

Autochanging – let your CMM do the work!

Increase the throughput of your DCC CMM with a probe autochange system

Why use a Renishaw probe autochange system?

Optimise reach and accuracy Increase throughput

Automatically select the right probe and extension bar for each measurement from a range of probes stored in your rack.

Save time and speed up the probe change process by introducing an autochange system.

Maximise machine working volume

Mount the autochange rack in either a horizontal or vertical position to optimise your working volume.

Maximise the benefits of PH10M/MQ ownership

Get the best out of your PH10 system capabilities and fully automate your CMM with an autochange system.

Protect your probes and extension bars

Avoid contamination, store your probes and extension bars in an autochange rack. The covered ports provide protection for the otherwise exposed 'Autojoint'.

Safeguard your employees

Remove the need to enter the measurement area to change probes by automating the change process.



Lower the cost of ownership

As with all Renishaw's products, responsive and cost effective support and service is available, minimising your downtime and lifetime costs.

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 solutions using the following products:

- Probe systems for inspection on CMMs (co-ordinate measuring machines).
- Systems for job set-up, tool setting 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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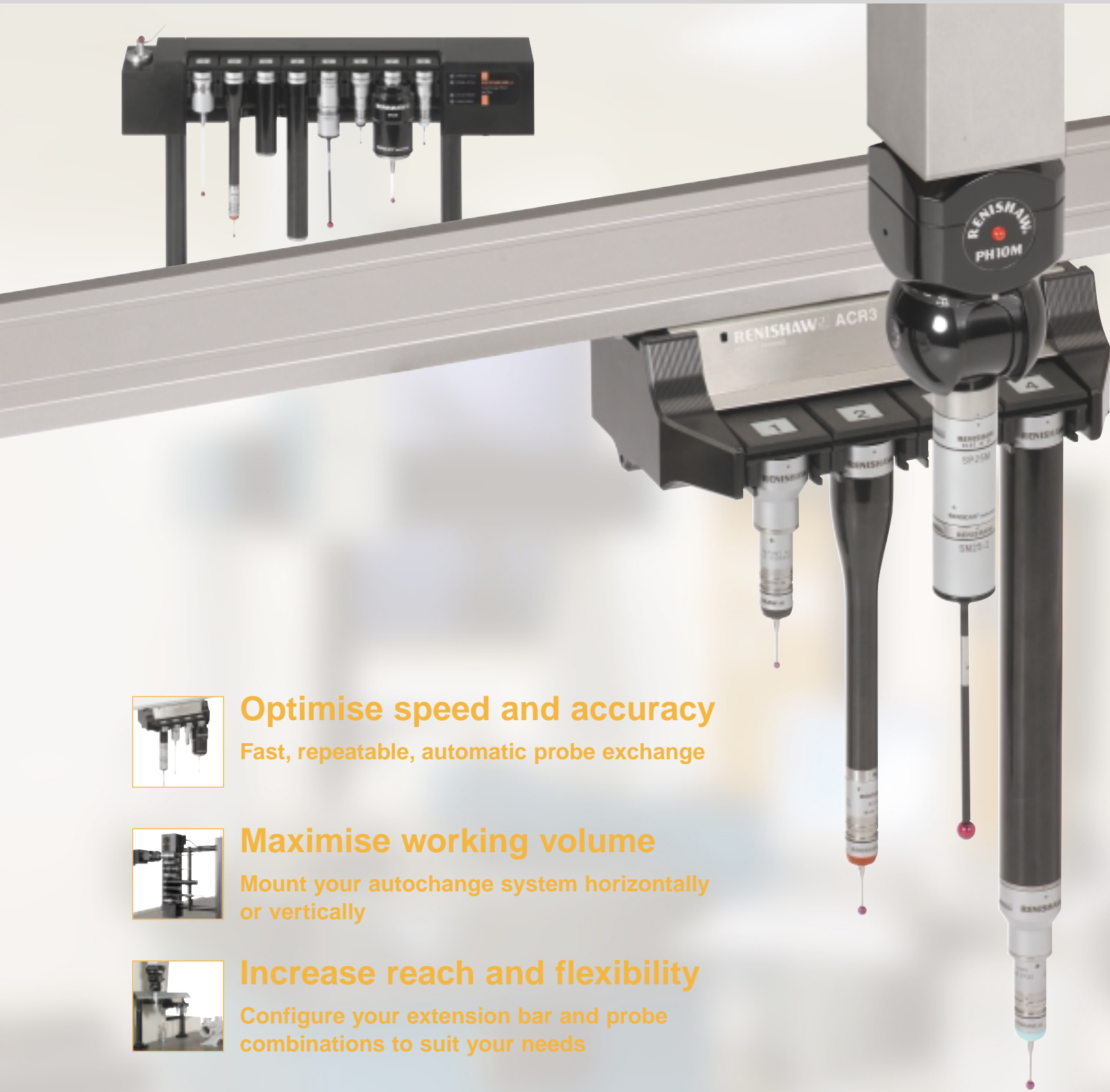
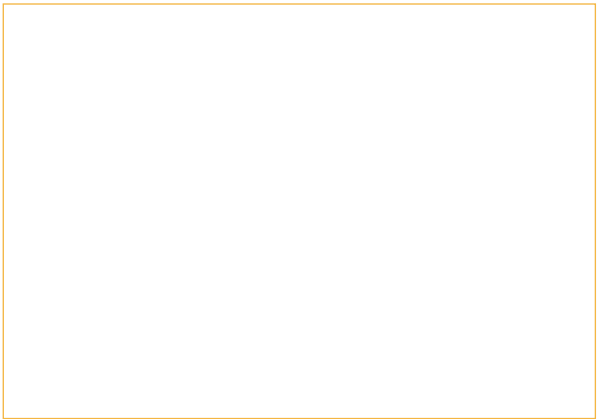
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Optimise speed and accuracy

