CERTIFICATE OF ACCREDITATION

The ANSI National Accreditation Board

Hereby attests that

JAC Manufacturing, Inc.
701 Industrial Blvd.
Palmyra, WI 53156

Fulfills the requirements of

ISO/IEC 17025:2017

In the field of

CALIBRATION

This certificate is valid only when accompanied by a current scope of accreditation document.
The current scope of accreditation can be verified at www.anab.org.

R. Douglas Leonard Jr., VP, PILR SBU

Expiry Date: 27 November 2022
Certificate Number: L1151-1

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

JAC Manufacturing, Inc.

701 Industrial Blvd.
Palmyra, WI 53156
Don Miller 262-495-2141

CALIBRATION

Valid to: **November 27, 2022** Certificate Number: **L1151-1**

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
DC Current – Source[1]	(0 to 22) mA	575 µA/A + 14 µA	Comparison performed with a Process Calibrator
DC Current – Measure[1]	(0 to 30) mA (30 to 110) mA	207 µA/A + 12 µA 167 µA/A + 49 µA	
DC Voltage – Source[1]	(0 to 110) mV (0.11 to 1.1) V (1.1 to 15) V	100 µV/V + 61 µV 206 µV/V + 210 µV 222 µV/V + 2.6 mV	
DC Voltage – Measure[1]	(0 to 110) mV (0.11 to 1.1) V (1.1 to 11) V (11 to 110) V (110 to 300) V	330 µV/V + 35 µV 300 µV/V + 290 µV 300 µV/V + 2.9 mV 531 µV/V + 29 mV 521 µV/V + 80 mV	
Thermocouple Millivolt Simulation – Source[1]	Type E (-200 to 1 000) °C Type N (-200 to 1 300) °C Type J (-210 to 1 200) °C Type K (-200 to 1 372) °C Type T (-200 to 400) °C Type B (600 to 1 820) °C	 0.9 °C 1.1 °C 0.9 °C 1 °C 1 °C 1.5 °C	Comparisons performed with a Process Calibrator and Electronic Thermometer

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Thermocouple Millivolt Simulation – Source[1]	Type R (-20 to 1 767) °C Type S (0 to 1 760) °C Type C (0 to 2 316) °C	1.7 °C 1.7 °C 1.5 °C	Comparisons performed with a Process Calibrator and Electronic Thermometer
Thermocouple Millivolt Simulation – Measure[1]	Type E (-200 to 1 000) °C Type N (-200 to 1 300) °C Type J (-210 to 1 200) °C Type K (-200 to 1 372) °C Type T (-200 to 400) °C Type B (600 to 1 820) °C Type R (-20 to 1 767) °C Type S (0 to 1 760) °C Type C (0 to 2 316) °C	1 °C 1.5 °C 1.1 °C 1.2 °C 1.1 °C 1.8 °C 2 °C 2 °C 2.5 °C	Comparisons performed with a Process Calibrator and Electronic Thermometer

Thermodynamic

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Humidity Measure[1]	(10 to 90) % RH	3.4 % RH	Comparison performed with a Thermo-hygrometer
Temperature Measure[1] (System Accuracy Test)	(-200 to 1 100) °C	1.6 °C	Comparison performed with a Process Calibrator and Thermocouple

Thermodynamic

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Temperature Uniformity Calibration Surveys[1] Type J Type K	 (-100 to 300) °C (300 to 1 100) °C	 2.3 °C	Comparisons performed with a Multi-Channel Recorder and Thermocouples per Current AMS 2750

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 all parameters, 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. This scope is formatted as part of a single document including Certificate of Accreditation No. L1151-1.

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