



SIGMA

Sistema de Gestión Metrológica S.A de C.V.

Asunción #201, Col. Paraje Santa Rosa Sur, CP 66607

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NUESTROS SERVICIOS DE CALIBRACIÓN EN LAS MAGNITUDES.

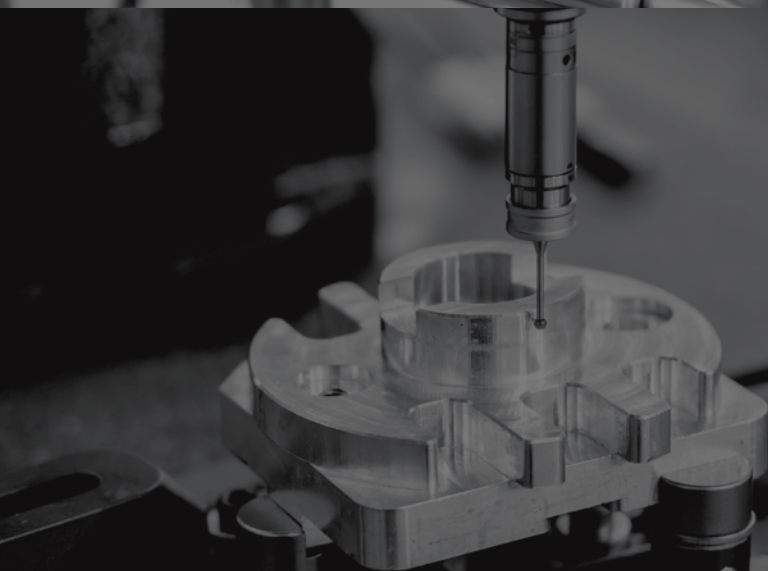


**LABORATORIO ACREDITADO ISO/IEC 17025 2017
ACREDITACIONES 109337 L20-313-R1 Y L20-724**

DIMENSIONAL

- Máquinas de medición por coordenadas (Cmm)
- Brazos articulados (Cmm portátiles)
- Inspección dimensional con escáner
- Inspección dimensional con brazo articulado
- Micrómetros de exteriores
- Micrómetros de interiores
- Micrómetros de profundidad
- Vernier
- Cinta métrica
- Mesas de planitud
- Medidores de alturas (pie de rey)
- Indicadores
- Transportadores de ángulos
- Medidor de espesores
- Calibrador de espesores





MASA

Básculas

- 20 g - 200 g (res= .01g)
- 200 g - 2 kg (res= .1 g)
- 2 kg - 5 kg (res= 1g)
- 20 kg - 200 kg (res= 10g)
- 100 kg - 1000 kg (res= .5 kg)

TIEMPO Y FRECUENCIA

- Tacómetros
- Cronómetros
- Timers

TERMODINÁMICA

- Termómetros
- Pirómetros
- Hornos
- Muflas
- Enfriadores
- Cámaras de temperatura
- Termohigrómetros

TORQUE

Torquímetros

- De todo tipo con alcance hasta 37 Nm (327 in/lb)

PRESIÓN

Manómetros

- Hasta 69 000 kpa (10,000 psi)

Vacuómetros

- Hasta 103 kps (-15 psi)

ELÉCTRICA

- Voltímetros
- Hipot
- Medidores de resistencia





REPARACIÓN

- Realizamos cualquier tipo de reparación para sus equipos de metrología, dimensional, eléctrica, torque, masas, eléctrica, por mencionar algunos con refacciones originales.

VENTA DE EQUIPO

- Herramientas manuales.
- Instrumentos de medición.
- Mesas de Mármol.
- Máquinas de medición por coordenadas.
- Accesorios para Cmm.
- Accesorios para brazos articulados. (Cmm portátiles)

CAPACITACIÓN

- En máquinas de medición coordenadas en varias marcas y software.
- Brazos articulados (Cmm portátiles) en varias marcas y software.
- Uso, manejo y calibración de instrumentos de medición.
- Interpretación y aplicación de GD&T (Tolerancias Geométricas).



