



World Class Accreditation

The American Association for Laboratory Accreditation

Accredited Laboratory

A2LA has accredited

CONBRACO CALIBRATION SERVICES

Pageland, SC

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 the requirements of ANSI/NCSL Z540-1-1994 and 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 10th day of March 2011.





Peter Meyer

President & CEO
For the Accreditation Council
Certificate Number 1736.01
Valid to March 31, 2013

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



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005
& ANSI/NCSL Z540-1994

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CALIBRATION

Valid To: March 31, 2013

Certificate Number: 1736.01

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 ^{2,3} (±)	Comments
Adjustable Thread Rings – Pitch Diameter	(0 to 6) in	300 μin	Master set plugs
Tapered Thread Rings	(0 to 3) in	780 μin	Master plug & indicator
Straight Thread Plugs – Pitch Diameter	(0 to 10) in (10 to 20) in	(110 + 1.0D) μin (98 + 2.0D) μin	3-wire measurement thread wires, universal measuring machine
Micrometer Length Standards	(0 to 10) in (10 to 20) in	(26 + 2.6L) μin (24 + 3.5L) μin	Universal measuring machine

Parameter/Equipment	Range	CMC ^{2,3} (\pm)	Comments
Tapered Thread Plugs – Pitch Diameter, Major Diameter	(0 to 6) in	260 μ in	3-wire measurement, master thread wires, sine block, universal measuring machine
Thread Wires – Threads Per Inch	(4 to 80) TPI	21 μ in	Universal measuring machine, measuring over a roll
Cylindrical Measure – Outside Diameter	(0 to 10) in (10 to 20) in (0 to 2) in	(27 + 2.4D) μ in (24 + 3.5D) μ in 88 μ in	Universal measuring machine Lasermike
Cylindrical Measure – Inside Diameter	(0 to 8) in (8 to 16) in	(36 + 1.9D) μ in (33 + 3.0D) μ in	Universal measuring machine and ring
Bore Gages – 2-Point Contact 3-Point Contact	(0.125 to 10) in (0.125 to 6) in	110 μ in 120 μ in	Universal measuring machine Setting rings
Height Gages	(0 to 12) in (12 to 24) in (24 to 36) in	220 μ in 240 μ in 270 μ in	Gage blocks
Micrometers – Outside Depth Inside	(0 to 36) in (0 to 12) in (0.5 to 20) in	(39 + 3.5L) μ in (61 + 1.8L) μ in (150 + 1.1L) μ in	Gage blocks Gage blocks Universal measuring machine

Peter Abney

Parameter/Equipment	Range	CMC ^{2,3} (±)	Comments
Gage Blocks	(< 0.100) in (0.100 to 4) in (> 4 to 20) in	4.1 μin (2.6 + 1.6L) μin (5.6 + 1.6L) μin	By mechanical comparison
Calipers	(0 to 20) in (20 to 48) in	320 μin 370 μin	Gage blocks
Indicators	(0 to 0.005) in (0.005 to 4) in	6 μin (120 + 0.5R) μin	Universal measuring machine

II. Mechanical

Parameter/Equipment	Range	CMC ² (±)	Comments
Torque Wrenches & Torque Multipliers	(0.5 to 400) oz·in (4 to 1000) lb·in (20 to 1100) lb·ft	0.71 % of full scale 0.71 % of full scale 0.71 % of full scale	Torque tester
Pressure Gages –	(0 to 10 000) psig (0 to 300) psig (0 to 3000) psig	0.65 % of full scale 0.65 % of full scale 0.42 % of full scale	Deadweight pressure testers Hydraulic Pneumatic Pace 5000

¹ This laboratory offers commercial calibration service.

² Calibration and Measurement Capability (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. Calibration and Measurement Capabilities 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 In the statement of CMC, L is the numerical value of the nominal length of the device measured in inches, D is the numerical value of the diameter of the device measured in inches, and R is the numerical value of the resolution of the device measured in microinches.

