



CERTIFICATE OF ACCREDITATION

ANSI National Accreditation Board
11617 Coldwater Road, Fort Wayne, IN 46845 USA

This is to certify that

VACS Ltd.
15 Regan Road, Unit 6
Brampton ON L7A 1E3

has been assessed by ANAB and meets the requirements of international standard

ISO/IEC 17025:2017

and national standard

ANSI/NCSL Z540-1-1994 (R2002)

while demonstrating technical competence in the field of

CALIBRATION

Refer to the accompanying Scope of Accreditation for information regarding the types of activities to which this accreditation applies

AC-1402
Certificate Number


ANAB Approval

Certificate Valid Through: 07/29/2021
Version No. 005 Issued: 06/24/2019



This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017. 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).



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

VACS Ltd.

15 Regan Road, Unit 6
Brampton, ON L7A 1E3
Derek Magee 905-840-7651
derekmagee@calibrations.ca

CALIBRATION

Valid to: **July 29, 2021**

Certificate Number: **AC-1402**

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
DC Voltage – Measure ¹	(0 to 100) mV (0.1 to 1) V (1 to 10) V (10 to 100) V (100 to 1 000) V	1.6 μV 0.01 mV 0.3 mV 1.6 mV 0.03 V	Agilent 3458A Multimeter
DC Voltage – Generate ¹	(0 to 20) mV (20 to 200) mV (0.2 to 2) V (2 to 20) V (20 to 200) V (200 to 1 000) V	6.1 μV 0.13 mV 0.04 mV 0.43 mV 4.3 mV 0.04 V	Fluke 5100B Calibrator Agilent 3458A Multimeter
DC Current – Measure ¹	(0 to 100) μA (0.1 to 1) mA (1 to 10) mA (10 to 100) mA (0.1 to 1) A	4.3 nA 0.04 μA 0.39 μA 6.3 μA 0.19 mA	Agilent 3458A Multimeter
DC Current – Generate ¹	(0 to 200) μA (0.2 to 2) mA (2 to 20) mA (20 to 200) mA (0.2 to 1) A	0.03 μA 0.18 μA 2.2 μA 0.05 mA 0.2 mA	Fluke 5100B Calibrator Agilent 3458A Multimeter
Resistance – Measure ¹	(1 to 10) Ω (10 to 100) Ω (0.1 to 1) kΩ (1 to 10) kΩ	16 μΩ/Ω + 0.087 mΩ 19 μΩ/Ω + 0.25 mΩ 10 μΩ/Ω + 2.1 mΩ 11 μΩ/Ω + 12 mΩ	Agilent 3458A Multimeter



Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Resistance – Measure ¹	(10 to 100 kΩ) (0.1 to 1) MΩ (1 to 10) MΩ	11 μΩ/Ω + 0.12 Ω 22 μΩ/Ω + 1.2 Ω 92 μΩ/Ω + 23 Ω	Agilent 3458A Multimeter
Resistance – Generate ¹	1 Ω 10 Ω 100 Ω 1 kΩ 10 kΩ 100 kΩ 1 MΩ 10 MΩ	0.29 mΩ 1.2 mΩ 6.3 mΩ 60 mΩ 630 mΩ 6.1 Ω 120 Ω 5.9 kΩ	Fluke 5100B Calibrator (6 months)
Resistance – Generate ¹	1 Ω 10 Ω	0.64 mΩ 1.2 mΩ	GR 1440 Resistors
Resistance – Generate ¹	100 Ω 1 kΩ 10 kΩ	6.5 mΩ 62 mΩ 0.62 Ω	Vishay S102K Resistors
Electrical Calibration of Thermocouple Indicating Devices Generate ¹	Type E (-20 to 1 000) °C Type J (-210 to 1 200) °C Type K (-200 to 1 372) °C Type N (-200 to 1 300) °C Type T (-200 to 1 300) °C Type R, S (0 to 1 767) °C	0.3 °C 0.3 °C 0.4 °C 0.6 °C 0.4 °C 1.1 °C	Fluke Process Calibrator
Electrical Calibration of RTD Indicating Devices-Generate ¹	100 Ω, Pt 385 (-200 to 0) °C (0 to 400) °C (400 to 800) °C 1 000 Ω, Pt 385 (-200 to 0) °C (0 to 400) °C (400 to 800) °C 100 Ω, Pt 3926 (-200 to 0) °C (0 to 630) °C	0.1 °C 0.2 °C 0.4 °C 0.1 °C 0.2 °C 0.4 °C 0.1 °C 0.2 °C	Fluke Process Calibrator



Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Electrical Calibration of RTD Indicating Devices-Generate ¹	100 Ω, Pt 3916 (-200 to 0) °C (0 to 630) °C	0.1 °C 0.2 °C	Fluke Process Calibrator
Resistance Thermometers ¹	(10 to 400) Ω	0.006 Ω	Resistance Standards

