

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

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CALIBRATION

Valid To: August 31, 2022 Certificate Number: 4692.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following calibrations^{1, 8}:

I. Acoustic

Parameter/Equipment	Range	CMC ² (±)	Comments
Sound Level Meters, @ 1 kHz	94 dB, 114 dB	0.52 dB	Sound calibrator

II. Dimensional

Parameter/Equipment	Range	CMC ^{2, 4} (±)	Comments
Gage Blocks	Up to 20 in	$(4.8 + 4.1L) \mu in$	Master gage blocks & comparator
Length Standards –			
Step Gages	(0.5 to 22) in	$(190 + 0.22L) \mu in$	Gage blocks & height master
Micrometer Setting Standards	(1 to 39) in	$(62 + 2.1L) \mu in$	Step gage, height gage & gage blocks

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Parameter/Equipment	Range	CMC ^{2, 4} (±)	Comments
Length Standards – (cont)			
Endrods, Distance Indicators	(0.1 to 600) in (600 to 1200) in (1200 to 2000) in	0.2 in 0.25 in 0.5 in	Laser distance meter
Plain Ring Gages	(0.1 to 8) in	(5.4 + 18 <i>L</i>) μin	Length measuring machine & master ring gages
Pin Gages	(0.01 to 2) in	91 μin	Laser micrometer
Thickness & Feeler Gages –			
Thickness	(0.0005 to 1) in	580 μin	Gage blocks
Feeler Gages	(0.001 to 1) in	80 µin	Digital micrometer
Ultrasonic Thickness	(0.01 to 100) mm	0.01 mm	Steel gage blocks
Coating Thickness	(1 to 100) µm (100 to 250) µm (250 to 500) µm	1.6 μm 6 μm 10 μm	Thickness standards
Radius Gages	(0.01 to 1) in	690 µin	Optical projector
Stage Micrometers	(0.001 to 2) in	220 µin	Vision system
Gaging Fixtures –			
Straight Edges, Parallel Bars	(1 to 72) in	$(150 + 3L) \mu in$	Precision height gage
Squares	(1 to 20) in	5L μin	Ceramic square, muchecker & height gage

Parameter/Equipment	Range ⁴	CMC ^{2, 4} (±)	Comments
Gaging Fixtures – (cont) V Blocks – Squareness of Sides Parallelism of Sides Angles Straightness	Up to 10 in	58 μin 120 μin 0.07° 120 μin	Precision height gage, square, video machine & gage blocks
Surface Plates ³ – Flatness Only	Up to 160 in <i>DL</i>	$0.12 DL^2 \mu in$	Laser measuring system
Thread Plugs – Pitch Diameter	(0.05 to 2) in (6 to 36) TPI (0.2 to 4) mm	170 μin 0.0043 mm	Length measuring machine, thread wire set
Calipers	(0.01 to 24) in (24 to 80) in	0.0007 in 0.001 in	Length standards
Micrometers –			
Outside	(0.01 to 40) in	(53 + 15 <i>L</i>) μin	Gage blocks & micmaster
Inside	(1 to 60) in	$(130 + 13L) \mu in$	Check master
Heads	(0.01 to 2) in	46 μin	Gage blocks
Depth	(0.05 to 12) in	0.000 86 in	Depth master & surface plate
Height Gages	(0.05 to 40) in	(84 + 7.9 <i>L</i>) μin	Step gage & surface plate
Length Indicators – Dial & Test	Up to 1 in (1 to 4) in (4 to 6) in	20 μin 86 μin 0.01 in	Height master Gage blocks

