



PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

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

Thwing-Albert Instrument Co.
14 West Collings Ave, West Berlin, NJ 08091

*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:

***Calibration of Mechanical, Dimensional,
Mass, Force, & Weighing and Time & Frequency Instruments
(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:

August 21, 2014

Issue Date:

January 16, 2025

Expiration Date:

February 28, 2027

Accreditation No.:

73494

Certificate No.:

L25-38

*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

Thwing-Albert Instrument Co.

14 West Collings Ave, West Berlin, NJ 08091
Contact Name: Denis Silva Phone: 856-767-1000

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)	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY ($\pm$)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED	CALIBRATION MEASUREMENT METHOD OR PROCEDURES USED	LOCATION OF ACTIVITY
Dimensional	Thickness Tester	Up to 0.1 in	$(8.6 + 4.61T) \mu\text{in}$	Class 2 Gage Blocks	CP-021, CP-077	FO
Dimensional	Thickness Tester	0.1 in to 0.2 in	$(12 + 210T) \mu\text{in}$	Class 2 Gage Blocks	CP-021, CP-077	FO
Dimensional	Thickness Tester	0.2 in to 0.5 in	$(10 + 98.6T) \mu\text{in}$	Class 2 Gage Blocks	CP-021, CP-077	FO
Dimensional	Crosshead Travel	Up to 12 in	0.02 in	Precision ruler	CP-053	FO
Dimensional	Crosshead Travel Length	Up to 6 in	$(65 + 2.75 \times 10^{-07} L) \mu\text{in}$	Caliper	CP-053	FO
Mechanical	Force – Tension -Tensile Tester --Friction/Peel Tester	Up to 10 lbf	0.05 % of Reading	Class 6 Weights Keithley 2001 DMM Power supply	CP-053, CP-062	FO
Mechanical	Force – Tension -Tensile Tester --Friction/Peel Tester	10.1 lbf to 100 lbf	0.05 % of Reading	Class 6 Weights Keithley 2001 DMM Power supply	CP-053, CP-062	FO
Mechanical	Force – Tension -Tensile Tester	100.1 lbf to 1 000 lbf	0.05 % of Reading	Class 6 Weights Keithley 2001 DMM Power supply	CP-053, CP-062	FO
Mechanical	Force – Tension -Tensile Tester	1 000.1 lbf to 2 000 lbf	0.03 % of Reading	2 kLbf Load cell & Indicator	CP-053	FO
Mechanical	Force – Compression -Tensile Tester	Up to 10 lbf	0.08 % of Reading	Class 6 weights	CP-053	FO
Mechanical	Force – Compression -Tensile Tester	10 lbf to 100 lbf	0.08 % of Reading	Class 6 weights	CP-053	FO
Mechanical	Force – Compression -Tensile Tester	100 lbf to 1 000 lbf	0.05 % of Reading	Class 6 Weights Keithley 2001 DMM Power supply	CP-053	FO
Mechanical	Force – Pendulum-Tear Tester	Up to 12 800 gf	0.05 % of FS	Non-standard weights	CP-016	FO
Mechanical	Force – Pendulum-Tear Tester	12 801 gf to 25 600 gf	0.05 % of FS	Non-standard weights	CP-260/ASTM D5734, D1424,	FO



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Mass, Force and Weighing Devices	Mass	14.71 g	0.62 mg	Class F ₁ Single Pan Balance	SOP-7	F
Mass, Force and Weighing Devices	Mass	24.48 g	0.65 mg	Class F ₁ Single Pan Balance	SOP-7	F
Mass, Force and Weighing Devices	Mass	40 g	0.68 mg	Class F ₁ Single Pan Balance	SOP-7	F
Mass, Force and Weighing Devices	Mass	63.58 g	0.74 mg	Class F ₁ Single Pan Balance	SOP-7	F
Mass, Force and Weighing Devices	Mass	65.61 g	0.74 mg	Class F ₁ Single Pan Balance	SOP-7	F
Mass, Force and Weighing Devices	Mass	131.22 g	0.99 mg	Class F ₁ Single Pan Balance	SOP-7	F
Mass, Force and Weighing Devices	Mass	245.585 g	1.6 mg	Class F ₁ Single Pan Balance	SOP-7	F
Mass, Force and Weighing Devices	Mass	262.44 g	1.7 mg	Class F ₁ Single Pan Balance	SOP-7	F
Mass, Force and Weighing Devices	Mass	297.32 g	1.9 mg	Class F ₁ Single Pan Balance	SOP-7	F
Mass, Force and Weighing Devices	Mass	400 g	2.5 mg	Class F ₁ Single Pan Balance	SOP-7	F
Mass, Force and Weighing Devices	Mass	611.44 g	3.7 mg	Class F ₁ Single Pan Balance	SOP-7	F
Mass, Force and Weighing Devices	Mass	730.97 g	4.3 mg	Class F ₁ Single Pan Balance	SOP-7	F
Mass, Force and Weighing Devices	Mass	1 237 g	9.5 mg	Class F ₁ Single Pan Balance	SOP-7	F
Mass, Force and Weighing Devices	Mass	1 718 g	12 mg	Class F ₁ Single Pan Balance	SOP-7	F
Mass, Force and Weighing Devices	Mass	1 963 g	14 mg	Class F ₁ Single Pan Balance	SOP-7	F



