



Moving Metrology into the 21st Century

Talyseries Roundness

Portable Roundness System



TALYSERIES ROUNDNESS

Production Bore Geometry Analysis System

- Component Dedicated
- Auto Retraction for Gauge Protection
- Fast, Single Key Operation
- 0.5 μ m (20 μ in) Resolution P-V
- Choice of Analysis Systems
- Hand Held, Bench Mounted or Line Integrated
- Single or Multiplane Measurement
- Rugged Construction for Harsh Operating environments.



Fast, Accurate Analysis

The TalySeries Roundness measuring system increases significantly the speed of single or multiplane bore analysis in a shopfloor or production line environment

TalySeries is capable of providing roundness and cylindricity analyses with a resolution of 0.5 μ m (20 μ in) (P-V) and diameter to a resolution of 1.0 μ m (40 μ in) from calibrated master.

A minimum of 500 data points per roundness plane are datalogged, for between one and six planes per component. Typically, a multiplane bore measurement can be completed in less than 30 seconds.

Hand held, Bench Mounted or Line Integrated

Three main configurations are available:

Hand held

This provides total portability between workstations producing the same component. The measurement head is manually loaded into the bore.

Bench mounted

This configuration may incorporate component specific fixturing, to ensure rapid, easy loading. The TalySeries measuring head can, if necessary, be inverted and fitted beneath the bench, with the gauge head projecting through an aperture.

Line integrated

Systems may be mounted above a production line and either lowered automatically or manually into the component bore. eg engine block line.

Component Dedicated

TalySeries Roundness measuring systems incorporate a rotating gauge head which can accommodate up to six gauges and is mounted on a precision spindle which rotates at 6 r.p.m.

The gauge head itself is designed and manufactured to a customer's specific requirements of component diameter, number and depth of planes to be measured, and preset before leaving the Taylor Hobson factory.

Measuring Capacity

TalySeries is subject to a minimum bore diameter of 60mm (2.36in) and minimum bore length of 100mm (3.93in) with six gauges. Above these minima, systems can be provided for a wide range of bore sizes and manufacturers' requirements.

The 2mm diameter ruby ball tip styli used with the gauges have a measuring range of ± 1 mm (± 0.039 in). They are easily interchangeable with longer styli to accommodate increases up to 8mm (0.3in) bore diameter. For example, a system initially provided to measure a 68mm (2.67in) bore can be adapted to measure a bore of 76mm (2.99in) by the use of longer styli, however Taylor Hobson must be consulted if this facility is required.

This feature enables manufacturers to utilise the one gauging head for measuring components with small variations in bore size.



Increase Productivity With Applications Engineered Metrology Systems

- Immediate inspection at the machining point.
- Fast set-up for repetitive batch measurement through customised fixturing.
- Measurement of components beyond the scope of standard instrumentation.
- Analysis capabilities dedicated to your specific quality control requirements.



Talyseries Roundness system configured for the measurement of crank bores. This system has ten gauges otherwise all other facilities are as denoted below.

other external analysis system.

Ruggedised for use in production areas, this provides a powerful PC based processing and analysis capability, allowing user flexibility in setting measurement conditions and parameters, within the initial gauging criteria. It will analyse and display planes of measurement individually. In addition, when used with a multigauged measuring head, the PC will analyse any plane with regard to any other plane, and provide analyses of component concentricity, cylindricity and co-axiality with reference to the LS, MI, MC and MZ circles or cylinders.

Among the options available are 9-way results multiplotting on an A4 page via a laser printer with customer specified results output (e.g. For a 5 gauge configuration, 5 roundness planes, 3 concentricity, 1 cylindricity), a full statistical process control package and special software to meet individual requirements.

Robust Construction

TalySeries is designed to withstand the harsh environment of the shopfloor. The styli are protected against damage by automatic mechanical retraction until measurement is initiated and completed.

A fixture is provided to store safely the measuring head between measurements.

System Calibration

A calibration master, manufactured to specific requirements, gives fast and accurate calibration of the system, providing users with the maximum confidence in their measurement results.



