SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

BURDHOUSE CALIBRATION AND TESTING LLC
8140 N 32nd St STE B
Richland, MI 49083
Andrew Burd Phone: 260 494 5057

CALIBRATION

Valid To: October 31, 2021 Certificate Number: 5431.02

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following calibrations[1, 6]:

I. Dimensional

Parameter/Equipment	Range	CMC[2] (±)	Comments
Calipers – Dial, Digital & Vernier[3]	Up to 6 in (6 to 12) in	120 µin 350 µin	Gage blocks
Outside Micrometers[3]	Up to 6 in (6 to 12) in	80 µin 110 µin	Gage blocks
Height Gages[3]	Up to 12 in (12 to 24) in	250 µin 450 µin	Gage blocks

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II. Electrical – DC/Low Frequency

Parameter/Equipment	Range	CMC[2, 4] (±)	Comments
Resistance – Measure[3]	Up to 12 Ω (12 to 120) Ω (0.12 to 1.2) kΩ (1.2 to 12) kΩ (12 to 120) kΩ (0.12 to 1.2) MΩ (1.2 to 12) MΩ (12 to 120) MΩ (0.12 to 12) GΩ	0.26 mΩ 1.7 mΩ 11 mΩ 190 mΩ 1.1 Ω 26 Ω 730 Ω 66 kΩ 5.2 MΩ	Keysight 3458A
Electrical Simulation of Thermocouples[3] –			Fluke 743
Type J	(-210 to -100) °C (-100 to 800) °C (800 to 1200) °C	0.52 °C 0.39 °C 0.44 °C	
Type K	(-200 to -100) °C (-100 to 400) °C (400 to 1200) °C (1200 to 1372) °C	0.61 °C 0.50 °C 0.50 °C 0.65 °C	
Type T	(-250 to -200) °C (-200 to 0) °C (0 to 400) °C	1.2 °C 0.55 °C 0.43 °C	

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III. Mechanical

Parameter/Equipment	Range	CMC[2, 5] (±)	Comments
Pressure – Measure[3]	(-15 to 72) psig (73 to 145) psig (145 to 1522) psig (1522 to 3045) psig	0.0062 psi 0.017 psi 0.15 psi 0.30 psi	Mensor CPC6050

IV. Thermodynamics

Parameter/Equipment	Range	CMC[2, 5] (±)	Comments
Temperature – Measure[3]	(-80 to 0) °C (0 to 100) °C (100 to 200) °C	0.060 °C 0.053 °C 0.16 °C	Control Co. 6412

[1] This laboratory offers commercial 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 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] 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 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] 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.

[5] 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.

[6] This scope meets A2LA's *P112 Flexible Scope Policy*.

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Accredited Laboratory

A2LA has accredited

BURDHOUSE CALIBRATION AND TESTING LLC

Richland, MI

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 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).

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Presented this 9th day of December 2019.

Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 5431.02
Valid to October 31, 2021

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