

PH10M / PH10MQ motorised indexing probe heads

The PH10M and PH10MQ are versatile motorised indexing heads that incorporate the Renishaw autojoint with multiwire capability. This allows PH10M/MQ heads to carry long extension bars and sophisticated multiwired probes such as SP25M and TP7M. There are 720 repeatable positions, set at 7.5° increments to provide probe orientation.

The highly repeatable, kinematic autojoint allows rapid probe or extension bar changing without the need for re-qualification.

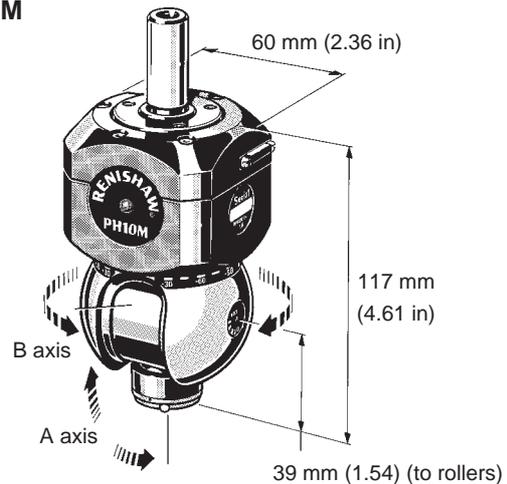
The PH10MQ is a variant that allows the motorised head to be attached directly to the quill with the 'cube' of the head inside the quill itself. This option provides a neater and shorter probe mount, with only the swivel protruding from the quill.

The AM1 and AM2 adjustment modules permit correction of alignment of the probe head to machine and are fitted between the probe head and the shank/quill of the machine.

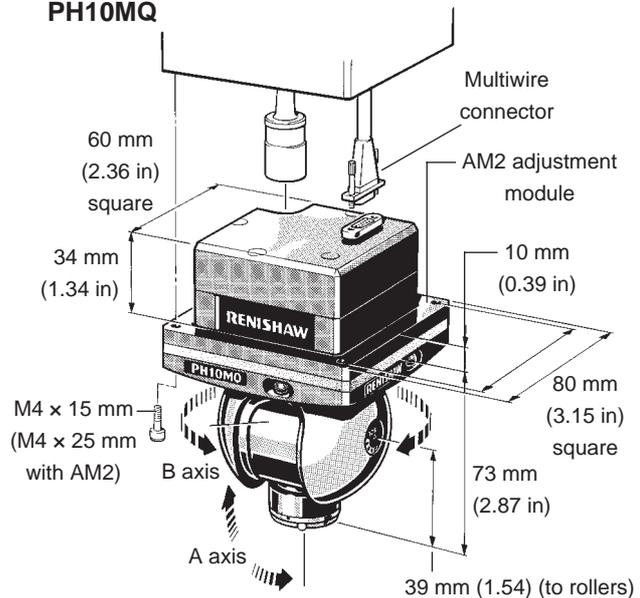
PH10M/MQ features and benefits:

- Autojoint mount, repeatable probe positioning
- Rapid automatic probe interchange via ACR1 or ACR3
- Full multiwire capability
- 720 repeatable positions at 7.5° increments
- Torque capable of lifting 300 mm (11.81 in) long extension bar

PH10M



PH10MQ



Specification summary		PH10M / PH10MQ
REPEATABILITY OF POSITION* (2σ)		<0.5 μm (<0.00002 in) specified at a distance of 62 mm (2.44 in)
* At constant temperature		- equivalent to a TP6A and 21 mm stylus
ACCURACY OF STEP SPACING FROM THEORETICAL POSITION		±0.3 mm (±0.012 in) (using TP6A probe and stylus part number A-5000-3553)
CYCLE TIME	7.5° step	2.5 seconds
	Maximum 90° move	3.5 seconds
TOTAL ANGULAR MOVEMENT	A axis	0° to 105° in 7.5° steps
	B axis	±180° in 7.5° steps
TOTAL NUMBER OF POSITIONS		720
MAXIMUM OUTPUT TORQUE		0.45 Nm
MAXIMUM EXTENSION BAR LENGTH	PAA3	300 mm (11.81 in)
	Carbon fibre extension	450 mm (17.72 in) (please contact Renishaw for more details)
HEAD MOUNTING		PH10M shank to suit CMM PH10MQ direct to quill (M3/M4 screws)
WEIGHT (excluding shank)		PH10M - 645 g (22.75 oz) PH10MQ - 730 g (25.8 oz)
WORKING TEMPERATURE RANGE		10 °C to 40 °C (50 °F to 104 °F)
PROBE MOUNTING FACILITY		Autojoint
PROBE HEAD CONTROLLER		PHC10-2 (PHC1050 card for UCC controller)
HAND HELD CONTROL UNIT		HCU1
CHANGE RACK SYSTEM		ACR1, ACR3

Probing systems for co-ordinate measuring machines

NOTE: Please see the accessories page 13-4 for details of adaptor plates PHA3 and PHA80 which permit rapid interchange between PH10MQ and SP80 scanning probe.

- ‡ Specialised interface required
- * When using a SP600M with a PH10MQ a PEM25 extension bar is required to achieve $A = 97.5^\circ$ or $A = 105^\circ$ in all B axis positions

