



CERTIFICATE OF ACCREDITATION

ANSI National Accreditation Board

11617 Coldwater Road, Fort Wayne, IN 46845 USA

This is to certify that

Canadian Measurement-Metrology Inc.

2433 Meadowvale Blvd.

Mississauga, ON, L5N 5S2

has been assessed by ANAB and meets the requirements of international standard

ISO/IEC 17025:2017

while demonstrating technical competence in the fields of

CALIBRATION and DIMENSIONAL MEASUREMENT

Refer to the accompanying Scope of Accreditation for information regarding the types of activities to which this accreditation applies

ACT-1284

Certificate Number


ANAB Approval

Certificate Valid Through: 07/17/2021
Version No. 011 Issued: 06/21/2019



This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017. 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).



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

Canadian Measurement-Metrology Inc.

2433 Meadowvale Blvd.
Mississauga, Ontario, L5N 5S2 Canada
Margot Wax
905-819-7878

CALIBRATION & DIMENSIONAL MEASUREMENT

Valid to: July 17, 2021

Certificate Number: ACT-1284

CALIBRATION

Length – Dimensional Metrology

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-) ²	Reference Standard, Method, and/or Equipment
CMM X, Y, Z Linear Displacement Accuracy ¹	(25 to 2 250) mm	(0.9 + 6.4L) μm	ASME B89.4.1B-1997/2001 using Starrett-Weber or MTI Step Bar
	(25 to 6 000) mm	(0.3 + 4.8L) μm	ASME B89.4.1B-1997/2001 using Renishaw Laser Interferometer
CMM Length Measurement Error ¹	(25 to 610) mm	(1.7 + 5.7L) μm	ASME B89.4.10360.2 using Mitutoyo Step Bar
	(25 to 6 000) mm	(0.8 + 4.4L) μm	ASME B89.4.10360.2 using Renishaw Laser with Gage Block
CMM Scanning Probing Error (THP) ¹	Nominal Sphere Diameter: 25 mm	0.75 μm	ISO 10360-4 using Precision Sphere
CMM Single-stylus Probing Error ¹	Nominal Sphere Diameter: 25 mm	0.61 μm	ISO 10360-5 at 6.2 using Precision Sphere
Optical/Contour Projectors X, Y Linear Accuracy ¹	X, Y: Up to 600 mm	(1.4 + 7L) μm	ASME B89.4.18 using Glass Scale
Optical/Vision Measuring Systems X, Y, Z Linear Accuracy ¹	X, Y: Up to 610 mm	(4.2 + 1.4L) μm	Internal Calibration Procedure using Optical Grid Plate



Length – Dimensional Metrology

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-) ²	Reference Standard, Method, and/or Equipment
	Z: Up to 102 mm	(1.6 + 1.6L) μm	Internal Calibration Procedure using Optical Step Gage
Articulated Arm CMM (AACMM) Volumetric Performance	Up to 1 210 mm	(2.4 + 7.2L) μm	ASME B89.4.22, except Effective Diameter using Test Length Standard
Length Standard for AACMM	Up to 1 210 mm	(2.2 + 6.4L) μm	Internal Calibration procedure using CMM

DIMENSIONAL MEASUREMENT

3 Dimensional

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-) ²	Reference Standard, Method, and/or Equipment
Dimensional Measurement 3D	X = Up to 1 200 mm Y = Up to 3 000 mm Z = Up to 1 000 mm	(3.5 + 6.2L) μm	Coordinate Measuring Machine and Software utilized as Reference Standard for Dimensional Measurement
	X = Up to 900 mm Y = Up to 5 000 mm Z = Up to 800 mm	(6 + 3.9L) μm	
	X = Up to 2 000 mm Y = Up to 5 100 mm Z = Up to 1 500 mm	(16 + 4.3L) μm	
Dimensional Measurement 3D ¹	Measuring Envelopes (1.2 to 3.6) m	(45 + 0.4L) μm	Articulated Arm CMM and Software utilized as Reference Standard for Dimensional Measurement
	Absolute Distance Measurement (ADM) Range (1 to 40) m	(17 + 2L) μm	LTD800 Leica Laser Tracker with Corner Cube Reflector and Software utilized as Reference Standard for Dimensional Measurement
	Measurement of 2 500 mm Spatial Length from Distance (1 to 10) m	(44 + 0.8L) μm	LTD800 Leica Laser Tracker with Leica T-Probe and Software utilized as Reference Standard for Dimensional Measurement



3 Dimensional

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-) ²	Reference Standard, Method, and/or Equipment
	Measurement of 2 500 mm Spatial Length from Distance (1 to 80) m	$(17 + 2L) \mu\text{m}$	AT402 Leica Laser Tracker with Corner Cube Reflector and Software utilized as Reference Standard for Dimensional Measurement
Dimensional Measurement 3D	X = Up to 300 mm Y = Up to 300 mm Z = Up to 250 mm	$(3.4 + 2.9L) \mu\text{m}$	Optical Vision Measuring System and Software utilized as Reference Standard for Dimensional Measurement

Calibration and Measurement Capability (CMC) is expressed in terms of the measurement parameter, measurement range, expanded uncertainty of measurement and reference standard, method, and/or equipment. The expanded uncertainty of measurement is expressed as the standard uncertainty of the measurement multiplied by a coverage factor of 2 ($k=2$), corresponding to a confidence level of approximately 95%.

Notes:

1. On-site calibration service is available for this parameter, since on-site conditions are typically more variable than those in the laboratory, larger measurement uncertainties are expected on-site than what is reported on the accredited scope.
2. L is Length in unit of meter.
3. This scope is formatted as part of a single document including Certificate of Accreditation No. ACT-1284.



Vice President