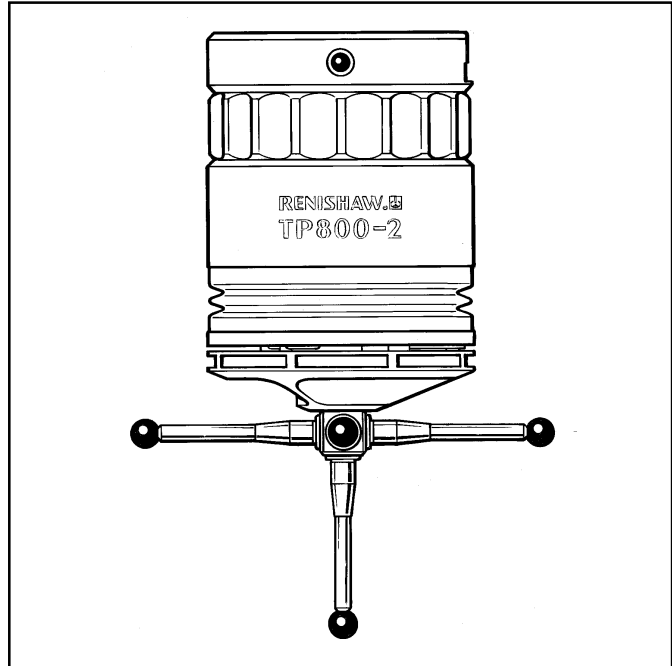


# TP800-2 Probe System

- Ultra high precision trigger probe
- Very long styli
- Automatic stylus changing facility



## UNPRECEDENTED PERFORMANCE

Renishaw have developed a unique multi-sensing design for the **TP800-2**. Using piezo, strain and kinematic sensors, the probe can detect the minute shock of impact between stylus and workpiece, the force exerted on the stylus during displacement and the absolute displacement of the stylus. The signals generated at contact are combined within the **PI 800-2 Interface** using novel techniques which give performance without compromise.

The **TP800-2** System combines ultra high precision touch trigger points with real versatility of use; a wide range of operating speeds, stylus options, and workpiece material tolerance.

## THE SYSTEM COMPONENTS

### TP800-2 Probe

The TP800-2 mounts directly to the CMM quill via a standard Renishaw shank and is designed for vertical installation only. Straight styli, with extensions, to a maximum length of 350mm can be used. A 5-way star cluster with a maximum length vertically and horizontally of 200mm can be fitted.

### PI 800-2 Interface

The PI 800-2 is designed to work with the TP800-2 only and it may be rack mounted or free standing. LEDs on the front panel indicate POWER, STRAIN, STATUS and STOP. An audible indicator signals trigger events.