VENTA DE EQUIPOS

SIGMA le ofrece productos de calidad mundial cumpliendo con los estándares internacionales y a precios muy competitivos en el mercado ayudando con esto en la reducción de costo a su empresa en la compra de equipo. Le ofrece soluciones en requerimientos de equipos. Como lo es en.

- Herramientas manuales.
- Instrumentos de medición.
- Mesas de Mármol.
- Máquinas de medición por coordenadas.
- Accesorios para Cmm.
- Accesorios para brazos articulados. (Cmm portátiles)
- Venta de brazos articulados con experiencia!

CAPACITACIÓN

- En máquinas de medición coordenadas en varias marcas y software.
Brazos articulados (Cmm portátiles) en varias marcas y software.
Uso, manejo y calibración de instrumentos de medición.
Interpretación y aplicación de GD&T (Tolerancias Geométricas).





Todos nuestros servicios y cursos, así como nuestro personal están reconocidos por la STPS como agentes capacitadores externos y cuentan con validez oficial.

“Capacitarse y mejorar continuamente determina el éxito de su negocio”



UNI- DADES DE NEGOCIO



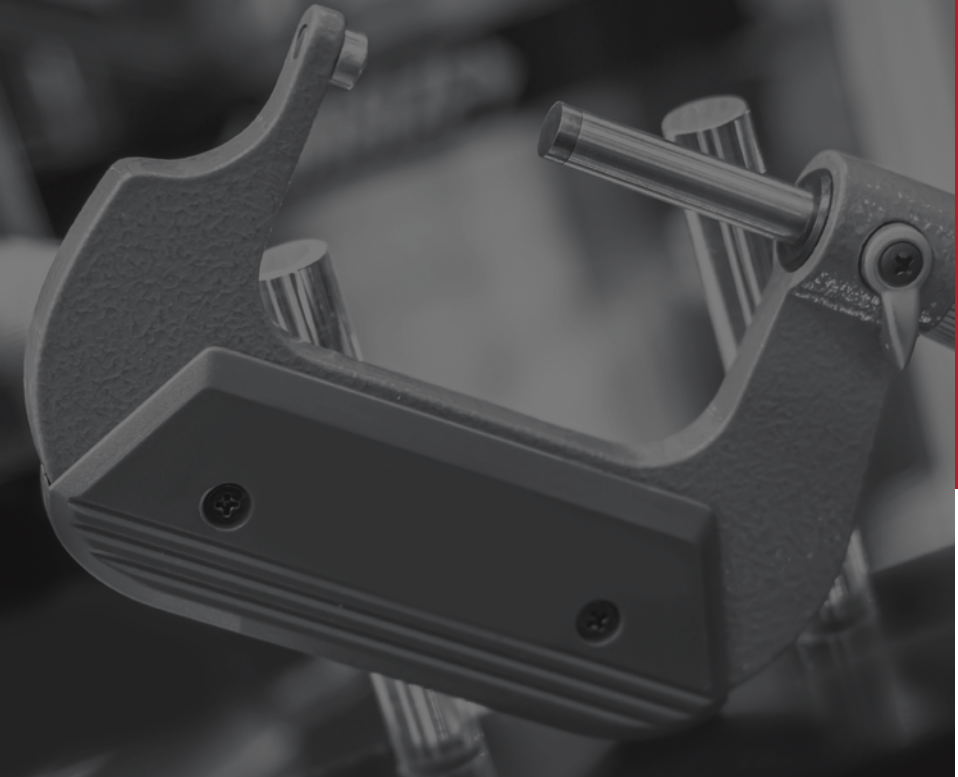
LABORATORIO DE CALIBRACIÓN

SIGMA Le proporciona soluciones en el mantenimiento de su sistema metrológico en base a las calibraciones de sus equipos en tiempo y forma. Le da seguimiento para así reducirle costo en desviar recurso humano y evitarle costos extraordinarios proporciona soluciones de capacitación a su personal encargado a su sistema metrológico colabora en soluciones a sus necesidades.

