



CERTIFICATE OF ACCREDITATION

The ANSI National Accreditation Board

Hereby attests that

Intra Corporation
885 Manufacturer's Drive
Westland, MI 48186-4036

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: 06 May 2024
Certificate Number: L2310



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

Intra Corporation
885 Manufacturer's Drive
Westland, MI 48186-4036
Keith Mandeville
734-326-7030

CALIBRATION

Valid to: **May 6, 2024**

Certificate Number: **L2310**

Length – Dimensional Metrology

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-) ²	Reference Standard, Method, and/or Equipment
Inside Diameter - Plain Rings	Up to 30 mm	0.71 μm	Mahr 828 & Reference Rings or Gage Blocks
	(30 to 200) mm	(0.66 + 0.000 8L) μm	
	(200 to 500) mm	(1.3 + 0.000 59L) μm	
Over Roll Dimension – Flush Pin Gage	(0 to 152) mm	5.8 μm	Roll-Chek RC, Pins and Gage Blocks
Involute Curve, Total Deviation – Reference Artifact, Gear, or Spline	Base Diameter: (5 to 650) mm	3 μm	Gear Analyzer
Helix, Total Deviation – Reference Artifact, Gear, or Spline	Helix Angle: 0° to 42° Test Diameter: (5 to 650) mm	3.5 μm	Gear Analyzer
Eccentricity/Concentricity	Test Diameter: Up to 650 mm	0.62 μm	Gear Analyzer
Pitchline Runout – Reference Artifact, Gear, or Spline	Test Diameter: Up to 650 mm	2.6 μm	Gear Analyzer
Single Pitch – Reference Artifact, Gear, or Spline	Test Diameter: Up to 650 mm	2 μm	Gear Analyzer
Cumulative Pitch – Reference Artifact, Gear, or Spline	Test Diameter: Up to 650 mm	2.2 μm	Gear Analyzer

Length – Dimensional Metrology

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-) ²	Reference Standard, Method, and/or Equipment
Dimension over Pins- Reference Artifact, Gear, or Spline	Test Diameter Up to 650 mm	10 μm	Gear Analyzer Pins: Customer Specified Diameter
Diameter- Reference Artifact, Gear, or Spline	Test Diameter Up to 650 mm	6.6 μm	Gear Analyzer
Length Measurement - Plain Cylinders, Pin Gages and Part Dimensions	(0 to 500) mm	(0.45 + 0.029L) μm	Mahr 828 & Gage Blocks
	(0 to 356) mm	(3.5 + 0.004 1L) μm	Heidenhain Height Gage System and Gage Blocks
	(0 to 305) mm	5 μm	Height Master and Indicator
	(0 to 305) mm	13 μm	Microkator and Gage Blocks
	(0 to 60) mm	0.61 μm	Heidenhain Height Gage
	(0 to 28) mm	5 μm	Micrometer
Fixtures, Gages and Masters	X = (0 to 1 200) mm Y = (0 to 1 800) mm Z = (0 to 1 000) mm	(2.5 + 0.004 1L) μm	Coordinate Measuring Machine utilized as a Reference Standard for Dimensional Inspection. Material for CMC = Steel

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 millimeters.
3. This scope is formatted as part of a single document including Certificate of Accreditation No. L2310.



R. Douglas Leonard Jr., VP, PILR SBU