



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

METROLOGY & ENGINEERING TECHNOLOGIES INC
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CALIBRATION

Valid To: February 28, 2018

Certificate Number: 1863.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following calibrations and dimensional testing¹:

I. Dimensional

Parameter/Equipment	Range	CMC ² (±)	Comments
Calipers	Up to 12 in (12 to 20) in	500 μin (500 + 5L) μin	Gage blocks, Kalmaster or length standards; <i>L</i> is the length in inches.
Micrometers	Up to 10 in	(50 + 5L) μin	Gage blocks; <i>L</i> is the length in inches.
Indicators	Up to 4 in	57 μin	Gage blocks
Pin Gages – Class ZZ	Up to 1 in	90 μin	Laser micrometer

II. Dimensional Testing/Calibration⁴

Parameter/Equipment	Range	CMC ² (±)	Comments
CMM Inspection	Up to (750 × 750 × 550) mm Up to (1200 × 2200 × 1000) mm	(29 + 0.05L) μm (16 + 0.044L) μm	CMM; L is the length in millimeters
CMM Inspection ³	2.4 m sphere	120 μm	Romer CMM
Optical Comparator Inspection – Length (X,Y Direction) Magnification	Up to (9 × 3) in 10x	630 μm 630 μm	ST optical comparator
Caliper Inspection	Up to 8 in	0.0032 in	Caliper
Micrometer Inspection	Up to 1 in	0.00061 in	Micrometer
Pin Gage Inspection	(1.52 to 17.8) mm	15 μm	Pin gages
Micro Vu Matrix Manual 24 × 18	Up to (12 × 18 × 6) in	0.0013 in	Micro Vu

¹ This laboratory offers commercial dimensional testing/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 This laboratory meets R205 – *Specific Requirements: Calibration Laboratory Accreditation Program* for the types of dimensional tests listed above and is considered equivalent to that of a calibration.



Accredited Laboratory

A2LA has accredited

METROLOGY & ENGINEERING TECHNOLOGIES INC.

Grand Rapids, MI

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 *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 8 January 2009).



Presented this 26th day of May 2016.

A handwritten signature in black ink, written over a horizontal line.

President and CEO
For the Accreditation Council
Certificate Number 1863.01
Valid to February 28, 2018
Revised on January 15, 2018

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