



PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

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

SICAMING México, S.A. de C.V.

Dr. Gustavo Baz No. 317, Col. Hipico

Metepec, Estado de México, México. C.P. 52156

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

***Mechanical, Thermodynamic, Dimensional, and Mass, Force and Weighing
Devices 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

Initial Accreditation Date:

July 6, 2022

Issue Date:

July 6, 2022

Expiration Date:

October 31, 2024

Revision Date:

January 15, 2023

Accreditation No.:

117896

Certificate No.:

L22-485-R1

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.pjllabs.com



Certificate of Accreditation: Supplement

SICAMING México, S.A. de C.V.

Dr. Gustavo Baz No. 317, Col. Hipico
 Metepec, Estado de México, México. C.P. 52156
 Contact Name: José Angel Felix Phone: 722-270-0239

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

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
Differential Pressure Electronic & Analytical Gauge ^{FO}	-1 245 to 3 735 Pa	0.76 Pa	Pressure Gage Druck PACE1002 Pressure Gage Alnor 560 CEM ME-020 CENAM Technical Guide
	-6 854 Pa to 6 854 Pa	0.76 Pa	Pressure Gage Druck PACE1002 Pressure Gage Additel ADT681-05-DP30-H ₂ O CEM ME-020 CENAM Technical Guide
Digital Gauges, Manometric Gauges, Transducers and Transmitters ^{FO}	0.001 psi to 200 psi (6.894 7 Pa to 1.38 MPa)	0.042 psi (0.29 kPa)	Pressure Gage Druck PACE1002 Pressure Gage Ametek CP 200 CINDG NMX-CH-003-SCFI NOM-013-SCFI CENAM Technical Guide
	0.001 psi to 500 psi (6.894 7 Pa to 3.45 MPa)	0.042 psi (0.29 kPa)	Pressure Gage Druck PACE1002 Pressure Gage Additel ADT681-02-CP500-PSI-N-X Pressure Gage Additel ADT686-05-GP500-PSI-N NMX-CH-003-SCFI NOM-013-SCFI CENAM Technical Guide
Digital and Pressure Gauges, Transducers and Transmitters (Negative/Vacuum Pressure) ^{FO}	-12 psi to 0.001 psi (-82 737 Pa to 6.894 7 Pa)	0.017 psi (0.12 kPa)	Pressure Gage Druck PACE1002 Pressure Gage Additel ADT681-02-CP500-PSI-N-X Pressure Gage Additel ADT686-05-GP500-PSI-N NOM-013-SCFI NMX-CH-003-SCFI CENAM Technical Guide
Safety Valves ^{FO}	Up to 200 psi (Up to 1.38 MPa)	0.042 psi (0.29 kPa)	Pressure Gage Druck PACE1002 Pressure Gage Ametek CP 200 CINDG NOM-093-SCFI



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Safety Valves ^{FO}	Up to 500 psi (Up to 3.45 MPa)	0.042 psi (0.29 kPa)	Pressure Gage Druck PACE1002 Pressure Gage Additel ADT681-02-CP500-PSI-N-X Pressure Gage Additel ADT686-05-GP500-PSI-N NOM-093-SCFI

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 ^{FO}	-25 °C to 125 °C	0.19 °C	Platinum Resistance Thermometer Accumac Temperature Gauge Micro-Bath Fluke 7103 NOM-011-SCFI
Indicators and Register Temperature Devices with RTD Sensor ^{FO}	28 °C to 600 °C	0.11 °C	Platinum Resistance Thermometer Accumac Temperature Gauge Ametek CTC-660A CEM TH-001
	-40 °C to 140 °C	0.061 °C	Platinum Resistance Thermometer Accumac Temperature Gauge Kaye Instruments LTR-40/140 CEM TH-001
Bimetallic and Capillary Thermometer ^{FO}	28 °C to 300 °C	0.10 °C	Platinum Resistance Thermometer Accumac Temperature Gauge Ametek CTC-660A NOM-CH-70-SCFI CENAM Technical Guide



