



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

MOTOR CITY CALIBRATION, INC.
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Warren, MI 48089
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CALIBRATION

Valid To: February 29, 2020

Certificate Number: 3253.01

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} (\pm)	Comments
Adjustable Column Height Gages –	Up to 24 in	$(32 + 0.8L) \mu\text{in}$	Gage blocks, electronic amplifier and probe
Air Gages ³	Up to 0.003 in	14 μin	Comparison with standard magnification kit
Angle Plates	(1 to 40) in	$(21 + 7L) \mu\text{in}$	Master square
Bench Mic / ULM ³	(0.1 to 80) in	$(2.8 + 3.7L) \mu\text{in}$	Gage blocks
Bore Gages ³	0.0001 in res. 0.0005 in res.	70 μin 290 μin	ID/OD comparator adjustable height gage
Calipers ³	(4 to 120) in	$(280 + 5.6L) \mu\text{in}$	Gage block, ring gage

Parameter/Equipment	Range	CMC ^{2,4} (±)	Comments
Electronic Amplifier and Probes ³	0.000001 in res. 0.00001 in res. 0.0005 in res. 0.01 in res.	5.4 μin 6.5 μin 290 μin 580 μin	Gage blocks
End Standards	(1 to 12) in (13 to 80) in	(16 + 6.5L) μin (13 + 7.4L) μin	Gage blocks, electronic amplifier and probe Gage blocks and digital indicator
Hole Gages	(0.25 to 10) in	(10 + 9.7L) μin	Ring gages
Indicators ³	0.00001 in res. 0.0001 in res. 0.0005 in 0.001 in	6.7 μin 59 μin 290 μin 580 μin	ULM, gage blocks, adjustable height gage ULM, indicator calibrator
Levels	Up to 45°	2.7 arc sec	Dividing head
Micro Hites ³ and Height Gages ³	Up to 48 in	(35 + 1.4L) μin	Gage blocks
Micrometers ³	Up to 72 in	(12.1 + 17L) μin	Gage blocks
Parallels	Up to 48 in	(26 + 6.3L) μin	Surface plate, electronic amplifier and probe
Pin & Plug Gages ³	(0.05 to 10) in	(5 + 8L) μin	ID/OD comparator
Ring Gages	(0.25 to 12) in	(6.7 + 7L) μin	ID/OD comparator and gage blocks
Snap Gages	Up to 20 in	(36 + 20L) μin	Electronic amplifier and probe

Parameter/Equipment	Range	CMC ^{2,4} (±)	Comments
Squares (Squareness)	Up to 40 in	57 µin	Master square, surface plate and indicator
Surface Roughness ³ – Standards, ISO Type C Instrument Amplification	20 µin Ra 120 µin Ra 20 µin Ra 120 µin Ra	4 µin 4 µin 2 µin 2 µin	Comparison to reference standard
V-Blocks	Up to 6 in	(69 + 10L) µin	Surface plate, reference cylinder and indicator

¹ This laboratory offers commercial calibration and field calibration services.

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 the numerical value of the nominal length of the device measured in inches.



Accredited Laboratory

A2LA has accredited

MOTOR CITY CALIBRATION, INC.

Warren, 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 April 2017)*.



Presented this 18th day of April 2018.

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

President and CEO
For the Accreditation Council
Certificate Number 3253.01
Valid to February 29, 2020

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