REPARACIÓN DE EQUIPOS

Realizamos cualquier tipo de reparación para sus equipos de metrología, dimensional, eléctrica, torque, masas, eléctrica, por mencionar algunos con refacciones originales.





NUES- TROS CLIENTES





PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

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

Sistema de Gestión Metrológica, S.A. de C.V.

*Asunción 201, Col. Paraje Santa Rosa
Apodaca, Nuevo León, México. C.P. 66607*

*(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):

***Dimensional, Mass, Force and Weighing Devices, Time and Frequency,
Thermodynamic, Mechanical and Electrical 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:

May 27, 2020

Issue Date:

May 27, 2020

Expiration Date:

June 30, 2022

Revision Date:

November 29, 2020

Accreditation No.:

109337

Certificate No.:

L20-313-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

Sistema de Gestión Metrológica. S.A. de C.V.

Asunción 201, Col. Paraje Santa Rosa
Apodaca, Nuevo León, México. C.P. 66607
Contact Name: Claudia Silvina Saucedá Huerta Phone: 818-082-2565

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
Outside Micrometer ^{FO}	0.1 mm to 508 mm	$(1.46 + 2.09 \times 10^{-3}L) \mu\text{m}$	Comparison Master Block Jingstone Grade 0 JIS B 7502
Inside Micrometer ^{FO}	1 mm to 300 mm	$(1.28 + 7.33 \times 10^{-3}L) \mu\text{m}$	
Depth Micrometer ^{FO}	1 mm to 300 mm	$(1.16 + 7.79 \times 10^{-3}L) \mu\text{m}$	
Calipers ^{FO}	0.1 mm to 1 000 mm	$(11.46 + 3.36 \times 10^{-4}L) \mu\text{m}$	Comparison Master Block Jingstone Grade 0 JIS B 7507
Flexometers ^{FO}	0.1 mm to 1 000 mm	$(0.07 + 0.059L) \text{mm}$	Comparison Rule Master Mitutoyo JIS B 7512
Granite Surface Plates Flatness Only ^{FO}	300 mm to 3 600 mm	$(5.342 + 3.51 \times 10^{-3}D) \mu\text{m}$	Level Electronics Mahr Federal JIS B 7513
Height Caliper ^{FO}	12.7 mm to 609.6 mm	$(11.49 + 4.27 \times 10^{-3}L) \mu\text{m}$	Comparison Master Block Jingstone Grade 0 JIS B 7517
Ping Gages ^{FO}	0.152 mm to 25.4 mm	$(2.26 + 1.6 \times 10^{-2}L) \mu\text{m}$	Micrometer Jingstone Asme B 89.1.5
Dial Indicators ^{FO}	0.1 mm to 25.4 mm	$(2.49 + 1.28 \times 10^{-2}L) \mu\text{m}$	Calibration Tester Mitutoyo UDT-2 JIS B 7503
Protactor Angle Meter ^{FO}	0° to 90°	0.38°	Angle Blocks NMX-CH-151
Thickness Gages ^{FO}	0.022 mm to 1 mm	$(2.37 + 0.8L) \mu\text{m}$	Thickness Gages ASTM E 797
Feeler Gauge ^{FO}	0.03 mm to 0.9 mm	$(11.6 + 1.03 \times 10^{-1}L) \mu\text{m}$	Micrometer Digital JIS B 7524
Coordinate Measuring Machines (CMM) Verification Length Error ^O	Up to 2 000 mm	$(0.25 + 8.4 \times 10^{-4}L) \text{mm}$	ISO 10360-2 ISO 10360-5 & ASME B 89.4.10360.2 Gauge Block
Coordinate Measuring Machines (CMM) Verification Volumetric Measuring Error ^O	Up to 2 000 mm	0.51 μm	Master Spheres ISO 10360-5
Articulated Arm (ACMM) Verification ^{FO}	Up to 3 000 mm	$(10.77 + 0.013L) \text{mm}$	Spheres Bar Blocks Master Grade 0 ASME B89.4.22 ISO 10360-12



