

# SFM-E1

## Surface finish probe module

### Enhanced access and inspection capability for integrated surface finish measurement

The SFP2 system consists of a probe and a range of SFM modules which have been designed to suit the demands of specific parts and features encountered in a precision manufacturing environment. The probe and modules can be automatically interchanged with all other REVO® probe options, providing the flexibility to easily select the optimum tool to inspect a wide range of features.

Each SFM module is its own miniature measuring device, incorporating Renishaw's proprietary encoder system to transduce the motion of the stylus tip.



### Features

The E-series of modules use dual skids with a central stylus. This makes them ideal for short scans on small to medium sized bores which may be deep within the workpiece.

### Typical applications

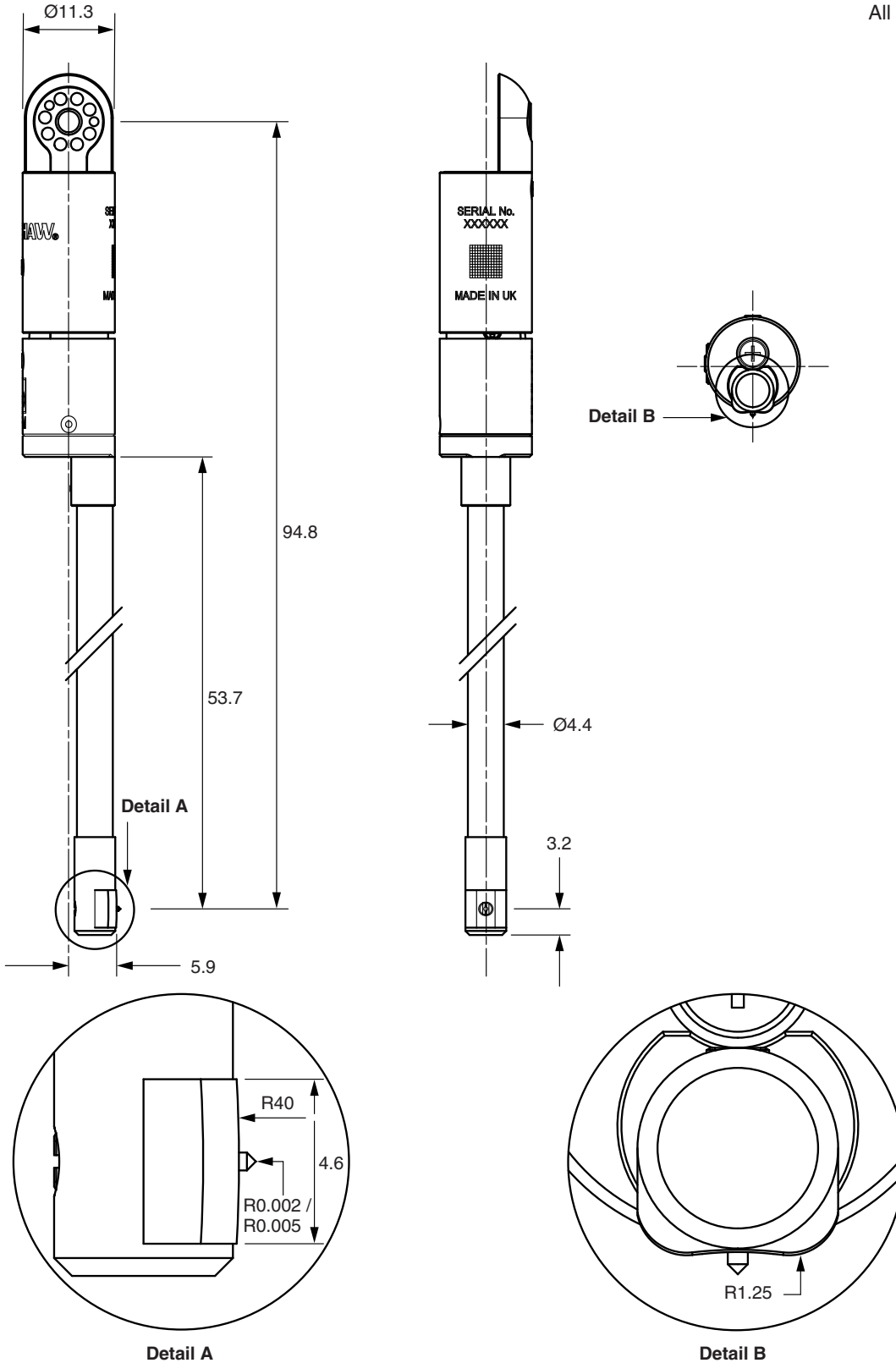
Automatic transmission valve bodies, valve seats, minimum feature access (mm): Ø9 × 52 (max. depth).

### Specification

Diamond tip radius (µm)		2 or 5
Surface finish measurement range (µm)	2 µm modules	6.3 to 0.05 Ra
	5 µm modules	6.3 to 0.10 Ra
Typical surface finish accuracy (of nominal Ra) *		±(10% + 20 nm)
Skid / stylus arrangement		Stylus central to dual skids
Skid material		DLC coated stainless steel
Nominal stylus tip protrusion beyond skid (mm)		0.6
Minimum feature access (mm)		Ø9 × 52 (maximum depth)
Skid length / radius (mm)		4.6 / 40
Skid width / radius (mm)		5.0 (total) / n/a
Skid contact force (N)		0.15
Stylus contact force (N)		0.003
SFM / SFH knuckle adjustment range		±90°
Weight (g)		12
Resolution (nm)		1
Measurement speed (mm/s)		Up to 1
Stylus holder compatibility		SFH-1 only
Lateral scanning capability		No

\* Accuracy values are dependent upon a number of system variables. These include the machine size and configuration, scan orientation, condition of stylus tip, part fixturing system and environmental noise.


All dimensions in mm.



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 #renishaw

+44 (0) 1453 524524

 [uk@renishaw.com](mailto:uk@renishaw.com)

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