PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

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

SG Metrology Solutions, S.A. de C.V.

Arroyo el Rincón 2213, Col. Los Arroyos
Chihuahua, Chihuahua, México. C.P. 31125

and hereby declares that the Organization is accredited in accordance with the recognized International Standard:

ISO/IEC 17025:2017

Whereby, technical competence has been confirmed for the associated scope supplement, in the fields of:

Mechanical, Mass, Force and Weighing Devices, Time and Frequency and Dimensional Calibration
(As detailed in the supplement)

Accreditation claims for conformity assessment activities shall only be made from the addresses referenced within this certificate and shall apply solely to those activities identified in the related scope. This Accreditation is granted subject to the Accreditation Body rules governing the Accreditation referred to above, and the Organization hereby commits to observing and complying with those rules in their entirety.

For PJLA:

Tracy Szerszen
President

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

Initial Accreditation Date:	*Issue Date:*	*Expiration Date:*
July 11, 2024	October 03, 2026	November 30, 2028

Accreditation No.:	*Certificate No.:*
127416	L26-889

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.pjlabs.com

Certificate of Accreditation: Supplement

SG Metrology Solutions, S.A. de C.V.

Arroyo el Rincón 2213, Col. Los Arroyos
Chihuahua, Chihuahua, México. C.P. 31125
Contact Name: Mauricio Sanchez Gonzalez. Phone: 614-102-6896

Accreditation is granted to the facility to perform the following conformity assessment activities:

FIELD OF CALIBRATION	MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE (AND SPECIFICATION WHERE APPROPRIATE)	EXPANDED MEASUREMENT UNCERTAINTY (±) [1]	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED	CALIBRATION MEASUREMENT METHOD OR PROCEDURES USED	FLEX CODE	LOCATION OF ACTIVITY
Mechanical	Indirect Verification of Rockwell Hardness Tester HRA	20 HRA to 65 HRA	0.27 HRA	Test Block	ASTM E18	F1, F2	F, O
Mechanical	Indirect Verification of Rockwell Hardness Tester HRA	70 HRA to 78 HRA	0.19 HRA	Test Block	ASTM E18	F1, F2	F, O
Mechanical	Indirect Verification of Rockwell Hardness Tester HRA	80 HRA to 84 HRA	0.19 HRA	Test Block	ASTM E18	F1, F2	F, O
Mechanical	Indirect Verification of Rockwell Hardness Tester HRBW	40 HRBW to 59 HRBW	0.27 HRBW	Test Block	ASTM E18	F1, F2	F, O
Mechanical	Indirect Verification of Rockwell Hardness Tester HRBW	60 HRBW to 79 HRBW	0.43 HRBW	Test Block	ASTM E18	F1, F2	F, O
Mechanical	Indirect Verification of Rockwell Hardness Tester HRBW	80 HRBW to 100 HRBW	0.4 HRBW	Test Block	ASTM E18	F1, F2	F, O
Mechanical	Indirect Verification of Rockwell Hardness Tester HRC	20 HRC to 30 HRC	0.44 HRC	Test Block	ASTM E18	F1, F2	F, O
Mechanical	Indirect Verification of Rockwell Hardness Tester HRC	35 HRC to 55 HRC	0.33 HRC	Test Block	ASTM E18	F1, F2	F, O
Mechanical	Indirect Verification of Rockwell Hardness Tester HRC	60 HRC to 70 HRC	0.32 HRC	Test Block	ASTM E18	F1, F2	F, O

Certificate of Accreditation: Supplement

SG Metrology Solutions, S.A. de C.V.

Arroyo el Rincón 2213, Col. Los Arroyos
Chihuahua, Chihuahua, México. C.P. 31125
Contact Name: Mauricio Sanchez Gonzalez. Phone: 614-102-6896

Accreditation is granted to the facility to perform the following conformity assessment activities:

