

## ContourGT-I 3D Optical Microscope

- World's First Automated Bench Top Profiler with Tip/Tilt Head

The ContourGT-I 3D Optical Microscope combines over three decades of surface metrology innovation and experience from industry partnerships into a single bench top system to deliver production-ready automation, measurement angle flexibility, outstanding imaging, and proven gage-capable performance. Incorporating Bruker's proprietary tip/tilt optical head, the system is fully automated and programmable to measure surface features over a range of angles while minimizing tracking errors. Latest generation Vision64® software and a streamlined staging design provide intuitive analysis capabilities and the ultimate operator ease of use. The ContourGT-I has everything needed to immediately measure on demand. Never before have so many advanced metrology features been available in one bench top system.

### Fastest, Easiest Nanometer-Scale Measurements

- First fully automated bench top solution (focus, intensity, staging, tip/tilt head, FOV)
- Nanometer-scale resolution on high-contour surfaces

### Maximum Vibration Stability and Robustness

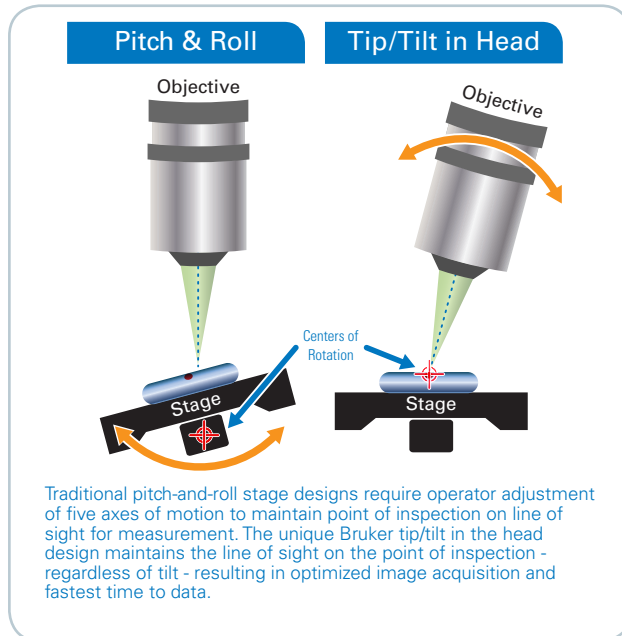
- Integrated air isolation
- High stability, space-efficient footprint

### Most Powerful Measurement Analysis

- Streamlined interface and intuitive workflow
- Real-time automated measurement optimization
- Extensive library of filters and analysis options
- Customized analysis reporting

## Speed to Results

Bruker's proprietary tip/tilt in the head provides unmatched user flexibility for production setup and inspection. By coupling the tip/tilt functionality with the optical path in the microscope head, Bruker has coupled the point of inspection to the line of sight independent of tilt. This is a tremendous throughput and ease of use advantage for production metrology, where both surface tracking and simplicity is critical for rapid inspection of varying surfaces. The combination of this feature with automated staging and objectives makes the ContourGT-I ideally suited to "measure-on-demand" industrial requirements – all within a compact footprint.



## Robust Metrology for the Factory

In addition, the ContourGT-I utilizes proprietary vibration-resistant measurement techniques and a unique base design with integrated air isolation to deliver accurate measurements under very demanding shop floor production conditions. The time-tested, vibration-tolerant design is fully optimized to provide uncompromised, repeatable and quantitative results.

The bench top ContourGT-I delivers fully automated, gage-capable, measure-on-demand reliability for R&D and production.

### ● Bruker Nano Surfaces Division

Tucson, AZ • USA  
Phone +1.520.741.1044/800.366.9956  
productinfo@bruker-nano.com

[www.bruker.com/nano](http://www.bruker.com/nano)

## Specifications

Max. Scan Range	Up to 10mm
Vertical Resolution	<0.01nm
RMS Repeatability (PSI)	0.01nm
Lateral Resolution	0.38µm min (Sparrow criterion); 0.13µm (with AcuityXR™) 0.01µm (with NanoLens™)
Step Height Accuracy	<0.75% *
Step Height Repeatability	<0.1% 1 sigma repeatability
Max. Scan	73µm/sec (with standard camera)
Sample Reflectivity	0.05% - 100%
Max. Sample Slope	Up to 40° (shiny surfaces); Up to 87° (rough surfaces)
Sample Height	Up to 100mm (4in.) standard; Up to 150mm (6in.) option
Sample Weight	Up to 10kg (22lbs)
XY Sample Stage	150mm (6in.) automated
Z Focusing	100mm (4in.) automated
Tip/Tilt Function	±5° automated in head
Optical Metrology Module	Patented dual-LED illumination; Single-objective adapter or automated turret; Single or auto zoom lenses
Objectives	Parfocal: 2.5x, 5x, 10x, 20x, 50x, 115x LWD: 1x, 1.5x, 2x, 5x, 10x TTM: 2x, 5x, 10x, 20x Bright field: 2.5x, 5x, 10x, 50x
Available Zoom Lenses	0.55x, 0.75x, 1x, 1.5x, 2x
Camera	Standard monochrome: 640 x 480 High-resolution monochrome (option): 1280 x 960 Color (option): 640 x 480
Software System	Vision64 Analysis Software on Windows 7 64-bit OS
Software Packages	Production mode; AcuityXR; Annular Analysis; Resolution Enhancement; High Speed AF; Optical Analysis; Adv Imaging Processing; Thick Film; MatLab; PSS
XY Automation	Automated stitching, scatter and grid automation
Calibration	Via traceable step standards
System Footprint	452mm (W) x 534mm (D) x 683mm (H)
System Weight	60kg (133lbs)
Warranty	12 months

\* Absolute accuracy for step heights 8µm and greater.

## Cover images

Foreground: ContourGT-I 3D Optical Microscope.

Background: Stitched image of U.S. quarter. Insets: 3D images of diffractive lens (top), rolled aluminum (middle), heart stent (bottom).