

# IF-Profiler

3D profiler to measure roughness and surface finish

IF-Profiler is a handheld 3D roughness measurement system for high resolution measurement of surface finish. Users measure roughness of flat and curved components with only one system. Measurements are performed both profile based (ISO 4287) and areal based (ISO 25178). The lightweight IF-Profiler consists of a 3D measurement sensor and a robust, at the same time handy framework. The ergonomic design combines ease of use and required mechanical rigidity. Traceable and repeatable measurements are achieved in a min. measurement time of three seconds.



## GENERAL SPECIFICATIONS

Positioning volume (Z)	25 mm (mot.)
Specimen radius	100 mm - ∞

## OBJECTIVE SPECIFIC FEATURES

Objective magnification (*)		10x	20x	50x
Numerical aperture		0.3	0.4	0.6
Working distance	mm	17.5	16	10.1
Lateral measurement area (X,Y) (X x Y)	mm mm <sup>2</sup>	2 4	1 1	0.4 0.16
Measurement point distance	µm	1	0.5	0.2
Calculated lateral optical limiting resolution	µm	1.09	0.82	0.54
Finest lateral topographic resolution	µm	2	1	0.64
Measurement noise	nm	40	20	10
Vertical resolution	nm	100	50	20
Vertical measurement area	mm	16	15	9
Accessibility	°	31	29	19

(\*) Objectives with longer working distance available upon request

## RESOLUTION AND APPLICATION SPECIFICATIONS

Objective magnification (*)		10x	20x	50x
Min. measurable roughness (Ra)	µm	0.3	0.24	0.18
Min. measurable roughness (Sa)	µm	0.15	0.12	0.09
Max. measurable slope angle	°		87	



Initiative Fair Data Sheet  
Specifications in blue mark Alicon specific values.