FIELD OF CALIBRATION	MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE (AND SPECIFICATION WHERE APPROPRIATE)	EXPANDED MEASUREMENT UNCERTAINTY (±) [1]	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED	CALIBRATION MEASUREMENT METHOD OR PROCEDURES USED	FLEX CODE	LOCATION OF ACTIVITY
Mechanical	Indirect Verification of Rockwell Hardness Tester HREW	70 HREW to 79 HREW	0.44 HREW	Test Block	ASTM E18	F1, F2	F, O
Mechanical	Indirect Verification of Rockwell Hardness Tester HREW	84 HREW to 90 HREW	0.21 HREW	Test Block	ASTM E18	F1, F2	F, O
Mechanical	Indirect Verification of Rockwell Hardness Tester HREW	93 HREW to 100 HREW	0.53 HREW	Test Block	ASTM E18	F1, F2	F, O
Mechanical	Indirect Verification of Rockwell Hardness Tester HRHW	80 HRHW to 94 HRHW	0.46 HRHW	Test Block	ASTM E18	F1, F2	F, O
Mechanical	Indirect Verification of Rockwell Hardness Tester HRHW	96 HRHW to 100 HRHW	0.43 HRHW	Test Block	ASTM E18	F1, F2	F, O
Mechanical	Indirect Verification of Rockwell Hardness Tester HR15TW	74 HR15TW to 80 HR15TW	0.34 HR15TW	Test Block	ASTM E18	F1, F2	F, O
Mechanical	Indirect Verification of Rockwell Hardness Tester HR15TW	81 HR15TW to 86 HR15TW	0.4 HR15TW	Test Block	ASTM E18	F1, F2	F, O
Mechanical	Indirect Verification of Rockwell Hardness Tester HR15TW	87 HR15TW to 93 HR15TW	0.31 HR15TW	Test Block	ASTM E18	F1, F2	F, O
Mechanical	Indirect Verification of Rockwell Hardness Tester HR30TW	43 HR15TW to 56 HR30TW	0.61 HR30TW	Test Block	ASTM E18	F1, F2	F, O

Certificate of Accreditation: Supplement

SG Metrology Solutions, S.A. de C.V.

Arroyo el Rincón 2213, Col. Los Arroyos
Chihuahua, Chihuahua, México. C.P. 31125
Contact Name: Mauricio Sanchez Gonzalez. Phone: 614-102-6896

Accreditation is granted to the facility to perform the following conformity assessment activities:

FIELD OF CALIBRATION	MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE (AND SPECIFICATION WHERE APPROPRIATE)	EXPANDED MEASUREMENT UNCERTAINTY (±) [1]	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED	CALIBRATION MEASUREMENT METHOD OR PROCEDURES USED	FLEX CODE	LOCATION OF ACTIVITY
Mechanical	Indirect Verification of Rockwell Hardness Tester HR30TW	57 HR30TW to 69 HR30TW	0.25 HR30TW	Test Block	ASTM E18	F1, F2	F, O
Mechanical	Indirect Verification of Rockwell Hardness Tester HR30TW	70 HR30TW to 83 HR30TW	0.34 HR30TW	Test Block	ASTM E18	F1, F2	F, O
Mechanical	Indirect Verification of Rockwell Hardness Tester HR45TW	13 HR45TW to 32 HR45TW	0.7 HR45TW	Test Block	ASTM E18	F1, F2	F, O
Mechanical	Indirect Verification of Rockwell Hardness Tester HR45TW	33 HR45TW to 52 HR45TW	0.42 HR45TW	Test Block	ASTM E18	F1, F2	F, O
Mechanical	Indirect Verification of Rockwell Hardness Tester HR45TW	53 HR45TW to 73 HR45TW	0.44 HR45TW	Test Block	ASTM E18	F1, F2	F, O
Mechanical	Indirect Verification of Rockwell Hardness Tester HR15N	70 HR15N to 77 HR15N	0.41 HR15N	Test Block	ASTM E18	F1, F2	F, O
Mechanical	Indirect Verification of Rockwell Hardness Tester HR15N	78 HR15N to 88 HR15N	0.44 HR15N	Test Block	ASTM E18	F1, F2	F, O
Mechanical	Indirect Verification of Rockwell Hardness Tester HR15N	90 HR15N to 92 HR15N	0.51 HR15N	Test Block	ASTM E18	F1, F2	F, O
Mechanical	Indirect Verification of Rockwell Hardness Tester HR30N	42 HR30N to 50 HR30N	0.3 HR30N	Test Block	ASTM E18	F1, F2	F, O

Certificate of Accreditation: Supplement

SG Metrology Solutions, S.A. de C.V.