Calibration Master

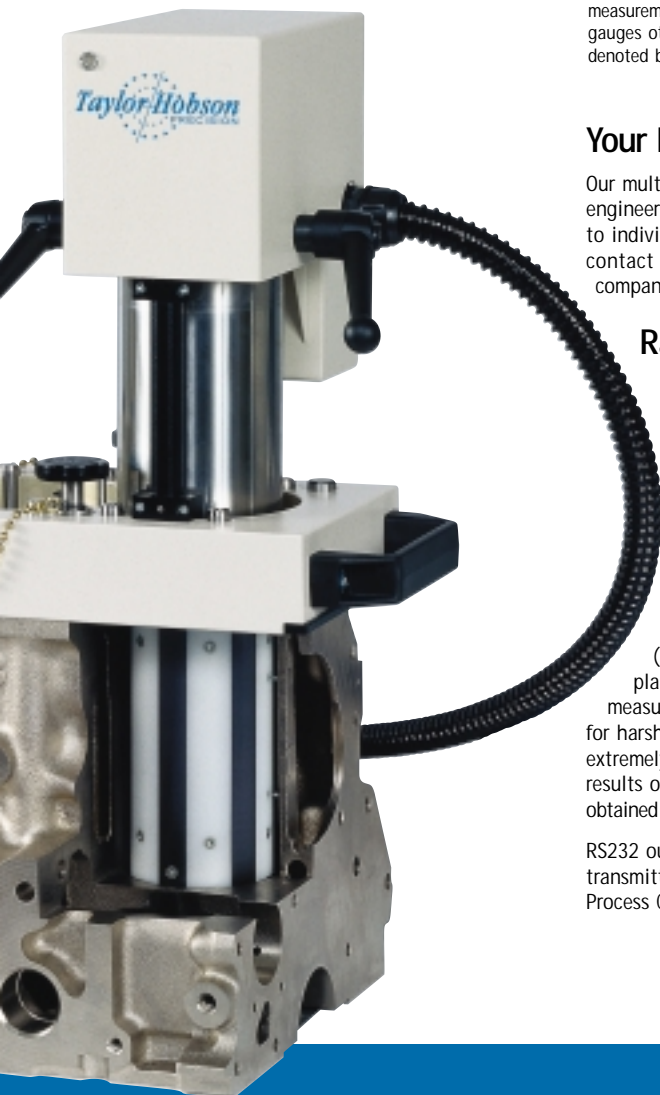
Your Problem - our Solution

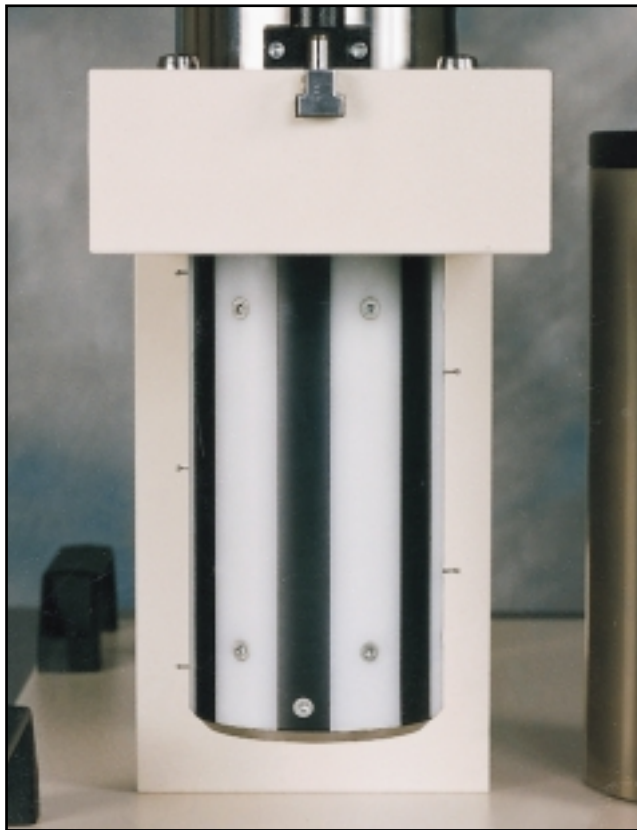
Our multi-discipline team of applications engineers offer innovative design solutions to individual measuring problems. Simply contact your local Taylor Hobson company, technical centre or agent.

Range of Analysis Capabilities

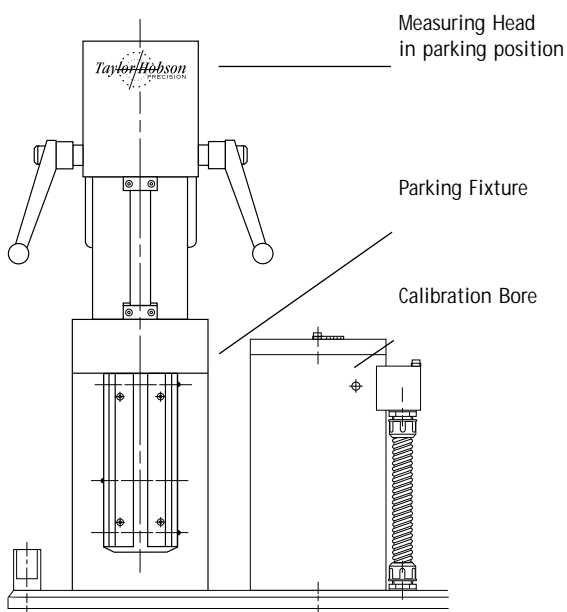
Whether hand held, bench mounted or line integrated, TalySeries system control and results processing is through a ruggedised PC for workshop environments. Dedicated to customer requirements, this provides fast, single button measurement, analysis and numeric display (L.C.D.) of P-V roundness for all planes of measurement. It is effectively protected for harsh environmental conditions, and extremely simple to operate. Hard copy results on an optional printer can also be obtained with further single button operation.

