

Form Talysurf PGI 2540

PRODUCT

High-resolution Aspherics Measurement System

SYSTEM PERFORMANCE
25mm RANGE
0.2nm RESOLUTION



Form Talysurf PGI 2540 delivers results you can trust with industry leading performance...

- ✓ Form measurement, 25mm range at 0.4nm resolution
- ✓ Surface finish and form, 12.5mm range at 0.2nm resolution
- ✓ Very low noise, 1nm (0.04 μ m) RMS
- ✓ User programmable, including stylus lift
- ✓ Large capacity, 200mm traverse unit



Form Talysurf PGI 2540 Aspherics Measurement System

The latest in a long tradition of form measuring instruments dedicated to the optics industry, the Form Talysurf PGI 2540 delivers 25mm of measuring range at a resolution of just 0.4nm. For surface finish measurements the instrument provides an unprecedented 0.2nm resolution.

Key features:

- Form measurement: 25mm range at 0.4nm resolution
- Surface finish and form: 12.5mm range at 0.2nm resolution
- Very low noise: < 1nm RMS
- Patented ball calibration provides excellent gauge linearity
- Programmable using Ultra software.
- Automated stylus lift/lower as standard
- Aspheric analysis software
 - Complete with derived coefficients analysis
- Diffractive analysis available as an option

Automation

The Form Talysurf PGI 2540 is driven through Taylor Hobson's renowned Ultra software with its intuitive "learn mode" capability. In addition to the major axes of the instrument being programmable, the system is fitted with a motorized stylus lift-lower mechanism as standard. This allows many components to be loaded and measured with minimal disturbance to the measuring loop, leading to increased stability.

Low Noise

Measurement uncertainty is often driven by external factors including floor-borne and air-borne vibrations. The Form Talysurf PGI 2540 measurement system is provided with active anti-vibration mounts and a high quality environmental enclosure to reduce the effects of these noise sources. Combined with the low noise drive technology used in the traverse unit the system delivers an extremely low noise figure (less than 1nm RMS).

Ergonomic Design

The environmental cover is fitted with double folding doors to maximize component accessibility. A swinging arm support for the computer keyboard and monitor is provided to allow the user to position them close to the work area whilst setting up the measurement.

System Software

Control and programming of the system is achieved through Ultra Software, which also provides extensive surface finish and form fitting capabilities. The form options within Ultra include a least squares ellipse/hyperbola fit as well as LS Arc and LS Arc (absolute).



Aspheric Analysis

The Form Talysurf PGI 2540 is supplied with Taylor Hobson's dedicated Aspheric Analysis Software. This provides analysis of aspheres up to 20th order.

Key features of the software include:

- SAG table generation at user-defined x intervals
- Derived coefficients analysis
- Astigmatism analysis
- Base radius optimization

Asphero-diffractive Analysis (optional)

When combined with the results of the Aspheric Analysis software, the Diffractive Analysis software allows the residual diffractive form to be analysed and the underlying form error to be visualized. Numerical results include overall Pt, measured zone height, zone height error and zone half-diameter.

Key features of the software include:

- Visualisation of form error after removal of diffractive design
- Clear indication of zone transitions
- Zone parameters can be exported to a CSV file for further analysis
- Designs can be saved and restored easily

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@ametec.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

For the above services, contact our Sales Department:

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