Parameter/Equipment	Range	CMC ^{2, 4} (±)	Comments
Rules & Tapes –			
Rulers	(1 to 40) in (40 to 80) in	0.0029 in 0.0036 in	Length measuring machine
Pi Tapes	(6.3 to 10.3) in	900 µin	Cylinder
Tape Measures	(1 to 108) in (9 to 100) ft	(560 + 29 <i>L</i>) µin	Length measuring machine
Length Measuring	(0.1 to 4) in	$(5.7 + 3.8L) \mu in$	Gage blocks
Systems ³ – (UMMs, ULMs, Length Setting Machine, Distance Indicators)	(100 to 500) mm (500 to 1300) mm (1300 to 2200) mm (2200 to 4000) mm	2 μm 15 μm 23 μm 32 μm	Laser measuring system
Optical Comparators ³ –			
Linear Accuracy Angle Magnification	(1 to 250) mm 90° (10, 20, 31.25, 50) X	6 μm 0.05° 290 μm	Glass scale master, precision square & gage blocks
Microscopes ³ – Linear Accuracy	(0.05 to 2) in	110 μin	Glass scale master
Video Machines ³ – Linear Accuracy	(0.05 to 300) mm	$(2.9 + 0.0043L) \mu m$	Glass scale master
Angle Indicators –			
Inclinometer & Protractors	(0.1 to 360)°	0.08°	Angle blocks
Levels	(4 to 12) in	330 µin	Master precision level, surface plate & gage blocks
Bore Gages	(0.2 to 3.5) in (3.5 to 7) in	190 μin 210 μin	Ring gages

Parameter/Equipment	Range	$CMC^{2}(\pm)$	Comments
Roughness Testers	16.1 Ra 119.5 Ra	3.1 µin 4.2 µin	Roughness standard
Machine Tools Scale ³ (DRO)	1 mm to 2.2 m	26 μm	Laser measuring system; standard reference bar & step gages

III. Dimensional Testing⁵

Parameter/Equipment	Range	CMC ^{2, 7} (±)	Comments
Length – 1D	Up to 2 in Up to 6 in Up to 12 in Up to 24 in Up to 40 in	150 μin 370 μin 300 μin 0.0025 in 300 μin	Digital micrometer Optical comparator Video machine Digital caliper Check master
Length – 2D	Up to 60 in Up to 90°	370 μin 0.015 °	Optical comparator or video machine Video machine
Length – 3D	Up to 18 in	270 μin	Coordinate measuring machine
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IV. Electrical – DC/Low Frequency

Parameter/Equipment	Range	CMC ^{2, 6} (±)	Comments
Capacitance – Generate	(0.1 to 10) nF (10 to 110) nF (0.1 to 1) μF (1 to 5) μF (5 to 11) μF (11 to 33) μF (33 to 110) μF	18 pF 72 pF 0.7 nF 7.2 nF 44 nF 0.3 μF 0.9 μF	Multifunction calibrator

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Parameter/Equipment	Range	CMC ^{2, 6} (±)	Comments
DC Current – Generate	Up to 3 mA (3 to 30) mA (30 to 300) mA (0.3 to 3) A (3 to 10) A	0.4 μA 3.8 μA 38 μA 1.3 mA 6.4 mA	Multifunction calibrator
Clamp Meters – Non-Toroidal	(10 to 150) A (150 to 500) A (500 to 1025) A	1.2 % 0.9 % 0.7 %	Multifunction calibrator & 50 turn coil
DC Current – Measure	Up to 200 μA 200 μA to 2 mA (2 to 20) mA (20 to 200) mA 200 mA to 2 A (2 to 20) A	$\begin{array}{c} 27~\mu A/A + 0.03~nA \\ 25~\mu A/A + 5~nA \\ 38~\mu A/A + 0.08~\mu A \\ 100~\mu A/A + 2.3~\mu A \\ 180~\mu A/A + 92~\mu A \\ 610~\mu A/A + 3~mA \end{array}$	Reference multimeter
DC Voltage – Generate	Up to 300 mV (0.3 to 3) V (3 to 30) V (30 to 300) V (300 to 1000) V	10 μV 71 μV 0.73 mV 8.7 mV 62 mV	Multifunction calibrator
DC Voltage – Measure	Up to 200 mV 200 mV to 2 V (2 to 20) V (20 to 200) V (200 to 1000) V	$\begin{array}{c} 9.7 \; \mu V/V + 0.5 \; \mu V \\ 2.8 \; \mu V/V + 1.5 \; \mu V \\ 2.5 \; \mu V/V + 9.5 \; \mu V \\ 4.3 \; \mu V/V + 0.09 \; mV \\ 4.9 \; \mu V/V + 1 \; mV \end{array}$	Reference Multimeter
Resistance – Generate	Up to 1 Ω (1 to 10) Ω (10 to 100) Ω (0.1 to 1) k Ω (1 to 10) k Ω (10 to 100) k Ω (0.1 to 1) M Ω (1 to 10) M Ω (1 to 10) M Ω (10 to 100) M Ω (100 to 110) M Ω	$\begin{array}{c} 0.06 \text{ m}\Omega \\ 1.7 \text{ m}\Omega \\ 7.5 \text{ m}\Omega \\ 68 \text{ m}\Omega \\ 680 \text{ m}\Omega \\ 6.8 \Omega \\ 71 \Omega \\ 1.7 \text{ k}\Omega \\ 85 \text{ k}\Omega \\ 7.5 \text{ M}\Omega \\ \end{array}$	Multifunction calibrator

