Provider of machine tools calibration and repair services
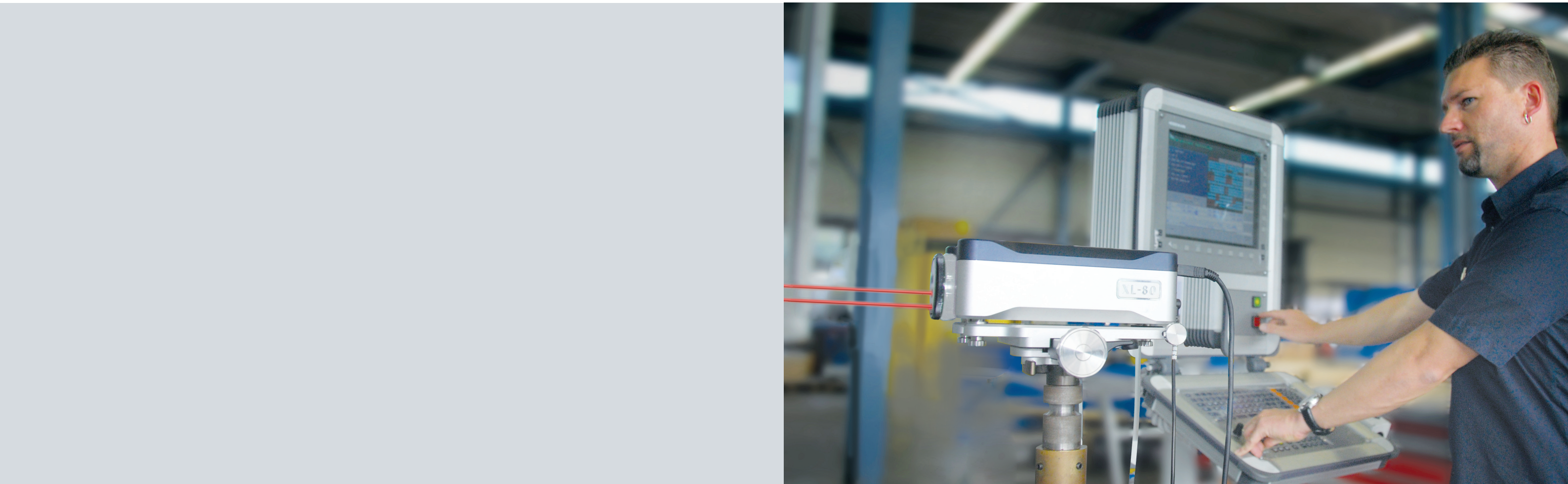
Business Line
Precision Machinery

Think Asia. Think DKSH.

Renishaw calibration solutions

### XL-80 laser measurement system (+/-0.5 ppm, 4.0 m/s performance)
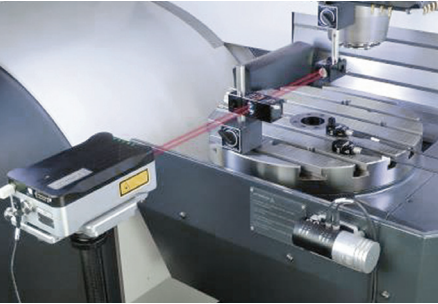
Linear measurement accuracy is assured +/- 0.5 ppm thanks to a precision stabilized laser source and accurate environmental compensation. Readings can be taken at up to 50 kHz, with a maximum linear measurement speed of 4 m/s and a linear resolution of 1 nm, even at maximum speed. All measurement options (not just linear) are based on interferometric measurements, giving confidence in the accuracy of the data recorded.

### Benefits of laser verification of machines

- Increase machine uptime
- Improve machine performance
- Prove the performance of your machines
- Increase your machine manufacturing capabilities
- Comply with quality assurance procedures and standards
- Provide a professional maintenance service

