SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

VISIONAL TECHNOLOGY, SRL
Flexipark Free Zone Building A8
San Rafael de Alajuela, Costa Rica 20108
Victor Rivera Castro Phone: +506 4800-1845

CALIBRATION

Valid To: July 31, 2025 Certificate Number: 4111.02

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following calibrations[1, 5]:

I. Dimensional

Parameter/Equipment	Range	CMC[2, 4] (±)	Comments
Vision Measurement System and Multi-Sensors[3]			
Length	Up to 758 mm	(0.22 + 0.000 69L) µm	Glass line scale
Z-Axis Linear Error (1D tactile)	Up to 177 mm	(0.29 + 0.0018L) µm	Gage blocks
EUV – Length Error of Imaging Probe	Up to 150 mm	(1.0 + 0.0021L) µm	Glass line scale
Probing Error (PF2D)[8]	Up to 3.5 mm 14 mm	0.44 µm 1 µm	Circle chart
Probing Error of the Imagining Probe (PFV2D)[8]	Up to 3.5 mm 14 mm	0.57 µm 1 µm	Circle chart

Parameter/Equipment	Range	CMC[2, 4] (±)	Comments
Coordinate Measuring Machines (CMM)[3]			
Length	Up to 1000 mm	(0.14 + 0.0002L) µm	Step gage[8]
Probe Performance	Up to 30 mm	0.15 µm	Sphere[8]
Scanning Performance	Up to 30 mm	0.12 µm	Sphere[8]
Universal Length Measuring Machine (ULM/UMM)	Up to 12 inch	(2.0 + 0.91L) µin	Gage blocks, force gage
Optical Comparator[3, 8]			Optical scale
Length (Horizontal)	Up to 606 mm Up to 24 in	(0.65 + 0.0019L) µm (26 + 1.9L) µin	
Length (Vertical)	Up to 192 mm Up to 8 in	(1.4 + 0.005L) µm (56 + 5L) µin	
Chart Rotation	Up to 360°	1.2 Arcminutes	
Gage Blocks			Master gage blocks (ULM)
Length	> 0.05 to 1 inch > 1 to 4 inch > 4 to 12 inch	(1.8 + 0.53L) µin (1.6 + 0.7L) µin (0.5 + 1.1L) µin	
Parallelism (Variation in Length)	> 0.05 to 1 inch	0.50 µin	
Optical Scales, Reticules, Grid / Dot Array			Vision measurement system with comparison to calibrated standards.
Length	Up to 758 mm	(0.52 + 0.000 67L) µm	
Diameter	Up to 3.5 mm Up to 400 mm	0.41 µm (2.1 + 0.0035*D*) µm	
Angles	Up to 360°	1.0 Arc minutes	

Parameter/Equipment	Range	CMC[2, 4] (±)	Comments
Length Standards and Dimensional Gages-(Length Indicators, Micrometers Heads, Micrometers, Calipers)	Up to 12 inch Up to 758 mm	(2.0 + 0.91L) µin (0.10 + 0.000 23L) µm	Labmaster universal (ULM), gage blocks, CMM, vision system
Spheres Size Form	 Up to 25 mm Up to 25 mm	 0.43 µm 0.13 µm	CMM with comparison to calibrated standard, Labmaster Universal (ULM)
Cylindrical Gages Plain Pin and Plug Gages Plain Ring Gages	 Up to 4 inch Up to 7 inch	 (3.2 + 0.017D) µin 11 µin	Labmaster universal (ULM), master gage blocks
Thread Wires	(1 to 120) TPI (0.2 to 10) Pitch	5.0 µin 0.13 µm	Labmaster universal (ULM), master gage blocks
Steel Rulers	Up to 640 mm	(3.9 + 0.0025L) µm	Vision measurement system
Computer Tomography Systems - CT Machines Length Measurement Error (E) Sphere Distance Deviation (SD) Probing Error Size (PS) Probing Error Form (PF)	Measuring volume with a space of diagonal < 205 mm	 1.5 µm 0.8 µm 0.6 µm 0.9 µm	Sphere array reference, master sphere

II. Dimensional Testing[1, 6]

Parameter/Equipment	Range	CMC[2, 4] (±)	Comments
Length Measurements	Up to 640 mm 640 to 1000 mm	(2.0 + 0.0034L) µm (2.8 + 0.0028L) µm	Vision measurement system, ULM, CMM
Diameter	Up to 400 mm 400 to 700 mm	(2.1 + 0.0035D) µm (2.8 + 0.0027D) µm	Vision measurement system, ULM, CMM
Angles	Up to 360°	(0.53 + 0.000 15A) Arcminutes	Vision measurement system and CMM

[1] This laboratory offers commercial calibration service, field calibration service, and dimensional testing.

[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 Calibration and Measurement Capability Uncertainty (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 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 millimeters (metric units) or inches (imperial units); D is the numerical value of the nominal diameter of the device measured in millimeters (metric units) or inches (imperial units); and A is the nominal numerical value of an angle measured in decimal degrees.

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

[6] 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.

[7] Calibration method utilizing corresponding section(s) of ISO 10360 for defined parameter.

[8] Repeatability of the Unit Under Test has not been utilized in the calculation of the CMC value for this measurement parameter.

Accredited Laboratory

A2LA has accredited

VISIONAL TECHNOLOGY, SRL

San Rafael de Alajuela, Costa Rica

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 18th day of October 2023.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 4111.02
Valid to July 31, 2025
Revised October 26, 2023

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