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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
Balances ^{FO}	20 g to 200 g (Res.= 0.01 g)	$(1.2 \times 10^{-2} + 2.5 \times 10^{-8} \text{Wt}) \text{ g}$	Class F1 Weights CENAM, Technical Guide
	200 g to 2 kg (Res.= 0.1 g)	$(1.2 \times 10^{-1} + 2.6 \times 10^{-8} \text{Wt}) \text{ g}$	
	2kg to 5 kg (Res.= 1 g)	$(1.2 + 7.8 \times 10^{-7} \text{Wt}) \text{ g}$	Class M2 Weights CENAM, Technical Guide
	20 kg to 200 kg (Res.= 10 g)	$(1.2 + 2.4 \times 10^{-6} \text{Wt}) \text{ g}$	
	100 kg to 1 000 kg (Res.= 0.5 kg)	$(577 + 4.4 \times 10^{-8} \text{Wt}) \text{ g}$	

Time and Frequency

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
Equipment to Output RPM ^{FO}	6 rpm to 4 000 rpm	0.000 25 rpm + 0.001 rpm	No contact, Tachometer AS432B UNI-T UT370
Equipment to Output Time ^{FO}	Up to 3 600 s	16 s/day	Extech Hw30 Stopwatch 0.01 s ITTC-7.6-02-07

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
Temperature-Measure Thermometers Radiations ^{FO}	50 °C to 1 200°C	0.8 °C	Infrared Blackbody Presys T-1200PH CENAM Technical Guide
Temperature Generation Ovens, Furnaces, Muffles And Freezers ^{FO}	0 °C to 1 300 °C	1.7 °C	Fluke 754 with TC Type J Temperature Calibration CENAM Technical Guide
Thermo Hygrometer ^{FO}	30 % RH to 90 % RH	2 % RH	Psychrometer CEM Model DT-321s Humidity Chamber Complete Calibrator Euramet-cg-20
	25 °C to 50 °C	0.24 °C	



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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
Torque Meter Clockwise and Counter Clockwise ^{FO}	0.11 N·m to 1.13 N·m	0.006 4 N·m	ISO 6789 NMX-CH-6789-IMNC Torque Tester Mountz (BMX10L) PTT
Torque Meter Clockwise ^{FO}	1.13 N·m to 11.3 N·m	0.066 N·m	ISO 6789 NMX-CH-6789-IMNC Torque Tester Mountz (BMX100I) PTT NOM-013-SCFI
	3.68 N·m to 36.87 N·m	0.066 N·m	
Pressure ^{FO}	-103.42 kPa to -6.89 kPa	0.2 % of reading	Pressure Gauge 700 PV4 Fluke 754 Euramet-cg-17
	6.89 kPa to 68.94 kPa	0.2 % of reading	
	68.94 kPa to 3 447 kPa	0.15 % of reading	Pressure Gauge 750 P07 Fluke 754 Euramet-cg-17 NOM-013-SCFI
	689.47 kPa to 6894.76 kPa	0.15 % of reading	Pressure Gauge 700 P08 Fluke 754 Euramet-cg-17 NOM-013-SCFI
	6 894.76 kPa to 68 947.57 kPa	0.1 % of reading	Manometer Crystal Euramet-cg-17 NOM-013-SCFI

Electrical

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
Temperature Calibration, Indication and Control Equipment used with Thermocouple Type B ^{FO}	600 °C to 800 °C	0.44 °C	Fluke 754 Electrical Simulation of Thermocouple Output ASTM E 230
	600 °C to 1 000 °C	0.34 °C	
	1 000 °C to 1 550 °C	0.3 °C	
	1 550 °C to 1 820 °C	0.26 °C	
Temperature Calibration, Indication and Control Equipment used with Thermocouple Type C ^{FO}	0 °C to 150 °C	0.3°C	
	150 °C to 650 °C	0.26°C	
	650 °C to 1 000 °C	0.31°C	
	1 000 °C to 1 800 °C	0.5°C	
	1 800 °C to 2 316 °C	0.84°C	



