

New pocket guide for co-ordinate measuring machine probes includes 5-axis measurement system

Renishaw offers a wide range of sensing technologies and accessories for co-ordinate measuring machines (CMMs), from manually operated touch-trigger probes, through to fully automated stylus changing systems and the latest five-axis scanning technologies. The company's new pocket-sized CMM technology guide is a useful reference source for companies specifying new machines or considering upgrades and retrofits, and is suitable for both experienced users and those new to sensor technologies for CMMs.

Featuring the major types of probe systems available from Renishaw, the guide aims to help metrology specifiers maximise their return on investment by selecting the right equipment for their CMM application, ensuring that immediate needs are covered, whilst also selecting a system that has the flexibility to develop as their needs grow. The importance of correct stylus selection is also covered, ensuring that users do not compromise measurement accuracy by selecting inappropriate configurations and low quality materials.

Contact scanning is given particular focus in the pocket guide, with the increasing number of measurement applications where features need large amounts of data to define their form, ruling out the use of discrete point measurement. Using scanning systems, the stylus remains in constant contact with the measured surface, streaming data at rates as high as 4,000 points per second. The choice between 3- and 5-axis scanning systems is discussed, highlighting the latest Renscan5™ technology which minimises the dynamic errors caused by machine motion, allowing users to benefit from high speed measurement without compromising accuracy.

Also covered in the guide is Renishaw's machine checking gauge (MCG) which gives CMM users a method for regularly monitoring machine accuracy in the period between full annual calibrations, and to quickly check machine condition following a collision. Using the MCG, users are able to carry out a 10-minute interim verification of a CMM's volumetric measuring performance.



The guide also explains the importance of system flexibility and the role of the new I++DME (Dimensional Metrology Equipment) specification in helping to ensure that businesses can share measurement jobs between various machines by providing a common interface language for CMM controllers and metrology application software. All Renishaw controllers are I++DME compatible, from the basic UCCLite for touch trigger probe applications to the multi-axis capable UCC2.

Copies of the CMM technology guide are available from Renishaw's international locations, or can be downloaded from www.renishaw.com/cmm.

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