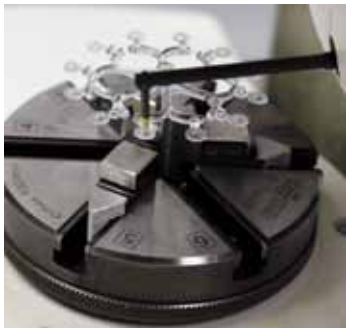
TAYLOR HOBSON®

PGI Matrix

A fully automated, fast and accurate system for precision optics measurement



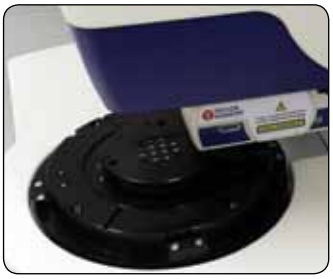
AMETEK®
ULTRA PRECISION TECHNOLOGIES

Talysurf PGI Matrix

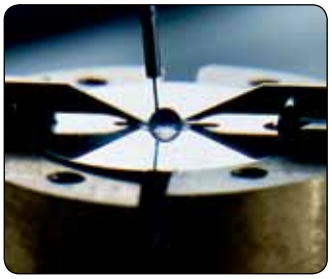
Fully automated one-touch optics measurement

- ☑ Easy to program
- ☑ Easy to use
- ☑ Extremely fast
- ☑ Fully automatic
- ☑ Packed with powerful analysis tools to improve your capacity and capability

The most versatile metrology in the industry

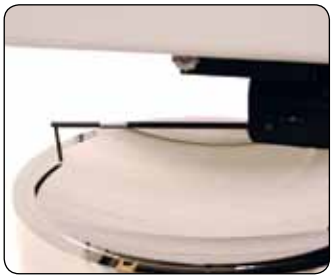


Batch testing of multiple parts

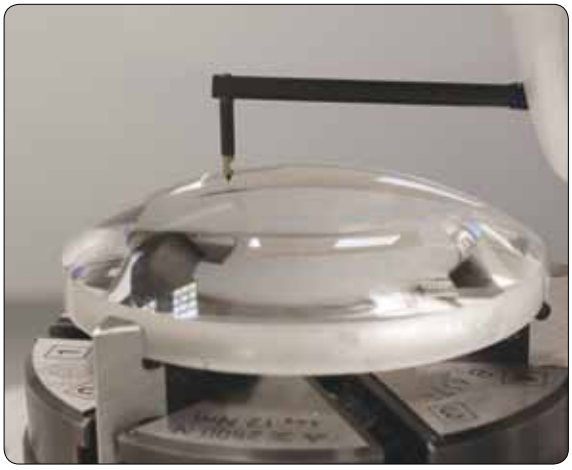


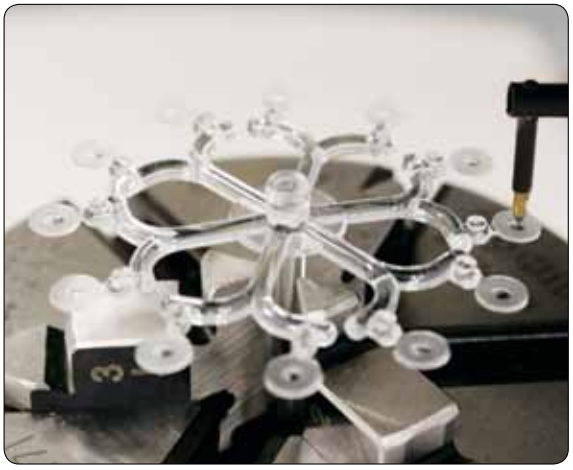
Single components

Moulded lens trees



Large diameter optics





The benefits of Talysurf PGI Matrix

Easy set-up, test and analysis for single or multiple parts make this the perfect tool for fast and accurate testing of optical components

The PGI Matrix offers the renowned accuracy of the PGI coupled with fast, motorized stages and a new software interface designed for ease of use. Loading and programming one lens or a batch of hundreds is made easy and guarantees accurate results with automatic alignment, measurement and even analysis. Automated spike removal and radius optimization help to give the most repeatable results.

Designed for ease of use in the production environment

The new PGI Matrix interface gives fully automated operation, ideal for use on the shop-floor. The software is quick to learn and will provide an easy solution to programming multipart (batch) measurements for high volume applications. Alignment and measurement speeds coupled with quick and useful analysis tools have been streamlined to simplify and automate the complete measurement cycle.

Advanced Software saves production time and increases output

Aspherics Analysis Utility (AAU) software verifies the quality of optics and saves time with instant analysis of form error, radius, slope error, zone depth and spacing. Unique patented technology delivers nanometre level residual form error analysis, and advanced algorithms can extract a sub-micron lens form error from much larger diffractive zone depths. Derived co-efficient functions enable reverse engineering of aspheric and diffractive components, giving feedback to designers of the as-is manufactured lens (with error) to enable adjustment of critical design systems to improve performance.

New features such as automatic spike removal, P-V/ RMS radius optimization, cycle-time calculator and go-no-go indicators enable you to quickly optimize set-up parameters, and automate the measurement and analysis process, in a production environment.

Connection to manufacturing process

Our new X-offset and radius compensation algorithms enable quick feedback to the manufacturing machines to improve process yields. This capability dramatically reduces set-up time for CNC grinding and diamond turning operations, and enables quick compensation for temperature drift issues throughout the day.

PGI Matrix's enhanced capabilities and new software architecture support high speed measurements of mobile device lenses, ophthalmic lenses, medical and fibre optics, high power LEDs.

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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