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Bimetallic and Capillary Thermometer ^{FO}	-40 °C to 140 °C	0.061 °C	Platinum Resistance Thermometer Accumac Temperature Gauge Kaye Instruments LTR-40/140 NOM-CH-70-SCFI CENAM Technical Guide
Direct Reading Thermometer, Thermistors and Transducer ^{FO}	28 °C to 600 °C	0.12 °C	Platinum Resistance Thermometer Accumac Temperature Gauge Ametek CTC-660A CEM TH-001
	-40 °C to 140 °C	0.061 °C	Platinum Resistance Thermometer Accumac Temperature Gauge Kaye Instruments LTR-40/140 CEM TH-001
Indicators Temperature with Thermocouple B Sensor ^{FO}	28 °C to 600 °C	0.12 °C	Platinum Resistance Thermometer Accumac Temperature Gauge Ametek CTC-660A ASTM E220-07A CENAM Technical Guide
	-40 °C to 140 °C	0.061 °C	Platinum Resistance Thermometer Accumac Temperature Gauge Kaye Instruments LTR-40/140 ASTM E220-07A CENAM Technical Guide
Indicators Temperature with Thermocouple E Sensor ^{FO}	28 °C to 600 °C	0.12 °C	Platinum Resistance Thermometer Accumac Temperature Gauge Ametek CTC-660A ASTM E220-07A CENAM Technical Guide



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Indicators Temperature with Thermocouple E Sensor ^{FO}	-40 °C to 140 °C	0.061 °C	Platinum Resistance Thermometer Accumac Temperature Gauge Kaye Instruments LTR-40/140 ASTM E220-07A CENAM Technical Guide
Indicators Temperature with Thermocouple J Sensor ^{FO}	28 °C to 600 °C	0.12 °C	Platinum Resistance Thermometer Accumac Temperature Gauge Ametek CTC-660A ASTM E220-07A CENAM Technical Guide
	-40 °C to 140 °C	0.061 °C	Platinum Resistance Thermometer Accumac Temperature Gauge Kaye Instruments LTR-40/140 ASTM E220-07A CENAM Technical Guide
Indicators Temperature with Thermocouple K Sensor ^{FO}	28 °C to 600 °C	0.12 °C	Platinum Resistance Thermometer Accumac Temperature Gauge Ametek CTC-660A ASTM. E220-07A CENAM Technical Guide
	-40 °C to 140 °C	0.061 °C	Platinum Resistance Thermometer Accumac Temperature Gauge Kaye Instruments LTR-40/140 ASTM E220-07A CENAM Technical Guide
Indicators Temperature with Thermocouple R Sensor ^{FO}	-28 °C to 600 °C	0.12 °C	Platinum Resistance Thermometer Accumac Temperature Gauge Ametek CTC-660A ASTM E220-07A CENAM Technical Guide



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Indicators Temperature with Thermocouple S Sensor ^{FO}	0 °C to 140 °C	0.061 °C	Platinum Resistance Thermometer Accumac Temperature Gauge Kaye Instruments LTR-40/140 ASTM E220-07A CENAM Technical Guide
Indicators Temperature with Thermocouple S Sensor ^{FO}	28 °C to 600 °C	0.12 °C	Platinum Resistance Thermometer Accumac Temperature Gauge Ametek CTC-660A ASTM E220-07A CENAM Technical Guide
	0 °C to 140 °C	0.061 °C	Platinum Resistance Thermometer Accumac Temperature Gauge Kaye Instruments LTR-40/140 ASTM E220-07A CENAM Technical Guide
Indicators Temperature with Thermocouple T Sensor ^{FO}	28 °C to 350 °C	0.10 °C	Platinum Resistance Thermometer Accumac Temperature Gauge Ametek CTC-660A ASTM E220-07A CENAM Technical Guide
	-40 °C to 140 °C	0.061 °C	Platinum Resistance Thermometer Accumac Temperature Gauge Kaye Instruments LTR-40/140 ASTM E220-07A CENAM Technical Guide
Thermohygrometer ^F	0 °C to 60 °C	0.56 °C	Humidity And Temperature Indicator Vaisala MI70 (indicador), HMP76 (sensor) Incubator-refrigerator Mettler IPP30plus, Climatic Chamber Mettler ICH110 TH-007 CEM CENAM Technical Guide



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Thermohygrometer and Hygrometer ^F	10 % RH to 80 % RH	1.2 % RH	Humidity and Temperature Indicator Vaisala, MI70 (indicador), HMP76 (sensor) Climatic Chamber Memmert ICH110 TH-007 CEM CENAM Technical Guide
Equipment with Sensor and Humidity Control ^O	0 % RH to 100 % RH	1.2 % RH	

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
Vernier Calipers ^F	0.01 mm to 300 mm	0.000 82 mm	Gauge Blocks Grade 0 Mitutoyo, Inside Micrometer Checker, Depth Micro Checker DI-008 CEM CENAM Technical Guide
Outside Micrometer ^F	0.001 mm to 300 mm	0.000 90 mm	Gauge Blocks Grade 0 Mitutoyo DI-005 CEM NMX-CH-099-IMNC CENAM Technical Guide
Inside Micrometer ^F	0.001 mm to 300 mm	0.000 88 mm	Gauge Blocks Grade 0 Mitutoyo DI-021 CEM CENAM Technical Guide
Depth Micrometer ^F	0.001 mm to 300 mm	0.000 88 mm	Gauge Blocks Grade 0 Mitutoyo DI-005 CEM CENAM Technical Guide
Dial Indicator ^F	0.001 mm to 25 mm	0.000 71 mm	Gauge Blocks Grade 0 Mitutoyo DI-010 CEM CENAM Technical Guide



