



C. D. Measurements Ltd

SPECIALISTS IN ENGINEERING METROLOGY



On-Site Calibration Services

Laser Metrology Services - Utilising Advanced Equipment and Computer Aided Technology, we provide Professional Calibration Services for users of Machine Tools and Co-ordinate Measuring Machines (CMMs) which are traceable to National Standards and are UKAS accredited. This, coupled with our highly qualified staff, experienced in all aspects of Machine Tool and CMM Metrology, can accommodate requirements for basic axis positioning (linear and rotary), full volumetric evaluation, error mapping, software compensation and diagnostic analysis.

Error Compensation – Automatic Error Compensation data is generated and uploaded to CNC controllers without manual intervention.

Minimum Downtime – Guaranteed by application of our Automated Calibration Software and techniques. Typically a 3-axis CNC machine can be error compensated and calibrated using Agilent laser interferometer equipment in approximately 7 hours.

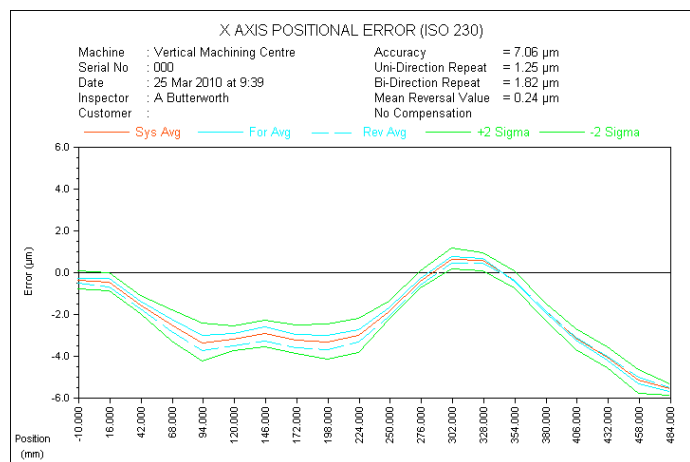
Reliability – is assured by our UKAS accreditation for on-site calibration.

Rotary Axes – are assessed using our extensive range of metrology aids including Laser Interferometers, Laser Autocollimators, Precision Polygons, automated index tables etc.

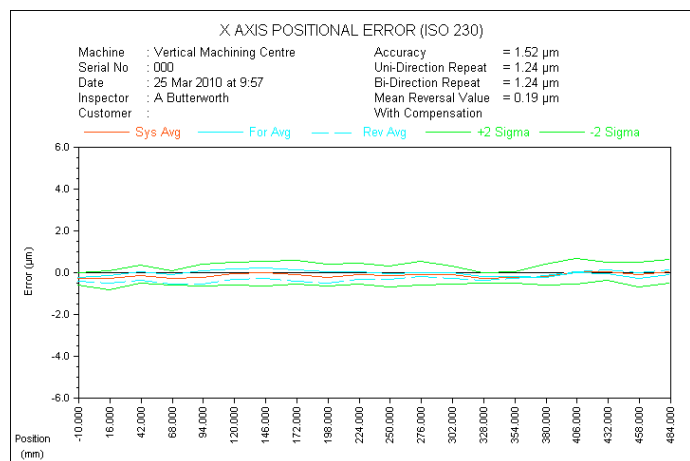
Reports and Certification – results can be analysed to various international standards such as ISO 230, JIS, VDI3441, NMTBA and to customer specified requirements. Reports and Calibrations are provided in hardcopy or PDF format. Our UKAS accreditation gives our customers internationally recognised certificates of calibration

Sub-Micron Uncertainty – Our best measurement capability of $0.15\mu\text{m} + 0.5\mu\text{m}/\text{m}$ for lengths up to 4m and $1.9\mu\text{m}/\text{m}$ for axes up to 80m is the best available in the UK.

Improve Machine Performance - Software Error Correction can usually improve the accuracy of Machine Tools. Our software generates data for compensation schemes used in the most popular controllers. Our experienced team can normally manually upload the Machine Control System for controllers not supported by our software.



From this...



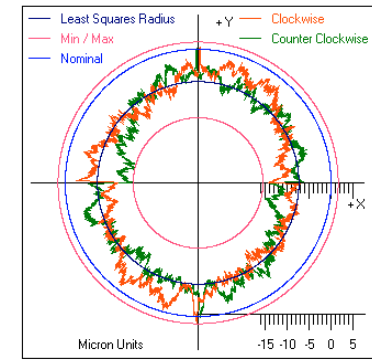
...to this in 18 minutes

Ball Bar – Contouring Assessment – Our "Contisure" ball bar system assesses circular profiling performance at varying radii from 0.1mm to 1000mm, with results produced to ISO 230-4.

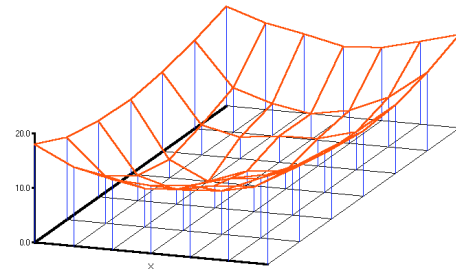
Flatness Assessment – Application of our "Surfsure" Flatness Calibration Software providing Flatness by Union Jack and Grid methods to BS 817, ISO 8512-2 and DIN 876 standards.

Volumetric Error Mapping and Analysis – Complete Parametric Error Assessment of Machine Tools and CMMs can be undertaken. Using our VEA software, Positional, Straightness, Squareness, Roll, Pitch and Yaw errors can be combined to give a volumetric error map. Direct measurement of Machine Diagonals can also be undertaken to ISO 230-6.

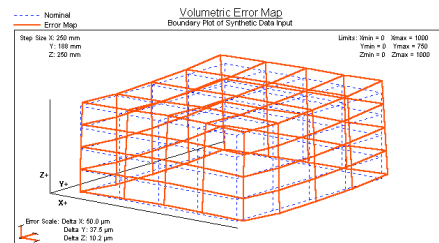
A Service to Industry – Customers appreciate our commitment to quality and our continued endeavour to offer our best service at competitive cost, together with willingness and flexibility in accommodating their needs, even outside working hours thereby alleviating lost production. We cover the whole of the UK, EU and other countries by special request, where we work alongside our customers' maintenance staff. Our considerable experience in the calibration and compensation fields enables us to offer, not only the basic requirements for reliable production, but also in-depth assessment of all aspects of machine tool and CMM performance. The combination of experience, extensive range of equipment and unique software, enable us to carry on where others leave off.



Ball Bar plot to ISO 230-4



Flatness Plot to ISO 8512-2



Volumetric Error Map

Our Measurement Capability	
Linear Length	Up to 80m
Angular / Straightness	Up to 30m
Squareness	Up to 30m total axes travel
Rotary	360° without restriction
Ball Bar Contouring	0.2mm up to 2000mm diameter

CD Measurements Ltd.
 Chomlea House, Hadfield Road, Hadfield, Glossop,
 Derbyshire, SK13 2ER, United Kingdom.
 Tel : 01457 852929 Fax : 01457 860619
 Email : sales@cdmeasurements.com
 Internet : www.cdmeasurements.com