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Temperature Calibration, Indication and Control Equipment used with Thermocouple Type E	-250 °C to -100 °C	0.5 °C	Fluke 754 Electrical Simulation of Thermocouple Output ASTM E 230
	-100 °C to -25 °C	0.16 °C	
	-25 °C to 350 °C	0.14 °C	
	350 °C to 650 °C	0.16 °C	
	650 °C to 1 000 °C	0.21 °C	
Temperature Calibration, Indication and Control Equipment used with Thermocouple Type J ^{FO}	-210 °C to -100°C	0.27 °C	
	-100 °C to -30 °C	0.16 °C	
	-30 °C to 150 °C	0.14 °C	
	150 °C to 760 °C	0.17 °C	
	760 °C to 1 200 °C	0.23 °C	
Temperature Calibration, Indication and Control Equipment used with Thermocouple Type K ^{FO}	-200 °C to -100 °C	0.33 °C	
	-100 °C to -25 °C	0.18 °C	
	-25 °C to 120 °C	0.016 °C	
	120 °C to 1 000 °C	0.26 °C	
	1 000 °C to 1 372 °C	0.4 °C	
Temperature Calibration, Indication and Control Equipment used with Thermocouple Type L ^{FO}	-200 °C to -100 °C	0.37 °C	
	-100 °C to 800 °C	0.26 °C	
	800 °C to 900 °C	0.17 °C	
Temperature Calibration, Indication and Control Equipment used with Thermocouple Type N ^{FO}	-200 °C to -100 °C	0.4 °C	
	-100 °C to -25 °C	0.22 °C	
	-25 °C to 120 °C	0.19 °C	
	120 °C to 410 °C	0.18 °C	
	410 °C to 1 300 °C	0.27 °C	
Temperature Calibration, Indication and Control Equipment used with Thermocouple Type R ^{FO}	0 °C to 250 °C	0.57 °C	
	250 °C to 400 °C	0.35 °C	
	400 °C to 1 000 °C	0.33 °C	
	1 000 °C to 1 767 °C	0.4 °C	
Temperature Calibration, Indication and Control Equipment used with Thermocouple Type T ^{FO}	-250 °C to -150 °C	0.63 °C	
	-150 °C to 0 °C	0.24 °C	
	0 °C to 120 °C	0.16 °C	
	120 °C to 400 °C	0.14 °C	



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Electrical

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Temperature Calibration, Indication and Control Equipment used with Thermocouple Type U ^{FO}	-200 °C to 0 °C	0.56 °C	Fluke 754 Electrical Simulation of Thermocouple Output ASTM E 230
	0 °C to 600 °C	0.27 °C	
Equipment to Measure DC High Voltage ^{FO}	1 kV to 30 kV	1 kV	Multimeter Fluke 117 + Voltage Divisor CEW IPTS-68 / ITS-90 Euramet-cg-1
Equipment to Measure DC Voltage ^{FO}	1 mV to 99 mV	0.005 % of reading + 0.003 5 mV	Agilent 34401A Multimeter CENAM Technical Guide
	100 mV to 0.99 V	0.004 % of reading + 0.000 7 mV	
	1 V to 9.99 V	0.003 5 % of reading + 0.000 5 mV	
	10 V to 99.9 V	0.004 5 % of reading + 0.000 6 mV	
	100 V to 1 000 V	0.004 5 % of reading + 0.001 V	
Equipment to Measure AC Voltage At the listed frequencies ^{FO}			
3 Hz to 5 Hz	10 mV to 100 mV	1 % of reading + 0.04 mV	
5 Hz to 10 Hz	10 mV to 100 mV	0.35 % of reading + 0.04 mV	
10 Hz to 20 kHz	10 mV to 100 mV	0.06 % of reading + 0.04 mV	
20 kHz to 50 kHz	10 mV to 100 mV	0.12 % of reading + 0.04 mV	
50 kHz to 100 kHz	10 mV to 100 mV	0.6 % of reading + 0.08 mV	
100 kHz to 300 kHz	10 mV to 100 mV	4 % of reading + 0.5 mV	
Equipment to Measure AC Voltage At the listed frequencies ^{FO}			
3 Hz to 5 Hz	100 mV to 1 V	1 % of reading + 0.03 V	
5 Hz to 10 Hz	100 mV to 1 V	0.35 % of reading + 0.03 V	
10 Hz to 20 kHz	100 mV to 1 V	0.06 % of reading + 0.03 V	
20 kHz to 50 kHz	100 mV to 1 V	0.12 % of reading + 0.04 V	
50 kHz to 100 kHz	100 mV to 1 V	0.6 % of reading + 0.08 V	
100 kHz to 300 kHz	100 mV to 1 V	4 % of reading + 0.5 V	
Equipment to Measure AC Current At the listed frequencies ^{FO}			
3 Hz to 5 Hz	1 V to 750 V	1 % of reading + 0.03 V	
5 Hz to 10 Hz	1 V to 750 V	0.35 % of reading + 0.03 V	



