

New 5-axis head for touch-trigger inspection on CMMs gives up to three-fold increase in throughput

Renishaw is introducing another innovative measurement product that is expected to transform inspection performance on a wide range of co-ordinate measuring machines (CMMs). Utilising technology developed for the multi-award winning REVO® measurement system, the new PH20 probe head offers unique 'head touches' for rapid touch-trigger measurement, and fast infinite 5-axis positioning to guarantee optimal feature access. Its compact design makes it suitable for new CMM purchases and as a retrofit to the vast majority of existing CMM touch-trigger installations.

The new PH20 probe head also benefits CMM users with adaptive positioning to accommodate part misalignment, fast calibration routines, and an integral TP20 probe mount that optimises the working volume of the CMM, bringing 5-axis capability to smaller machines for the first time.

Proven probe performance

By incorporating the industry standard TP20 touch-trigger probe, users of the PH20 probe head will immediately have access to a range of proven probe modules, providing a wide selection of trigger forces, directional sensing options and extensions to meet application requirements. The detachable modules provide crash protection and can be automatically changed using the MCR20 change rack. Companies with existing TP20 systems will be able to upgrade to PH20 and utilise their existing modules*.



Significantly improved inspection throughput

Speaking about this significant introduction, Brian Gow, Renishaw's CMM Marketing Manager said, "Whilst REVO has set the benchmark for 5-axis scanning measurement on larger CMMs, the exciting aspect of the new PH20 probe head is that it opens up access to our new technologies for most existing users of CMMs. Like REVO, PH20 minimises CMM motion, therefore reducing dynamic CMM errors, and its rapid 'head touches' mean measurement points are taken much faster using only the rotary motion of the head.

The result is improved accuracy, repeatability, and significantly improved inspection throughput, with parts measured up to three times faster than current touch-trigger systems."

Dramatically reduced calibration times

For many CMM users probe calibration can be a long and laborious process. The new PH20 head will offer dramatic time savings with a unique rapid 'inferred calibration' technique which determines head orientation and probe position in a single operation, allowing subsequent measurement at any head angle.

Available as a CMM retrofit

PH20 is available for purchase with new CMMs, and is also available as a retrofit, including Renishaw's own CMM retrofit service where it is packaged with Renishaw's MODUS™ metrology software to give a completely integrated solution. The PH20 system uses a Renishaw UCC controller, which provides connection to existing metrology and application software through the established I++ protocol.

For users of touch trigger probing systems, PH20 therefore offers an excellent opportunity to upgrade their existing heads to the very latest 5-axis technology. The PH20's design means no air supply is required, and it can be mounted to the CMM quill either directly or via a shank using a range of mounting adaptors. Importantly, in the majority of cases a PH20 system will also run existing indexing head programs without modification.

* Excepting the extended force module

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