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

RECAL CALIBRATION SERVICES
1003A Cresthaven Drive
Euless, TX 76040
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CALIBRATION

Valid To: June 30, 2022 Certificate Number: 1426.01

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, 4] (±) | Comments |
|---|---|---|---|
| Micrometers & Calipers[3] | Up to 14 in | (76 + 36*L*) µin | Micrometer master |
| Dial Indicators (LVDT)[3] | Up to 1 in<br>Up to 2 in | 130 µin<br>150 µin | Indicator calibrator |

II. Electrical – DC/Low Frequency

| Parameter/Equipment | Range | CMC[2, 7] (±) | Comments |
|---|---|---|---|
| Electrical Simulation of Thermocouple Indicating Devices – Generate[3] | (-10 to 32) °F<br>(32 to 500) °F | 2.6 °F<br>1.8 °F | Temperature calibrator with Type K thermocouple |



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III. Mechanical

| Parameter/Equipment | Range | CMC[2, 6] (±) | Comments |
|---|---|---|---|
| Force[3], Compression – Measure | Up to 600 000 lbf | 0.08 % Full Scale | ASTM E4 and standard load cells |
| Force[3], Tension – Measure | Up to 5000 lbf | 0.05 % Full Scale | ASTM E4 and standard load cells |
| Scales & Balances[3] – | | | |
| Analytical Balances | Up to 200 g | 0.0004 % Full Scale | Class 1 weights |
| Top Loader Balances | Up to 20 g<br>(20 to 200) g<br>200 g to 1 kg<br>(1 to 5) kg<br>(5 to 10) kg<br>(10 to 20) kg | 0.0002 % Full Scale<br>0.0002 % Full Scale<br>0.0003 % Full Scale<br>0.0004 % Full Scale<br>0.0014 % Full Scale<br>0.0059 % Full Scale | Class 4 weights |
| Industrial Scales | Up to 300 lb | 0.01 % Full Scale | Class F weights |
| Pressure Gages & Transducers[3] | Up to 300 psi | 0.12 % psi | Standard pressure indicator |
| Vacuum – Measure[3] | Up to 29.5 in Hg | 0.06 in Hg | Standard pressure/vacuum indicator |

IV. Thermodynamics

| Parameter/Equipment | Range | CMC[2, 6] (±) | Comments |
|---|---|---|---|
| Thermometers[3] | (0 to 350) °C | 0.19 °C | PRT/indicator in dry block |
| Temperature – Measure[3] | (0 to 660) °C<br>(0 to 1220) °F | 0.59 °C<br>1.4 °F | Fluke 52 with 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 within its scope of accreditation when performing more or less routine calibrations of nearly ideal measurement standards of 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] Field calibration service is available for this calibration and this laboratory meets A2LA *R104 – General Requirements: Accreditation of Field Testing and Field Calibration Laboratories* for these calibrations. 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 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, *L* is length measured in inches.

[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.

[7] The stated measured values are determined using the indicated instrument (see Comments). This capability is suitable for the calibration of the devices intended to measure or generate the measured value in the ranges indicated. CMCs are expressed as either a specific value that covers the full range or as a percent or fraction of the reading plus a fixed floor specification.

# Accredited Laboratory

A2LA has accredited

## RECAL CALIBRATION SERVICES

*Euless, TX*

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/NCSL 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 2nd day of September 2020.

Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 1426.01
Valid to June 30, 2022

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