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Equipment to Measure AC Current At the listed frequencies ^{FO}			Agilent 34401A Multimeter CENAM Technical Guide
10 Hz to 20 kHz	1 V to 750 V	0.06 % of reading + 0.03 V	
20 kHz to 50 kHz	1 V to 750 V	0.12 % of reading + 0.04 V	
50 kHz to 100 kHz	1 V to 750 V	0.6 % of reading + 0.08 V	
100 kHz to 300 kHz	1 V to 750 V	4 % of reading + 0.5 V	
Equipment to Measure AC Current At the listed frequencies ^{FO}			
3 Hz to 5 Hz	1 mA to 0.999 99 A	1 % of reading + 0.04 A	
5 Hz to 10 Hz	1 mA to 0.999 99 A	0.3 % of reading + 0.04 A	
10Hz to 5 kHz	1 mA to 0.999 99 A	0.1 % of reading + 0.04 A	
Equipment to Measure AC Current At the listed frequencies ^{FO}			
3 Hz to 5 Hz	1 A to 3 A	1 % of reading + 0.04 A	
5 Hz to 10 Hz	1 A to 3 A	0.3 % of reading + 0.04 A	
10 Hz to 5 kHz	1 A to 3 A	0.1 % of reading + 0.04 A	
Equipment to Measure Resistance ^{FO}			
	Up to 100 Ω	0.01 % of reading + 0.004 Ω	
	100 Ω to 1 000 Ω	0.01 % of reading + 0.001 Ω	
	1 k Ω to 10 k Ω	0.01 % of reading + 0.001 k Ω	
	10 k Ω to 100 k Ω	0.01 % of reading + 0.001 k Ω	
	100 k Ω to 1 M Ω	0.01 % of reading + 0.001 M Ω	
	1 M Ω to 10 M Ω	0.04 % of reading + 0.001 M Ω	
	10 M Ω to 100 M Ω	0.8 % of reading + 0.01 M Ω	
Equipment to Measure Frequency At the listed voltage (100 mV to 750 V) ^{FO}			
	3 Hz to 5 Hz	0.1 % of reading	
	5 Hz to 10 Hz	0.05 % of reading	
	10 Hz to 40 Hz	0.03 % of reading	
	40 Hz to 300 Hz	0.01 % of reading	



