

TR Scan

An Extensive Range of Contactless Measuring Products

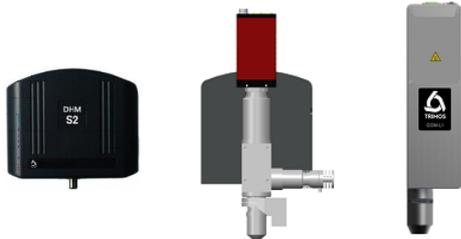


TR Scan 3D

- ✓ Multi-technology
- ✓ Contactless
- ✓ Measurements on very reflective and transparent surfaces
- ✓ Sub-nanometric resolution
- ✓ Quick, reliable and replicable measurements
- ✓ ISO compatible measurements
- ✓ Extremely stable cast-iron base
- ✓ Completely CNC controlled
- ✓ Rigid X/Y table
- ✓ Parts weight up to 20kg

INTRODUCTION

Trimos provides you with a unique, multi-technology solution allowing a wide range of measurement possibilities on reflective, non-reflective and transparent surfaces. The quick clamping system allows you to change the measuring head in seconds, without having to restart the application.



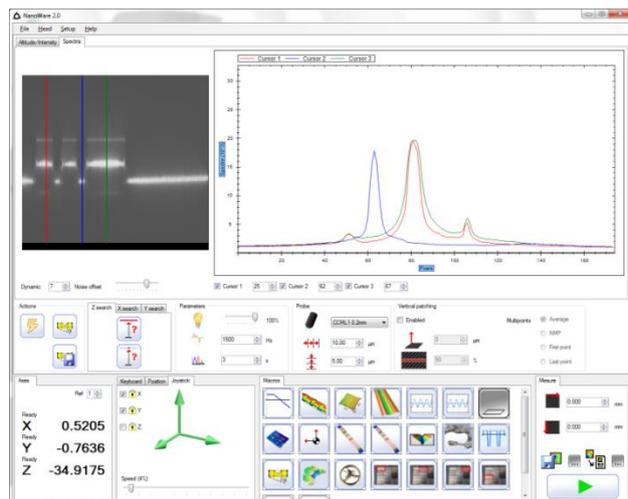
Both the wide range of high-resolution matrix measuring heads and the ultra-fast line sensor mean measurements can be taken quickly on a measurement range of several millimetres. Depending on the type of optics mounted on the system, it is possible to carry out large-scale measurements.

PROGRAM

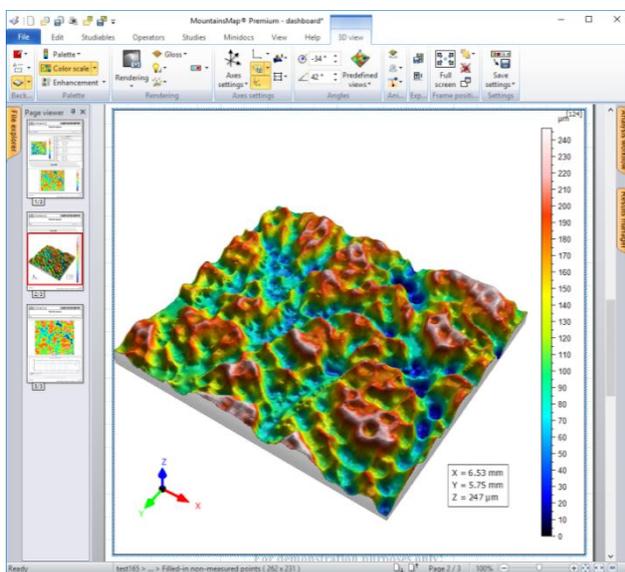
The simplicity of Trimos Nanoware measuring program enables both 3D and 2D measurements.

The "Spectra" mode means artefacts can be analysed on transparent items and enables the system to "pass through" the item taking multi-layer measurements.

"Macro" allows to carry out fully automatic measurements.



