machining.

By combining the multi-axis accuracy of the Rengage™ 3D product line with the creative process control benefits of the PC-based Productivity+™ software, machine tool users will find it easier than ever to use in-process measurement to gain efficiency and eliminate machining errors.

Renishaw's range of measurement and process control software for CNC machine tools caters for the complete cross-section of machine tool probing applications, from solving process control problems using the Productivity+™ suite, through to On-Machine Verification and CMM-style measurement from the Renishaw OMV software family. For further information about Renishaw's market-leading range of probe systems and software for CNC machine tools please visit www.renishaw.com/mtp



Productivity+™ MultiAxis