



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005
& ANSI/NCSL Z540-1-1994

QUALITY TECH SERVICES
 132 Gralan Drive
 Byron, GA 31008
 Michael Schraufnagel Phone: 478 654 6690

CALIBRATION

Valid To: April 30, 2018

Certificate Number: 2921.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following calibrations¹:

I. Dimensional

Parameter/Equipment	Range	(CMC) ^{2,4} (±)	Comments
Machine Tool ³ –			
Linear Displacement Accuracy	Up to 3200 in	(24L) μin	Laser calibration system, XL-80
Linear Diagonals	Up to 3200 in	(24L) μin	
Straightness and Squareness ³	Up to 160 in using short range optics	[190 + (0.005S + 20 + 0.5F ²)] μin	Laser calibration system, XL-80
	Up to 1200 in using long range optics	[180 + (0.025S + 200 + 0.05F ²)] μin	
Angular Displacement ³	(-10 to 10)°	[0.38 + (0.006A + 0.1 + 0.007F)] arc seconds	Laser calibration system, XL-80
Angle ³	Up to 40 000 μm/m	3.4 μm/m (0.7 arc seconds)	Wyler electronic levels, wireless

Parameter/Equipment	Range	(CMC) ^{2,4} (\pm)	Comments
Rotational Positioning ³	(-360 to 360) $^{\circ}$	$[2.2 + (0.006A + 0.1)]$ arc seconds	XR20- rotary calibrator, wireless XR20-W
Circular Interpolation Volume ³	(50 to 600) mm	$[2.4 + (0.4 \%V)]$ μ m	QC20-W ball bar, wireless

¹ This laboratory offers commercial calibration and field calibration service.

² Calibration and Measurement Capability Uncertainty (CMC) is the smallest uncertainty of measurement that a laboratory can achieve within its scope of accreditation when performing more or less routine calibrations of nearly ideal measurement standards or nearly ideal measuring equipment. CMCs represent expanded uncertainties expressed at approximately the 95 % level of confidence, usually using a coverage factor of $k = 2$. The actual measurement uncertainty of a specific calibration performed by the laboratory may be greater than the (CMC) Uncertainty due to the behavior of the customer's device and to influences from the circumstances of the specific calibration.

³ Field calibration service is available for this calibration and this laboratory meets A2LA R104 – *General Requirements: Accreditation of Field Testing and Field Calibration Laboratories* for these calibrations. Please note the actual measurement uncertainties achievable on a customer's site can normally be expected to be larger than the (CMC) Uncertainty found on the A2LA Scope. Allowance must be made for aspects such as the environment at the place of calibration and for other possible adverse effects such as those caused by transportation of the calibration equipment. The usual allowance for the actual uncertainty introduced by the item being calibrated, (e.g. resolution) must also be considered and this, on its own, could result in the actual measurement uncertainty achievable on a customer's site being larger than the (CMC) Uncertainty.

⁴ In the statement of (CMC) Uncertainty, L is length measured in feet, S is displayed straightness reading in μ in, F is distance traveled in feet, A is the displayed angle in arc seconds and V is the radial circularity variation reading in μ m.



Accredited Laboratory

A2LA has accredited

QUALITY TECH SERVICES

Byron, GA

for technical competence in the field of

Calibration

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 *General requirements for the competence of testing and calibration laboratories*. This laboratory also meets the requirements of ANSI/NCSL Z540-1-1994 and any additional program requirements in the field of calibration. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated 8 January 2009).



Presented this 14th day of April 2016.

A handwritten signature in blue ink, appearing to read 'J. C. Burt'.

Senior Director of Quality and Communications
For the Accreditation Council
Certificate Number 2921.01
Valid to April 30, 2018

For the calibrations to which this accreditation applies, please refer to the laboratory's Calibration Scope of Accreditation.