

Renishaw TP20 Probe & Module



Brand: RENISHAW

Category: Renishaw Probe Body & Modules

Compact module changing touch-trigger probe, which allows the use of a range of stylus configurations and extensions to access features on complex parts.

The TP20 is a compact 5-way, or 6-way, kinematic touch-trigger probe system. The two-piece design, comprising probe body and detachable stylus module(s), connected using a highly repeatable magnetic kinematic coupling. This provides the facility to change stylus configurations either manually or automatically without the need for requalification of the stylus tips, thereby giving significant time savings in inspection routines.

Modules offering a range of trigger forces allow the probe performance to be best matched to the measurement task. A set of probe extensions is also available, as is a 6-way module. The stylus mounting thread accepts styli from the Renishaw M2 range.

The TP20 system is easily retrofitted and is compatible with existing touch-trigger probe interfaces, extensions and adaptors.

System components

The system components are:

- TP20 probe body
- TP20 probe module – seven variants allow optimisation to suit application
- MCR20 or TCR20 module changing rack – automatic operation
- Suitable for interfacing with Renishaw's PI 7-3, PI 200-3 and UCC controllers

Sense directions	All modules except 6W	$\pm X, \pm Y, \pm Z$
	6W	$\pm X, \pm Y, \pm Z$
Suitable interface		PI 7-3, PI 200-3, UCC controllers
Pre-travel variation	LF	$\pm 0.60 \mu\text{m} (\pm 0.000023 \text{ in})$
	SF / EM1 / EM2	$\pm 0.80 \mu\text{m} (\pm 0.000032 \text{ in})$
	MF	$\pm 1.00 \mu\text{m} (\pm 0.000039 \text{ in})$
	EF	$\pm 2.00 \mu\text{m} (\pm 0.000079 \text{ in})$
	6W	$\pm 1.50 \mu\text{m} (\pm 0.000058 \text{ in})$
Unidirectional repeatability	LF / SF / EM1 / EM2	$\pm 0.35 \mu\text{m} (\pm 0.000014 \text{ in})$
	MF	$\pm 0.50 \mu\text{m} (\pm 0.000020 \text{ in})$
	EF	$\pm 0.65 \mu\text{m} (\pm 0.000026 \text{ in})$
	6W	$\pm 1.00 \mu\text{m} (\pm 0.0000395 \text{ in})$
Repeatability of stylus changing	MCR20	$\pm 0.50 \mu\text{m} (\pm 0.000020 \text{ in})$
	Manual	$\pm 1.00 \mu\text{m} (\pm 0.000040 \text{ in})$
Stylus range		M2
Mounting method		M8 thread