Parameter/Equipment	Range	CMC ^{2, 6} (±)	Comments
Electrical Calibration of Temperature Sensors ³	(32 to 1382) °C	0.6 °C	Process calibrator
Electrical Calibration of Thermocouples – Measure			
Туре С	Up to 150 °C (150 to 650) °C (650 to 1000) °C (1000 to 1800) °C (1800 to 2316) °C	0.56 °C 0.53 °C 0.8 °C 0.92 °C 1.2 °C	Multifunction calibrator
Type E	(-250 to -100) °C (-100 to -25) °C (-25 to 350) °C (350 to 650) °C (650 to 1000) °C	0.56 °C 0.53 °C 0.8 °C 0.92 °C 1.2 °C	
Туре Ј	(-210 to -100) °C (-100 to -30) °C (-30 to 150) °C (150 to 760) °C (760 to 1200) °C	0.47 °C 0.39 °C 0.38 °C 0.4 °C 0.72 °C	
Туре К	(-200 to -100) °C (-100 to -25) °C (-25 to 120) °C (120 to 1000) °C (1000 to 1372) °C	0.59 °C 0.49 °C 0.48 °C 0.79 °C 0.86 °C	
Type N	(-200 to -100) °C (-100 to -25) °C (-25 to 120) °C (120 to 410) °C (410 to 1300) °C	0.63 °C 0.5 °C 0.48 °C 0.48 °C 0.78 °C	
Type S	Up to 250 °C (250 to 1000) °C (1000 to 1400) °C (1400 to 1767) °C	0.7 °C 0.83 °C 0.84 °C 0.9 °C	
Type U	(-200 to 0) °C (0 to 600) °C	0.76 °C 0.5 °C	

Parameter/Equipment	Range	CMC ² (±)	Comments
Electrical Simulation of Thermocouples ³ –			
Type J	(-18 to 700) °C	0.77 °C	Thermocouple
Туре К	(-178 to 1200) °C	0.85 °C	calibrator – field calibration
Type N	(-178 to 1200) °C	0.87 °C	
Type S	Up to 1200 °C	1 °C	
Туре Т	(-200 to 350) °C	0.71 °C	
Electrical Calibration of pH Meters & Calibrators –			
pH Meters	Up to 14 pH units	0.017 pH units	pH meter calibrator
Calibrators	(-415 to 415) mV Up to 14 pH	0.01 mV 0.01 pH	Multifunction calibrator

Parameter/Range	Frequency	CMC ^{2, 6} (±)	Comments
AC Current – Generate			
(0 to 3) mA	(10 to 20) Hz (20 to 45) Hz 45 Hz to 1 kHz (1 to 5) kHz (5 to 10) kHz (10 to 30) kHz	7.4 µA 6.9 µA 6.9 µA 9.2 µA 8.4 µA 36 µA	Multifunction calibrator
(3 to 30) mA	(10 to 20) Hz (20 to 45) Hz 45 Hz to 1 kHz (1 to 5) kHz (5 to 10) kHz (10 to 30) kHz	34 μA 17 μA 17 μA 31 μA 73 μA 0.14 mA	

