



# CERTIFICATE OF ACCREDITATION

## The ANSI National Accreditation Board

Hereby attests that

### **1Source Metrology Corp.**

**465 Pinebush Rd. Unit #2  
Cambridge, Ontario, N1T 2J4**

Fulfills the requirements of

### **ISO/IEC 17025:2017**

In the fields of

## **CALIBRATION and 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](http://www.anab.org).

A handwritten signature in black ink, appearing to be 'Jason Stine', is positioned above a horizontal line.

Jason Stine, Vice President

Expiry Date: 21 May 2025

Certificate Number: AD-2678



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**

**1Source Metrology Corp.**

465 Pinebush Rd. Unit #2  
Cambridge, Ontario, N1T 2J4  
Bill Reilly  
905-988-0165

**CALIBRATION AND DIMENSIONAL MEASUREMENT**

Valid to: **May 21, 2025**

Certificate Number: **AD-2678**

**CALIBRATION**

**Length – Dimensional Metrology**

Parameter / Equipment	Range	Expanded Uncertainty of Measurement (+/-) <sup>2</sup>	Reference Standard, Method and/or Equipment
Coordinate Measuring Machines (CMMs) — CMMs Used for Measuring Linear Dimensions <sup>1</sup>	(10 to 1 010) mm	(1.4 + 0.004 4L) μm	ISO 10360-2 using Step Gauges as references
Coordinate Measuring Machines (CMMs) — CMMs Used for Measuring Linear Dimensions <sup>1</sup>	(10 to 5 000) mm	(1.5 + 0.004L) μm	ISO 10360-2 using Laser Interferometer and Gauge Block as references
Profile Projectors <sup>1</sup>			
Length (X & Y axis)	(5 to 300) mm	(2.4 + 0.003L) μm	JIS B 7184:1999 using Glass Scales, squareness standard and protractor as references
Squareness between X axis and Y axis	X/Y travel up to 100 mm	3.2 μm	
Angle	0° to 180°	0.017°	

**Length – Dimensional Metrology**

Parameter / Equipment	Range	Expanded Uncertainty of Measurement (+/-) <sup>2</sup>	Reference Standard, Method and/or Equipment
Thread Plug Gauges Pitch Diameter Major Diameter	Up to 101.6 mm Up to 101.6 mm	$(2.2 + 0.27L) \mu\text{m}$ $(1.8 + 0.08L) \mu\text{m}$	ASME B1-16M-1984 (R2016) & ASME B1-2-1983 (R2007/R2017) using Trimos ULM and Thread Wires as references
Adjustable Thread Ring Gauges	Up to 101.6 mm (Up to 4 in)	$(7.3 + 5.9L) \mu\text{m}$	ASME B1-16M-1984 (R2016) & ASME B1-2-1983 (R2007/R2017) using Calibrated Master Set Plugs as references
Plain Plug/Pin Gauges	0.1 mm to 203.2 mm (0.004 in to 8 in)	$(2 + 0.004 2L) \mu\text{m}$	ASME B89-1-5-1998 (R2019) using Trimos ULM and Gauge Blocks as reference
Plain Ring Gauges	12.7 mm to 203.2 mm (0.5 in to 8 in)	$(2 + 0.01L) \mu\text{m}$	ASME B89.1.6-2002 (R2012) using Trimos ULM and master rings as references
Granite Surface Plates <sup>1</sup> Overall Flatness Flatness of Local Area	Diagonal: Up to 6 000 mm Up to 0.5 mm	$(1.3 + 0.1D) \mu\text{m}$ 0.23 $\mu\text{m}$	Fed GGG-P-463c using Tesa TT20 & Autocollimator ( <i>D</i> is the length of the diagonal in meters)
Gauge Blocks	1 mm to 101.6 mm	$(0.1 + 0.004 1L) \mu\text{m}$	Using Gauge Block Comparator and Master Gauge Blocks as references
Calipers	(0 to 304.8) mm	$(2 + 0.01L) \mu\text{m} + 0.6R$	ASME B89.1.14-2018 using Gauge Blocks as references (R=gauge resolution in mm)
Outside Micrometers	(0 to 25.4) mm	$0.51 \mu\text{m} + 0.007L + 0.6R$	ASME B89.1.13 – 2013 using Gauge Blocks as references (R=gauge resolution in mm)
Depth Micrometers	(0 to 25.4) mm	$0.52 \mu\text{m} + 0.004L + 0.6R$	ASME B89.1.13 – 2013 using Gauge Blocks as references (R=gauge resolution in mm)
Height Gauges	(0 to 914.4) mm	$4.8 \mu\text{m} + 0.0067L + 0.6R$	JIS B 7517-2018 using gauge Blocks and/or Step Gauges as references (R=gauge resolution in mm)

