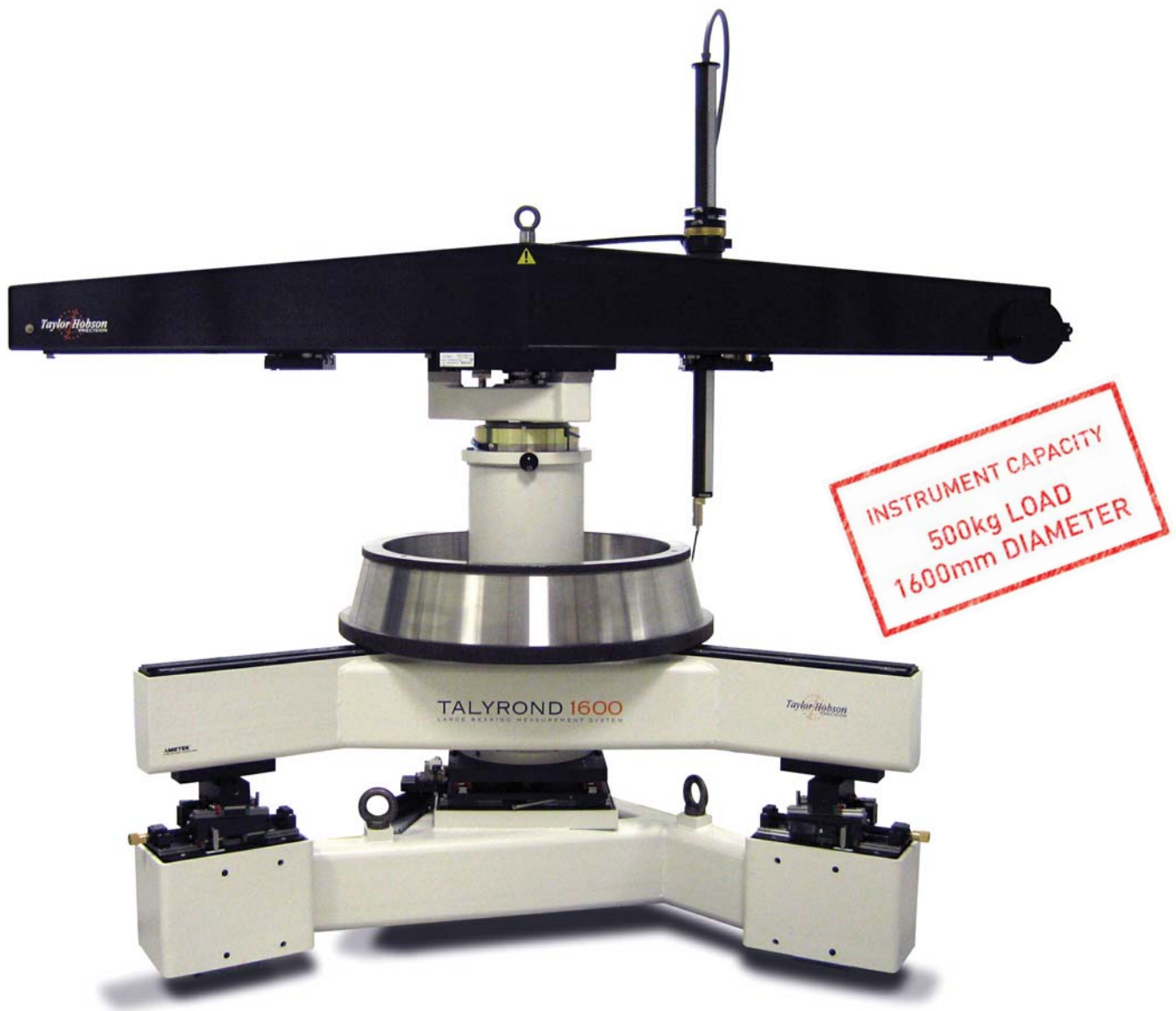


# Talyrond 1600 Large Bearing Measurement System

PRODUCT

High precision roundness measurement of large diameter bearings



Unrivalled diameter and weight capacity with sub-micron measurement integrity

- |                               |   |  |
|-------------------------------|---|--|
| Precision air bearing spindle | – | radial and axial limit of error $\pm 0.1\mu\text{m}$ |
| High load capacity            | – | bearing weights of up to 500kg                       |
| Large measurement diameter    | – | radial arm with 1600mm range                         |
| Fully automated centering     | – | target eccentricities to $< 0.8\mu\text{m}$          |



# Talyrond 1600

The Talyrond 1600 is the world's largest roundness system capable of measuring bearings up to half a metric tonne with diameters up to 1600mm. The unique and patented design of this system ensures roundness accuracies and repeat abilities to levels usually associated with laboratory equipment.

