



RENISHAW SFM-A1 Surface Finish Probe Module Instructions

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SFM-A1

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 A-series of modules is designed to deliver high performance with a good level of capability to access part features.

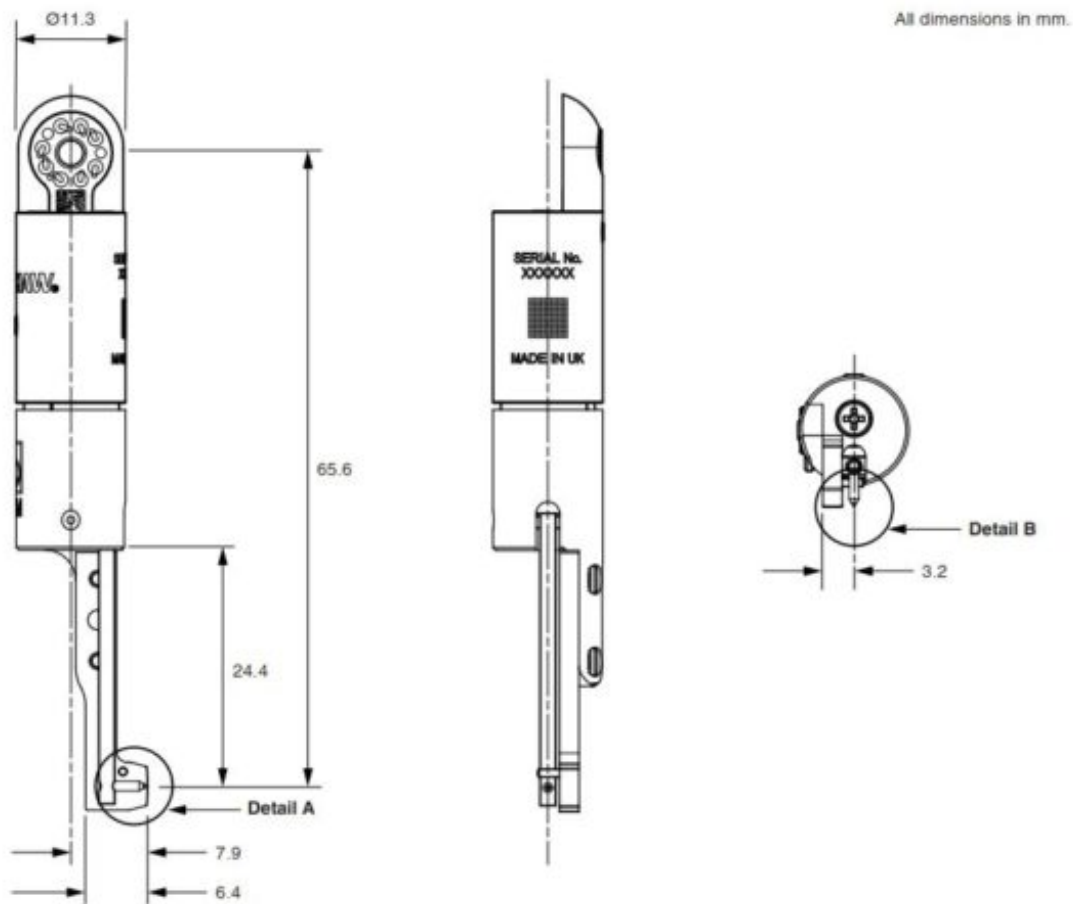
Typical applications

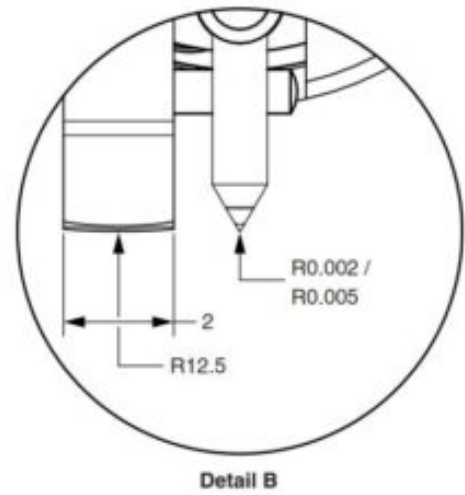
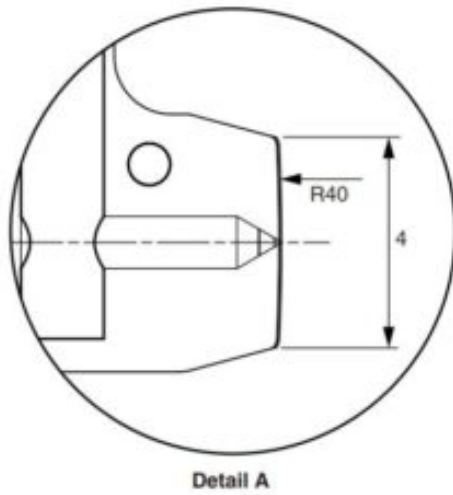
General purpose; engine block gasket face.

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) *		$\pm(5\% + 15 \text{ nm})$
Skid / stylus arrangement		Side-by-side
Skid material		DLC coated stainless steel
Nominal stylus tip protrusion beyond skid (mm)		0.5
Skid length / radius (mm)		4 / 40
Skid width / radius (mm)		2 / 12.5
Skid contact force (N)		0.2
Stylus contact force (N)		0.003
SFM / SFH knuckle adjustment range		$\pm 90^\circ$
Weight (g)		12
Resolution (nm)		1
Measurement speed (mm/s)		Up to 1
Stylus holder compatibility		SFH-1, SFH-2
Lateral scanning capability		Yes

* 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.





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References

- [SFP2 surface finish probe for the REVOA® system](#)