### Stylus Changing Module

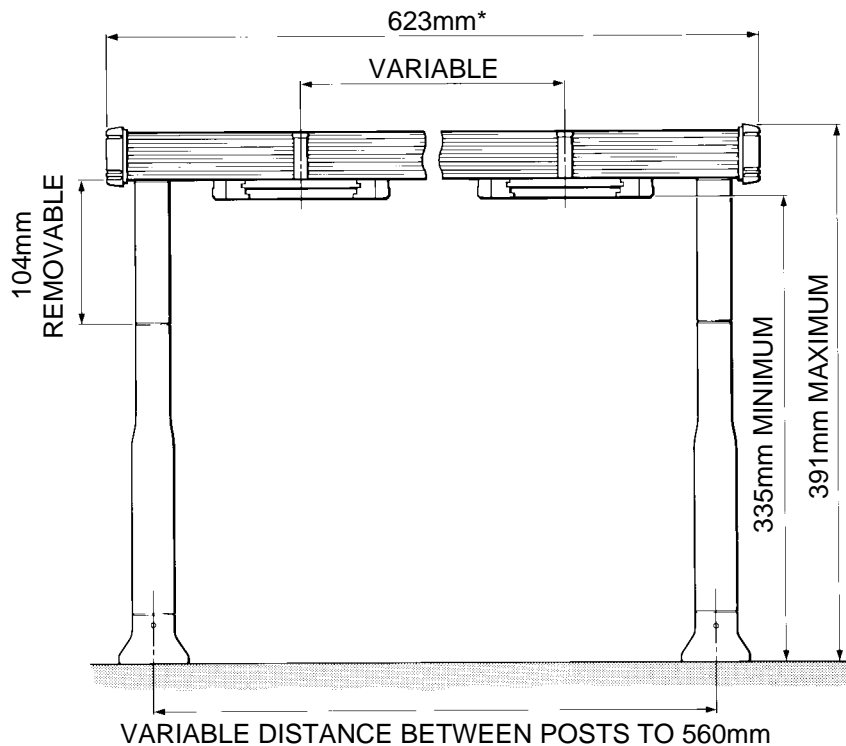
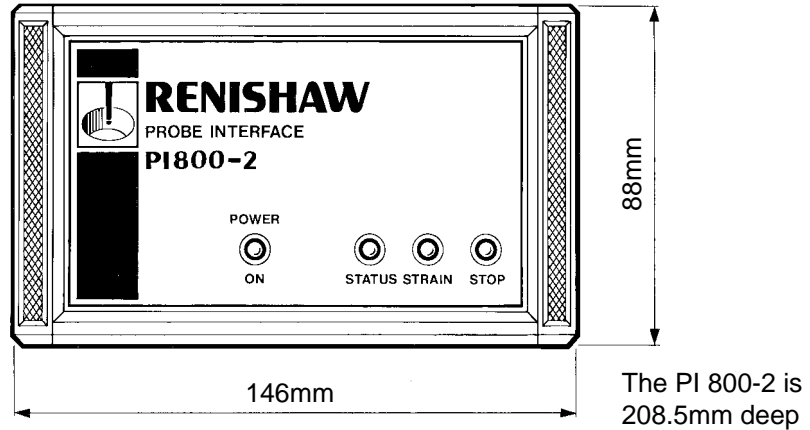
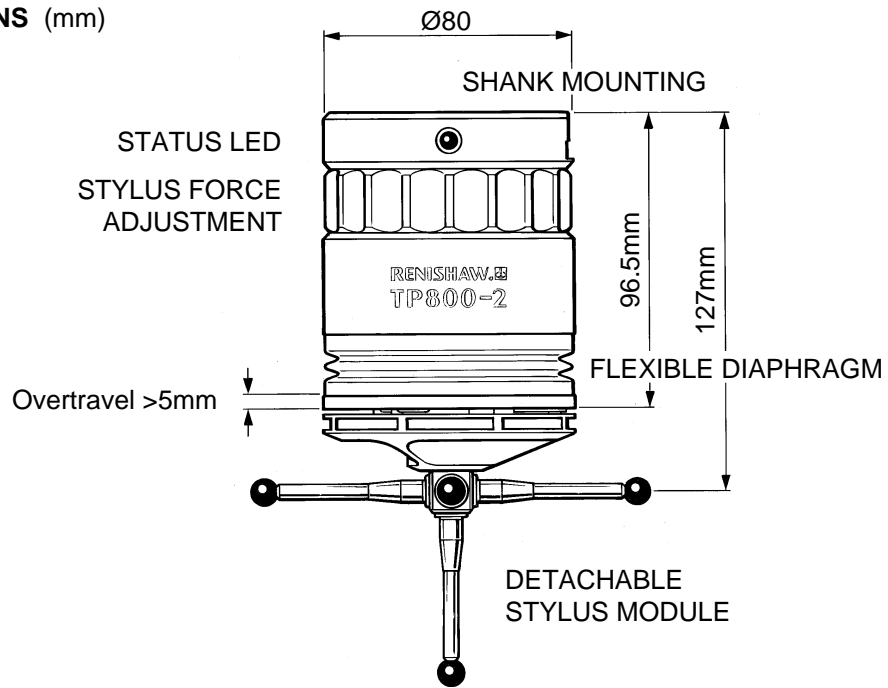
The magnetic modules locate repeatably onto the TP800-2 Probe for both manual and automatic stylus changing (using the SCR800 Stylus Changing Rack). This allows the automated use of a variety of stylus configurations and eliminates the need to redatum after changes.

