

TOPOS 50

Instrument for fast, high-accuracy non-contact flatness measurement of precision parts



The TOPOS 50 is a non-contact flatness measurement instrument for precision-manufactured surfaces with sub-micron accuracy.

The TOPOS flatness measurement instruments meet the requirements for objectively working measurement tools for the production and quality control of sophisticated components, such as those being utilized, for instance in fuel injection systems, pumps or valves.

The TOPOS interferometers allow the non-contact flatness measurement of lapped, fine-machined and polished precision parts. The design of the interferometer ensures significant advantages and facilitates the

handling, especially when being placed in the production environment.

Maximum possible protection of the reference surface and the specimen is ensured by the non-contact measurement and by the placement of the entire interferometer above the parts which are supposed to be measured.

Thus, oil and other processing materials on the part cannot reach the reference surface and reach into the interferometer.

The evaluation software ISA for TOPOS interferometers ensures an easy handling and allows an intuitive operation of the interferometer.

In less than 2 seconds, the worker will receive a concrete flatness value according

to the ISO/TS 12781-1.

Thus results are made comparable and quantifiable.

In order to visualize the results of the flatness measurement, it is possible to present the topography of parts in various graphics.

Furthermore, there exists a connection to statistics and quality control programs.

The results of a measurement series can be exported to CSV or AQDEF data format.

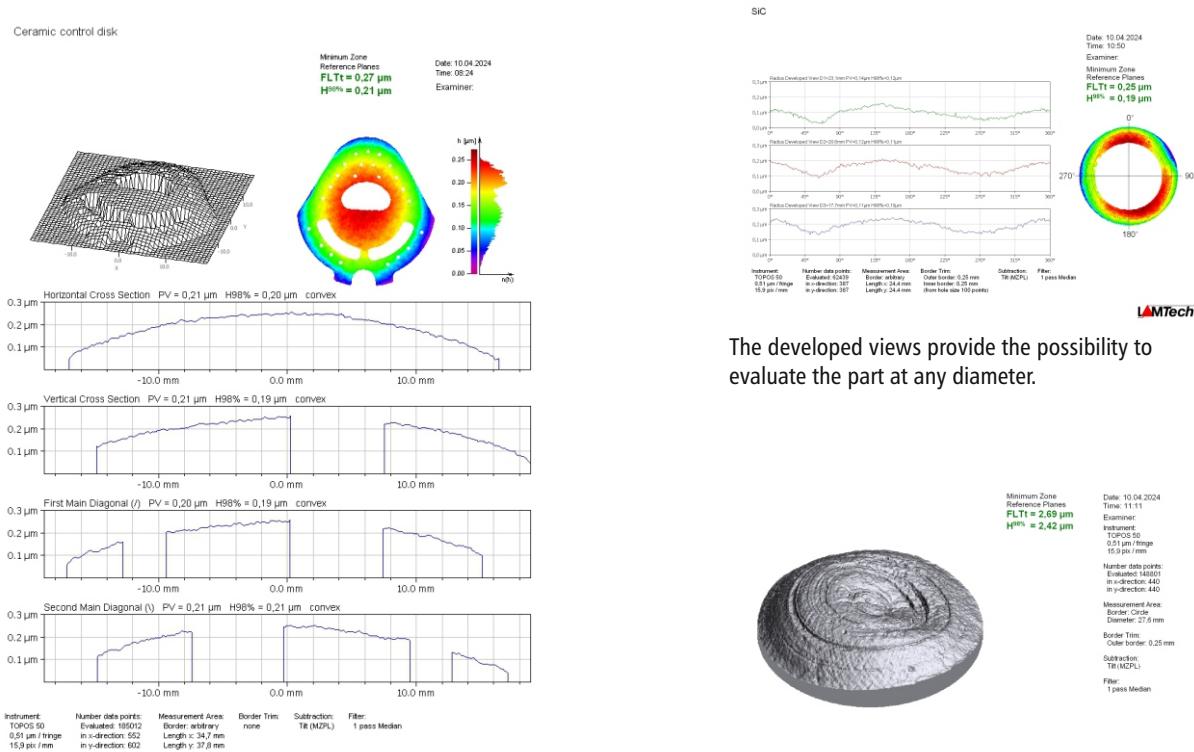
The parameters how a part is measured (measurement area, description, filter ...) can be saved into a file which allows a fast change between different parts.

It includes the motorized setting of the sensitivity.

Specifications TOPOS 50

Measurement area (diameter)	50 mm
Material of reference surface	Quartz glass
Calibrated sensitivities	0.5 , 1, 2 and 4 μm per fringe
Accuracy	(0.1 ... 0.4) μm + 2% of measured value, according to the sensitivity
Dynamic range	up to 140 μm , limited by the slope of the surface
Measuring points	up to 350,000
Spatial resolution	0.07 mm
Measurement time	< 2 s
Dimensions (L x W x H)	610 mm x 500 mm x 605 mm incl. base plate
Weight of the interferometer	32 kg
Weight of the base	63 kg (base plate with linear axis and height-adjustable tilt table)

Examples for the graphical presentation of the measurement results with the evaluation software ISA



The measurement sheet summarizes the measurement results for a simplified documentation.

The relief image provides an additional visual impression about the form of the part.



LAMTECH Lasermesstechnik GmbH
Nellinger Strasse 20
70619 Stuttgart
Germany
T: +49 (0) 711 232810
F: +49 (0) 711 2361125
www.lamtech.de/en
info@lamtech.de