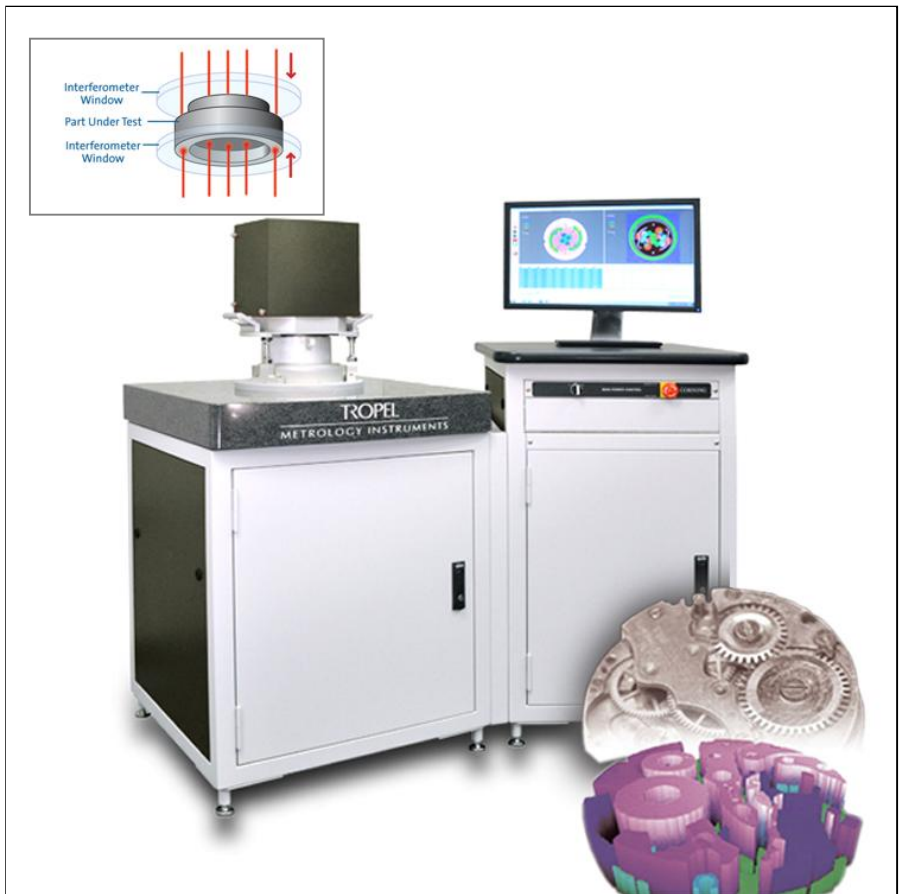


Tropel® FlatMaster® MSP-DH Surface Metrology System

Advanced Optical Measurement System for Flatness, Parallelism and Height/Depth

CORNING

Corning introduces the dual-head Tropel® FlatMaster® MSP-DH Optical Metrology System; a non-contact frequency scanning interferometer that simultaneously measures both sides of precision parts. This system provides measurement results for absolute thickness, depth, height, parallelism and flatness. Complex parts are fully characterized with sub-micron accuracy in just seconds!



Key Benefits

- Improves product quality, manufacturing yield and throughput
- Lowers manufacturing costs
- Increases process understanding and reduces time to market
- Increases customer satisfaction

Powerful

- Measure two opposing surfaces of a single part simultaneously
- Full-surface characterization in seconds
- Absolute thickness, relative height, depth, flatness and parallelism of multiple regions on opposing sides

Flexible

- Fast and easy programming setup
- Measures a variety of surface types and finishes
- Suitable for production, quality control or R&D applications

Easy to Use

- Load parts with little or no fixturing
- Intuitive recipe-driven measurements

Tropel® FlatMaster® MSP-DH System Specifications

Performance

	FlatMaster MSP-DH 40	FlatMaster MSP-DH 150	FlatMaster MSP-DH 300
Field of view	43 mm (1.7 in)	150 mm (5.9 in)	305 mm (12.0 in)
Z-Resolution	1 nm (0.04 µin)	1 nm (0.04 µin)	1 nm (0.04 µin)
Lateral resolution	0.04 mm (0.0016 in)	0.15 mm (0.006 in)	0.17 mm (0.007 in)
Maximum Part Thickness	Up to 50 mm (2.0 in)	Up to 300 mm (11.8 in)	Up to 300 mm (11.8 in)
Measurement method	Frequency Scanning Interferometry		
Measurement time	30 seconds typical		
Measured data points	up to 3.0 million per measurement		
Materials	Metals, glass, polymers, ceramics, and many others		
Surfaces	Fine-ground, lapped, polished, super-finished and others		

Accuracy and Repeatability

	Accuracy*	Repeatability*
Flatness	60 nm (2.4 µin)	20 nm (0.8 µin)
Parallelism	100 nm (4.0 µin)	25 nm (1.0 µin)
Depth/Height/Thickness**	500 nm (20.0 µin)	150 nm (6.0 µin)

* Refers to instrument limited Accuracy and Repeatability (σ) as based on measurement of traceable artifact
 ** Depth/Height

Tropel Metrology Software (TMS™)

Standard Parameters	Flatness, depth/height, parallelism, line profile, surface profile
User-defined Report Layouts	User-configurable including: OpenGL® 3-D, 2-D, line trace (X/Y, radial, circular), color contour, isometric, histogram, user-defined tolerances, pass/fail criteria
Data Management	Available in report layouts, also MS Access® database, MS Excel®, CSV and serial port, optional export to industry standard database formats

Environmental and Facility

Temperature	15 °C to 25°C (59 °F to 77 °F)
Rate of temperature change	< 1.0 °C per hour
Vibration Isolation	Passive isolation included
Humidity	5% to 95% relative humidity, non-condensing
Power	100-240 VAC, 50/60 Hz, 4 Amp
Air/Vacuum	None required
System Dimensions (W x D x H)	160 cm x 103 cm x 150 cm (63 in x 40 in x 59 in)
System Weight	390 kg (860 lb)

Standard System Configuration

Computer	Windows® based PC
Software	TMS™ Analysis software
Traceable artifact	Included

This product is covered by one or more U.S. patents.
 All specifications are subject to change.
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For more information about the FlatMaster® MSP System, or any of the other Tropel® Metrology Instruments, please contact:

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