



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017
& ANSI/NCSL Z540-1-1994

JLW INSTRUMENTS, INC
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 Chicago, IL 60607
 Linda Center Phone: 312 666 0595

CALIBRATION

Valid To: May 31, 2023

Certificate Number: 1753.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following calibrations^{1, 5}:

I. Mechanical

Parameter/Equipment	Range	CMC ^{2, 4, 6} (±)	Comments
Force ³ – Measuring Equipment			
Force Gauges & Load Sensors	(1 to 1000) gf	(0.000 83 + 0.0002x) gf	Class S weights
	(0.002 to 2.0) lbf	(0.000 85 + 0.0039x) lbf	Class F weights
	(0.2 to 200) lbf	(0.000 86 + 0.000 03x) lbf	
	(1.0 to 25) lbf	(0.025 lbf + 0.0004x) lbf	Reference load cell
	(10 to 300) lbf (10 to 500) lbf (500 to 5500) lbf	(0.19 lbf + 0.0002x) lbf 0.24 lbf (2.3 lbf + 0.0006x) lbf	
	(20 to 200) lbf	0.64 lbf	EVO force
	(90 to 5000) N	0.16 % + 2.1 N	Reference load cell
Hydraulic Grip Pinch Gauges	(5 to 100) lbf (50 to 250) lbf	0.32 lbf + 0.0054x lbf 1.2 % of rdg	Reference load cell

Parameter/Equipment	Range	CMC ^{2, 4, 6} (\pm)	Comments
Force & Material Testing Machines ³ –			
Crosshead Distance	(1 to 24) in	0.012 in	High resolution travel encoder
Crosshead Speed	(0.6 to 6) in/min (6.0 to 80) in/min	0.05 in/min (0.08 + 0.06 %D) in/min	
Pressure – Measuring Equipment			
Hydraulic Gages	(0 to 1000) psi (1000 to 15 000) psi	0.021 % + 0.1 psi 0.025 % + 0.8 psi	Deadweight tester
Pneumatic Gages	(-14 to 0) psi (0 to 100) psi	0.004 psi + 0.000 010x psi 0.024 psi	Digital pressure gages

¹ This laboratory offers commercial calibration and field calibration services.

² Calibration and Measurement Capability Uncertainty (CMC) is the smallest uncertainty of measurement that a laboratory can achieve within its scope of accreditation when performing more or less routine calibrations of nearly ideal measurement standards or nearly ideal measuring equipment. CMCs represent expanded uncertainties expressed at approximately the 95 % level of confidence, usually using a coverage factor of $k = 2$. The actual measurement uncertainty of a specific calibration performed by the laboratory may be greater than the CMC due to the behavior of the customer's device and to influences from the circumstances of the specific calibration.

³ Field calibration service is available for this calibration. Please note the actual measurement uncertainties achievable on a customer's site can normally be expected to be larger than the Calibration and Measurement Capability Uncertainty (CMC) found on the A2LA Scope. Allowance must be made for aspects such as the environment at the place of calibration and for other possible adverse effects such as those caused by transportation of the calibration equipment. The usual allowance for the uncertainty introduced by the item being calibrated, (e.g. resolution) must also be considered and this, on its own, could result in the actual measurement uncertainty achievable on a customer's site being larger than the CMC.

⁴ In the statement of CMC, all percentages are to be read as percent of reading unless otherwise noted. In the statement of CMC, x is the level of force at the time of calibration and D is the numerical value of the crosshead speed in in/min.

⁵ This scope meets A2LA's *P112 Flexible Scope Policy*.

⁶ The type of instrument or material being calibrated is defined by the parameter. This indicates the laboratory is capable of calibrating instruments that measure or generate the values in the ranges indicated for the listed measurement parameter.



Accredited Laboratory

A2LA has accredited

JLW INSTRUMENTS, INC.

Chicago, IL

for technical competence in the field of

Calibration

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 *General requirements for the competence of testing and calibration laboratories*. This laboratory also meets the requirements of ANSI/NC SL Z540-1-1994 and R205 – Specific Requirements: Calibration Laboratory Accreditation Program. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).



Presented this 5th day of May 2021.

A blue ink signature of the Vice President of Accreditation Services.

Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 1753.01
Valid to May 31, 2023

For the calibrations to which this accreditation applies, please refer to the laboratory's Calibration Scope of Accreditation.