



CERTIFICATE OF ACCREDITATION

The ANSI National Accreditation Board

Hereby attests that

Resources for Manufacturing, Inc.

**3000 South Tech Blvd.
Miamisburg, OH 45342**

Fulfills the requirements of

ISO/IEC 17025:2017

In the field of

CALIBRATION

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: 07 October 2023

Certificate Number: AC-1143



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

Resources for Manufacturing, Inc.

3000 South Tech Blvd.
Miamisburg, OH 45342
Daniel Cope 937-436-4699

CALIBRATION

Valid to: **October 7, 2023**

Certificate Number: **AC-1143**

Length – Dimensional Metrology

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Coordinate Measuring Machine ^{1,2} Linearity (X, Y, Z axis)	Up to 40 m	$(1.2 + 0.002\ 1L)\ \mu\text{m}$	ASME B89.4.1-1997 per 5.3, 5.4.3 and 5.5.2 using Linear Displacement Laser
Coordinate Measuring Machine ^{1,2} Linearity (X, Y, Z axis)	(25 to 650) mm	$(0.62 + 0.011L)\ \mu\text{m}$	ASME B89.4.1-1997 per 5.3, 5.4.2 and 5.5.2 using Webber Step Bar
Vision System ¹ Length (X, Y axis)	Up to 200 mm Up to 300 mm Up to 600 mm	4.4 μm 4.8 μm 6.7 μm	Procedure 5-04-03-03 using Glass Grid
Length (Z axis)	Up to 300 mm	0.68 μm	Gage Blocks
Video System ¹ Linearity (X, Y, Z axis)	Up to 300 mm	1.2 μm	Procedure 5-04-03-03 using Gage Blocks
Optical Comparator ¹ Length (X, Y axis)	Up to 355 mm	2.1 μm	Procedure 5-04-03-02 using Gage Blocks

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 = length in mm.
3. This scope is formatted as part of a single document including Certificate of Accreditation No. AC-1143.



R. Douglas Leonard Jr., VP, PILR SBU