



PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

Perry Johnson Laboratory Accreditation, Inc. has assessed the Laboratory of:

CALSER Calibrations, LLC
110 E. 6th Street, St. Jacob, IL 62281

(Hereinafter called the Organization) and hereby declares that Organization 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 (as outlined by the joint ISO-ILAC-IAF Communiqué dated April 2017):

***Dimensional, Mass, Force and Weighing,
Mechanical, and Thermodynamic Calibration***
(As detailed in the supplement)

Accreditation claims for such testing and/or calibration services shall only be made from addresses referenced within this certificate. This Accreditation is granted subject to the system rules governing the Accreditation referred to above, and the Organization hereby covenants with the Accreditation body's duty to observe and comply with the said rules.

For PJLA:

Tracy Szerszen
President/Operations Manager

Initial Accreditation Date:

January 10, 2017

Issue Date:

December 27, 2018

Expiration Date:

April 30, 2021

Accreditation No.:

93329

Certificate No.:

L18-595

Perry Johnson Laboratory
Accreditation, Inc. (PJLA)
755 W. Big Beaver, Suite 1325
Troy, Michigan 48084

The validity of this certificate is maintained through ongoing assessments based on a continuous accreditation cycle. The validity of this certificate should be confirmed through the PJLA website: www.pjilabs.com



Certificate of Accreditation: Supplement

CALSER Calibrations, LLC

110 E. 6th Street, St. Jacob, IL 62281

Contact Name: Cristy Bohnenstiehl Phone: 618-277-0329

Accreditation is granted to the facility to perform the following calibrations:

Dimensional

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE OR NOMINAL DEVICE SIZE AS APPROPRIATE	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (\pm)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED
Indicators and LVDTs ^o	0.05 in to 1 in	578 μ in	Non-Rotating Spindle Micrometer Linear Measurement (CAL60) TP-5
Indicators, LVDTs, and Calipers ^o	0.05 in to 11 in	190 μ in	Gage Blocks TP-4 & TP-7
Indicators, LVDTs, and Internal XHD Displacement ^o	0.5 in to 18 in	1 500 μ in	Height Gage (with Dial Indicator) E2309, D4767, and TP-6

Mass, Force, and Weighing Devices

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE OR NOMINAL DEVICE SIZE AS APPROPRIATE	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (\pm)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED
Balances ^o	1 g to 1 kg	($1.15 \times 10^{-2} + 1.05 \times 10^{-4}Wt$) g	NIST Class F Weights Calser Procedure 4
Force/Compression Testing Machines, Load Cells, and Load Rings ^o	40 lbf to 1 000 lbf	0.2 lbf	Load Cells (with Digital Readout Systems) ASTM E4, D4767, TP-1 & TP-3
	1 000 lbf to 10 000 lbf	3 lbf	
	10 000 lbf to 100 000 lbf	35 lbf	
	100 000 lbf to 1 000 000 lbf	127 lbf	
Scales ^o	1 kg to 30 kg	($4.95 \times 10^{-2} + 1.14 \times 10^{-4}Wt$) g	NIST Class F Weights Calser Procedure 4
	1 lb to 100 lb	($1.16 \times 10^{-1} + 5.82 \times 10^{-6}Wt$) g	
	100 lb to 200 lb	($1.15 + 1.73 \times 10^{-6}Wt$) g	

Mechanical

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE OR NOMINAL DEVICE SIZE AS APPROPRIATE	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (\pm)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED
Pressure-Pneumatic Gages and Transducers ^o	10 psi to 300 psi	0.2 psi	Pressure Transducer System (with Digital Readout Systems) D4767 & TP-2
Vacuum System and Vacuum Gauges ^o	1 inHg to 30 inHg	0.04 inHg	Transducer Based Pressure Measuring Equipment ASTM D 2041 & TP-12



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Accreditation is granted to the facility to perform the following calibrations:

Thermodynamic

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE OR NOMINAL DEVICE SIZE AS APPROPRIATE	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (\pm)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED
Liquid in Glass Thermometers RTD, Thermocouples ^{FO}	15 °F to 230 °F	0.3 °F	Calser Procedures 27 & 32 Fluke 9102S Dry Block Calibrator
	230 °F to 482 °F	1.1 °F	Calser Procedures 27 & 32 Fluke 9100S Dry Block Calibrator
	482 °F to 690 °F	2.2 °F	
Laboratory Ovens System Accuracy ^{FO}	70 °F to 1 000 °F	3.7 °F	Data Loggers, TP-11

- The CMC (Calibration and Measurement Capability) stated for calibrations included on this scope of accreditation represents the smallest measurement uncertainty attainable by the laboratory when performing a more or less routine calibration of a nearly ideal device under nearly ideal conditions. It is typically expressed at a confidence level of 95 % using a coverage factor k (usually equal to 2). The actual measurement uncertainty associated with a specific calibration performed by the laboratory will typically be larger than the CMC for the same calibration since capability and performance of the device being calibrated and the conditions related to the calibration may reasonably be expected to deviate from ideal to some degree.
- The laboratories range of calibration capability for all disciplines for which they are accredited is the interval from the smallest calibrated standard to the largest calibrated standard used in performing the calibration. The low end of this range must be an attainable value for which the laboratory has or has access to the standard referenced. Verification of an indicated value of zero in the absence of a standard is common practice in the procedure for many calibrations but by its definition it does not constitute calibration of zero capacity.
- The presence of a superscript FO means that the laboratory performs calibration of the indicated parameter both at its fixed location and onsite at customer locations. Example: Outside Micrometer^{FO} would mean that the laboratory performs this calibration at its fixed location and onsite at customer locations.
- The presence of a superscript O means that the laboratory performs calibration of the indicated parameter onsite at customer locations. Example: Outside Micrometer^O would mean that the laboratory performs this calibration onsite at the customer's location.
- Measurement uncertainties obtained for calibrations performed at customer sites can be expected to be larger than the measurement uncertainties obtained at the laboratories fixed location for similar calibrations. This is due to the effects of transportation of the standards and equipment and upon environmental conditions at the customer site which are typically not controlled as closely as at the laboratories fixed location.
- The term Wt represents weight in pounds or grams (including SI multiple and submultiple units) appropriate to the uncertainty statement.