



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

NELS JORGENSEN & CO.  
 20400 East Nine Mile Road  
 St. Clair Shores, MI 48080-0347  
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CALIBRATION

Valid To: December 31, 2020

Certificate Number: 1989.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following calibrations<sup>1,4</sup>:

I. Mechanical

Parameter/Equipment	Range	CMC <sup>2</sup> (±)	Comments
Force <sup>3</sup> –  Universal Testing Machines, Lloyd Instruments Test Frames:			
Compression	(0 to 10) N (0 to 50) N (0 to 100) N (0 to 250) N	0.012 N 0.006 N 0.03 N 0.09 N	Class F dead weights
	(0 to 500) N (0 to 1000) N (0 to 2500) N (0 to 5000) N (0 to 10 000) N (0 to 20 000) N (0 to 30 000) N (0 to 50 000) N	0.15 N 0.55 N 0.98 N 1.6 N 2.9 N 3.7 N 3.7 N 4.2 N	Reference load cells/indicator
Tension	(0 to 10) N (0 to 50) N (0 to 100) N (0 to 250) N (0 to 500) N (0 to 1000) N	0.012 N 0.006 N 0.03 N 0.09 N 0.13 N 0.2 N	Class F dead weights

Parameter/Equipment	Range	CMC <sup>2</sup> (±)	Comments
Force <sup>3</sup> – (cont)			
Tension	(0 to 2500) N	1.2 N	Admet display with load cells
	(0 to 5000) N	1.3 N	
	(0 to 10 000) N	2.5 N	
	(0 to 20 000) N	4.3 N	
	(0 to 30 000) N	4.3 N	
	(0 to 50 000) N	4.9 N	
Gauges	(0 to 250) gf	0.03 gf	Class F dead weights
	(0 to 2) lbf	0.0001 lbf	
	(0 to 5) lbf	0.0003 lbf	
	(0 to 10) lbf	0.004 lbf	
	(0 to 50) lbf	0.01 lbf	
	(0 to 100) lbf	0.01 lbf	
	(0 to 200) lbf	0.01 lbf	
Compression/Tension	(0 to 500) lbf	0.3 lbf	Reference load cells/indicator with manual test stand
	(0 to 1000) lbf	0.4 lbf	
	(0 to 2000) lbf	0.8 lbf	
	(0 to 5000) lbf	2.7 lbf	
	(0 to 10 000) lbf	2.5 lbf	
Dial Gauges (Compression Only)	(0 to 500) lbf	2.9 lbf	Reference load cells/indicator with manual test stand
	(0 to 1000) lbf	5.8 lbf	
	(0 to 2000) lbf	12 lbf	
	(0 to 5000) lbf	29 lbf	

<sup>1</sup> This laboratory offers commercial calibration service and field calibration service.

<sup>2</sup> 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. CMC's 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 uncertainty due to the behavior of the customer's device and to influences from the circumstances of the specific calibration.

<sup>3</sup> Field calibration service is available for this calibration and this laboratory meets A2LA R104 – *General Requirements: Accreditation of Field Testing and Field Calibration Laboratories* for these calibrations. Please note the actual measurement uncertainties achievable on a customer's site can normally be expected to be larger than the CMC uncertainty 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 actual 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 uncertainty.

<sup>4</sup> This scope meets A2LA's P112 Flexible Scope Policy.



## *Accredited Laboratory*

A2LA has accredited

**NELS JORGENSEN & CO.**

*St. Clair Shores, MI*

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 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 30<sup>th</sup> day of April 2019.

A blue ink signature of the Vice President of Accreditation Services, written over a horizontal line.

Vice President, Accreditation Services  
For the Accreditation Council  
Certificate Number 1989.01  
Valid to December 31, 2020

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