



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017
& ANSI/NCSL Z540-1-1994

QUALITY TECH SERVICES
132 Galan Drive
Byron, GA 31008
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CALIBRATION

Valid To: April 30, 2022

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 calibrations^{1, 6}:

I. Dimensional

Parameter/Equipment	Range	CMC ^{2, 4, 5} (±)	Comments
Machine Tools, CMMs, CNCs, Measuring Machines, Scales and Encoders 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 – Measure 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	

Parameter/Equipment	Range	CMC ^{2, 4, 5} (\pm)	Comments
Angular Displacement – CNC, CMM, Inclinometers and Levels ³	(-10 to 10) $^{\circ}$	[0.38 + (0.006A + 0.1 + 0.007F)] arc seconds $\pm 0.02 A$ $\pm 0.5 \pm 1 M$	Laser calibration system, XL-80
Angle – Measure ³	Up to 40 000 $\mu\text{m}/\text{m}$	3.4 $\mu\text{m}/\text{m}$ (0.7 arc seconds)	Wyler electronic levels, wireless
Rotational Positioning – Rotary Encoders, Inclinometers/Levels, Rotary Indexes/Tables ³	(-360 to 360) $^{\circ}$	[2.2 + (0.006A + 0.1)] arc seconds $\pm 0.02 A$ $\pm 0.5 \pm 0.1 M$	RX10, Ultradex rotary calibrator, wireless XR20-W
Circular Interpolation Volume – CMMs, CNC and Machine Tools ³	(50 to 600) mm	[2.4 + (0.4 %V)] μm	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 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 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.

⁴ In the statement of CMC, L is length measured in feet; S is displayed straightness reading in μin ; F is distance traveled in feet; A is the displayed angle in arc seconds; A is the angle measured in $\mu\text{radians}$; M is the linear measurement between angular interferometer and reflection; and V is the radial circularity variation reading in μm .

⁵ The type of instrument or material being calibrated is defined by the parameter. This indicates the laboratory is capable of calibrating instruments that measure or generate the values in the ranges indicated for the listed measurement parameter.

⁶ This scope meets A2LA's *P112 Flexible Scope Policy*.





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 17025:2017 *General requirements for the competence of testing and calibration laboratories*. This laboratory also meets the requirements of ANSI/NC SL Z540-1-1994 and R205 – Specific Requirements: Calibration Laboratory Accreditation Program. 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 April 2017).



Presented this 24th day of March 2020.

A blue ink signature of the Vice President of Accreditation Services.

Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 2921.01
Valid to April 30, 2022

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



*Joint ISO-ILAC-IAF
Communique on the
Management Systems Requirements of ISO/IEC 17025,
General Requirements for the competence of testing and
calibration laboratories*

*A laboratory's fulfillment of the requirements of ISO/IEC 17025 means the laboratory meets both the technical competence requirements and **management system requirements** that are necessary for it to consistently deliver technically valid test results and calibrations. The **management system requirements** in ISO/IEC 17025 are written in language relevant to laboratory operations and operate generally in accordance with the principles of ISO 9001.*

A handwritten signature in blue ink, appearing to read "K. Nishi".

ISO Acting Secretary General

A handwritten signature in blue ink, appearing to read "Matti Malmqvist Nilsson".

ILAC Chair

A handwritten signature in black ink, appearing to be in Chinese characters.

IAF Chair