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

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
Mass Weight Class F1 ^F	1 mg	0.007 1 mg	Class E2 Weights Set ME-025 Double Substitution CENAM Technical Guide
	2 mg	0.007 1 mg	
	5 mg	0.007 1 mg	
	10 mg	0.008 6 mg	
	20 mg	0.010 mg	
	50 mg	0.014 mg	
	100 mg	0.017 mg	
	200 mg	0.020 mg	
	500 mg	0.027 mg	
	1 g	0.034 mg	
	2 g	0.046 mg	
	5 g	0.055 mg	
	10 g	0.071 mg	
	20 g	0.086 mg	
	50 g	0.10 mg	
	100 g	0.28 mg	
200 g	0.41 mg		
Mass Weight Class F2 ^F	1 mg	0.020 mg	Class F1 Weights Set ME-025 Double Substitution CENAM Technical Guide
	2 mg	0.020 mg	
	5 mg	0.020 mg	
	10 mg	0.027 mg	
	20 mg	0.033 mg	
	50 mg	0.040 mg	
	100 mg	0.053 mg	
	200 mg	0.067 mg	
	500 mg	0.083 mg	
	1 g	0.10 mg	
	2 g	0.14 mg	
	5 g	0.17 mg	
	10 g	0.20 mg	
	20 g	0.27 mg	
50 g	0.33 mg		



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Mass Weight Class F2 ^F	100 g	0.55 mg	Class F1 Weights Set ME-025 Double Substitution CENAM Technical Guide
	200 g	1.0 mg	
	500 g	2.7 mg	
	1 kg	0.055 mg	
	2 kg	0.010 mg	
	5 kg	0.034 g	
	10 kg	0.055 g	
	20 kg	0.10 g	
Mass Weight Class M ^F	1 mg	0.067 mg	
	2 mg	0.067 mg	
	5 mg	0.067 mg	
	10 mg	0.083 mg	
	20 mg	0.10 mg	
	50 mg	0.13 mg	
	100 mg	0.17 mg	
	200 mg	0.20 mg	
	500 mg	0.27 mg	
	1 g	0.33 mg	
	2 g	0.40 mg	
	5 g	0.50 mg	
	10 g	0.67 mg	
	20 g	0.83 mg	
	50 g	1.0 mg	
	100 g	1.7 mg	
	200 g	3.3 mg	
	500 g	8.3 mg	
	1 kg	0.017 g	
	2 kg	0.041 g	
5 kg	0.086 g		
10 kg	0.17 g		
20 kg	0.41 g		



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Mass Weight Class M2 ^F	100 mg	0.53 mg	Class F1 Weights Set ME-025 Double Substitution CENAM Technical Guide
	200 mg	0.67 mg	
	500 mg	0.83 mg	
	1 g	1.0 mg	
	2 g	1.3 mg	
	5 g	1.7 mg	
	10 g	2.0 mg	
	20 g	2.7 mg	
	50 g	3.3 mg	
	100 g	5.3 mg	
	200 g	10 mg	
	500 g	27 mg	
	1 kg	0.055 mg	
	2 kg	0.10 g	
	5 kg	0.27 g	
Mass Weight Class M3 ^F	10 kg	0.53 g	
	20 kg	1.0 g	
	1 g	3.3 mg	
	2 g	4.0 mg	
	5 g	5.3 mg	
	10 g	6.7 mg	
	20 g	8.3 mg	
	50 g	10 mg	
	100 g	17 mg	
	200 g	33 mg	
500 g	86 mg		
1 kg	0.17 g		
2 kg	0.33 g		
5 kg	0.83 g		
10 kg	1.7 g		
20 kg	3.3 g		



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Low and Medium Range Weighing Instruments ^{FO}	1 mg to 500 g (Res.= 0.01 mg)	1.2 mg	Class E2 Weights Set CENAM Technical Guide
	1 g to 20 kg (Res.= 0.001 kg)	0.71 g	Class F1 Weights Set CENAM Technical Guide
	20 kg to 500 kg (Res=0.01 kg)	17 g	OIML Class M1 CENAM Technical Guide

- 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 F means that the laboratory performs calibration of the indicated parameter at its fixed location. Example: Outside Micrometer^F would mean that the laboratory performs this calibration at its fixed location.
- 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.
- 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.
- 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.