



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

TOLEDO TRANSDUCERS, INC.
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CALIBRATION

Valid To: August 31, 2023

Certificate Number: 1379.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following calibrations¹:

I. Mechanical

Parameter/Equipment	Range	CMC ^{2,4} (±)	Comments
Calibration of Force, Load Cells –			
Tension/Compression	(10 to 100) lbf (20 to 500) lbf 100 lbf to 5 klbf (5 to 50) klbf (5 to 120) klbf	0.04 % 0.04 % 0.05 % 0.10 % 0.08 %	Calibrated using internal procedure 1017 with load cells
Compression Only ³	(20 to 500) lbf 100 lbf to 5 klbf (5 to 50) klbf (5 to 120) klbf (1 to 50) klbf 85 klbf to 1 Mlbf 175 klbf to 2.0 Mlbf	0.04 % 0.05 % 0.10 % 0.08 % 0.06% 0.04 % 0.07 %	
Calibration of Force –			
Tension & Compression	(0.1 to 5) lbf	0.05 %	Class 6 dead weights, Toledo procedure 1017

Parameter/Equipment	Range	CMC ^{2,4} (±)	Comments
Calibration of Torque Load Cells	(0.125 to 20) in·lbf, 4 in beam	0.35 %	Class 6 dead weights Toledo procedure 1017
	(10 to 1000) in·lbf, 10 in beam	0.04 %	Standard load cells, Toledo procedure 1017 w/ elements of E2428
	(30 to 3000) in·lbf, 30 in beam	0.06 %	
	(24 000 to 48 000) in·lbf, 24 in beam	0.04 %	
	(10 000 to 120 000) in·lbf, 48 in beam	0.03 %	
(60 000 to 240 000) in·lbf, 48 in beam	0.03 %		

¹ This laboratory offers commercial 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 routine calibrations of nearly ideal measurement standards of 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 specified 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 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 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.

⁴ In the statement of CMC, percentages are to be read as percent of reading, unless noted otherwise.