

## Manufacturing excellence

#### Common sense manufacturing in spacious 80,000ft<sup>2</sup> machine hall.

A new machine shop at Stonehouse, Gloucestershire, houses over 70 CNC machine tools, plus the latest technologies for anodising, automatic deburring and part cleaning, producing over 300,000 parts each month.

The experiences gained as a manufacturer give valuable feedback to designers of both styli and probe systems.

At our main Assembly facility in Woodchester, Gloucestershire, UK, the styli production cell is equipped with dedicated machinery for styli assembly, all designed specifically to

Renishaw's exacting standards. These include a unique machine for press-fit joints that eliminates the need for adhesives, a pad printing machine that adds a logo to the stylus stem to identify genuine Renishaw styli, and an ASAM (automated stylus assembly machine) which is used for the production of our grade 3 styli range.

A CMM fitted with automated Renishaw sensors is used to inspect all finished styli, giving you the confidence that our styli meet specification and are of the highest quality.



Pad printing



**ASAM** machine



Special styli press



Special styli



#### Renishaw plc

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# Renishaw applies innovation to provide solutions to your problems

Renishaw is an established world leader in metrology, providing high performance, cost-effective solutions for measurement and increased productivity. A worldwide network of subsidiary companies and distributors provides exceptional service and support for its customers.

Renishaw designs, develops and manufactures products which conform to ISO 9001 standards.

Renishaw provides innovative and cost-effective solutions using the following products:

- Probe systems for inspection on CMMs (co-ordinate measuring machines).
- Systems for job set-up, toolsetting and inspection on machine tools.
- Scanning and digitising systems.
- Laser and automated ballbar systems for performance measurement and calibration of machines.
- Encoder systems for high accuracy position feedback
- Spectroscopy systems for non-destructive material analysis in laboratory and process environments.
- Styli for inspection and tool setting probes.
- Customised solutions for your applications.

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## **Understanding genuine Renishaw styli**



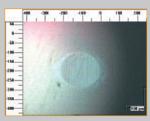
## **Research and Development**

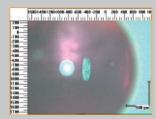
### Facilities investment enables high performance and continuous improvement.

Renishaw has always been committed to research and development and this is especially true for it's probe styli. We constantly strive to optimise the performance of styli in measurement applications, with a specific focus on material development and assembly methods.

A fundamental part of this work is the rigorous testing of component parts and life-cycle application testing of styli assemblies, achieved by using a range of sophisticated metrology equipment.

These include a roundness machine which allows fast, repetitive measurement of styli balls, ensuring that we are able to assemble our styli using only the very best grade 3 and grade 5 sphericity balls. The same machine is also used for ongoing research into ball material selection for contact scanning applications. After rigorous testing on different surface materials, styli balls are magnified and measured, quickly identifying any material pickup or abrasive wear that has occurred. This allows us to give clear recommendations to our customers based on their specific applications.









## **Design**

#### Vast experience and latest systems deliver high level design solutions.

A team of highly experienced design engineers focuses on the design and development of both standard and custom styli. All designers use the latest CAD systems and have access to the latest rapid prototyping equipment housed within Renishaw's Rapid Manufacturing Centre.

A key strength is the knowledge and experience gained from manufacturing applications worldwide over more than 30 years. The team maintains close liaison with designers of Renishaw's probes for co-ordinate measuring machines (CMMs) and CNC machine tools, ensuring that styli designs keep pace with the latest developments in probe technology.

So, whatever your application, you can be assured that our designers will produce the right stylus to suit your needs.



Custom design styli



Custom design styl



Custom design styli





## Service and support

#### Extensive capacity enables in-stock availability and fast order turnaround.

Renishaw's expansion over more than 30 years has always been accompanied by investment in a worldwide sales and support network, which today includes offices in more than 30 countries, plus a global network of distributors and agents. The benefit to our customers is that at any time, there are in excess of 100,000 styli held in stock locations around the world, ensuring rapid local delivery.

Our global presence is further enhanced by product websites and literature exists in multiple languages. We exhibit at over

100 global events each year, giving customers further opportunities to discuss their manufacturing issues first-hand.

Finally, we have earned an enviable reputation for our commitment to customer care and support. Should technical advice be required, or a problem arise, our global network of staff is always available to offer advice and recommend a suitable replacement.



Product websites



Global stock



Multi-lingual literature