**Length – Dimensional Metrology**

Parameter / Equipment	Range	Expanded Uncertainty of Measurement (+/-) <sup>2</sup>	Reference Standard, Method and/or Equipment
Dial Indicators (Mechanical and Electronic Types)	(0 to 25.4) mm	1.3 μm + 0.0022L + 0.6R	ASME B89.1.10M - 2001(R2021) using Trimos ULM as reference (R=gauge resolution in mm)
Test Indicators	(0 to 10) mm	1.3 μm + 0.01L + 0.6R	ASME B89.1.10M - 2001(R2021) using Trimos ULM as reference (R=gauge resolution in mm)
Snap Gauges (Adjustable/Fixed)	(0 to 500) mm	(2.3 + 0.01L) μm	Internal procedure WI-25 using Gauge Blocks as reference and CMM as direct measurement
Micrometer Setting Standards	(25 to 1 000) mm	(1.2 + 0.021L) μm	Internal procedure WI-27 using Universal Measuring Machine.

**Mass and Mass Related**

Parameter / Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method and/or Equipment
Indirect Verification of Rockwell Hardness Testers <sup>1</sup>	HRA: Low Medium High	0.48 HRA 0.54 HRA 0.35 HRA	Indirect verification method per ASTM E18:2020
	HRC: Low Medium High	0.49 HRC 0.74 HRC 0.38 HRC	
	HREW: Low Medium High	0.66 HREW 0.75 HREW 0.63 HREW	
	HRBW: Low Medium High	1.20 HRBW 0.81 HRBW 0.55 HRBW	

**Mass and Mass Related**

Parameter / Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method and/or Equipment
Indirect Verification of Rockwell Hardness Testers <sup>1</sup>	HR15N: Low Medium High	0.49 HR15N 0.71 HR15N 0.31 HR15N	Indirect verification method per ASTM E18:2020
	HR30TS: Low Medium High	0.83 HR30TS 0.68 HR30TS 0.55 HR30TS	
	HR30N: Low Medium High	0.49 HR30N 0.86 HR30N 0.40 HR30N	
	HR15TW: Low Medium High	0.61 HR15TW 0.47 HR15TW 0.58 HR15TW	
	HR30TW: Low Medium High	0.74 HR30TW 0.45 HR30TW 0.50 HR30TW	
	HR45N: Low Medium High	0.66 HR45N 0.82 HR45N 0.44 HR45N	
	HR45TW: Low Medium High	0.77 HR45TW 0.52 HR45TW 0.57 HR45TW	

## DIMENSIONAL MEASUREMENT

### 3 Dimensional

Parameter	Range	Expanded Uncertainty of Measurement (+/-) <sup>2</sup>	Reference Standard, Method and/or Equipment
Dimensional Measurement 3D	X: Up to 1 200 mm Y: Up to 2 000 mm Z: Up to 1 000 mm	$(4.2 + 0.03L) \mu\text{m}$	Coordinate Measuring Machine utilized as Reference Standard for Dimensional Measurement
Dimensional Measurement 3D	X: Up to 900 mm Y: Up to 1 500 mm Z: Up to 800 mm	$(3.2 + 0.03L) \mu\text{m}$	Coordinate Measuring Machine utilized as Reference Standard for Dimensional Measurement
Dimensional Measurement 3D	X: Up to 1 000 mm Y: Up to 1 000 mm Z: Up to 600 mm	$(2.5 + 0.03L) \mu\text{m}$	Coordinate Measuring Machine 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 the length of object under calibration or measurement in mm.  $R$  is the resolution of the device under calibration in  $\mu\text{m}$ .
3. This scope is formatted as part of a single document including the Certificate of Accreditation No. AD-2678.



Jason Stine, Vice President