Arroyo el Rincón 2213, Col. Los Arroyos
Chihuahua, Chihuahua, México. C.P. 31125
Contact Name: Mauricio Sanchez Gonzalez. Phone: 614-102-6896

Accreditation is granted to the facility to perform the following conformity assessment activities:

FIELD OF CALIBRATION	MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE (AND SPECIFICATION WHERE APPROPRIATE)	EXPANDED MEASUREMENT UNCERTAINTY (±) [1]	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED	CALIBRATION MEASUREMENT METHOD OR PROCEDURES USED	FLEX CODE	LOCATION OF ACTIVITY
Mechanical	Indirect Verification of Rockwell Hardness Tester HR30N	55 HR30N to-73 HR30N	0.31 HR30N	Test Block	ASTM E18	F1, F2	F, O
Mechanical	Indirect Verification of Rockwell Hardness Tester HR30N	77 HR30N to 82 HR30N	0.31 HR30N	Test Block	ASTM E18	F1, F2	F, O
Mechanical	Indirect Verification of Brinell Hardness Tester HBW 10/500	50 HBW to 125 HBW	1.4 HBW	Test Block	ASTM E10 ASTM E110	F1, F2	F, O
Mechanical	Indirect Verification of Brinell Hardness Tester HBW 10/500	126 HBW to 224 HBW	1.9 HBW	Test Block	ASTM E10 ASTM E110	F1, F2	F, O
Mechanical	Indirect Verification of Brinell Hardness Tester HBW 5/250	50 HBW to 125 HBW	1.3 HBW	Test Block	ASTM E10 ASTM E110	F1, F2	F, O
Mechanical	Indirect Verification of Brinell Hardness Tester HBW 5/250	126 HBW to 224 HBW	2.5 HBW	Test Block	ASTM E10 ASTM E110	F1, F2	F, O
Mechanical	Indirect Verification of Brinell Hardness Tester HBW 10/1500	50 HBW to 125 HBW	0.6 HBW	Test Block	ASTM E10 ASTM E110	F1, F2	F, O
Mechanical	Indirect Verification of Brinell Hardness Tester HBW 10/1500	126 HBW to 224 HBW	1.3 HBW	Test Block	ASTM E10 ASTM E110	F1, F2	F, O
Mechanical	Indirect Verification of Brinell Hardness Tester HBW 10/3 000	50 HBW to 125 HBW	0.68 HBW	Test Block	ASTM E10 ASTM E110	F1, F2	F, O

Certificate of Accreditation: Supplement

SG Metrology Solutions, S.A. de C.V.

Arroyo el Rincón 2213, Col. Los Arroyos
Chihuahua, Chihuahua, México. C.P. 31125
Contact Name: Mauricio Sanchez Gonzalez. Phone: 614-102-6896

Accreditation is granted to the facility to perform the following conformity assessment activities:

FIELD OF CALIBRATION	MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE (AND SPECIFICATION WHERE APPROPRIATE)	EXPANDED MEASUREMENT UNCERTAINTY (±) [1]	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED	CALIBRATION MEASUREMENT METHOD OR PROCEDURES USED	FLEX CODE	LOCATION OF ACTIVITY
Mechanical	Indirect Verification of Brinell Hardness Tester HBW 10/3 000	126 HBW to 224 HBW	0.94 HBW	Test Block	ASTM E10 ASTM E110	F1, F2	F, O
Mechanical	Indirect Verification of Leeb Hardness HLD	500 HLD to 800 HLD	6.9 HLD	Test Block	ASTM A956/ A956M	F1, F2	F, O
Mechanical	Pressure Gauges	5 psi to 60 psi	0.023 psi	Digital Manometer	DKD-R 6-1	F1, F2	F, O
Mechanical	Universal Testing Machine (Crosshead Speed)	0.05 mm/min to 100 mm/min	0.078 mm/min	Digital Indicator and Stopwatch	ASTM E2658	F1, F2	O
Mass, Force and Weighing Devices	Force Machine and Force Gages (Traction)	4.4482 N to 93.41 N	0.018 % of reading	Master Weights	ISO 7500-1 ASTM E4	F1, F2	F, O
Mass, Force and Weighing Devices	Force Machine and Force Gages (Traction)	4.2 N to 110 N	0.088 % of reading	Load Cell	ISO 7500-1 ASTM E4	F1, F2	F, O
Mass, Force and Weighing Devices	Force Machine and Force Gages (Traction)	98 N to 978 N	0.038 % of reading	Load Cell	ISO 7500-1 ASTM E4	F1, F2	F, O
Mass, Force and Weighing Devices	Force Machine and Force Gages (Traction)	0.98 kN to 9.8 kN	0.14 % of reading	Load Cell	ISO 7500-1 ASTM E4	F1, F2	F, O
Mass, Force and Weighing Devices	Force Machine and Force Gages (Traction)	9.8 kN to 98 kN	0.17 % of reading	Load Cell	ISO 7500-1 ASTM E4	F1, F2	F, O
Mass, Force and Weighing Devices	Force Machine and Force Gages (Traction)	29.42 kN to 294.2 kN	0.16 % of reading	Load Cell	ISO 7500-1 ASTM E4	F1, F2	F, O
Mass, Force and Weighing Devices	Force Machine and Force Gages (Compression)	4.4482 N to 93.41 N	0.018 % of reading	Master Weights	ISO 7500-1 ASTM E4	F1, F2	F, O
Mass, Force and Weighing Devices	Force Machine and Force Gages (Compression)	4.2 N to 110 N	0.059 % of reading	Load Cell	ISO 7500-1 ASTM E4	F1, F2	F, O
Mass, Force and Weighing Devices	Force Machine and Force Gages (Compression)	98 N to 978 N	0.08 % of reading	Load Cell	ISO 7500-1 ASTM E4	F1, F2	F, O

