



# CERTIFICATE OF ACCREDITATION

## ANSI-ASQ National Accreditation Board

500 Montgomery Street, Suite 625, Alexandria, VA 22314, 877-344-3044

This is to certify that

### Calibration Services, Inc.

300 Buttertown Road

Emlenton PA 16373

has been assessed by ANAB

and meets the requirements of international standard

### ISO/IEC 17025:2005

and national standards

**ANSI/NCSL Z540-1-1994 (R2002) and**

**ANSI/NCSL Z540.3-2006 (R2013)**

while demonstrating technical competence in the field of

## CALIBRATION

Refer to the accompanying Scope of Accreditation for information regarding the types of calibrations to which this accreditation applies.

L1174-1

Certificate Number

  
ANAB Approval

Certificate Valid: 08/08/2017-08/27/2020

Version No. 001 Issued: 08/08/2017



This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. 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 April 2017).



**SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005  
ANSI/NCSL Z540-1-1994 (R2002) AND ANSI/NCSL Z540.3-2006 (R2013)**

**Calibration Services, Inc.**

300 Buttertown Road  
Emlenton, PA 16373  
William W. Stump III  
800-793-1870 / 724-867-6664

**CALIBRATION**

Valid to: **August 27, 2020**

Certificate Number: **L1174-1**

**Length – Dimensional Metrology**

<b>Parameter / Equipment</b>	<b>Range</b>	<b>Expanded Uncertainty of Measurement (+/-)</b>	<b>Reference Standard, Method and/or Equipment</b>
Dimensional Extensometers and Deflectometers	(0.000 1 to 2) in	280 $\mu$ in	In accordance with ASTM E-83/ISO 9513 Using length comparator
Dimensional LVDT and LDT Devices, Dial Indicators	(0.000 1 to 3) in	280 $\mu$ in	In accordance with ASTM D6027 Using length comparator and gage blocks
Dimensional Crosshead Displacement	(0.001 to 31) in	(50 + 190L) $\mu$ in	In accordance with ASTM E2309 Using Gauge Blocks and Dial Indicators
Dimensional Speed Controls	(0.001 to 20) in/min	(300 + 190L) $\mu$ in	In accordance with ASTM E2658

**Mass**

<b>Parameter / Equipment</b>	<b>Range</b>	<b>Expanded Uncertainty of Measurement (+/-)</b>	<b>Reference Standard, Method and/or Equipment</b>
Force in Compression <sup>1</sup> Mechanical Testing Machines and Force Measurement Devices	(60 to 800 000) lbf	0.18 lbf + 0.15 % of reading	In accordance with ASTM E4 using Loading Cells



Mass

Parameter / Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method and/or Equipment
Force in Tension Mechanical Testing Machines and Force Measurement Devices	(45 to 55 000) lbf (45 to 250 000) lbf <sup>3</sup>	0.18 lbf + 0.15 % of reading	In accordance with ASTM E4 using Loading Cells
Force in Compression and Tension <sup>1</sup> Mechanical Testing Machines and Force Measurement Devices	(0.01 to 45 359) g	0.003 g + 0.015 % of reading	In accordance with ASTM E4 using Dead Weights
Pressure Transducers and Analog Gauges	(1 to 10 000) psi	0.005 psi + 0.15 % of reading	In accordance with ASTM D5720
Low Pressure and Vacuum Devices	(0 to 29.5) inHg	0.04 inHg – 0.15 % of reading	In accordance with AASHTO methods

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.  $L$  = length in inches
3. Tension by transfer.
4. This scope is formatted as part of a single document including Certificate of Accreditation No. L1174-1.



Vice President