Parameter/Range	Frequency	CMC ^{2, 6} (±)	Comments
AC Current – Generate (cont)			
(30 to 300) mA	(10 to 20) Hz (20 to 45) Hz 45 Hz to 1 kHz (1 to 5) kHz (5 to 10) kHz (10 to 30) kHz	0.3 mA 0.1 mA 0.1 mA 0.4 mA 0.8 mA 1.6 mA	Multifunction calibrator
(0.3 to 3) A	45 Hz to 1 kHz (1 to 5) kHz	21 mA 21 mA	
(3 to 10) A Clamp Meters – Toroidal	60 Hz to 1 kHz (1 to 5) kHz	14 mA 0.35 A	
(10 to 150) A (150 to 500) A (500 to 1025) A	(45 to 65) Hz (45 to 65) Hz (45 to 65) Hz	0.6 % 0.4 % 0.3 %	Multifunction calibrator & 50 turn coil
Clamp Meters – Other Than Toroidal			
(40 to 150) A (150 to 500) A (500 to 1025) A	(45 to 65) Hz (45 to 65) Hz (45 to 65) Hz	1.4 % 1.3 % 0.8 %	
AC Voltage – Generate			
Up to 30 mV	(10 to 45) Hz 45 Hz to 1 kHz (1 to 10) kHz (10 to 20) kHz (20 to 50) kHz (50 to 100) kHz (100 to 500) kHz	12 μV 12 μV 12 μV 14 μV 42 μV 0.14 mV 0.34 mV	Multifunction calibrator
(30 to 300) mV	(10 to 45) Hz 45 Hz to 1 kHz (1 to 10) kHz (10 to 20) kHz (20 to 50) kHz (50 to 100) kHz (100 to 500) kHz	61 μV 61 μV 61 μV 66 μV 0.13 mV 0.32 mV 0.78 mV	

Parameter/Range	Frequency	CMC ^{2, 6} (±)	Comments
AC Voltage – Generate (cont)			
(0.3 to 3) V	(10 to 45) Hz 45 Hz to 1 kHz (1 to 10) kHz (10 to 20) kHz (20 to 50) kHz (50 to 100) kHz (100 to 500) kHz	0.59 mV 0.59 mV 0.59 mV 0.73 mV 1.1 mV 2.6 mV 9.1 mV	Multifunction calibrator
(3 to 30) V	(10 to 45) Hz 45 Hz to 1 kHz (1 to 10) kHz (10 to 20) kHz (20 to 50) kHz (50 to 100) kHz	6 mV 6 mV 6 mV 9 mV 13 mV 33 mV	
(30 to 300) V	45 Hz to 1 kHz (1 to 10) kHz (10 to 20) kHz (20 to 50) kHz (50 to 100) kHz	69 mV 77 mV 94 mV 0.12 V 0.76 V	
(300 to 750) V	45 Hz to 1 kHz (1 to 10) kHz	0.3 V 0.36 V	
(750 to 1000) V	45 Hz to 1 kHz (1 to 10) kHz	0.31 V 0.36 V	

V. Fluid Quantities

Parameter/Equipment	Range	CMC ^{2,7} (±)	Comments
Volumetric Flow – Measure ³	(0.1 to 30) 1/s	1 % of rdg	Ultrasonic flowmeter

VI. Mechanical

Parameter/Equipment	Range	CMC ^{2, 7} (±)	Comments
Force – Measuring Equipment, Compression & Tension ³	(1 to 8) ozf (0.5 to 2) lbf (2 to 10) lbf (10 to 25) lbf (25 to 500) lbf	0.002 ozf 0.001 lbf 0.008 lbf 0.009 lbf 0.06 lbf	NIST Class F weights
Force – Measuring Equipment, Load Cells ³	(30 to 300) lbf (200 to 2000) lbf (2500 to 25 000) lbf (5000 to 50 000) lbf	0.07 % of rdg 0.07 % of rdg 0.07 % of rdg 0.07 % of rdg	Load cell system
	(50 000 to 320 000) lbf	0.25 % of rdg	High capacity load cell system
Durometers –			ASTM D2240 with:
A, B, E, O, C, D, & DO	(0 to 90) Duro	0.9 Duro	Durometer calibrator/force gauge
Test Blocks	(20 to 90) Duro	1.9 Duro	Durometers
Indenter Shape: Length Angle Diameter Radius	(2 to 3) mm (2 to 40)° (0.7 to 12) mm (0.09 to 11) mm	0.01 mm 0.066° 0.01 mm 0.01 mm	Vision system
Calibrators	(0 to 4.54) kg·f	9 g·f	Force gage
Rockwell Hardness Testers ³ – Indirect Verification	HRBW: High Middle Low HRC:	0.72 HRBW 0.52 HRBW 0.65 HRBW	ASTM E18 with test blocks
	High Middle Low	0.52 HRC 0.45 HRC 0.41 HRC	
	HRFW: High Middle Low	0.55 HRFW 0.58 HRFW 0.57 HRFW	

