



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

DIMENSIONAL MEASUREMENT, INC.  
46989 Liberty Drive  
Wixom, MI 48393  
Andrew Rauch Phone: 248 960 8801

CALIBRATION

Valid To: December 31, 2024

Certificate Number: 2503.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following calibrations<sup>1,6</sup>:

I. Dimensional

Parameter/Equipment	Range	CMC <sup>2,4</sup> ( $\pm$ )	Comments
Bore Gages (2-point) <sup>3</sup>	Up to 100 mm	4.4 $\mu$ m	Gage block comparison
Calipers <sup>3</sup>	Up to 300 mm Up to 600 mm Up to 1000 mm	(8.2 + 0.02L) $\mu$ m (11 + 0.02L) $\mu$ m 24 $\mu$ m	Gage block comparison
Depth Micrometers <sup>3</sup>	Up to 300 mm	15 $\mu$ m	Gage block comparison
Dial & Digital Indicators <sup>3</sup>	Up to 25 mm Up to 60 mm	2.9 $\mu$ m 1.7 $\mu$ m	Indicator checker Gage block comparison
Depth Standards	Up to 1 mm	(0.097 + 0.19L) $\mu$ m	Profilometer & gage block comparison
Feeler/Taper Gages <sup>3</sup>	Up to 25 mm	3 $\mu$ m	Digital micrometer
Gage Balls – Diameter	Up to 100 mm	1.1 $\mu$ m	Gage block & bench micrometer

Parameter/Equipment	Range	CMC <sup>2,4</sup> ( $\pm$ )	Comments
Height Gages <sup>3</sup>	Up to 965 mm	$(9.4 + 0.007L) \mu\text{m}$	Reference bar, gage blocks
Micrometers <sup>3</sup>	Up to 300 mm (300 to 600) mm	$(0.91 + 0.005L) \mu\text{m}$ $(7.6 + 0.009L) \mu\text{m}$	Gage block comparison
Micrometer Standards <sup>3</sup>	Up to 600 mm Up to 600 mm	$(2.8 + 0.003L) \mu\text{m}$ $(5.7 + 0.006L) \mu\text{m}$	Reference bar, gage blocks, amplifier
Parallels – Flatness & Parallelism	Up to 2500 mm	3.6 $\mu\text{m}$	CMM
Pin & Plug Gages <sup>3</sup>	Up to 100 mm Up to 25 mm	1.1 $\mu\text{m}$ 2.8 $\mu\text{m}$	Bench micrometer Digital micrometer
Profilometer	$(0.4 \text{ to } 3.2) \mu\text{m } Ra$	0.051 $\mu\text{m } Ra$	Roughness standard
Roughness Standard	Up to $\approx 6 \mu\text{m } Ra$	$(0.045 + 0.014A) \mu\text{m } Ra$	Profilometer
Radius Gages	Up to 300 mm	12 $\mu\text{m}$	Vision system
Scales/Rulers – Length	Up to 400 mm Up to 2000 mm	$(3.1 + 0.007L) \mu\text{m}$ $(24 + 0.008L) \mu\text{m}$	Video system CMM w/ camera
Straight Edge – Straightness	Up to 1500 mm Up to 2500 mm	3.3 $\mu\text{m}$ 5.9 $\mu\text{m}$	Surface plate, amplifier CMM

Parameter/Equipment	Range	CMC <sup>2</sup> (±)	Comments
Thread Plugs – Pitch Diameter	Up to 25 mm	2.6 μm	Thread wires, bench micrometer
Major Diameter	Up to 25 mm	1.1 μm	Bench micrometer

## II. Dimension Testing/Calibration<sup>1</sup>

Parameter/Equipment	Range	CMC <sup>2,4</sup> (±)	Comments
Length – 1D <sup>5</sup>	Up to 965 mm	(0.42 + 0.004L) μm	Reference bar comparison w/ amplifier
	Up to 2 mm	0.43 μm	Amplifier
	Up to 25 mm	5.6 μm	Bore gages
	Up to 600 mm	36 μm	Caliper
	Up to 60 mm	4.1 μm	Digital indicator
	Up to 100 mm	2.7 μm	Digital micrometer
2D <sup>5</sup>	Up to (300 × 300) mm	(2.9 + 0.008L) μm	Vision system
3D <sup>5</sup>	Up to (1000 × 800 × 700) mm	(2.2 + 0.005L) μm	CMM (LH87)
	Up to (2000 × 1200 × 1000) mm	(3.1 + 0.005L) μm	CMM (LH1210)
3D <sup>3,5</sup>	Up to 3600 mm	110 μm	CMM (faro arm edge)
		99 μm	CMM (faro arm prime)

Parameter/Equipment	Range	CMC <sup>2</sup> ( $\pm$ )	Comments
Flatness	Up to 2.6 $\mu\text{m}$	0.36 $\mu\text{m}$	Optical flat & monochromatic light
Surface Finish <sup>5</sup>	$\approx 6 \mu\text{m } Ra$	$(0.045 + 0.014Ra) \mu\text{m } Ra$	Profilometer
Surface Finish <sup>3, 5</sup>	$\approx 6 \mu\text{m } Ra$	0.15 $\mu\text{m } Ra$	Portable profilometer

<sup>1</sup> This laboratory offers commercial calibration/dimensional testing service and field calibration/dimensional testing service.

<sup>2</sup> 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.

<sup>3</sup> Field calibration service is available for this calibration. 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.

<sup>4</sup> In the statement of CMC,  $L$  is the numerical value of the nominal length of the device measured in millimeters;  $A$  is the vertical amplitude in micro-meters;  $R$  is the numerical value of the resolution of the device;  $D$  is the numerical value of the length of the shortest leg of the measurement.

<sup>5</sup> 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.

<sup>6</sup> This scope meets A2LA's *P112 Flexible Scope Policy*.



# Accredited Laboratory

A2LA has accredited

## **DIMENSIONAL MEASUREMENT, INC.**

*Wixom, MI*

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 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 14<sup>th</sup> day of November 2022.

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

Vice President, Accreditation Services  
For the Accreditation Council  
Certificate Number 2503.01  
Valid to December 31, 2024

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