ANSI-ASQ National Accreditation Board

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

Ottawa Gage

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Valid to: **November 2, 2019** Certificate Number: **L1130-1**

CALIBRATION

Length – Dimensional metrology

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Plain Plug Gage[2]	Up to 11.75 in (11.75 to 23.5) in	(10 + 3.7*D*) µin (9.1 + 3.7*D*) µin	Comparison made with a Universal Comparator, Gage Blocks
Plain Ring Gage[2]	Up to 4 in (4 to 18) in (18 to 24) in	(4.3 + 3.8*D*) µin (7.9 + 3.7*D*) µin (9.1 + 3.7*D*) µin	Comparison made with a Universal Comparator, Height Comparator / Gage Blocks
Bar Flush Pin[2]	Up to 24 in	(9.2 + 3.7*L*) µin	Comparison made with a Surface Plate, Elec. Amp, Height Gage, Gage Blocks
Barrel Flush Pin[2]	Up to 6 in	(10 + 3.7*L*) µin	
Tapered Plug[2]	Up to 8 in	(68 + 3.7*D*) µin	Comparison made with Surface Plate, Gage Blocks, Micrometers, Gage Rolls
Tapered Ring[2]	Up to 3 in (3 to 10) in	(65 + 3.8*D*) µin (67 + 3.7*D*) µin	
Countersink Flush Pin Gages[2]	Up to 4 in	(49 + 3.9*L*) µin	Comparison made with Gage Rolls, Micrometers, Elec. Amp, Surface Plate, Gage Blocks, Height Gage
Special Length Gages[2]	Up to 1 in (1 to 3) in (3 to 5) in	(9 + 3.8*L*) µin (7.6 + 3.8*L*) µin (10 + 3.7*L*) µin	Comparison made with a Universal Comparator, Gage Blocks

Length – Dimensional metrology

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Plain Plug Gage[2]	Up to 13 in	(7.7 + 2.5*D*) µin	LabMaster Universal
Plain Ring Gage[2]	Up to 0.125 in (0.125 to 0.25) in (0.25 to 0.5) in (0.5 to 1) in (1 to 3) in (3 to 5) in (5 to 7) in (7 to 9) in	(10 + 3.1*D*) µin	LabMaster Universal
	(9 to 11) in (11 to 14) in	(11 + 3.1*D*) µin	

DIMENSIONAL MEASUREMENT

Specific Tests and / or Properties Measured	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method and/or Equipment
1 Dimensional Outside Diameter Measurement[2]	Up to 1 in (1 to 4) in (4 to 23.5) in	(6.1 + 3.9*D*) µin (8.1 + 3.8*D*) µin (11 + 3.7*D*) µin	Comparison made with a Height Master, Universal Comparator, Gage Blocks, Surface Plate, Elec. Amp, Optical Comparator
1 Dimensional Inside Diameter Measurement[2]	(0.059 to 4) in (4 to 24) in	(8.1 + 3.8*D*) µin (8.8 + 3.7*D*) µin	Comparison made with a Height Master, Universal Comparator, Gage Blocks, Surface Plate, Elec. Amp, Optical Comparator
1 Dimensional Height Measurement	Up to 30 in	(11 + 3.7*D*) µin	Comparison made with a Height Master, Universal Comparator, Gage Blocks, Surface Plate, Elec. Amp, Optical Comparator

Specific Tests and / or Properties Measured	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method and/or Equipment
2 Dimensional Radius Measurement	(0.005 to 0.336) in 20x Magnification (0.337 to 0.672) in 10x Magnification	628 µin	Comparisons made with Optical Comparator, Gage Rolls
1 Dimensional Angle Measurement	(0 to 46) °	12 s	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 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. D = diameter in inches, L = length in inches.
3. This scope is formatted as part of a single document including Certificate of Accreditation No. L1130-1.

Vice President