Parameter/Equipment	Range	CMC ^{2, 7} (±)	Comments
Leeb Hardness Testers – Indirect Verification	(500 to 800) HLD	17 HLD	ASTM A956
Mass, Fixed Points	1 mg 2 mg 5 mg 10 mg 20 mg 50 mg 100 mg 200 mg 500 mg 1 g 2 g 5 g 10 g 20 g 50 g 100 g 200 g 500 g 1 kg 2 kg 5 kg 10 kg 2 oz 4 oz 8 oz 1 lb 2 lb 5 lb 10 lb 20 lb 25 lb 50 lb	0.04 mg 0.04 mg 0.04 mg 0.04 mg 0.05 mg 0.05 mg 0.05 mg 0.05 mg 0.04 mg 0.05 mg 0.04 mg 0.03 mg 0.02 mg 0.04 mg 0.03 mg 0.08 mg 0.87 mg 0.32 mg 0.87 mg 3.2 mg 5.7 mg 0.14 g 0.2 g 0.22 g 0.26 g 0.000 01 oz 0.000 02 oz 0.000 05 oz 0.000 12 lb 0.000 37 lb 0.000 37 lb 0.000 37 lb 0.000 43 lb 0.000 48 lb	ASTM E617 Class I weights & precision balance

Parameter/Equipment	Range	CMC ^{2, 7} (±)	Comments
Pressure – Measuring Equipment –			
Pneumatic	(0.1 to 100) psig (100 to 500) psig	0.02 psi 0.1 psi	Pressure meter
Hydraulic	(500 to 5000) psig (5000 to 10 000) psig (10 000 to 16 000) psig	1 psi 2.2 psi 3.0 psi	Dead weight tester
Negative Pressure	(-14 to -1) psig	0.07 psi	Dead weight tester
Pressure – Measuring Equipment ³ –			
Pneumatic	(0 to 14.49) psig (0 to 100) psig (0 to 300) psig	0.0025 psi 0.020 psi 0.086 psi	Pressure calibrator
Hydraulic	(0 to 1000) psig (0 to 10 000) psig	0.26 psi 7.0 psi	
Pressure – Measuring Equipment, Transducers ³	(0.5 to 30) psia	0.2 psia	Pressure gage, pressure/vacuum pump
Vacuum Gauges & Transducers ³	(0 to 28.8) in·Hg	0.2 in·Hg	Vacuum gage/pump
Scales & Balances ³	(0 to 1) g (0 to 10) g (0 to 20) g (0 to 50) g (0 to 100) g (0 to 200) g	35 µg 2.3 mg 3.8 mg 0.18 mg 0.24 mg 0.6 mg	Class 0 & 1 weights
	(0 to 500) g (0 to 1200) g	2.3 mg 3.8 mg	Class 1 weights
	(0 to 5) lb (0 to 10) lb (0 to 20) lb (0 to 50) lb (0 to 60) lb	0.0003 lb 0.0003 lb 0.0004 lb 0.0004 lb 0.0026 lb	Class F weights calibrated in accordance with NIST Handbook 105-1
	(0 to 1000) lb	0.3 lb	

Parameter/Equipment	Range	CMC ^{2, 7} (±)	Comments
Torque – Measuring Equipment, Transducers	(1.25 to 250) in·lbf (20 to 260) ft·lbf	0.1 % of rdg 0.23 % of rdg	NIST Class F weights, torque arm
Torque – Measure, Wrenches, Indicators	(4 to 36) in·ozf (4 to 1000) in·lbf (20 to 250) ft·lbf (250 to 1000) ft·lbf	2 % of rdg 0.4 % of rdg 0.7 % of rdg 0.9 % of rdg	Torque calibration system