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Mass, Force and Weighing Devices	Mass	2 489 g	16 mg	Class F ₁ Single Pan Balance	SOP-7	F
Mass, Force and Weighing Devices	Mass	7 845 g	16 mg	Class F ₁ Single Pan Balance	SOP-7	F
Mass, Force and Weighing Devices	Mass	1 g	0.59 mg	Class F ₁ Single Pan Balance	SOP-7	F
Mass, Force and Weighing Devices	Mass	2 g	0.59 mg	Class F ₁ Single Pan Balance	SOP-7	F
Mass, Force and Weighing Devices	Mass	5 g	0.60 mg	Class F ₁ Single Pan Balance	SOP-7	F
Mass, Force and Weighing Devices	Mass	10 g	0.61 mg	Class F ₁ Single Pan Balance	SOP-7	F
Mass, Force and Weighing Devices	Mass	20 g	0.64 mg	Class F ₁ Single Pan Balance	SOP-7	F
Mass, Force and Weighing Devices	Mass	25 g	0.65 mg	Class F ₁ Single Pan Balance	SOP-7	F
Mass, Force and Weighing Devices	Mass	50 g	0.71 mg	Class F ₁ Single Pan Balance	SOP-7	F
Mass, Force and Weighing Devices	Mass	100 g	0.82 mg	Class F ₁ Single Pan Balance	SOP-7	F
Mass, Force and Weighing Devices	Mass	200 g	1.4 mg	Class F ₁ Single Pan Balance	SOP-7	F
Mass, Force and Weighing Devices	Mass	500 g	3 mg	Class F ₁ Single Pan Balance	SOP-7	F
Mass, Force and Weighing Devices	Mass	1 000 g	5.8 mg	Class F ₁ Single Pan Balance	SOP-7	F
Mass, Force and Weighing Devices	Mass	2 000 g	14 mg	Class F ₁ Single Pan Balance	SOP-7	F
Mass, Force and Weighing Devices	Mass	5 000 g	30 mg	Class F ₁ Single Pan Balance	SOP-7	F



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Mass, Force and Weighing Devices	Mass	0.5 lb	0.003 lb	Class F ₁ Single Pan Balance	SOP-7	F
Mass, Force and Weighing Devices	Mass	1 lb	0.006 lb	Class F ₁ Single Pan Balance	SOP-7	F
Mass, Force and Weighing Devices	Mass	2 lb	0.01 lb	Class F ₁ Single Pan Balance	SOP-7	F
Mass, Force and Weighing Devices	Mass	5 lb	0.03 lb	Class F ₁ Single Pan Balance	SOP-7	F
Mass, Force and Weighing Devices	Mass	10 lb	0.06 lb	Class F ₁ Single Pan Balance	SOP-7	F
Mass, Force and Weighing Devices	Mass	20 lb	0.11 lb	Class F ₁ Single Pan Balance	SOP-7	F
Mass, Force and Weighing Devices	Precision Balances	Up to 100 g	(0.59 + 0.002 32 Wt) mg	Class F ₁ weights	CP-BAL CP-SCALE	FO
Mass, Force and Weighing Devices	Precision Balances	100 g to 1 000 g	(0.26 + 0.005 56 Wt) mg	Class F ₁ weights	CP-BAL CP-SCALE	FO
Mass, Force and Weighing Devices	Precision Balances	1000 g to 10 000 g	(2.6 + 0.005 56 Wt) mg	Class F ₁ weights	CP-BAL CP-SCALE	FO
Mass, Force and Weighing Devices	Precision Balances	10 000 g to 18 000 g	(0.5 + 0.005 77 Wt) mg	Class F ₁ weights	CP-BAL CP-SCALE	FO
Mass, Force and Weighing Devices	Scales	Up to 100 g	(2.2 + 0.115 Wt) mg	Class F ₁ weights	CP-BAL CP-SCALE	FO
Mass, Force and Weighing Devices	Scales	100 g to 1 000 g	(0.1 + 0.137 Wt) mg	Class F ₁ weights	CP-BAL CP-SCALE	FO
Mass, Force and Weighing Devices	Scales	1 000 g to 10 000 g	(0.88 + 0.136 Wt) mg	Class F ₁ weights	CP-BAL CP-SCALE	FO
Mass, Force and Weighing Devices	Scales	10 000 g to 18 000 g	(1.9 + 0.136 Wt) mg	Class F ₁ weights	CP-BAL CP-SCALE	FO



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Mass, Force and Weighing Devices	Scales	1 lb to 100 lb	(0.003 5+0.012 6 Wt) lb	Class 6 Weights	CP-SCALE	FO
Time and Frequency	Crosshead Travel Time	Up to 60 min	(0.05 + 0.001 6 Tm) s	Stopwatch	CP-053	FO
Time and Frequency	Rate of Rotation	10 rpm to 10 000 rpm	(0.034 + 0.000 8 R)rpm	Tachometer	CP-053	FO

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. Location of activity:

Location Code	Location
F	Conformity assessment activity is performed at the CABs fixed facility
O	Conformity assessment activity is performed onsite at the CABs customer location
4. 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.
5. The term T represents thickness in inches.
6. The term L represents length in inches.
7. The term F represents applied force in units appropriate to the uncertainty statement.



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8. The term Wt represents weight in units specified in the scope entry.
9. The term Tm represents time interval in seconds.
10. The term R represents Rate of rotation in rpm.

