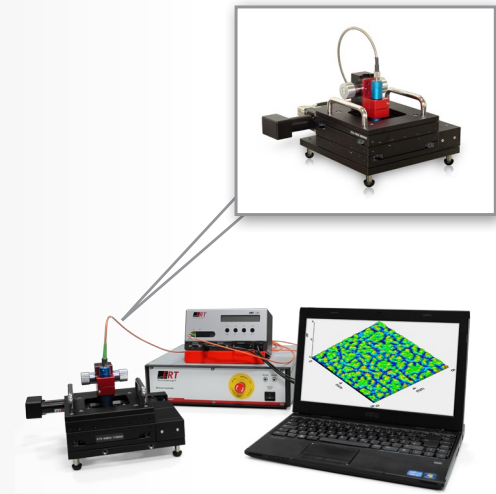


# MicroSpy® Mobile

The **MicroSpy® Mobile** as a portable surface metrology unit, is perfectly suited for direct surface measurement on large parts, vehicles, cylinders, rolls, glass panes and so forth. The measuring system is based on the highly successful MicroSpy® - series for measuring roughness, contour, topography and thickness of surfaces and was especially developed to measure components „on site“. Due to its low weight the instrument can be easily positioned on small to very large parts. Various optical topography and thickness point sensors are available as measuring head for the MicroSpy® Mobile depending on the measuring task.

The mobile surface measuring tool uses the same technology and software as the established FRT multi-sensor measuring instruments.



## MEASURING TASKS

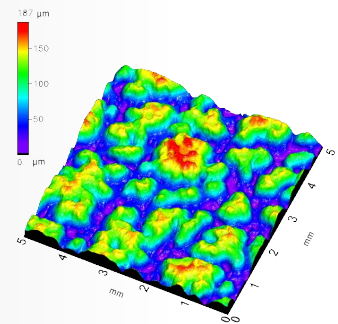
*Roughness    Waviness    Step Height    Flatness*  
*Topography    Surface Structure    Defect Inspection*  
*Wear    3D Map    Film Thickness    ...*

## SYSTEM CHARACTERISTICS

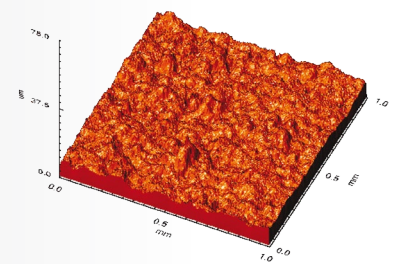
- Mobile system for measuring “on site”
- Low weight, small components, laptop
- Handles and adjustable support feet
- Point, 2D and 3D measurements up to 50 mm x 50 mm
- Various topography and film thickness sensors available
- Manual sensor approach with high-precision axis
- Simple and efficient control with FRT Acquire software
- Comprehensive analysis software FRT Mark III

## BENEFITS

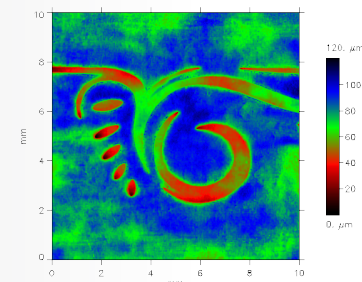
- Simple, fast and flexible installation “on-site”
- Attractive price-performance ratio
- Highly sophisticated hard- and software
- Professional quality assurance based on precise optical metrology
- Intuitive handling with fast evaluation of results
- Application specific consulting from skilled FRT experts



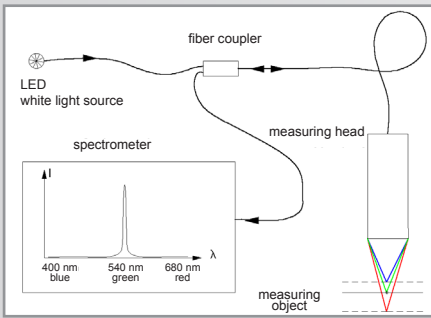
Measurement of an artificial leather surface on a dash board



Roughness of the steel surface of a roller



Embossment in paper (packaging)



## Measuring Principle

The **MicroSpy® Mobile** uses the principle of chromatic distance measurement for topography measurements. White light is focused on the surface by a measuring head with a strongly wavelength-dependent focal length. The spectrum of the light reflected on the surface generates a peak in the spectrometer.

The wavelength of this peak is used to determine the height on the sample.

The measuring tool handles transparent, highly reflective or even light absorbing surfaces and materials.

System	
Assembly	Portable
Sensor	Point Sensor
Scanning Stage	
Travel	up to 50 mm x 50 mm
Drive Type	Ball Screw
Bearing Type	Crossed Roller Bearing
Encoder Resolution	0.25 µm
Flatness	< 2 µm / 50 mm
Max. Speed	50 mm / s
z-Axis	Manual Axis
z-Axis Travel	25 mm
System Requirements	
Environmental Requirements	Clean, Vibration Free, Stable Temperature
Input Voltage	110 V / 220 V AC, 1 Phase
Footprint (L x W x H)	230 mm x 280 mm x 200 mm (Measurement Device)
Weight	Measurement Device approx. 5 kg
Measuring Characteristics (Measuring Head)	
	<b>CWL 600 µm *</b>
Measuring Range xy	50 mm x 50 mm
Measuring Range z	600 µm
Resolution (lateral)	2 µm
Resolution (vertical)	6 nm

\* Sensor CWL 600 µm taken as an example, other sensors are available.

## Questions? Talk to an expert!

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