System performance specifications

±0.5 ppm	Certified linear measurement accuracy over the full range of environmental operating conditions
1 nm	Linear resolution (even at max. velocity)
4 m/s	Maximum travel velocity
7 seconds	Between each automatically updated environmental compensation
50 kHz	Dynamic capture rate
80 m	Linear range as standard
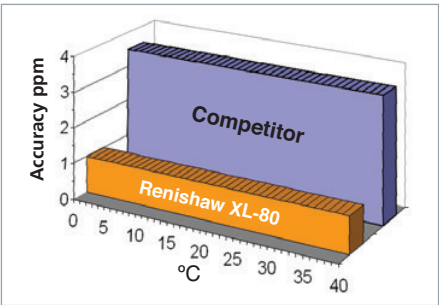
Material normalisation accuracy at 10 ppm/°C
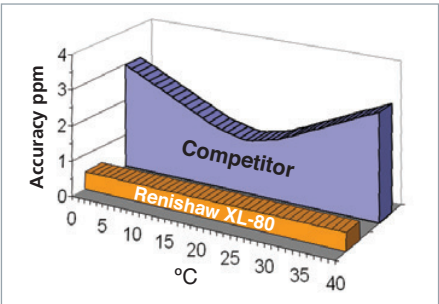
System linear measurement accuracy vs. environmental temperature

QC20- W telescoping ballbar system

The QC20-W system draws on Renishaw's many years of experience with ballbar testing and offers significant performance and operational benefits:

- Bluetooth wireless technology ensures no wire handling issues, closed door operation and reduced possibility for system damage
- New hardware and software which allows a "partial arc" (220°) test. This gives you greater test flexibility including
  - Improved Z axis testing
  - Tests where axis travel is limited (typically Z-axis on machining centres and X axis on lathes)
  - Ability to test 3 planes from a single set up, using "partial arc" tests for 2 of the tests and present a "volumetric analysis"
- Faster data reading for enhanced analysis

on small test circle and high feed rates
- Enhanced software includes many new features for extended testing and greater ease of use

Features and benefits

Compact and light weight	• Handling and fixing on machine can be achieved single handed • Easy, cost effective transportation • Clearance issues on machine minimised
Flexible mounting system	• Can be configured to allow fitment to a wider variety of rotary tables, lathes and other rotary axes than existing rotary calibrators • Simpler and quicker setup
Wireless operation	• Lithium batteries and Bluetooth® communications give truly wireless operation • Provides for easier and quicker setup and avoids issues with trailing cables, eliminating the safety hazard these create
Integrated target optics	• Factory set alignment to base unit minimises alignment and resulting measurement errors
Built in alignment targets	• Simple optics-to-laser 'alignment aid' to help minimise measurement errors. Optics adjustments made via software provides quicker and safer working for the operator
Auto calibration and pre-test cycles	• Pre-measurement calibration cycle compensates for remaining angular alignment errors • Test overrun sampling detects and sets axis direction sense and axis feedrate
Use of Renishaw system	• Provides a high integrity, non-contact reference measurement, remote from the axis under test
Traceability	• All XR20-W systems are calibrated and delivered with traceable certification
Servo controlled drive	• Rotary axis measurement speeds for larger angles (>5°) of up to 10 rpm • Uses unique, integrated rotary encoder technology
New data collection software	• Enables quicker and more consistent test setup to give faster test results with increased confidence

Calibration service provider works faster and smarter to create more revenue

Why Calibrate?
- Reduce scrap, improve machine accuracy and keep your machine tool in specification
- Reduce hours to mechanically align a machine. After an alignment or crash, the machine should always be calibrated
- Calibrate the kinematic parameters of the Tool Center Point (TCP) to enhance your machine
- Market calibrated machines to customers

- Make full use of your Control's capabilities. Often, we find many machines with empty compensation tables. Machine owners should utilize their Controller's capabilities to increase machine accuracy and prevent unnecessary wear
- Regular calibrations will help to recognize abnormal wear and tear so problems can be addressed and managed
- End customer requirement

- Accurate machines save money
- Calibrations allow usage of the entire working volume of the machine, not just a "sweet spot" that you know is accurate within the volume
- Increased capability, accurate machines allow you to take on more precise work that you may not have been able to handle before a calibration

Calibration service request form

To request for calibration services, please fill up the form below:

Contact information

Company name _____ Phone/mobile _____

Email _____ Office phone _____

Address _____ Zip/postal code _____

Service information

Machine status ☐ Up ☐ Down

Model number _____ Serial number _____

Description of problem

_____

_____

_____

_____

_____

_____

_____

_____

For more information, please contact our Tech Support:

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Calibration Specialist
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