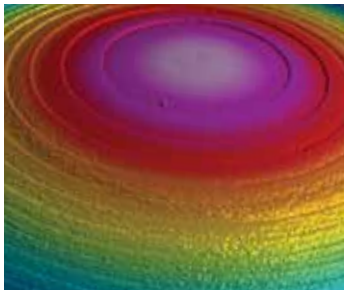


CCI Optics

World-leading tools for optics metrology



The CCI Optics range

Engineered to challenge your definition of impossible



Optical interferometry without compromise

- 2.2 mm vertical range with closed loop piezoless Z axis scanner
- 0.1 ångström resolution over the entire measurement range
- 2048 x 2048 pixel array for large FOV with high resolution
- 0.3% - 100% reflectivity surfaces measured with ease

Virtual elimination of measurement uncertainty

- <0.2 ångström RMS repeatability, <0.1% step height repeatability
- FEA optimised mechanical design for excellent R&R capability
- Calibration utilising traceability standards ensures acceptance of results
- Automatic set-up features eliminate operator variability

Robust design for long-term cost effectiveness

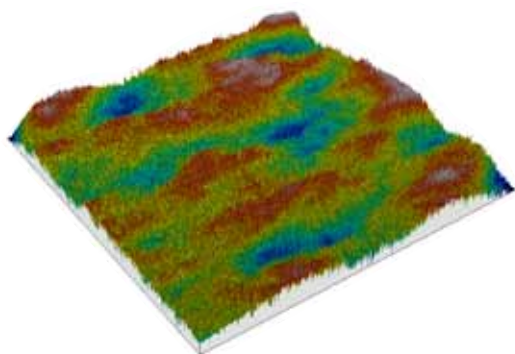
- Piezoless Z axis scanner eliminates expensive repair bills
- Automatic surface detection prevents crash damage to lens
- Built in self-diagnostic tools for quick and easy troubleshooting
- Ease of operation reduces the possibility of operator mishandling

64-bit control and analysis software

- Multi-language support to ease communication with global partners
- Compatible with most PC platforms for collaborative research projects
- New tools including 4D analysis of 3D surfaces as they evolve over time
- Automatic report generation based on batches of measurement data

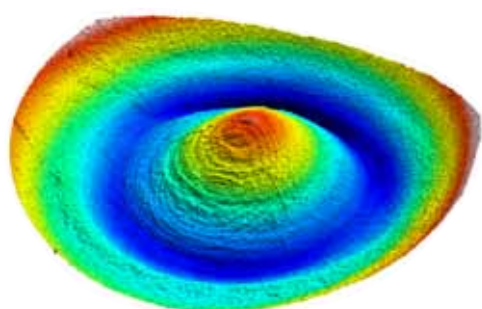


Improving optical performance



Surface roughness

Controlling surface finish specifications for diamond turned, polished or moulded optics is critical for optical performance. The CCI Optics is ideal for studying a range of roughnesses from low spatial frequency form error through to mid and high spatial frequency roughness and waviness. The system includes 3D (ISO 25178) and 2D (4287) roughness, advanced PSD and super smooth surface analysis.

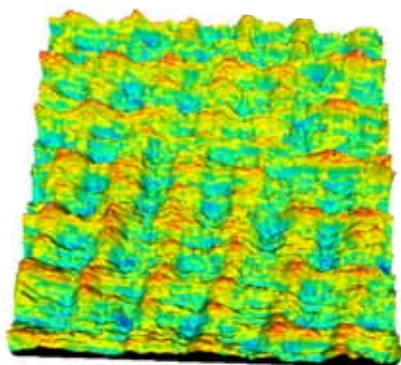


Aspheric form

Expressly designed for aspheric optical components, the software fits measurement data to the component design formula, and aligns the resultant error profile with respect to the aspheric axis.

Base radius optimisation to highlight base radius variation in production, allowing users to quickly determine the best-fit radius for the component, which can then be checked against allowable production tolerances.

Removal of the design form produces a plot of the residual deviation from form, which can be used for feedback for tool tip and machine correction.



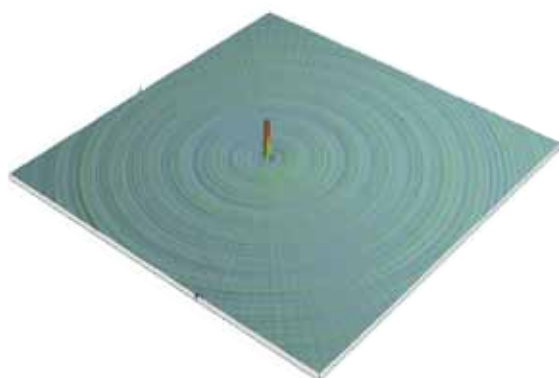
Grind, polish and MRF

Roughness and waviness analysis tools are ideal for grinding and polishing performance evaluation. Advanced PSD and Slope-error tools can identify frequency errors (i.e. Tool loading and surface ripple effects). Easy analysis of grinding, polishing and MRF process issues including: orange peel, poly-crystalline growth zones, haze, pull-outs etc. Analysis of cross-cut and center pip effects from X and Y-offset errors.

Diamond turning

Common faults such as X-offset (center) and tool height errors can be identified and repaired. Roughness and waviness analysis tools for cutting performance evaluation and feedback (chatter; spoke, color, etc) will optimise optical performance.

Advanced PSD and slope-error tools are ideal for diagnostic evaluation of frequency errors (i.e. surface ripple effects). The drop-out free data when looking at diffractive and Fresnel zone depth, height and corner radius analysis improves efficiency and performance.



Serving a global market

Taylor Hobson is world renowned as a manufacturer of precision measuring instruments used for inspection in research and production facilities. Our equipment performs at nanometric levels of resolution and accuracy.

To complement our precision manufacturing capability we also offer a host of metrology support services to provide our customers with complete solutions to their measuring needs and total confidence in their results.

Contracted Services from Taylor Hobson

- **Inspection services**
measurement of your production parts by skilled technicians using industry leading instruments in accord with ISO standards
- **Metrology training**
practical, hands-on training courses for roundness and surface finish conducted by experienced metrologists
- **Operator training**
on-site instruction will lead to greater proficiency and higher productivity
- **UKAS Calibration and Testing**
certification for artifacts or instruments in our laboratory or at customer's site

For the above services, contact our Center of Excellence:
email: taylor-hobson.cofe@ametek.com
or call: **+44 116 276 3779**

- **Design engineering**
special purpose, dedicated metrology systems for demanding applications
- **Precision manufacturing**
contract machining services for high precision applications and industries
- **Preventative maintenance**
protect your metrology investment with a Talycare service cover plan

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