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Equipment to Measure AC Current At the listed frequencies ^{FO}			Agilent 34401A Multimeter CENAM Technical Guide
10 Hz to 20 kHz	1 V to 750 V	0.06 % of reading + 0.03 V	
20 kHz to 50 kHz	1 V to 750 V	0.12 % of reading + 0.04 V	
50 kHz to 100 kHz	1 V to 750 V	0.6 % of reading + 0.08 V	
100 kHz to 300 kHz	1 V to 750 V	4 % of reading + 0.5 V	
Equipment to Measure AC Current At the listed frequencies ^{FO}			
3 Hz to 5 Hz	1 mA to 0.999 99 A	1 % of reading + 0.04 A	
5 Hz to 10 Hz	1 mA to 0.999 99 A	0.3 % of reading + 0.04 A	
10Hz to 5 kHz	1 mA to 0.999 99 A	0.1 % of reading + 0.04 A	
Equipment to Measure AC Current At the listed frequencies ^{FO}			
3 Hz to 5 Hz	1 A to 3 A	1 % of reading + 0.04 A	
5 Hz to 10 Hz	1 A to 3 A	0.3 % of reading + 0.04 A	
10 Hz to 5 kHz	1 A to 3 A	0.1 % of reading + 0.04 A	
Equipment to Measure Resistance ^{FO}			
	Up to 100 Ω	0.01 % of reading + 0.004 Ω	
	100 Ω to 1 000 Ω	0.01 % of reading + 0.001 Ω	
	1 k Ω to 10 k Ω	0.01 % of reading + 0.001 k Ω	
	10 k Ω to 100 k Ω	0.01 % of reading + 0.001 k Ω	
	100 k Ω to 1 M Ω	0.01 % of reading + 0.001 M Ω	
	1 M Ω to 10 M Ω	0.04 % of reading + 0.001 M Ω	
	10 M Ω to 100 M Ω	0.8 % of reading + 0.01 M Ω	
Equipment to Measure Frequency At the listed voltage (100 mV to 750 V) ^{FO}			
	3 Hz to 5 Hz	0.1 % of reading	
	5 Hz to 10 Hz	0.05 % of reading	
	10 Hz to 40 Hz	0.03 % of reading	
	40 Hz to 300 Hz	0.01 % of reading	



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Apodaca, Nuevo León, México. C.P. 66607

Contact Name: Claudia Silvina Saucedo Huerta Phone: 818-082-2565

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

1. 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.
2. 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.
3. 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.
4. 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.
5. 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.
6. 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.
7. The term L represents length in inches or millimeters as appropriate to the uncertainty statement.
8. The term Wt represents weight in pounds or grams (including SI multiple and submultiple units) appropriate to the uncertainty statement.



PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

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

Sistema de Gestión Metrológica S.A. de C.V.

*Asunción 201, Col. Paraje Santa Rosa
Apodaca, Nuevo León, México. C.P. 66607*

*(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):

Dimensional Inspection (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:

November 29, 2020

Issue Date:

November 29, 2020

Expiration Date:

June 30, 2022

Accreditation No.:

109337

Certificate No.:

L20-724

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

Sistema de Gestión Metrológica. S.A. de C.V.

Asunción 201, Col. Paraje Santa Rosa
Apodaca, Nuevo León, México. C.P. 66607
Contact Name: Claudia Silvina Saucedo Huerta Phone: 818-082-2565

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

FIELD OF TEST	ITEMS, MATERIALS OR PRODUCTS TESTED	SPECIFIC TESTS OR PROPERTIES MEASURED	SPECIFICATION, STANDARD METHOD OR TECHNIQUE USED	RANGE (WHERE APPROPRIATE) AND DETECTION LIMIT
Dimensional Inspection ^{FO}	Fixtures and Parts	Measurement of Parts Geometrically Dimensioned and Tolerance (GD&T)	ASME Y 14.5	FARO with 3D Scanning Faro Arm: X= 3 700 mm Y= 3 700 mm Z= 3 700 mm (Accuracy Specification: 0.025 mm)
			ASME Y 14.5	Faro Arm: X= 3 700 mm Y= 3 700 mm Z= 3 700 mm (Measurement Uncertainty: 0.0035 mm)

- The presence of a superscript FO means that the laboratory performs testing 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 testing at its fixed location and onsite at customer locations.