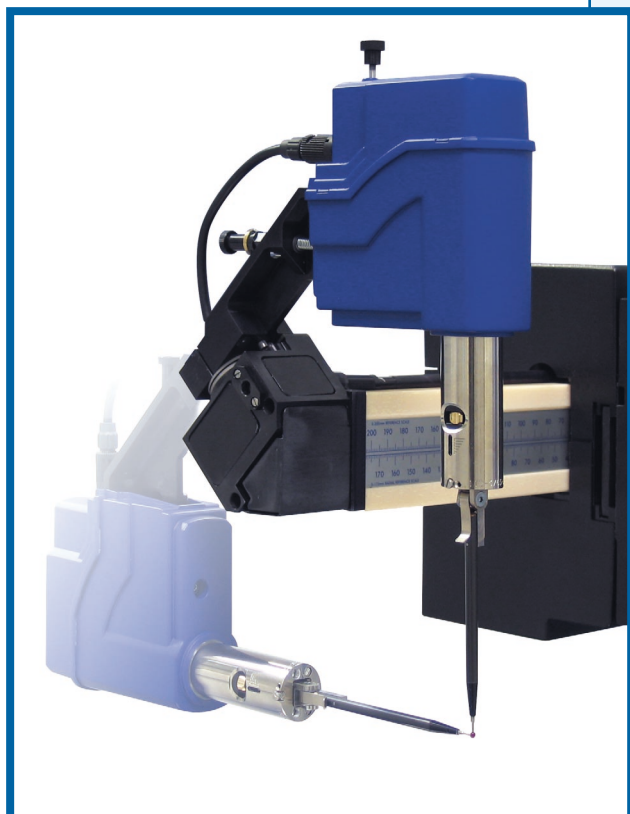


Fully automated high precision instruments for sub-micron components

Talyrond 385 is an all new modular range of roundness measuring instruments that are unsurpassed in accuracy and reliability. There are 6 versions to choose from, offering the right balance of capability, automation and capacity for virtually every application and budget.



fully automated gauge



Talyrond 385 is the **AUTOMATIC** choice for high performance and value

- | | |
|---------------------------------------|--|
| AUTOMATIC attitude/orientation | - increase productivity with unattended, automatic operation |
| AUTOMATIC calibration | - prevent mistakes with automatic calibration of the gauge head |
| AUTOMATIC center and level | - improve repeatability with automatic alignment of the component |
| AUTOMATIC follow mode | - save money on the cost of fixtures for non-concentric components |
| AUTOMATIC 3D mapping | - speed up research projects with cylindrical mapping analysis |

Automatic calibration

An industry first for mid-range roundness instruments. This unique, precise and error free routine will calibrate the Talymin 5 gauge head in less than 10 seconds.

Automatic center and level

Our patented 3 point kinematic support system is designed to out-perform all other roundness instruments.

- During centering the spindle rotates continuously; this condition of "dynamic equilibrium" is good metrology and also speeds the centering process
- No null point means components can be centered and leveled at any point above the table top without the frustration of finding a "neutral tilting plane"
- Pre-defined eccentricity target levels less than $0.8\mu\text{m}$ ensure repeatability and consistency between operators

Automatic follow mode

The column and the arm of the TR385 are capable of following the eccentricity and contour of the part outside of the normal gauge range. This reduces the need for manual pre-centering or the use of expensive workholding fixtures.



auto follow is ideal for non-concentric features

Ultra high precision air bearing spindle

Our spindles provide the best combination of precision and stiffness in the world to give you superior axial and radial accuracy.

- $< 0.02\mu\text{m}$ radial accuracy
- $0.0003\mu\text{m}/\text{mm}$ coning error
- Data point sampling via high accuracy glass encoder giving up to 18000 points

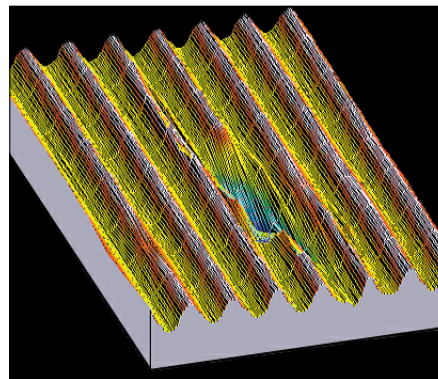
Arm and column axes

Talyrond 385 utilizes precision glass scales and state of the art electronic positioning controls for high precision straightness measurement in both the horizontal and vertical axes. Data sampling up to 200,000 points with $0.25\mu\text{m}$ resolution is provided.

Talymin 5 gauge head

This single bias inductive transducer has exceptional accuracy, range and resolution along with excellent stability and features that improve measurement efficiency.

- $+ / - 1\text{mm}$ range (maximum)
- $0.0012\mu\text{m}$ resolution (minimum)
- built in stop attachment
- ultra fine force control mechanism
- dual cresting facility



3D mapping finds a flaw in the cylinder surface

Fully automated gauge attitude/orientation mechanism

Our patented and fully automated gauge mechanism keeps the center of the ball stylus tip constant regardless of gauge orientation.

With this unique design there is a large volumetric air gap around the stylus tip which improves access capability and reduces the need for multiple styli.

Stylus orientation can be rotated in steps of 1 degree for measurement of inclined or coned surfaces.

3D Cylindrical Mapping

Now, for the first time, you can measure rotationally symmetric components in 3 dimensions. Coupled with our Talymap imaging software, cylindrical mapping provides analysis of surface topography and form in much greater detail than any other roundness instrument technique.

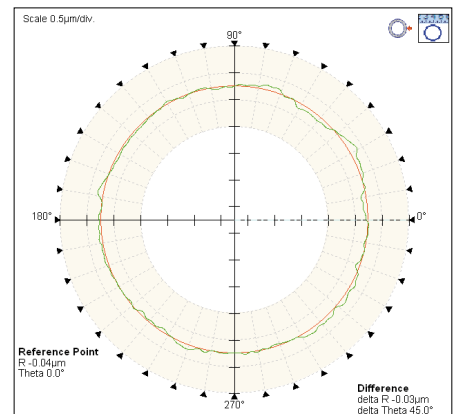
Comprehensive analysis

All Talyrond 385 instruments are driven by Ultra, our powerful Windows based software; analysis features include:

- Roundness
- Cylindricity
- Vertical straightness
- Horizontal straightness (RSU only)
- Parallelism
- Flatness (Single or Multiplane)
- Squareness
- Concentricity and Eccentricity
- Co-axiality
- Harmonic analysis
- Tolerancing
- Cylindrical mapping
- Partial arc roundness
- Partial arc flatness

Instrument Selection Table

300mm Vertical Column	●	●				
500mm Vertical Column			●	●		
900mm Vertical Column					●	●
Radial Straightness Unit	●		●		●	
Motorized Radial Arm		●		●		●
Automatic center & level	●	●	●	●	●	●



example of a typical roundness profile

Specifications are subject to change without notice. Note, not all features are included with all instruments. Please enquire for detailed specifications.