RENISHAW
apply innovation™

Ease of use - boost efficiency with flexible gauging

Q. We need this to be as easy to use as possible for our shop floor operators, explain to me what they do?

A. Shop floor operators will usually require less than 1 hour of training on Equator's Organiser software interface. This will enable them to select programs, load parts onto Equator and review gauging results. Parts are selected by scrolling through a simple menu to find the correct program (which can be designated using photos, part numbers, or selected with a bar code reader). After pressing the 'start inspection' button, a count-down timer is displayed on screen whilst Equator measures the part. Once measured, the operator can unload the part and decide what to do with it based on the measurement result: e.g. pass / fail, or a numerical result. Prompts can be used to remind operators that they need to measure the master part to re-zero the system.

Q. Our operators understand and correct the manufacturing process, can you give them more than Pass or Fail?

A. Yes. When a Fail or Warning message appears Equator can display more detailed information on the nature and extent of the problem. Operators can refer either to a detailed inspection report for that part, which lists every feature measurement including tolerance information, or to the process trend chart in the Process Monitor view.

Q. How can Equator give us Quality Assurance on the shop floor without involving the Quality Room?

A. If – as we would recommend – Equator is situated right next to your manufacturing process, you will have a very timely view of inspection reports, last-part tolerance status and gauging history. Having measurement data from the last part manufactured, before the next part has been made, significantly shortens the time between machining and verification when compared with typical wait times in the lab. This enables knowledgeable operators, with a small amount of extra training, to control a process without having to involve more senior team members.

Q. The production engineers or supervisors will be setting up the systems on the shop floor – does Equator have additional functionality for them?

A. The Equator Organiser software has a series of Admin functions, which can be password protected to prevent shop-floor staff from accidentally or deliberately changing them. These functions include setting alerts to ensure the operator re-masters the system (if ambient temperature changes, or if a set number of parts or time elapsed is reached) before they can continue, or to set process warning limits to alert the operator that a potential issue needs to be resolved.

Q. Is there an alternative to controlling Equator with a mouse and keyboard?

A. The Equator Button Interface (EBI) has been designed for this purpose. The EBI is a small control unit with a set of tactile buttons assigned to dedicated Equator functions. The buttons correspond directly with the functions displayed on screen, so any operator can easily understand how to select, start and stop programs, switch master/measure modes, use error-recovery programs and move the Equator probe if necessary.

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Q. What extra flexibility do the fixture plates and racks give us, and how easy are they to set up?

A. Fixture plates can be exchanged in a few seconds, with kinematic location points to ensure that they are very repeatably relocated each time. Each fixture plate can have different fixtures according to the part or sets of parts to be gauged; the operator then only needs to select and run the corresponding programs using Organiser. The Equator rack is used to store various stylus tools; with more complex parts several of these may be used to gauge all the part features. Rack setup programmes are included within the Equator software.

For more information visit www.renishaw.com/equator

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