



# 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 read 'R. Douglas Leonard Jr.', is positioned above a horizontal line.

R. Douglas Leonard Jr., VP, PILR SBU

Expiry Date: 21 May 2023

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, 2023**

Certificate Number: **AD-2678**

**CALIBRATION**

**Length – Dimensional Metrology**

<b>Parameter / Equipment</b>	<b>Range</b>	<b>Expanded Uncertainty of Measurement (+/-) <sup>2</sup></b>	<b>Reference Standard, Method and/or Equipment</b>
Coordinate Measuring Machines (CMMs) — CMMs Used for Measuring Linear Dimensions <sup>1</sup>	(10 to 1 010) mm	(1.3 + 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)  Squareness between X axis and Y axis	(5 to 300) mm  X/Y travel up to 100 mm	(2.4 + 0.003L) μm  3.2 μm	JIS B 7184:1999 using Glass Scales and squareness standard as references.

**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 101.6mm	$(1.7 + 0.06L) \mu\text{m}$ $(0.8 + 0.04L) \mu\text{m}$	B1-16M_1984_R2016 & B1-2_1983_R2007_R2017 using Pratt & Whitney Supermicrometer, Gauge Blocks and Thread Wires as references
Thread Ring Gauges	Up to 101.6 mm	8 $\mu\text{m}$	B1-16M_1984_R2016 & B1-2_1983_R2007_R2017 using Calibrated Master Set Plugs as references
Plain Plug/Pin Gauges	Up to 101.6 mm	$(0.8 + 0.03L) \mu\text{m}$	B89-1-5-1998 (R2019) using Pratt & Whitney Supermicrometer and Gauge Blocks as references
Plain Ring Gauges	Up to 152.4 mm	$(0.7 + 0.05L) \mu\text{m}$	ASME B89.1.6-2002 (R2012) using Federal Horizontal Master Comparator and Gauge Blocks as references
Granite Surface Plates <sup>1</sup> Overall Flatness Flatness of Local Area	Up to 6 000 mm Diagonal Up to 0.5 mm	$(1.3 + 0.1DL) \mu\text{m}$ 0.23 $\mu\text{m}$	GGG-P-463c using Tesa TT20 & Autocollimator <i>D is the length of the diagonal in meters</i>

**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
	HRC: Low Medium High	0.49 HRC 0.74 HRC 0.38 HRC	

**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>	HREW: Low Medium High	0.66 HREW 0.75 HREW 0.63 HREW	Indirect verification method per ASTM E18
	HRBW: Low Medium High	1.20 HRBW 0.81 HRBW 0.55 HRBW	
	HR15N: Low Medium High	0.49 HR15N 0.71 HR15N 0.31 HR15N	
	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	Up to 1 000 mm	$(12 + 0.023L) \mu\text{m}$	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.
3. This scope is formatted as part of a single document including the Certificate of Accreditation No. AD-2678.



R. Douglas Leonard Jr., VP, PILR SBU