Fast, repeatable, automatic probe exchange



Maximise working volume

Mount your autochange system horizontally or vertically



Increase reach and flexibility

Configure your extension bar and probe combinations to suit your needs

Autochange systems

Which product is right for you?

Reap the benefits of your  
existing Renishaw products!

If you already own a Renishaw product that carries the 'Autojoint' connection you can optimise its potential by using an autochange system.

Renishaw's 'Autojoint' is a highly repeatable kinematic joint, one half of which is part of the probe head and the other is part of the probe itself. The 'Autojoint' can be either manually or, ideally, automatically locked and unlocked to allow accurate and repeatable probe sensor changes. Re-qualification is not required.

In addition to mechanical repeatability, the 'Autojoint' carries thirteen electrical connections known as the Renishaw 'Multiwire' system. These carry simple two wire touch trigger probe signals and the more demanding signals from analogue scanning and non-contact laser probes, providing you with the benefit of the complete Renishaw range.

If you currently own Renishaw M8 threaded probes, they can be used in an autochange system via a PAA1 adapter. Please contact your Renishaw supplier for more details.

Choosing your  
autochange solution

Whilst ACR3 and ACR1 are comprehensive autochange solutions, you will need to decide which one is best suited to your application.

Both allow touch trigger, scanning and optical probes to be interchanged quickly and without the need for re-qualification, saving you time and effort, and always allowing you to use the correct probe for the job.

The answers to the following questions dictate which solution will best suit your application.

Do I require an entry level solution that can be expanded to meet future requirements?



**✓ ACR3**  
The ACR3 offers:

- the ability to combine probe autochange with other racks such as stylus changing
- occupies minimum machine space on your bridge type CMM

Do I need to remove probes from the end of extension bars?

Do I need to mount the rack vertically on my horizontal arm machine to maximise machine working volume?



**✓ ACR1**  
The ACR1 offers:

- lock/unlock status indication in front end software
- collision protection in the event of an accident

ACR3 key benefits

The ACR3 is a simple mechanical design that utilises the motion of the CMM to lock and unlock the 'Autojoint'. Only available for use in the horizontal plane, the ACR3 provides a passive cable free solution for automatically changing probes or extension bars.

- Available as a four port unit, two ACR3s can be linked to provide an eight port system, providing an expandable solution
- The modular nature of ACR3 allows it to be combined with other Renishaw racks such as SCP600 and FCR25, giving ultimate system flexibility
- The ACR3 is mounted on Renishaw's modular rack system (MRS) making it quick and easy to install

ACR1 key benefits

The ACR1 system is a fully integrated 8 port probe autochange system which gives the facility to change probe/stylus combinations automatically and without the need for re-qualification.

- ACR1 can be mounted in either a horizontal or vertical orientation optimising the space available
- Driven by its own controller, ACR1 can remove probes from the end of extension bars allowing you to use different probes while maintaining reach
- ACR1 has a comprehensive crash protection system
- ACR1 ports can be configured to accept a variety of probes

**Note:** It is not possible to mount ACR3 vertically, nor is it possible to change probes from the end of extension bars.