



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

BORBOLLA METROLOGY, S.A. DE C.V.  
Calle Hidalgo Norte. No. 448, Zona Centro  
Saltillo, Coah., MEXICO C.P. 25000  
Contact: Jorge Borbolla Phone: + 52 (844) 412-8868

CALIBRATION

Valid To: December 31, 2021

Certificate Number: 3486.01

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

I. Dimensional Testing/Calibration<sup>1</sup>

Parameter/Equipment	Range	CMC <sup>2,4</sup> (±)	Comments
CMM <sup>3,5</sup> – Verification			
Length Measurement Error & R0	Up to 1000 mm	$(0.18 + 0.0021L) \mu\text{m}$	ISO 10360-2; Section 6.3.3, 6.4 and 6.5 -step gage and gage blocks
	Up to 30 000 mm	$(0.13 + 0.001L) \mu\text{m}$	Gage blocks, Renishaw laser
Probing Error	25 mm	0.31 $\mu\text{m}$	ISO 10360-5; Section 6.2 - test sphere
Optical Comparators & Vision Systems <sup>3,5</sup> –			JIS B7184:1999 Table 1 and 8;
X & Y Axis Length Error of Indication	Up to 140 mm	2.7 $\mu\text{m}$	Glass scale

Parameter/Equipment	Range	CMC <sup>2,4</sup> (±)	Comments
2D Dimensional Measurement <sup>5</sup> – X - Axis Y - Axis	Up to 200 mm Up to 150 mm	6.0 μm	ASME Y14.5; optical comparator
3D Dimensional Measurement <sup>5</sup> – X - Axis Y - Axis Z - Axis	Up to 800 mm Up to 1000 mm Up to 700 mm	(2.4 + L/298) μm	ASME Y14.5; CMM

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

<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 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.

<sup>4</sup> In the statement of CMC,  $L$  is the numerical value of the nominal length of the device measured in millimeters.

<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.



## Accredited Laboratory

A2LA has accredited

**BORBOLLA METROLOGY, S.A. DE C. V.**

*Zona Centro, Saltillo, Coah., MEXICO*

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 9<sup>th</sup> day of October 2019.

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

Vice President, Accreditation Services  
For the Accreditation Council  
Certificate Number 3486.01  
Valid to December 31, 2021  
Revised November 30, 2021

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