



# CERTIFICATE OF ACCREDITATION

**ANSI-ASQ National Accreditation Board**

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

This is to certify that

**JAC Manufacturing, Inc.**

**701 Industrial Blvd.**

**Palmyra, WI 53156**

has been assessed by ANAB  
and meets the requirements of international standard

**ISO/IEC 17025:2005**

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.

L1151-1  
Certificate Number

  
ANAB Approval

Certificate Valid: 06/07/2018-11/27/2019  
Version No. 001 Issued: 06/07/2018



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**

**JAC Manufacturing, Inc.**

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

**CALIBRATION**

Valid to: **November 27, 2019**

Certificate Number: **L1151-1**

**Electrical – DC/Low Frequency**

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
DC Current – Source	(0 to 22) mA	575 $\mu$ A/A + 14 $\mu$ A	Comparison performed with a Process Calibrator
DC Current – Measure	(0 to 30) mA (30 to 110) mA	207 $\mu$ A/A + 12 $\mu$ A 167 $\mu$ A/A + 49 $\mu$ A	
DC Voltage – Source	(0 to 110) mV (0.11 to 1.1) V (1.1 to 15) V	100 $\mu$ V/V + 61 $\mu$ V 206 $\mu$ V/V + 210 $\mu$ V 222 $\mu$ V/V + 2.6 mV	
DC Voltage – Measure	(0 to 110) mV (0.11 to 1.1) V (1.1 to 11) V (11 to 110) V (110 to 300) V	330 $\mu$ V/V + 35 $\mu$ V 300 $\mu$ V/V + 290 $\mu$ V 300 $\mu$ V/V + 2.9 mV 531 $\mu$ V/V + 29 mV 521 $\mu$ V/V + 80 mV	
Thermocouple Millivolt Simulation – Source	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**

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

**Thermodynamic**

<b>Parameter/Equipment</b>	<b>Range</b>	<b>Expanded Uncertainty of Measurement (+/-)</b>	<b>Reference Standard, Method, and/or Equipment</b>
Humidity Measure	(10 to 90) % RH	3.4 % RH	Comparison performed with a Thermo-hygrometer
Temperature Measure (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 Type J Type K	(-100 to 300) °C (300 to 1 100) °C	2.3 °F	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.

Vice President

