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# Enhance the performance of your manual co-ordinate measuring machines






## Ultra compact

with fully adjustable orientation



## Repeatable indexing

in a compact design



## Fully compatible

with probe modules from the extensive TP20 system range

# Renishaw's extensive range of manual head systems provide an economical solution to everyday inspection needs.





## Module storage

MH20 and MH20i are principally designed for installation on manual CMMs, however their productivity enhancing modular flexibility and compact design means they are also suitable for smaller Direct Computer Controlled (DCC) CMMs, where automatic stylus changing is not a requirement.

For the convenient storage of probe modules, the MSR1 (manual storage rack) provides protection from possible contaminants in the working environment. It is available for mounting on horizontal or vertical surfaces.

## Improved performance

The MH20 and MH20i are the new generation of manually adjustable probe heads from Renishaw.

Suitable for installation on new and existing co-ordinate measuring machines (CMMs), both probe heads incorporate Renishaw's TP20 kinematic probe mount, which permits repeatable probe module changing. This unique system enables productivity improvements to be made through rapid changes in probe/stylus configurations. The incorporation of the modified TP20 kinematic probe mount results in a compact design, permitting a larger CMM working volume.

Benefits include:

- Enhanced inspection capability through adjustable probe orientation.
- Improved productivity by means of probe module changing without re-qualification.
- Optimum working volumes provided by compact design.
- Choice of fully flexible (MH20) or indexable (MH20i) orientation.
- Smooth position changing through purpose designed locking mechanisms.
- Easy installation on CMMs using industry standard shanks.

## Modular stylus changing

Both heads have been specifically designed to maximise the benefits associated with Renishaw's revolutionary TP20 probe system.

This concept enables various different probing configurations to be used during an inspection cycle, without the need for time consuming probe re-qualification. The TP20 probe module range provides a selection of trigger force, length and directional sensing options, and allows a maximum stylus carrying capability of 60 mm and overall reach of 145 mm. The current range includes:

For general use

- Standard, medium and extended force probe modules, suitable for most applications.

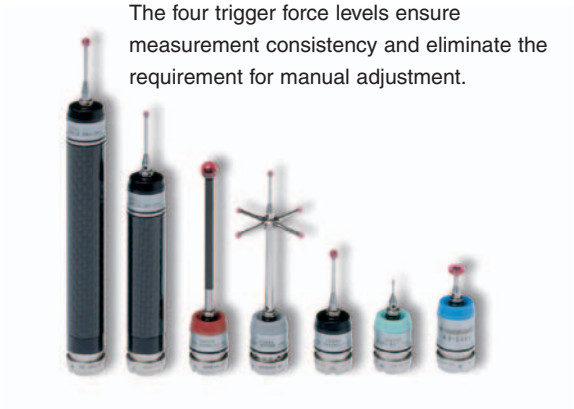
Two additional standard force probe modules providing extended reach:

- EM1 and EM2 (50 mm and 75 mm extra reach respectively).

Two probe modules that are designed specifically for specialist applications:

- Low force for measurement of delicate objects.
- 6-way sensing for measurement of undercuts where access limitations would otherwise make inspection difficult.

The four trigger force levels ensure measurement consistency and eliminate the requirement for manual adjustment.



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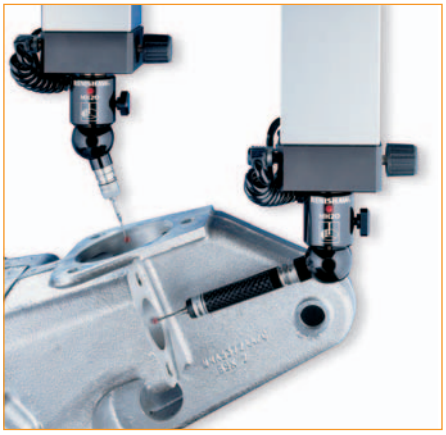
# MH20

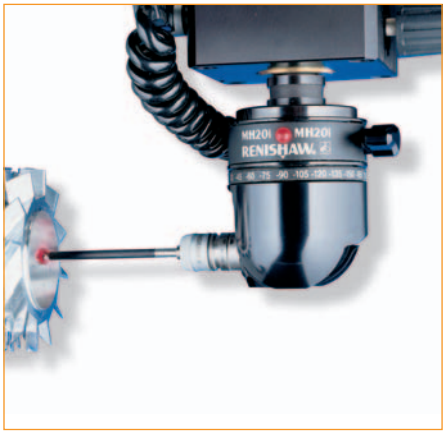
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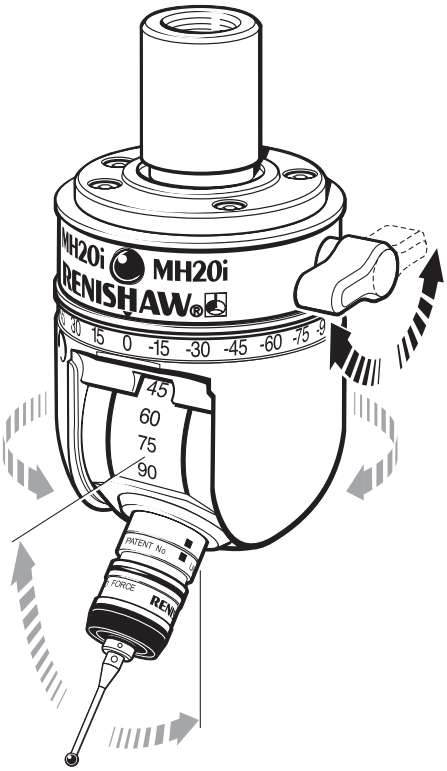
**For further information on the MH20 and MH20i**

please refer to Data Sheet H-1000-2195. For data sheets and latest product updates visit our web site:

**www.renishaw.com**






## MH20

The MH20 is an ultra compact manually adjustable probe head offering maximum flexibility in probe orientation. The full range of TP20 probe modules can be used via its integral probe mounting.

**Key benefits:**

- Ultra compact design maximises CMM working volume.
- Flexible probe orientation optimises work-piece accessibility.
- Repeatable TP20 stylus module changing designed to enhance productivity.
- Easy installation on to new and existing CMMs via a range of standard shanks.

## MH20i

The MH20i compact probe head offers the significant advantage of repeatable indexing positions, vastly improving productivity for multi-orientation measurement applications.

Ideal for use where several probe/stylus configurations and head positions are required to enable the comprehensive measurement of a part in a single routine.

**Key benefits:**

- Repeatable index positions eliminate the need for constant re-qualification.
- 168 positions (at 15° increments) offer maximum flexibility in repeatable probe orientation.
- Lock / unlock feature allows ease of positioning and eliminates unnecessary wear.
- Easy-to-read scales for rapid re-orientation to qualified positions.

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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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