

# SFM-D1

## 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 D-series of modules employ a cranked skid arm with the stylus in line with the skid to facilitate access on to formed surfaces.

### Typical applications

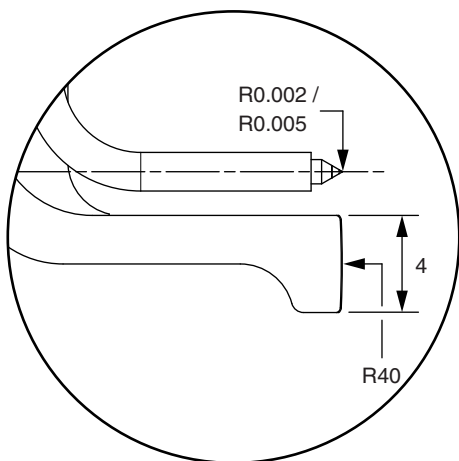
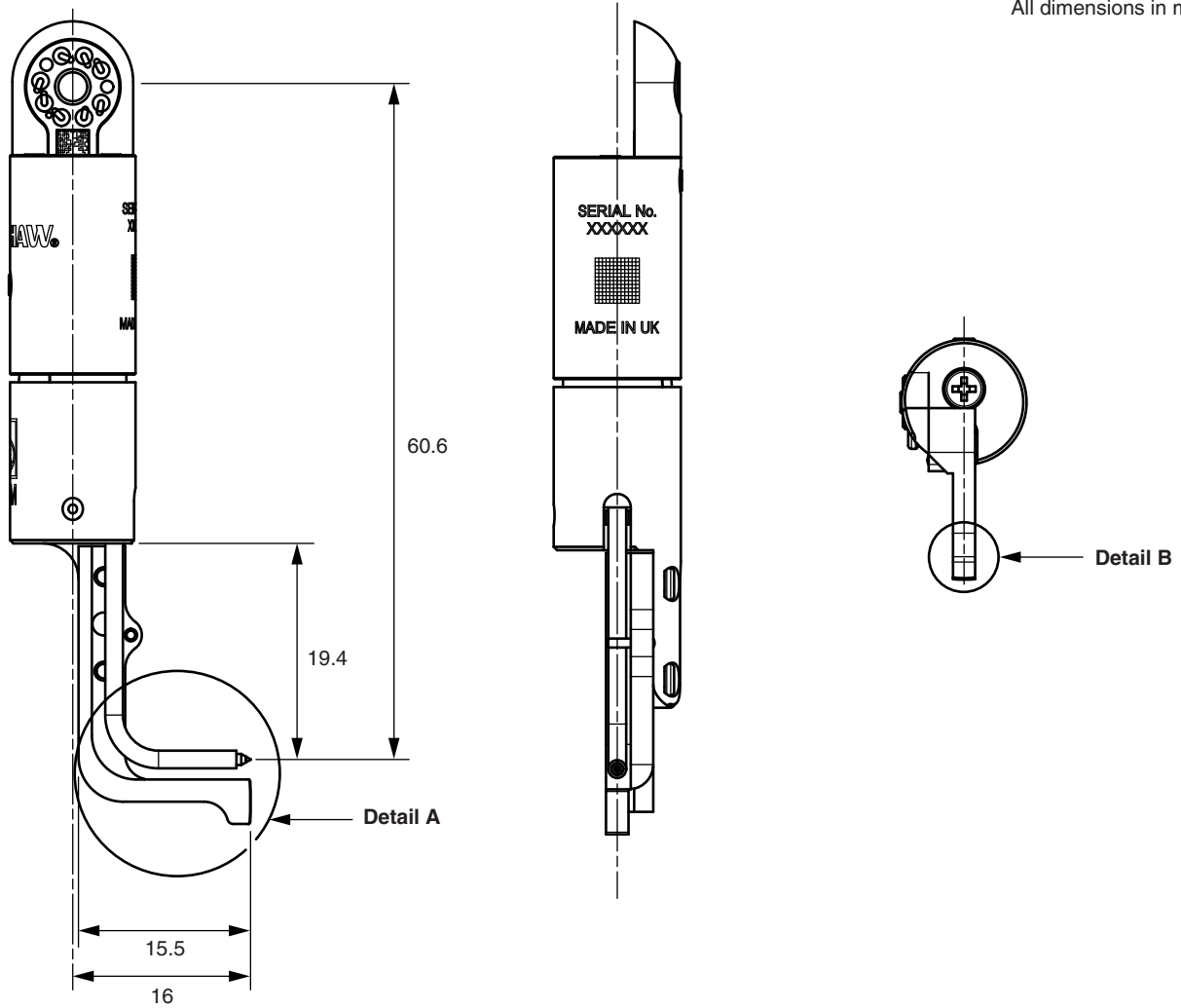
Rotors, blisks and blades, especially fillet radii.

### Specification

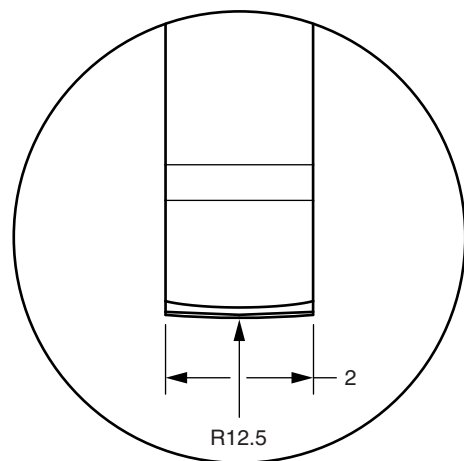
<b>Diamond tip radius (µm)</b>	2 or 5	
<b>Surface finish measurement range (µm)</b>	<b>2 µm modules</b>	6.3 to 0.05 Ra
	<b>5 µm modules</b>	6.3 to 0.10 Ra
<b>Typical surface finish accuracy (of nominal Ra) *</b>	±(10% + 20 nm)	
<b>Skid / stylus arrangement</b>	In-line (stylus leading skid)	
<b>Skid material</b>	DLC coated stainless steel	
<b>Nominal stylus tip protrusion beyond skid (mm)</b>	0.5	
<b>Skid length / radius (mm)</b>	4 / 40	
<b>Skid width / radius (mm)</b>	2 / 12.5	
<b>Skid contact force (N)</b>	0.2	
<b>Stylus contact force (N)</b>	0.003	
<b>SFM / SFH knuckle adjustment range</b>	±90°	
<b>Weight (g)</b>	13	
<b>Resolution (nm)</b>	1	
<b>Measurement speed (mm/s)</b>	Up to 1	
<b>Stylus holder compatibility</b>	SFH-1, SFH-2	
<b>Lateral scanning capability</b>	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.



Detail A




Detail B

[www.renishaw.com/SFP2](http://www.renishaw.com/SFP2)

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