



CERTIFICATE OF ACCREDITATION

The ANSI National Accreditation Board

Hereby attests that

A.V. Gauge & Fixture Inc.

**4000 Delduca Drive
Oldcastle, ON N0R 1L0**

(and the satellite location as listed on the scope)

Fulfills the requirements of

ISO/IEC 17025:2017

In the field of

DIMENSIONAL MEASUREMENT

This certificate is valid only when accompanied by a current scope of accreditation document.
The current scope of accreditation can be verified at www.anab.org.

A handwritten signature in black ink, appearing to read 'R. Douglas Leonard Jr.', is positioned above a horizontal line.

R. Douglas Leonard Jr., VP, PILR SBU

Expiry Date: 27 August 2024

Certificate Number: L2143-1



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

A.V. Gauge & Fixture Inc.
4000 Delduca Drive
Oldcastle, ON N0R 1L0, Canada
Steve St. Pierre
519-737-7677

DIMENSIONAL MEASUREMENT

Valid to: **August 27, 2024**

Certificate Number: **L2143-1**

1 Dimensional

Parameter	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Dimensional Measurement 1D	(0 to 25) mm	2.1 μm	Micrometer utilized as Reference Standard for Dimensional Measurement
	(0 to 150) mm	7.5 μm	Micrometer utilized as Reference Standard for Dimensional Measurement
	(0 to 300) mm	45 μm	Caliper utilized as Reference Standard for Dimensional Measurement
	(5 to 30) mm	7.7 μm	Inside Micrometer utilized as Reference Standard for Dimensional Measurement
	(0 to 60) mm	5 μm	Laser Micrometer utilized as Reference Standard for Dimensional Measurement

3 Dimensional

Parameter	Range	Expanded Uncertainty of Measurement (+/-) ²	Reference Standard, Method, and/or Equipment
Dimensional Measurement 3D	X = (0 to 3 500) mm Y = (0 to 1 500) mm Z = (0 to 1 200) mm	(18 + 0.048L) μm	Coordinate Measuring Machine utilized as Reference Standard for Dimensional Measurement

3 Dimensional

Parameter	Range	Expanded Uncertainty of Measurement (+/-) ²	Reference Standard, Method, and/or Equipment
Dimensional Measurement 3D	X = (0 to 3 000) mm Y = (0 to 1 200) mm Z = (0 to 1 200) mm	(32 + 0.044L) μm	Coordinate Measuring Machine utilized as Reference Standard for Dimensional Measurement
	X = (0 to 2 500) mm Y = (0 to 1 500) mm Z = (0 to 1 200) mm	(18 + 0.047L) μm	
	X = (0 to 2 500) mm Y = (0 to 1 500) mm Z = (0 to 1 000) mm	(18 + 0.047L) μm	
	X = (0 to 2 000) mm Y = (0 to 1 200) mm Z = (0 to 1 000) mm	(18 + 0.045L) μm	
	X = (0 to 2 000) mm Y = (0 to 1 000) mm Z = (0 to 800) mm	(18 + 0.045L) μm	
	X = (0 to 1 500) mm Y = (0 to 1 000) mm Z = (0 to 800) mm	(19 + 0.043L) μm	
	X = (0 to 1 000) mm Y = (0 to 700) mm Z = (0 to 600) mm	(19 + 0.039L) μm	
Dimensional Measurement 3D ¹	(50 to 3 000) mm	(66 + 0.036L) μm	Coordinate Measuring Arm utilized as Reference Standard for Dimensional Measurement
	(50 to 2 500) mm	(41 + 0.05L) μm	Coordinate Measuring Arm utilized as Reference Standard for Dimensional Measurement
	(50 to 3 000) mm	(78 + 0.033L) μm	Coordinate Measuring Arm utilized as Reference Standard for Dimensional Measurement
	(50 to 2 500) mm	(65 + 0.034L) μm	Laser Tracker utilized as Reference Standard for Dimensional Measurement

Services performed at satellite location

A V Gauge & Fixture de Mexico

Euro Business Park, Unit #24
Autopista Mexico - Queretaro km 201.5
El Marques, Queretaro, C.P. 76240, Mexico

DIMENSIONAL MEASUREMENT

1 Dimensional

Parameter	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Dimensional Measurement 1D	(0 to 25) mm	2.1 μ m	Digital micrometer utilized as Reference Standard for Dimensional Measurement
	(0 to 25) mm (25 to 50) mm (50 to 75) mm	2.1 μ m 2.2 μ m 2.3 μ m	Analog micrometer utilized as Reference Standard for Dimensional Measurement
	(0 to 200) mm	30 μ m	Digital caliper utilized as Reference Standard for Dimensional Measurement

3 Dimensional

Parameter	Range	Expanded Uncertainty of Measurement (+/-) ²	Reference Standard, Method, and/or Equipment
Dimensional Measurement 3D	X = (0 to 2 000) mm Y = (0 to 1 000) mm Z = (0 to 800) mm	(16 + 0.047L) μ m	Coordinate Measuring Machine utilized as Reference Standard for Dimensional Measurement
Dimensional Measurement 3D ¹	(50 to 3 000) mm	(80 + 0.033L) μ m	Coordinate Measuring Arm 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 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 = Length in millimeters.
3. This scope is formatted as part of a single document including Certificate of Accreditation No. L2143-1.



R. Douglas Leonard Jr., VP, PILR SBU

