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PH10M-iQ PLUS

Less time calibrating, more time measuring



PH10M-iQ PLUS offers all the benefits of a traditional PH10M PLUS but with the addition of inferred qualification. This further demonstrates Renishaw's commitment to continuous product development.

PH10M-iQ PLUS increases throughput by removing the need to qualify each head position that is used. This allows more time to be spent measuring.

Following an initial head localisation, a simple qualification procedure of as few as three positions allows the user to operate PH10M-iQ PLUS in every orientation possible without requalifying.

Innovations

Two heads in one

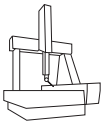
PH10M-iQ PLUS provides all the functionality of Renishaw's industry standard PH10M PLUS but with the addition of inferred qualification for touch-trigger probing routines.

Where an application or specific angle demands ultimate touch-trigger accuracy then PH10M-iQ PLUS can be qualified in the same way as a standard PH10M PLUS.

Fine tune your performance

PH10M-iQ PLUS must perform a simple qualification procedure before inferred mode can be used, after which any head position can be used for measurement without having to requalify.

Depending on your metrology requirements you can optimise the accuracy of your system by increasing the number of qualification positions during probe qualification.

Machine type	Mounting orientation	Qualification positions	P_{LTI} - Typical positional span*
		3	95 µm
		8	125 µm
		12	80 µm
		18	65 µm
		3	15 µm

Horizontal arm machine specification

Using a PAA3 300 mm extension bar, standard force TP20 module, 10 mm x 4 mm diameter stylus on a machine with the following specification;

MPEe = ± (9 + L / 100) µm (L in mm)
ISO 10360-2 (2009)

Bridge machine specification

Using a PAA1 adaptor, standard force TP20 module, 10 mm x 4 mm diameter stylus on a machine with the following specification;

MPEe = ± (1 + L / 750) µm (L in mm)
ISO 10360-2 (2009)

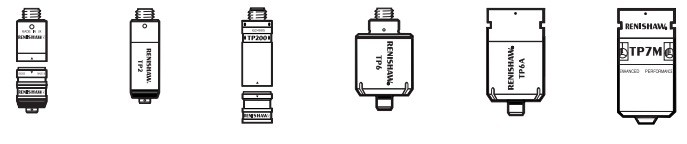
*Positional span of sphere location (P_{LTI}) evaluated as per ISO 10360-5 (2010) but covering all 720 head positions

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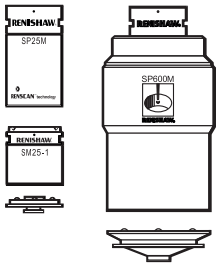
Compatibility

Renishaw's complete range of PH10M PLUS compatible probes are also compatible with PH10M-iQ PLUS. However, the added functionality of inferred qualification can only be used with touch-trigger probes.

TP20, TP2-5W, TP200, TP6, TP6A and TP7M touch-trigger probes can be used in traditional PH10 mode or can utilise inferred qualification; whereas SP25M and SP600M scanning probes can only be used in traditional PH10 mode and cannot utilise inferred qualification.



TP20 TP2-5W TP200 TP6 TP6A TP7M



SP25M SP600M

Specification

Head	PH10M-iQ PLUS	
Length	117 mm (4.60 in)	
Width	62 mm (2.44 in)	
Weight	645 g (22.07 oz)	
Mounting	Shank	
Probe mount	Renishaw Autojoint (multiwire) M8 threaded probes can be used with a PAA probe adaptor	
Controller	PHC10-3 PLUS	
Repeatability	0.4 µm (2σ 0.00002 in) specified at a distance of 62 mm (2.44 in) from the A-axis centre of rotation	
Angular movement	A-axis 0° to 105° in 7.5° steps B-axis -180° to 180° in 7.5° steps	
Total number of positions	720 positions	
Maximum drive output torque	0.45 Nm	
Maximum extension bar	300 mm (11.8 in) using PAA3 probe adaptor 450 mm (17.7 in) using PAACF special order only extension	300 mm (11.8 in) using PEL4 extension
Temperature range **Operating** **Storage**	 10 °C to 40 °C (50 °F to 104 °F) -10 °C to 70 °C (14 °F to 158 °F)	
Head control unit	HCU1 or MCU*lite*-2, MCU5 or MCU W	
Warranty	2 years	

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Issued 1013 Part no. H-1000-1272-02-A