



The American Association for Laboratory Accreditation

World Class 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 17th day of March 2009.





Peter Meyer

President & CEO
For the Accreditation Council
Certificate Number 1736.01
Valid to March 31, 2011
Revised on December 23, 2009

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

CONBRACO CALIBRATION SERVICES
1418 S. Pearl Street
Pageland, SC 29728
Jack Dearing Phone: 843 672 1616

CALIBRATION

Valid To: March 31, 2011

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	GGG-G-61 & master set plugs
Tapered Thread Rings	(0 to 3) in	830 µin	Master plug & indicator
Straight Thread Plugs – Pitch Diameter Major Diameter	(0 to 10) in (10 to 20) in (0 to 8) in (8 to 16) in (16 to 20) in	120 µin 190 µin (8 + 3.2L) µin (12 + 3.2L) µin (20 + 3.2L) µin	ANSI/ASME B1.2 & B1.16M w/ thread wires, 3-wire method



Parameter/Equipment	Range	CMC ^{2,3} (\pm)	Comments
Tapered Thread Plugs – Pitch Diameter Major Diameter	(0 to 3) in (3 to 6) in (0 to 6) in	100 μ in 200 μ in 260 μ in	ANSI/ASME B1.20.5 w/ thread wires & sine block
Thread Wires – Threads Per Inch Pitch	(4 to 80) TPI (0.2 to 6) μ m	24 μ in 0.60 μ m	ANSI/ASME B1.2 ANSI/ASME B1.16M
Cylindrical Measure – Pins, Plain Plugs, Discs, & Plain Rings	(0 to 8) in (8 to 16) in (16 to 20) in	(8 + 3.2L) μ in (12 + 3.2L) μ in (20 + 3.2L) μ in	Universal measuring machine
Micrometer Length Standards	(0 to 8) in (8 to 16) in (16 to 20) in	(8 + 3.5L) μ in (15 + 3.5L) μ in (20 + 3.5L) μ in	Universal measuring machine
Bore Gages – 2-Point Contact 3-Point Contact	(0.125 to 10) in (0.125 to 3) in	(40 + 0.6R) μ in (60 + 0.6R) μ in	Universal measuring machine Setting rings
Height Gages	(0 to 20) in (20 to 36) in	200 μ in 400 μ in	GGG-C-111C using grade 1 gage blocks
Micrometers – Outside Depth Inside	(0 to 36) in (0 to 12) in (0.5 to 20) in	(39 + 3.5L) μ in (45 + 6.7L) μ in (200 + 0.6R) μ in	Gage blocks Gage blocks Universal measuring machine

Peter Nguyen

Parameter/Equipment	Range	CMC ^{2,3} (±)	Comments
Gage Blocks	(0 to 4) in (4 to 20) in	(3.4 + 2.3L) μin (1.7 + 2.8L) μin	By mechanical comparison
Calipers	(0 to 20) in (20 to 48) in	500 μin 550 μin	Gage blocks
Indicators	(0 to 0.005) in (0.005 to 4) in	6 μin (20 + 0.6R) μin	Universal measuring machine

II. Mechanical

Parameter/Equipment	Range	CMC ² (±)	Comments
Torque Wrenches & Torque Multipliers	0.5 in-lb to 1100 ft-lb	0.65 % of full scale	Torque tester
Pressure Gages –			
Hydraulic	(0.2 to 10 000) psig	0.06 % of full scale	Deadweight pressure testers
Pneumatic	(0 to 300) psig	0.63 % of full scale	

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 and R is the numerical value of the resolution of the device measured in microinches.