## High Precision air spindle

The air bearing spindle is based on Taylor Hobson's proven Talyrond range of roundness instruments. Radial and axial accuracies are at levels usually associated with laboratory equipment

## Automated centering

Two high load capacity X,Y motors ensure rapid centering of the radial arm to target eccentricities of less than 0.8µm .

## Leveling Stages

Unique wedge type leveling stages are placed at two of the base frame legs, the third leg acting as a pivot point. This set up provides the ability to level bearings to micron level regardless of weight

## System Base

The base of the instrument is made from fabricated steel designed using finite element analysis techniques. The frame structure has in built anti vibration mounts ensuring isolation from external influences.

## Instrument Table

A kinematically designed bearing support table is provided with scales and adjustable stops to aid in bearing set-up.

When combined with the instruments base frame this table is capable of supporting loads of up to 500Kg.

## Radial Arm

The systems detachable radial arm is constructed of carbon fibre, its twin beam tapered design ensures low noise and high stability.

Radial movement is by both coarse and fine adjustment, with a unique counterbalance mechanism to remove the effects of offset load.

## Talymin 5 gauge

The Talymin 5 gauge with 2mm range has resolutions down to 1.2nm.

## Vertical movement

The gauge is connected to a carbon fibre tube with coarse and fine vertical adjustment. A precision scale and end stop mechanism allows the operator to move to set heights as well as being able to rotate between internal and external measurement.

## Interlock and Barrier

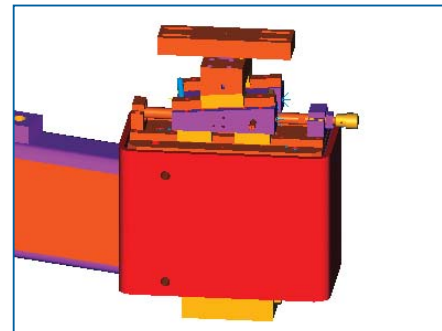
A special interlock system and protective barrier surrounds the instrument, the spindle cannot rotate when the gate is open ensuring the safety of the operator

## Ultra Software

Taylor Hobson's roundness software has the ability to analyse bearing form to national and international standards. Special facilities such as a simplified user interface coupled with full programming capability ensure consistency between operators.

## Comprehensive analysis

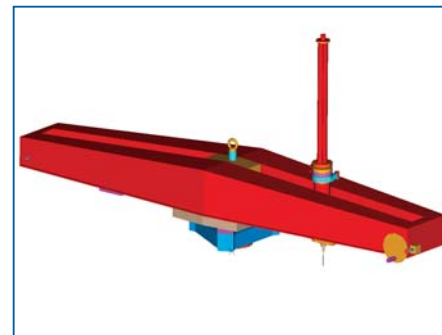
- Roundness
- Flatness
- Co-axiality
- Run-out
- Squareness
- Concentricity and Eccentricity
- Harmonic Analysis
- Tolerancing
- Wall Thickness Variation
- Velocity Analysis



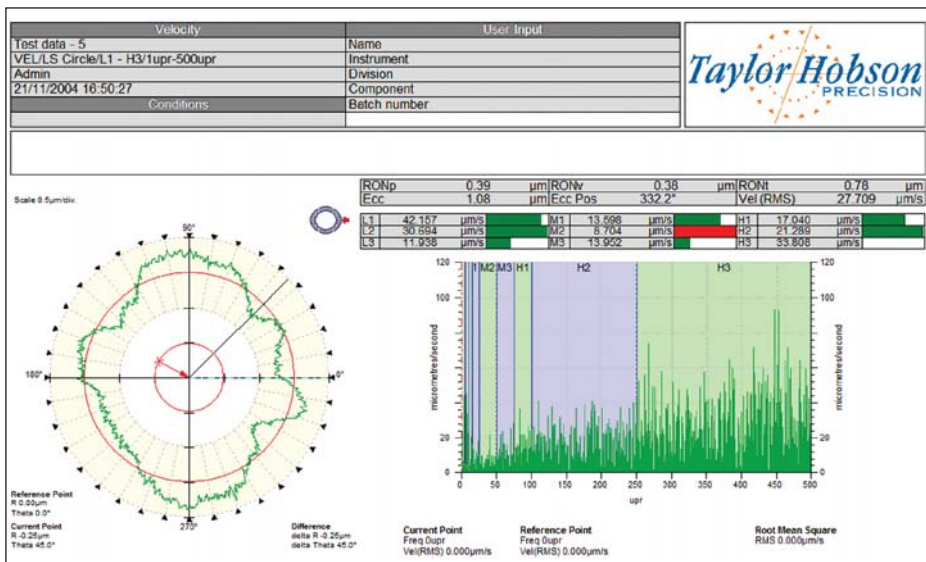
leveling stage



system base



radial arm and talymin 5 gauge



## 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](mailto: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

### For the above services, contact our Sales Department:

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