

**SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017  
AND ANSI/NCSL Z540-1-1994 (R2002)**

**National Standards Testing laboratory**

15753 Crabbs Branch Way  
Rockville, MD 20855  
Daniel J. Duggan 301-590-0097  
[Danduggan33@aol.com](mailto:Danduggan33@aol.com) [www.forcelab.com](http://www.forcelab.com)

**CALIBRATION**

Valid to: **December 2, 2024**

Certificate Number: **L2271**

**Mass and Mass Related**

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Mechanical Compression and Tension (Load Cells, Proving Rings, and Force Gages)	(44.5 to 53 379) N (10 to 12 000) lbf	0.002 % of applied force	Dead Weight to ASTM E74 and ISO 376
	(53 379 to 4 448 220) N (12 000 to 1 000 000) lbf	0.01% of applied force	Transfer Standards to ASTM E74 and ISO 376
Portable Testing Machines (in lab only)	(44.5 to 8896.4) N (10 to 2 000) lbf	0.1% of applied force	Dead Weight to ASTM E4
Compression and Tension <sup>1</sup> Testing Machines	(222.4 to 26 689 320) N (50 to 6 000 000) lbf	0.25% of applied force	Transfer Standards to ASTM E4

Calibration and Measurement Capability (CMC) is expressed in terms of the measurement parameter, measurement range, expanded uncertainty of measurement and reference standard, method, and/or equipment. The expanded uncertainty of measurement is expressed as the standard uncertainty of the measurement multiplied by a coverage factor of 2 ( $k=2$ ), corresponding to a confidence level of approximately 95%.

Notes:

1. On-site calibration service is available for this parameter, since on-site conditions are typically more variable than those in the laboratory, larger measurement uncertainties are expected on-site than what is reported on the accredited scope
2. This scope is formatted as part of a single document including Certificate of Accreditation No. L2271.



R. Douglas Leonard Jr., VP, PILR SBU