*August 2024*

**Renishaw to** **showcase the role of the Equator™ gauging system in innovative manufacturing at IMTS 2024**

Renishaw, a world-leading manufacturer of metrology systems, demonstrates how applying its innovative Equator gauging technology helps to optimize manufacturing, enabling more sustainable processes in the design and production of parts.

The Equator gauging system will be on show, demonstrating the unique design and method of operation that has made it the gauge of choice for production engineers across the globe.

**Equator gauging explained**

Equator systems deliver high-speed comparative gauging for the inspection of medium to high-volume manufactured parts in key applications across multiple industries, for example transmission components for automotive and landing gear for aerospace.

It is a fast, highly repeatable, and versatile gauge designed for shopfloor use.

Ben Spokes, Renishaw Business Development Manager for Equator gauging, explains: “The largest market for Equator gauging systems is automotive, with hundreds of Equator systems in use globally for electric vehicle part inspection. These are often used with fully automated loading and direct intelligent process control, that can improve the quality of manufactured parts, and significantly reduce or even eliminate scrap.”

**Sustainability through automation**

Equator gauging systems play an integral part in supporting manufacturers’ drive to develop their own smarter processes and embrace factory automation.

The Equator system can operate at a temperature range of 5 – 50°C and up to 80% humidity and has been optimized for part loading via a robot or shuttle system. Configured for easy communication between the system and a variety of automated work cell equipment, integration into an automated cell is simplified. The result is significantly reduced cycle times, improved productivity and increased throughput.

Introducing flexible gauging close to the point of manufacture also allows the validation of discrete machining operations, enabling automated process control and tool offset management. This leads to increased confidence in final part quality.

**Future proof your manufacturing process with improved process contro**l

Process control is significantly improved with the move from sample inspection to 100% inspection, whilst the Equator system’s Process Monitor function displays real-time gauging data bar graphs and charts, allowing for process corrections and scrap prevention.

Renishaw’s Intelligent Process Control software (IPC) can record actionable data and provide automated real-time solutions, applying offset updates for common causes of instability such as tool wear and thermal drift.

An example of the effectiveness of the Equator gauge’s level of automation led Olympus NDT, Canada, (who installed a system as part of a completely autonomous manufacturing cell) to conclude:

“Since we can now run the machine (tool) during the night and over the weekends, we have increased our machine capacity by almost 30%. We have reduced machine downtime, reduced the cost of scrap parts and improved the quality of parts produced.”

Equator gauging systems have been designed to cope with a wide range of parts and design changes, and the system’s automatic stylus changing rack enables the inspection of multiple parts in quick succession. It is a proven example of how manufacturers are future-proofing their business activities with an efficient and cost-effective solution to part gauging.

**Connectivity**

 Equator gauging systems are optimised for enhanced machine connectivity. Automation software and hardware have been developed to improve integration in automated cells.

The REN-IO interface unit, coupled with the EZ-IO automation software, allows the Equator gauge to connect to a variety of external equipment in an automated cell with up to 32 digital IO connections. EZ-IO software simplifies the setup of automated manufacturing cells to configure communications between Equator systems and the cell controller.

For further information on Renishaw’s latest process automation solutions for improved productivity and sustainability, visit Quality Assurance Booth # 134314 at IMTS Chicago (September 9-14, 2024).

**-ENDS-**

**Notes to editors**

Renishaw is a world leading supplier of measuring systems and production systems. Its products give high accuracy and precision, gathering data to provide customers and end users with traceability and confidence in what they are making. This technology also helps customers to innovate their products and processes.

It is a global business, with over 5,000 employees located in the 36 countries where it has wholly owned subsidiary operations. The majority of R&D work takes place in the UK, with the largest manufacturing sites located in the UK, Ireland and India.

For the year ended June 2022 Renishaw recorded sales of £671.1 million of which 95% was due to exports. The company’s largest markets are China, USA, Japan and Germany.

Renishaw is guided by its purpose: Transforming Tomorrow Together. This means working with customers to make the products, create the materials, and develop the therapies that are going to be needed for the future.

Further information at [www.renishaw.com](http://www.renishaw.com/)