VII. Thermodynamics

Parameter/Equipment	Range	CMC ^{2, 7} (±)	Comments
Relative Humidity – Measure & Measuring Equipment ³	(15 to 95) % RH	1.6 % RH	Humidity chamber and thermo-hygrometer
Humidity – Measure ³	(10 to 95) %	1.0 % RH	High precision thermohygrometer
Infrared Thermometers $(\varepsilon = 0.95)$ $(\lambda = 8 \text{ to } 14 \mu m)$	(50 to 100) °C (101 to 249) °C (250 to 500) °C	1.4 °C 3.6 °C 6.4 °C	Infrared calibrator
Temperature – Measuring Equipment & Measure	(-45 to 150) °C (150 to 200) °C (150 to 650) °C	0.024 °C 0.04 °C 0.06 °C	Temp. calibrator, liquid temp. calibrator, PRT probe
Temperature – Measure, Sensors/Digital Thermometers ³	(-70 to 25) °C (-40 to 140) °C (140 to 420) °C	0.14 °C 0.18 °C 0.26 °C	Metal block, cal bath PRT sensor, Hart 1560, 2560 SPRT module

Parameter/Equipment	Range	CMC ^{2, 7} (±)	Comments
Temperature – Measure, System Checks, System Accuracy Tests (Type K or Type N) ³	(100 to 1100) °C	2.6 °C	Thermocouple calibrator, thermocouple
Temperature – Measure, System Checks System Accuracy Tests ³	(-80 to 220) °C	0.5 °C	Process calibrator, RTD
Temperature – Measure, Uniformity Survey³ (Type K or Type N)	(50 to 1205) °C	1.3 °C	Datalogger, thermocouples
Calibration of Thermocouples –			
Туре Ј	Up to 700 °C	1.3 °C	Tube furnace, Type S thermocouple
Туре К	Up to 1100 °C 1200 °C	1.4 °C 1.9 °C	data acquisition system
Type N	Up to 1100 °C 1200 °C	1.4 °C 1.9 °C	
Type S	Up to 1100 °C 1200 °C	1.5 °C 2 °C	

VIII. Time & Frequency

Parameter/Equipment	Range	CMC ^{2, 7} (±)	Comments
Frequency – Measuring Equipment	(0.1 to 120) Hz (0.12 to 1) kHz (1 to 100) kHz (100 to 500) kHz	360 µHz 3 mHz 320 mHz 1.5 Hz	Multifunction calibrator

Parameter/Equipment	Range	CMC ^{2, 7} (±)	Comments
Tachometers –			
Contact	(1 to 500) rpm (500 to 2000) rpm (2000 to 4000) rpm	0.2 rpm 0.5 rpm 1 rpm	Tachometer, calibrator
Non-Contact	(1 to 1000) rpm (1000 to 10 000) rpm (10 000 to 100 000) rpm	0.022 rpm 0.062 rpm 0.61 rpm	Multifunction calibrator & LED
Stroboscopes	(1 to 12 500) fpm (20 000 to 100 000) fpm	0.019 % rdg + 0.64 fpm 0.058 % rdg + 0.5 fpm	Digital tachometer
Speed – Measure	(0.1 to 12) in/min	0.6 % of rdg	Ruler & stopwatch
Stopwatches	1 s to 8 h	0.55 s	Master stopwatch & camera

MECHANICAL TESTING

<u>Test</u>	<u>Test Method</u>
Compression Test	Internal Procedure TP02
Tensile Test	Internal Procedure TP03

¹ This laboratory offers commercial calibration, dimensional testing and mechanical testing service.

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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 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 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 *L* is the numerical value of the nominal length of the device measured in inches and *DL* is the diagonal length of the surface plate in inches.
- ⁵ This test is not equivalent to that of a calibration.
- ⁶ The stated measured values are determined using the indicated instrument (see Comments). This capability is suitable for the calibration of the devices intended to measure or generate the measured value in the ranges indicated. CMCs are expressed as either a specific value that covers the full range or as a percent or fraction of the reading plus a fixed floor specification.
- ⁷ 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.

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⁸ This scope meets A2LA's *P112 Flexible Scope Policy*.



Accredited Laboratory

A2LA has accredited

TRESCAL CANADA INC. (ONTARIO)

Brampton, ON, CANADA

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/NCSL 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).

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Presented this 2nd day of November 2020.

Vice President, Accreditation Services For the Accreditation Council Certificate Number 4692.01

Valid to August 31, 2022