

Scope of Accreditation For Ottawa Gage, Inc.

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In recognition of a successful assessment to ISO/IEC 17025:2005 to the following Calibration and Measurement Capabilities, accreditation has been granted to **Ottawa Gage, Inc.** for the following:

Accreditation Granted Through: **November 2, 2019**

Calibration

Length – Artifacts and Standards 1D

Calibration Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-) ²	Remarks
Plain Plug Gage	Up to 11.75 in	$(10 + 3.7D) \mu\text{in}$	Comparison made with a Universal Comparator, Gage Blocks
	(11.75 to 23.5) in	$(9.1 + 3.7D) \mu\text{in}$	
Plain Ring Gage	Up to 4 in	$(4.7 + 3.8D) \mu\text{in}$	Comparison made with a Universal Comparator, Height Comparator / Gage Blocks
	(4 to 18) in	$(9.1 + 3.7D) \mu\text{in}$	
	(18 to 24) in	$(9.1 + 3.7D) \mu\text{in}$	
Bar Flush Pin	Up to 24 in	$(9.2 + 3.7L) \mu\text{in}$	Comparison made with a Surface Plate, Elec. Amp, Height Gage, Gage Blocks
Barrel Flush Pin	Up to 6 in	$(10 + 3.7L) \mu\text{in}$	
Tapered Plug	Up to 8 in	$(68 + 3.7D) \mu\text{in}$	Comparison made with Surface Plate, Gage Blocks, Micrometers, Gage Rolls
Tapered Ring	Up to 3 in	$(65 + 3.8D) \mu\text{in}$	
	(3 to 10) in	$(67 + 3.7D) \mu\text{in}$	
Countersink Flush Pin Gages	Up to 4 in	$(49 + 3.9L) \mu\text{in}$	Comparison made with Gage Rolls, Micrometers, Elec. Amp, Surface Plate, Gage Blocks, Height Gage
Special Length Gages	Up to 1 in	$(9.5 + 3.6L) \mu\text{in}$	Comparison made with a Universal Comparator, Gage Blocks
	(1 to 3) in	$(7.6 + 3.8L) \mu\text{in}$	
	(3 to 5) in	$(10 + 3.7L) \mu\text{in}$	

Calibration Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-) ²	Remarks
Plain Plug Gage	Up to 13 in	(6 + 2.5D) μin	Labmaster Universal
Plain Ring Gage	Up to 0.125 in	(10.1 + 3.1D) μin	Labmaster Universal
	(0.125 to 0.25) in	(10 + 3.1D) μin	
	(0.25 to 0.5) in	(10 + 3.1D) μin	
	(0.5 to 1) in	(10 + 3.1D) μin	
	(1 to 3) in	(10.2 + 3.1D) μin	
	(3 to 5) in	(10 + 3.1D) μin	
	(5 to 7) in	(10.3 + 3.1D) μin	
	(7 to 9) in	(10.4 + 3.1D) μin	
	(9 to 11) in	(10.7 + 3.1D) μin	
	(11 to 14) in	(11 + 3.1D) μin	

Dimensional Measurement

Length - Dimensional Measurement 1D

Inspection Parameter	Range	Expanded Uncertainty of Measurement (+/-) ²	Remarks
Dimensional Measurement 1D	Up to 1 in	(6.1 + 3.9D) μin	Outside Diameter Measurement Comparison made with a Height Master, Universal Comparator, Gage Blocks, Surface Plate, Elec. Amp, Optical Comparator
	(1 to 4) in	(8.1 + 3.8D) μin	
	(4 to 23.5) in	(11 + 3.7D) μin	
	(0.059 to 4) in	(8.1 + 3.8D) μin	Inside Diameter Measurement Comparison made with a Height Master, Universal Comparator, Gage Blocks, Surface Plate, Elec. Amp, Optical Comparator
	(4 to 24) in	(9.1 + 3.7D) μin	
	Up to 30 in	(11 + 3.7D) μin	Height Measurement Comparison made with a Height Master, Universal Comparator, Gage Blocks, Surface Plate, Elec. Amp, Optical Comparator
	(0.005 to 0.336) in 20x Magnification	628 μin	Radius Measurement Comparisons made with Optical Comparator, Gage Rolls
	(0.337 to 0.672) in 10x Magnification	628 μin	

Length - Dimensional Measurement 2D

Inspection Parameter	Range	Expanded Uncertainty of Measurement (+/-)	Remarks
Dimensional Measurement 2D	0° to 46°	12 ^u	Sine Plate, Indicator and V-Block utilized for the Dimensional Inspection

Calibration and Measurement Capability (CMC) is expressed in terms of the measurement parameter, measurement range, expanded uncertainty of measurement and remarks. 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) Laboratory offers calibration services at the laboratory's own facilities and at the client or other agreed upon facilities.
- 2) *D* = Diameter in inches; *L* = Length in inches.

Approved by: 
R. Douglas Leonard
Chief Technical Officer

Date: November 2, 2016

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