Certificate of Accreditation: Supplement

SG Metrology Solutions, S.A. de C.V.

Arroyo el Rincón 2213, Col. Los Arroyos
Chihuahua, Chihuahua, México. C.P. 31125
Contact Name: Mauricio Sanchez Gonzalez. Phone: 614-102-6896

Accreditation is granted to the facility to perform the following conformity assessment activities:

FIELD OF CALIBRATION	MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE (AND SPECIFICATION WHERE APPROPRIATE)	EXPANDED MEASUREMENT UNCERTAINTY (±) [1]	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED	CALIBRATION MEASUREMENT METHOD OR PROCEDURES USED	FLEX CODE	LOCATION OF ACTIVITY
Mass, Force and Weighing Devices	Force Machine and Force Gages (Compression)	0.98 kN to 9.8 kN	0.071 % of reading	Load Cell	ISO 7500-1 ASTM E4	F1, F2	F, O
Mass, Force and Weighing Devices	Force Machine and Force Gages (Compression)	9.8 kN to 98 kN	0.12 % of reading	Load Cell	ISO 7500-1 ASTM E4	F1, F2	F, O
Mass, Force and Weighing Devices	Force Machine and Force Gages (Compression)	29.42 kN to 294.2 kN	0.34 % of reading	Load Cell	ISO 7500-1 ASTM E4	F1, F2	F, O
Dimensional	Extensometers	0.01 mm to 50 mm	4.9 µm	Micrometer Head	ASTM E83	F1, F2	O
Dimensional	Crosshead Travel	2 mm to 100 mm	2.7 µm	Digital Indicator	ASTM E2309/ E2309M	F1, F2	O

1. The CMC (Calibration and Measurement Capability) is expressed in terms of measurement instrument/aspect being calibrated, range, expanded measurement uncertainty, equipment, and method/procedure. The expanded measurement uncertainty 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 measurement uncertainty included on this scope 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 laboratory's range of calibration capability for all disciplines for which it is 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. Location of activity:

Location Code	Location
F	Conformity assessment activity is performed at the CAB's fixed facility
O	Conformity assessment activity is performed onsite at the CAB's customer location

Certificate of Accreditation: Supplement

SG Metrology Solutions, S.A. de C.V.
Arroyo el Rincón 2213, Col. Los Arroyos
Chihuahua, Chihuahua, México. C.P. 31125
Contact Name: Mauricio Sanchez Gonzalez. Phone: 614-102-6896

Accreditation is granted to the facility to perform the following conformity assessment activities:

4. Measurement uncertainties obtained for calibrations performed at customer sites can be expected to be larger than the measurement uncertainties obtained at the laboratory's 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 laboratory's fixed location.

5. Flex Codes

F0: When no flexibility is identified. There are no changes to items calibrated, characteristics identified or versions of methods except for updating to the most recent version of a standard method after verification.
F1: The laboratory has the capability to introduce a new instrument, quantity, or gauge for an accredited calibration method.
F2: The laboratory has the capability to introduce the newest revision of an accredited authoritative standard method (with no modifications) identified on the scope
F3: The laboratory has the capability to introduce a new revision of an accredited non-standard method using the same technology or technique identified on the scope
F4: The laboratory has the capability to introduce a validated method that is equivalent to an accredited method (using the same Calibration Equipment or Reference Standards identified on the scope for the same parameter, component, or analyte identified on the line item of the scope.