Live display of 3D topography :

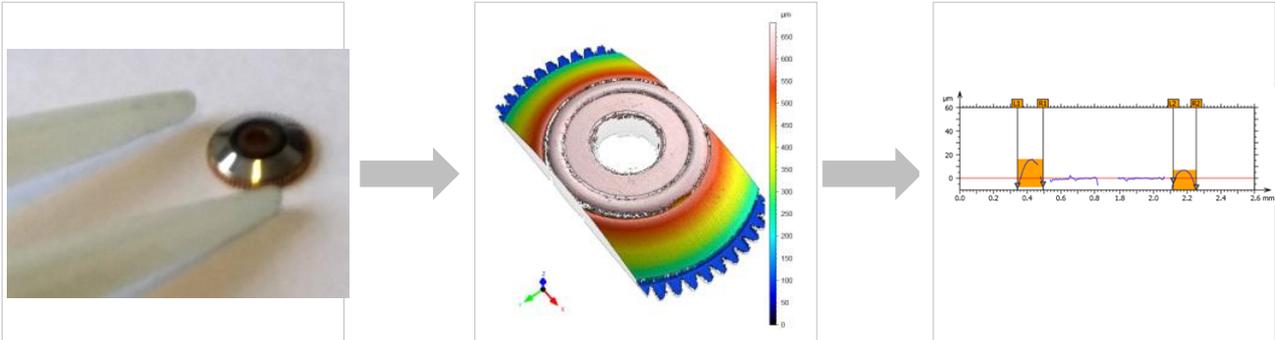


- Zoom and rotation of 3D surface topography.
- Image improvement tools.
- Choice of best lighting conditions.
- Selection of type rendered.
- Adjustment of amplification of surface height.
- Optimisation of the colour palette for the vertical scale.
- Specification of the flight plan, choice of features of interest and back-up of the "flight" as a video to use in presentations.
- View of contour diagrams and photo simulations.
- Extraction of 2D profiles from a 3D surface for visualisation and analysis.
- Conversion of RVB images into 3D pseudo images with the Z axis in intensity.

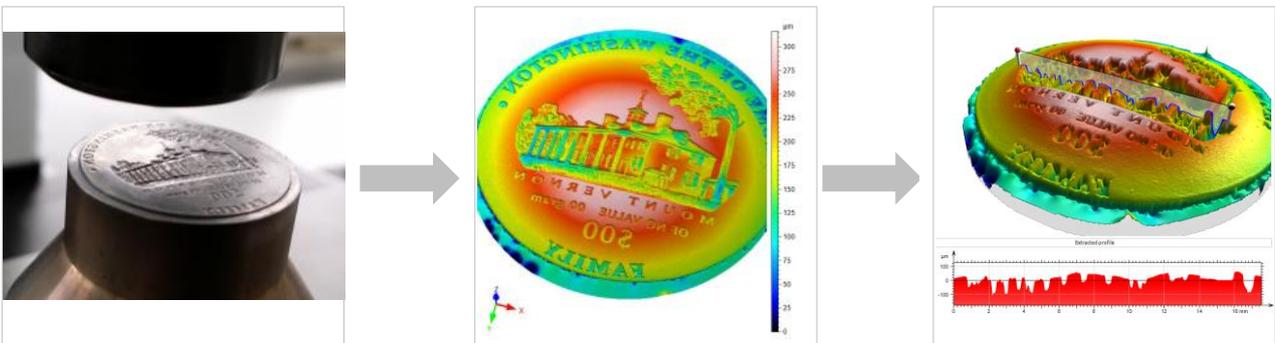
And more functionalities at your disposal.

APPLICATIONS

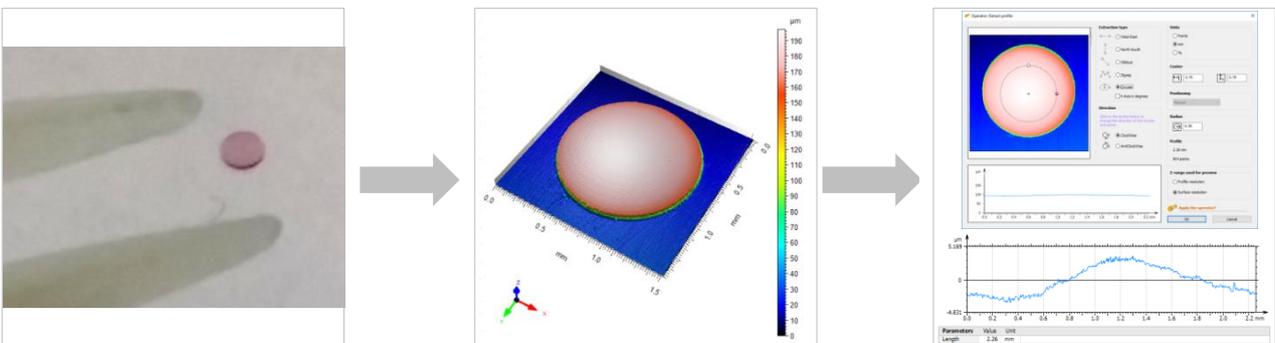
Measurement of the height of assembly on the flexible section, with various materials



