



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

PMC LONE STAR
 38383 Willoughby Parkway
 Willoughby, OH 44094
 Nick Bosworth III Phone: 440 953 3300

CALIBRATION

Valid To: December 31, 2017

Certificate Number: 1697.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following calibrations¹:

I. Dimensional

Parameter/Equipment	Range	CMC ^{2, 4} (±)	Comments
Straight Threaded Plug Gages –			
Pitch Diameter	Up to 20 in	(90 + 8L) μin	Three wire method
Major Diameter	Up to 20 in	(18 + 10L) μin	P&W Supermic ⁵
Lead	Up to 20 in	80 μin	UMM
Half Angle	360°	5'	UMM
Tapered Threaded Plug Gages –			
Pitch Diameter	Up to 20 in	(100 + 8L) μin	Two wire method
Major Diameter	Up to 20 in	(62 + 8L) μin	P&W Supermic ⁵
Lead	Up to 20 in	80 μin	UMM
Half Angle	360°	5'	UMM
Taper	Up to 20 in	(31 + 2L) μin	Thread wires

Parameter/Equipment	Range	CMC ^{2,4} (\pm)	Comments
Straight Plain Plug Gages	Up to 20 in	$(18 + 10L) \mu\text{in}$	P&W Supermic ⁵
Tapered Plain Plug Gages – Major Diameter	Up to 20 in	$(48 + 5L) \mu\text{in}$	Two wire method
Taper	Up to 20 in	$(110 + 3L) \mu\text{in}$	Sine bar and indicator
Length/Steps	Up to 20 in	$(120 + 1L) \mu\text{in}$	Micrometer/indicator
Straight Plain Ring Gages – Internal Diameter	(0.125 to 20) in	$(11 + 6L) \mu\text{in}$	ID comparator
Tapered Plain Ring Gages – Minor Diameter	(0.125 to 20) in	$(120 + 10L) \mu\text{in}$	Master & depth micrometer
Taper	(0.125 to 20) in	See Footnote 3	Bluing to master
Length/Steps	(0.125 to 20) in	$(120 + 1L) \mu\text{in}$	Micrometer/indicator
Straight Threaded Ring Gages – Pitch Diameter (Adjustable)	(0.05 to 20) in	$(150 + 5L) \mu\text{in}$	Master plug
Pitch Diameter (Solid)	(0.05 to 20) in	See Footnote 3	Master plug
Minor Diameter	(0.05 to 20) in	$(150 + 6L) \mu\text{in}$	Master plug
Lead	(0.375 to 20) in	170 μin	UMM
Half Angle	360°	10'	UMM

Parameter/Equipment	Range	CMC ^{2,4} (\pm)	Comments
Tapered Threaded Ring Gages –			
Standoff	(0.05 to 20) in	1600 μ in	Master & depth
Minor Diameter	(0.05 to 8) in	(120 + 10L) μ in	Master & depth
Truncation	(2.5 to 20) in	200 μ in	UMM
Taper	(2.5 to 20) in	(130 + 4L) μ in	Zeiss length machine
Lead	(2.5 to 20) in	170 μ in	UMM
Half Angle	360°	10'	UMM
Thread Wires	Up to 0.30 in	(15 + 2L) μ in	P&W Supermic ⁵

¹ This laboratory offers commercial calibration services.

² Calibration and Measurement Capability Uncertainty (CMC) is the smallest uncertainty of measurement that a laboratory can achieve within its scope of accreditation when performing more or less routine calibrations of nearly ideal measurement standards or nearly ideal measuring equipment. CMCs represent expanded uncertainties expressed at approximately the 95 % level of confidence, usually using a coverage factor of $k = 2$. The actual measurement uncertainty of a specific calibration performed by the laboratory may be greater than the CMC due to the behavior of the customer's device and to influences from the circumstances of the specific calibration.

³ Functional test, primary uncertainty contributor is the uncertainty of the master plug used.

⁴ In the statement of CMC, L is the numerical value of the nominal length of the device measured in inches.

⁵ "Supermicrometer" is a registered trade mark owned by Pratt & Whitney Measurement Systems, Inc., Connecticut U.S.A.



Accredited Laboratory

A2LA has accredited

PMC LONE STAR

Willoughby, OH

for technical competence in the field of

Calibration

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 *General requirements for the competence of testing and calibration laboratories*. This laboratory also meets any additional program requirements in the field of calibration. 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 8 January 2009).



Presented this 22nd day of January, 2016.

A handwritten signature in black ink, appearing to read "L. Anderson".

President & CEO
For the Accreditation Council
Certificate Number 1697.01
Valid to December 31, 2017
Revised: August 16, 2017

For the calibrations to which this accreditation applies, please refer to the laboratory's Calibration Scope of Accreditation.