



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017
& ANSI/NCSL Z540-1-1994

APPLIED TEST SYSTEMS
154 East Brook Lane
Butler, PA 16002
Devon Rottman Phone: 724 283 1212

CALIBRATION

Valid To: February 28, 2026

Certificate Number: 2132.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following calibrations^{1, 5}:

I. Dimensional

Parameter/Equipment	Range	CMC ² (±)	Comments
Displacement ³	(0.0002 to 0.140) in (0.141 to 0.500) in	71 µin 92 µin	ASTM E83 w/ micrometer heads
	(0.4 to 6) in (10 to 152) mm	0.0023 in 0.059 mm	Calipers and outside micrometers
	Up to 0.005 in (0.005 to 0.025) in (0.025 to 0.2) in (0.2 to 1) in (1 to 2) in	8.8 µin 32 µin 41 µin 180 µin 210 µin	Epsilon 3590 VHR
	Up to 1 in (1 to 2) in	0.000 94 in 0.0016 in	ASTM E2309- 2309M w/ dial indicator



II. Electrical – DC/Low Frequency

Parameter/Equipment	Range	CMC ² (±)	Comments
Electronic Calibration of Thermocouple Indicators ³ –			
Type B	(870 to 1700) °C (1700 to 1800) °C	1.4 °C 1.3 °C	Documenting process or temperature calibrator
Type J	(0 to 760) °C (760 to 1000) °C	0.38 °C 0.58 °C	
Type K	(-200 to 0) °C (0 to 1300) °C	0.82 °C 0.80 °C	
Type N	(0 to 650) °C (650 to 1300) °C	0.57 °C 0.67 °C	
Type R	(0 to 1450) °C (1450 to 1540) °C	1.1 °C 1.4 °C	
Type S	(0 to 1450) °C (1450 to 1540) °C	1.8 °C 1.4 °C	

III. Mechanical

Parameter/Equipment	Range	CMC ^{2, 4, 6} (±)	Comments
Force ³ – Measure			
Tension and Compression	Up to 20.0 lbf Up to 50.0 lbf Up to 150 lbf	0.24 % 0.22 % 0.20 %	ASTM E4 w/ standard/ dead weights
Tension	Up to 10 000 lbf Up to 20 000 lbf Up to 60 000 lbf Up to 100 000 lbf	0.059 % 0.062 % 0.061 % 0.17 %	ASTM E4 w/ proving rings
	(66.4 to 1500) lbf (816 to 12 000) lbf	0.086 % 0.051 %	ASTM E4 w/ S beam load cell
	(26 to 1000) lbf (200 to 10 000) lbf (800 to 25 000) lbf (5000 to 50 000) lbf	0.042 % 0.049 % 0.041 % 0.068 % FS	ASTM E4 w/ load cell

Parameter/Equipment	Range	CMC ^{2, 4, 6} (±)	Comments
Force ³ – Measure (cont) Compression	Up to 10 000 lbf Up to 20 000 lbf Up to 60 000 lbf Up to 100 000 lbf Up to 300 000 lbf (20 to 1000) lbf (200 to 10 000) lbf (796 to 25 000) lbf (5000 to 50 000) lbf	0.059 % 0.075 % 0.098 % 0.17 % 0.23 % 0.056 % 0.047 % 0.048 % 0.068 % FS	ASTM E4 w/ proving rings ASTM E4 w/ load cell
Vacuum, Pressure and Burst Systems ³ – Pneumatic	Up to 100 kPa (2.00 to 2.15) MPa (50 to 600) psi (600 to 3000) psi (1000 to 5000) psi	0.38 kPa 0.0026 MPa 1.00 psi 5.0 psi 2.4 psi	ASTM D6521, AASHTO R28 ASME B40, ASTM D1599, ASTM D1598
Alignment ³ – Course	40 % or Less	1.7 %	ASTM E1012 w/ strain gage
Bending Beam Rheometer Gauge Kit ³ – Special Weights Step Gage & Beam Thickness Beam Widths & Lengths	Up to 220 g (0.05 to 0.400) in (0 to 12) mm (0.401 to 6) in (10.0 to 152) mm	0.004 g 0.000 19 in 0.0043 mm 0.0023 in 0.059 mm	ASTM D6648 AASHTO T313 Micrometer Calipers
Speed ³	0.001 to 0.1 in/min 0.101 to 1.0 in/min	0.6% + 0.000023 in/min 0.41% + 0.00017 in/min	ASTM E2658 w/ dial indicator & stopwatch

IV. Thermodynamics

Parameter/Equipment	Range	CMC ^{2, 6} (±)	Comments
Temperature ³ – Measure	(-40 to 180) °C	0.037 °C	Digital monitor w/ platinum RTD
	(15 to 30) °C (59 to 86) °F	0.35 °C 0.63 °F	Fluke 51 w/ thermocouple

¹ This laboratory offers commercial calibration service and field calibration service.

² Calibration and Measurement Capability Uncertainty (CMC) is the smallest uncertainty of measurement that a laboratory can achieve w/in 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 This laboratory performs field calibration activities for these parameters. Please note the actual measurement uncertainties achievable on a customer's site can normally be expected to be larger than the CMC found on the A2LA Scope. Allowance must be made for aspects such as the environment at the place of calibration and for other possible adverse effects such as those caused by transportation of the calibration equipment. The usual allowance for the actual uncertainty introduced by the item being calibrated, (e.g. resolution) must also be considered and this, on its own, could result in the actual measurement uncertainty achievable on a customer’s site being larger than the CMC.

⁴ In the statement of CMC, percentages are percentage of reading, unless otherwise indicated, FS is defined as full scale.

⁵ This scope meets A2LA’s *P112 Flexible Scope Policy*.

⁶ The type of instrument or material being calibrated is defined by the parameter. This indicates the laboratory is capable of calibrating instruments that measure or generate the values in the ranges indicated for the listed measurement parameter.



Accredited Laboratory

A2LA has accredited

APPLIED TEST SYSTEMS

Butler, PA

for technical competence in the field of

Calibration

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 *General requirements for the competence of testing and calibration laboratories*. This laboratory also meets the requirements of ANSI/NCCL Z540-1-1994 and R205 – Specific Requirements: Calibration Laboratory Accreditation Program. 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).



Presented this 15th day of February 2024.

A blue ink signature of Mr. Trace McInturff, written over a horizontal line.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 2132.01
Valid to February 28, 2026
Revised February 12, 2025

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