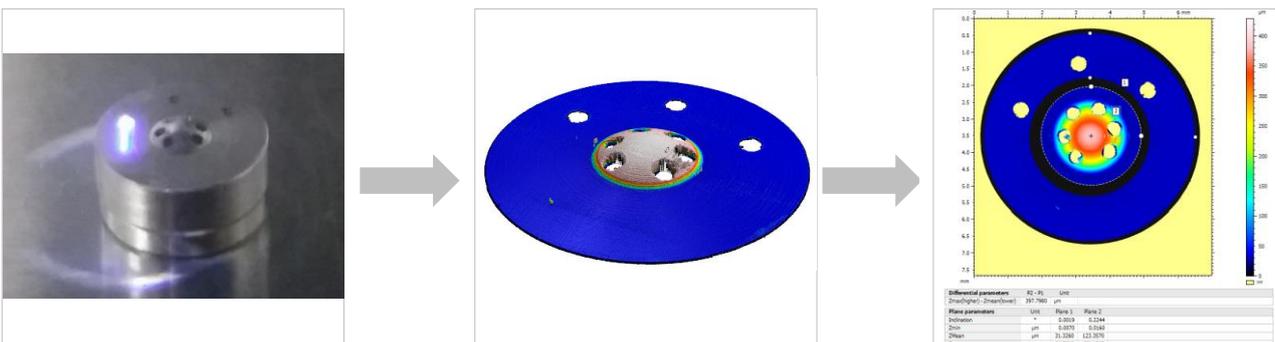
Measurement of quality / detection of imperfections / form



Control of polishing form on ruby of clockmaking



Measurement of maximum radius on a high-pressure injector



TECHNICAL DATA



LINE CCML1

Specifications	CCM-L1 0.2mm	CCM-L1 1mm	CCM-L1 4mm
Vertical measuring range	200 µm	0.95 mm	3.9 mm
Line width	0.96 mm ± 0.01 mm	1.91 mm ± 0.01 mm	4.78 mm ± 0.02 mm
Lateral range	5 µm	10 µm	25 µm
Working distance	5.3 mm ± 0.2 mm	18.5 mm ± 0.2 mm	41 mm ± 0.2 mm
Spot size	2 µm	4 µm	10 µm
Lateral resolution	1 µm	2 µm	5 µm
Axial resolution	20 nm	80 nm	320 nm
Accuracy ²⁾	± 80 nm	± 300 nm	± 1.2 µm
Numerical aperture	0.7	0.55	0.33
Maximum measurement angle	90°+/-44°	90°+/-33°	90°+/-20°
Range of thickness measurements	20 µm - 280 µm	75 µm - 1.35 mm	300 µm - 5.5 mm



DHM

Specifications	DHMS1	DHMS2	DHMS3
Z resolution	0.1 nm	0.1 nm	0.1 nm
Lateral resolution (X/Y)	0.5 µm	0.6 µm	0.6 µm
Vertical measuring range ¹⁾	3 µm	7 µm	7 µm
Measuring range X/Y	~250 µm x ~250 µm	~330 µm x ~330 µm	~330 µm x ~330 µm
Optical zoom	10x	7x	7x
Lambda 1 wavelength	~850 nm	~760 nm	~760 nm
Lambda 2 wavelength	~665 nm	~665 nm	~665 nm
Working distance	~6 mm	~6 mm	~6 mm
Specimen reflectiveness	< 1% to 100 %	< 1% to 100 %	< 1% to 100 %



WLI

Specifications	WLI 2.5x	WLI 5x	WLI 10x	WLI 20x	WLI 50x	WLI 100x
Resolution	0.1 nm	0.1 nm	0.1 nm	0.1 nm	0.1 nm	0.1 nm
Lateral resolution (X/Y)	4.81 µm	4.81 µm	1.2 µm	0.9 µm	0.66 µm	0.52 µm
Measuring range	400 µm	400 µm	400 µm	400 µm	400 µm	400 µm
Measuring range X/Y	~4536 µm x ~3447 µm	~2268 µm x ~1723 µm	~1134 µm x ~861 µm	~567 µm x ~430 µm	~226 µm x ~172 µm	~113 µm x ~86 µm
Optical zoom	2.5x	5x	10x	20x	50x	50x
Working distance	~10.3 mm	~9.3 mm	~7.4 mm	~4.7 mm	~3.4 mm	~3.4 mm

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