**RENISHAW** 

**Data Sheet**

Part No. H-1000-2011-05-A

**DIMENSIONS (mm)**



\* Longer lengths available

## SPECIFICATIONS

### TP800-2

Size:	
Diameter	80mm
Length (with 5-way centre)	127mm
Mounting	Standard Renishaw range of shanks
Weight	850gm
Electrical connection	Micro D, as used on PH10M
Repeatability including stylus changing ( $2\sigma$ )	0.25 $\mu$ m with 50mm stylus, any orientation 1.0 $\mu$ m with 250mm stylus, any orientation
Overtravel	5mm with 20mm stylus, any direction
Overtravel force	Min. 450gmf, Max. 1500gmf, (manually adjustable) } in Z direction
Force at trigger	Typically <1gmf
Pretravel variation	<0.5 $\mu$ m with 50mm stylus
Max. stylus configurations	Using Renishaw styli, either - 200mm 5-way star cluster 250mm horizontal, unbalanced stylus 350mm horizontal, balanced stylus 350mm vertical stylus
Probe status indicator	LED on, Probe seated
Measurement speed	4 to 20mms <sup>-1</sup> , speed consistent between measurement moves to $\pm 1$ mms <sup>-1</sup>
Interfacing	PI 800-2 only (Not compatible with PI 800)

### PI 800-2

Size:	88mm (2 "U")
Height	146mm (1/3 19inch Rack width)
Width	208.5mm
Depth	Freestanding: or in a 19inch rack when used with appropriate blanking panels
Mounting	15 way double density D
Probe input	IEC mains connector
Power connector	85 - 140V ac, 47 - 66Hz, 15W
Power supply	170 - 264V ac, 47 - 66Hz, 15W
Signal output	Renishaw Product Interconnection System (PICS) 9 way D type connector and 5 pin DIN additional output connector
Compatibility	TP800-2 only (Not compatible with TP800)

### SCR800

Size:	
Height	391mm
Width	623mm (greater lengths available)
Depth	165mm
Force to unlock stylus module	1.2Kgf max. 0.55Kgf min.
Crash protection	5mm of protection overtravel is provided in the probe. The Rack itself is entirely passive.

Automatic stylus changing is achieved by programming the CMM to complete a set series of moves. No control of the SCR800 is required.

## PARTS LIST

Please quote the Part No. when ordering equipment

Item	Part No.	Description
TP800-2 System kit	A-1316-0101	TP800-2 Probe Stylus changing module PI 800-2 Interface Basic stylus kit - M4 Knuckle joint 200mm M4 extension 100mm M4 extension (x2) 50mm M4 extension (x4) Ø4 x 50mm M4 stylus Ø8 x 50mm M4 stylus Ø1 x 20mm M4 stylus Ø2 x 20mm M4 stylus Ø4 x 20mm M4 stylus (x2) M4 5-way centre Tool kit
SCR 800 Stylus changing kit	A-1316-0197	3 Port stylus changing rack Stylus changing modules (x2)  Longer racks with more ports available - please contact Renishaw
Cables	A-1016-7625 A-1016-7624 A-1016-7626 A-1016-7627 A-1016-7628 A-1016-7629	PL38V 25m PL42V 15m PL56V 12m PL44V 8m PL46V 4m PL45V 2m
Rack mounting, 2/3 Blanking plate	M-1018-0042	

Renishaw reserves the right to change specifications without notice

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