SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

PRECISION MEASURING CORP.
33250 Groesbeck Hwy.
Fraser, MI 48026
Robert Meyer Phone: 586 293 4420

CALIBRATION

Valid To: September 30, 2027 Certificate Number: 1768.01

In recognition of the successful completion of the A2LA evaluation process (including an assessment of the organization's compliance with R205 – A2LA's Calibration Program Requirements), accreditation is granted to this laboratory to perform the following calibrations[1, 8]:

I. Dimensional

Parameter/Equipment	Range	CMC[2, 4] (±)	Comments
Length/Coordinate Measuring Machines (CMMs)[3] –			
Linear Displacement Accuracy (X, Y, Z)	Up to 125 ft	(54 + 3.6*L*) µin	Laser interferometer
Length/Boring Mills, Lathes, Machining Centers, Layout Machines[3] –			
Linear Axes Displacement (X, Y, Z)	Up to 125 ft	(74 + 3.6*L*) µin	Laser interferometer

5202 Presidents Court, Suite 220 | Frederick, MD 21703-8515 | Phone: 301 644 3248 | Fax: 240 454 9449 | www.A2LA.org

Parameter/Equipment	Range	CMC[2, 4] (±)	Comments
Straightness[3] –			
CMMs, Boring Mills, Lathes, Machining Centers, Layout Machines	Up to 400 µin (400 to 60 000) µin	$(27 + 0.035S + 0.5F^2)$ µin $(27 + 0.01S + 0.5F^2)$ µin	Laser with short range optics; up to 10 feet distance
	Up to 4000 µin (4000 to 60 000) µin	$(27 + 0.05S + 0.05F^2)$ µin $(120 + 0.025S + 0.05F^2)$ µin	Laser with long range optics; 3 to 33 feet distance
Squareness[3] –			
CMMs, Boring Mills, Lathes, Machining Centers, Layout Machines	Up to 18 in	180 µin	Master square and indicator
Angle[3] – CMMs, Boring Mills, Lathes, Machining Centers, Layout Machines, Electronic Levels, etc.	Up to 10° Up to 200 second	$(0.82 + 0.002B + 0.05M)$ arcsec 1.8 arcsec	Laser interferometer Electronic level
Angle – Machine Tools	0 to 360 degrees	0.000 39 degrees	Renishaw XR20 (Rotary Axis Calibrator) w/ XL-80 laser interferometer
Surface Plate – Overall Flatness Only[3]	Up to 20 ft × 30 ft	$(320 + 44D)$ µin	Electronic levels Note: uncertainty is to be no less than the acceptable closure error for the procedure

II. Dimensional Testing/Calibration[1]

Parameter/Equipment	Range	CMC[2, 4] (±)	Comments
Length Measurements[5, 6, 7] – 1D, 2D and 3D	X: Up to 110 in Y: Up to 45 in Z: Up to 54 in	(3200 + 1.3*L*) µin	Mitutoyo CHN 1612 CMM
	X-Y-Z: 29.59 in	710 µin	Ball bar
	X: Up to 35 in Y: Up to 59 in Z: Up to 35 in	(1400 + 2.4*L*) µin	Brown and Sharpe XCel CMM
	X-Y-Z: 21.70 in	390 µin	Ball bar
	X: Up to 120 in Y: Up to 55 in Z: Up to 60 in	(4200 + 1.7*L*) µin	DEA – Vento CMM
	X-Y-Z: 35.47 in	2500 µin	Ball bar
	Up to 131 ft hemisphere	(1000 + 1.9*L*) µin	Faro laser tracker
	Up to 3.5 meter	0.14 mm (tactile only)	Hexagon articulating arm CMM,
2D Length Measurements[5, 6] (non-contact)	X: 300 mm Y: 200 mm	(2.9 + 0.01*L*) µm	Vision system
Length Measurements[5] –			
Fixtures, Products, Go-No Go Gages, Inner Diameter, Outer Diameter	Up to 2 in	(110 + 10*L*) µin	Micrometer
	Up to 8 in	1200 µin	Caliper
	(0.061 to 1.0) in	590 µin	Pin gages

[1] This laboratory offers commercial calibration service, dimensional testing, 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. 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, for linear measurements; *L* is the nominal length of the device in inches, except where noted. For straightness and squareness measurements, *S* is the straightness error in micro-inches; *F* is the distance the optics travel during test in feet. With angle measurements, *B* is the measured error in arc-seconds, and *M* is the distance the optics travel during test in meters. With flatness measurements, *D* is the diagonal length of the surface plate.

[5] 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.

[6] CMC performance is identified as 3D (X-Y-Z) for measurements performed with the Faro Laser Tracker and Hexagon Articulating Arm CMM in the stated machine volume of the X, Y and Z coordinate ranges; or in the case of 2D non-contact measurements, the area of X and Y coordinates.

[7] 3D (X-Y-Z) length measurement performance is within the stated X, Y and Z coordinate ranges based on ball bar test data.

[8] This scope meets A2LA's *P112 Flexible Scope Policy*.

Accredited Laboratory

A2LA has accredited

PRECISION MEASURING CORP.

Fraser, 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 the requirements of 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 22nd day of August 2025.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 1768.01
Valid to September 30, 2027

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