

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

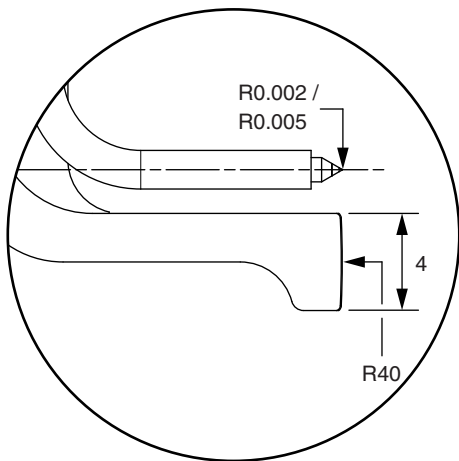
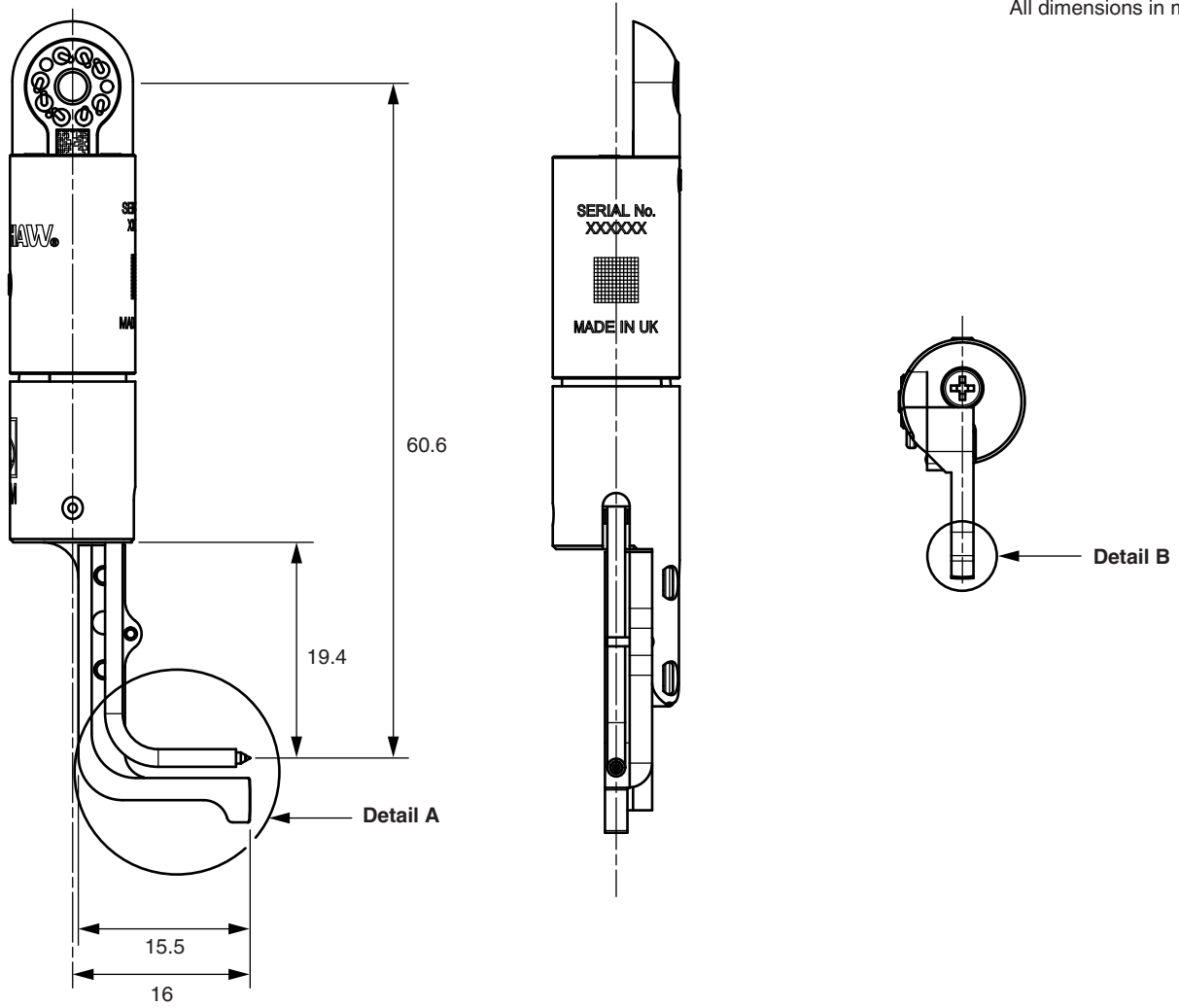
Rotors, blisks and blades, especially fillet radii.

Specification

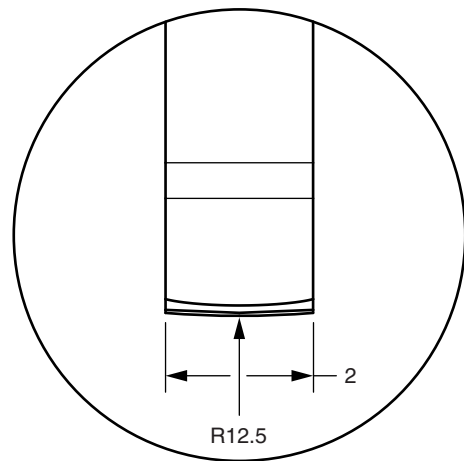
Diamond tip radius (µm)	2 or 5	
Surface finish measurement range (µm)	2 µm modules	6.3 to 0.05 Ra
	5 µm modules	6.3 to 0.10 Ra
Typical surface finish accuracy (of nominal Ra) *	±(10% + 20 nm)	
Skid / stylus arrangement	In-line (stylus leading skid)	
Skid material	DLC coated stainless steel	
Nominal stylus 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)	0.0036	
SFM / SFH knuckle adjustment range	±90°	
Weight (g)	13	
Resolution (nm)	1	
Measurement speed (mm/s)	Up to 1	
Stylus holder compatibility	SFH-1, SFH-2	
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.



Detail A




Detail B

www.renishaw.com/SFP2

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Part no.: H-1000-2305-06-A
 Issued: 07.2022