RS232 output is available as an option for transmitting results to the RTD Statistical Process Control analysis package, or any





Gauge Head, Showing exposed Styli.



T e c h n a c a l d a t a

Spindle Accuracy	0.5µm from a LSC at 50UPR
Measurement Speed	6RPM
Rotation	Data collection in one revolution with automatic return to start position
Measuring Range	±1mm from preset diameter (8mm diameter variation allowed before resetting required)
Resolution	0.5µm
Number of Data Points Per Plane	18000
Number of Data Points Per Plane Average for Analysis	2000 - 3600
Filter	1-15 or 1-50 UPR
Number of Planes	1 to 6 (Customer to Specify)
Position of Planes	Minimum separation 18mm (Customer Specified)
Bore Diameter	Customer Specified (Minimum 60mm)
Minimum Bore Length	100mm for 6 planes
Analysis	Ruggedised or Standard PC versions (Data Module version available on request)
Dimensions	Customer Specified <ul style="list-style-type: none"> ● Weight without gauge - 8kg ● Minimum fixture location Diameter - 84mm ● Length - 287mm



Internet: www.taylor-hobson.com

the measuring solution

At Taylor Hobson we don't sell products - we provide solutions. Whatever our customers' measuring needs, we will find a solution to meet them.

Our reputation for excellence is based on more than 100 years of metrology design and manufacturing experience. Add to this our worldwide coverage, our after sales support and our commitment to customer care and you have a company which provides its customers with total peace of mind.

The Taylor Hobson service:

Special applications

We have a team of engineers who provide a design service for dedicated metrology solutions. This can involve customising standard Taylor Hobson instruments to meet specific requirements or designing unique products.

For details of your local support centre phone +44 116 246 3186 or e-mail sales@taylor-hobson.com

Centre of excellence

Our Centre of Excellence, based at our headquarters in Leicester, offers:

- product and theory training either at our Leicester training centre or at our customers' premises
- instrument and metrology advice
- a trial measurement service to help you decide which product to buy
- lectures and presentations

Contact the Centre on +44 116 276 3779 or e-mail cofe@taylor-hobson.com

After sales support

To ensure that all our products are maintained to the standards you require, we offer a range of after sales service packages. They include an on-site calibration service, field service and a refit and upgrade service.

We also offer an instrument calibration service at our NAMAS laboratory in Leicester.

For details of your local support centre phone +44 116 246 3135 or e-mail service@taylor-hobson.com

Taylor Hobson Limited



PO Box 36, 2 New Star Road, Leicester, LE4 9JQ, England.

Tel: +44 116 276 3771 • Fax: +44 116 274 1350

e-mail: sales@taylor-hobson.com

Internet: <http://www.taylor-hobson.com>

Taylor Hobson SA

6 avenue de Norvege, Hightec 4,
91953 Courtaboeuf Cedex, France

Tel: +33 169 28 53 90 Fax: +33 169 28 33 37

e-mail: contact@taylor-hobson.fr



Taylor Hobson GmbH

Postfach 4827, Kreuzberger Ring 6
65038 Wiesbaden, Germany

Tel: +49 611 973040 Fax: +49 611 97304600

e-mail: info@taylor-hobson.de



Taylor Hobson S.p.A.

Via Vigentina 6-8

20090 Opera, Milan, Italy

Tel: +39 0257 606424 Fax: +39 0257 606740

e-mail: TaylorITA@compuserve.com



Taylor Hobson Liaison Office

Austria and Eastern Europe

Amalienstrasse 68, A-1130 Vienna, Austria

Tel: +43 1877 557112 Fax: +43 1877 860516

e-mail: thp@vienna.at



Taylor Hobson KK

No 31 Kowa Building 19-1, 3-Chome, Shiroganedai
Minato-Ku, Tokyo 108, Japan

Tel: +81 33473 7001 Fax: +81 33473 7002

e-mail: mail-box@taylor-hobson.co.jp



Taylor Hobson K INC

402, Hayan Bldg, Samsung Dong,
Kangnam-Ku, Seoul 135-091, Korea

Tel: +82 2564 0851 Fax: +82 2539 1708

e-mail: thkorea@kornet.net



Taylor Hobson China Office

7/F, Corporation Square, 8 Lam Lok Street
Kowloon Bay, Hong Kong

Tel: +85 22757 3033 Fax: +85 22757 1767

e-mail: talhobhk@netvigator.com



Taylor Hobson Inc

Suite 350, 2100 Golf Road, Rolling Meadows,
Illinois 60008, USA.

Tel: +1 847 290 8090 Fax: +1 847 290 1430

e-mail: 102167.236@compuserve.com

