*June 2013 - for immediate release Further information: Chris Pockett (+44 1453 524133)*

**New process monitoring software for the Equator gauge**

**Rich visual display of real-time and historical results, with built-in re-mastering management**

A new process monitoring window has been added to the shop-floor user interface for Renishaw’s Equator™ gauging system. This instantly displays measurement results of inspected features to the operator on a bar-graph display. It also shows the history of measurement on each feature so that process trends can be seen.

The system’s re-mastering process can now be managed based on temperature limits, number of parts or time since last master. The new process monitoring window is now included with all Equator systems, giving engineers a range of software tools for monitoring their process.

**Instant inspection status**

A status bar-chart shows inspection results for the last part measured, as a proportion of tolerance either side of nominal. If required the system can be set up to display just key features.

The part feature already has pass/fail tolerance limits set by the inspection program, but now the engineer can configure the system to set extra warning limits. This is so that the operator can take action before a process reaches 100% of the tolerance. At the warning limit the bar turns orange, if the process drifts further and the pass/fail tolerance is exceeded, the bar turns red and re-mastering can be enforced with an on-screen message to the operator.

**Measurement history**

Selecting an inspected feature changes the line graph to show the values measured for that feature on previous parts. The engineer can change the scale to show the history of a few recent parts, or to show more parts, so that any trend in the process can be seen. This graph is ideal when a process is likely to drift, for example when the cutting tools used to machine the inspected surfaces are subject to wear.

If the value for a feature is steadily drifting towards its tolerance limit the operator or engineer can make a decision to, for example, apply a tool offset or change the cutting tool used for that feature. The line graph shows the tolerance limits and warning limits, along with vertical lines when re-mastering points are recorded.

**Managing re-mastering**

One of the Equator comparator’s key strengths is the ability to cope with changes in shop-floor temperature, based on the traditional comparison of production parts to a reference master part, by re-zeroing the system with an inspection routine on the master part – re-mastering.

Re-mastering is as swift as measuring a production part and immediately compensates for any change in the thermal conditions of a shop-floor environment. Equator can be used in factories with wide temperature variation – simply re-master and the system is ‘re-zeroed’, ready for repeatable comparison to the master.

The process monitor window now makes this even easier to manage by using the built-in sensor to detect changes in ambient temperature and warn the operator that re-mastering is needed. Engineers responsible for the process can set an upper and lower drift limit – if the temperature chart is selected then the measured values can be seen plotted against each part inspected.

Alternatively an engineer can specify that re-mastering is required after a certain elapsed time, or after a certain number of measurement cycles. The software automatically switches from measure mode into master mode so that the operator can run the mastering routine.

**Exporting data**

It is also possible to export the historical measured data in 2 formats; .csv for use in a spreadsheet; or .jpg images for use in reports. These options are available through on-screen buttons and allow .csv or .jpg files to be saved on the Equator Controller or on a network location for other applications to use.

**A new industry standard for flexible gauging**

Equator is a radical alternative to traditional dedicated gauging, filling a gap in the market never before addressed. The patented low-cost design, unique in construction and method of operation, is capable of high-speed comparative gauging for inspection of high-volume manufactured parts. Equator is a lightweight, fast and highly repeatable gauge that operators can use with ‘push-button’ simplicity. Equator can switch between parts in seconds, perfect for flexible manufacturing processes or accepting parts from multiple machines.

Supported by a turnkey installation service and global support network, Equator systems have been installed in multiple automotive, aerospace, medical and electronic companies across the world. Users have been attracted by the reduced purchase, maintenance and fixture costs compared to traditional gauges, plus the ability to gauge multiple parts and to re-program for design changes.

**-Ends-**

Equator™ process monitoring software

The process monitor window is used for an instant view of the status of the latest part, along with history of measurement of each part feature. Temperature changes beyond set limits will trigger warnings to operators that re-mastering is required.