Length – Dimensional metrology

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Calipers ^{1,2}	Up to 24 in	(289 + 7.3L) μin	Gauge Blocks & Micrometer Setting Standards
Micrometer (Outside) ^{1,2}	Up to 6 in	(32 + 14L) μin	Grade 2 gauge Blocks
Gauge Blocks ¹	Up to 4 in (200 mm)	40 μin (1 μm)	Grade 2 gauge Blocks CT60 Heidenhain Length Gauge
Indicators ¹	(0 to 1) in 50 μin resolution 100 μin resolution (0 to 2) in 50 μin resolution 100 μin resolution	35 μin 60 μin 50 μin 70 μin	Gage Blocks and Comparator Stand
Indicators ¹ (Mounted in stands or custom fixtures)	(0 to 1) in 500 μin resolution 1 000 μin in resolution	335 μin 600 μin	Gage blocks
Measuring microscope ¹	(0 to 5) mm	0.96 μm	Stage Micrometer
Displacement Transducer ¹	(0 to 5) in (5 to 40) in	600 μin 0.001 in/in	Height Gauge
Optical Comparator ¹	(0 to 50) mm (0 to 90) °	0.005 mm 0.5 minute of angle	Glass Scale Angle Blocks
Material Testing Machine: ^{1,2} Displacement	(0.01 to 0.4) in (0.4 to 40) in	0.000 6 in (0.000 6 + 0.000 2L) in	ASTM E2309 Height Gauge MT25B Heidenhain Length Gauge
Speed ¹	(0.01 to 20) in/min	0.5 % of reading	ASTM E2658, Timer

Length – Dimensional metrology

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Extensometer, Type 1 Strain ^{1,2}	Gauge length of 0.5 in: (0.06 to 1) in/in (0.002 to 0.06) in/in Gauge length of 1 in : (0.025 to 1) in/in (0.001 to 0.025) in/in Gauge length of 2 in : (0.000 5 to 0.5) in/in	(64 + 715L) μin/in 88 μin/in (27 + 300L) μin/in 40 μin/in (17 + 126L) μin/in	ASTM E83 Extensometer Calibrator
Extensometer, Type 1 Gauge Length ¹	(0.5 to 2) in	0.000 4 in	ASTM E83 Extensometer Calibrator
Torque Drive Arms ¹ (2 Point Dimensional Measurement)	(4 to 60) in	0.1 % of arm length	Height Gauge 60” Steel Rule Length Standards

Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Aircraft Wheel Scales ¹	(1 to 100 000) lbf	0.05 % of reading	Dead Weight Machine, Loading Weights and Secondary Standards
Calibration of force ¹ testing machines and force measuring systems: Tension	1 gf to 471 kgf (1 to 500 000) lbf	0.25 % of reading	ASTM E4 Loading weights and Working Standard
Calibration of force ¹ testing machines and force measuring systems: Compression	1 gf to 471 kgf (1 to 1 000 000) lbf	0.25 % of reading	ASTM E4 Loading weights and Working Standard
Calibration of Durometer force ¹	1 gf to 5000 gf	0.25 % of reading	ASTM D2240 balance
Calibration of load cells	1 gf to 471 kgf	0.005 % of reading	Loading weights ASTM E74
Calibration of force ¹ Tension and Compression Crane Scales Dynamometers Load Cells	(10 lbf to 1 040) lbf (1 000 to 500 000) lbf	0.01 % of reading 0.05 % of reading	Dead Weight Machine and Secondary Standard ASTM E74



Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Liquid Flow	(4 to 40) Litre/hour	0.75 % of reading	Digital Balance/Stop Watch/Thermometer/ Distilled Water
Analytical Balances ¹	Up to 10 g (10 to 200) g 200 g to 35 kg 200 g to 220 kg	0.06 mg 0.12 mg 2.5 mg/kg 20 mg/ kg	ASTM E617 Class 1, OIML Class F1 and NIST Class F weights and NIST Handbook 44 utilized for calibration of the weighting system
Mass (metric) : Conventional Mass ¹ (non integral weights)	(1 to 100) kg	30 mg/kg	ASTM Class 0 and Class 1 Weights
Mass (pound, avoirdupois): Conventional Mass ¹	(0.01 to 0.05) lb (0.05 to 5) lb (5 to 220) lb	23 mg/lb 4.5 mg, /lb 14 mg/lb	Class F1 Weights
Mass (metric) Conventional Mass ¹	1 mg 2 mg 3 mg 5 mg 10 mg 20 mg 30 mg 50 mg 100 mg 200 mg 300 mg 500 mg 1 g 2 g 3 g 5 g 10 g 20 g 30 g 50 g 100 g 200 g 300 g 500 g 1 kg	0.008 8 mg 0.008 8 mg 0.008 8 mg 0.008 8 mg 0.008 8 mg 0.008 8 mg 0.008 8 mg 0.008 8 mg 0.008 8 mg 0.008 8 mg 0.008 8 mg 0.008 8 mg 0.01 mg 0.011 mg 0.023 mg 0.023 mg 0.044 mg 0.039 mg 0.05 mg 0.05 mg 0.068 mg 0.28 mg 1.3 mg 1.3 mg 1.5 mg	ASTM Class 0 and Class 1 Weights

Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Mass (metric) Conventional Mass ¹	2 kg 3 kg 5 kg 10 kg 20 kg	12 mg 12 mg 120 mg 120 mg 350 mg	ASTM Class 0 and Class 1 Weights
Deadweight Testers Effective area	(0.01 to 0.5) in ²	0.000 33 in ² / in ²	Ametek DWT (PK-854, HK-1000, R-50)
Dead Weights	(0.01 to 10) lb	0.000 05 lb/lb	ASTM Class 1 Weights
Pressure calibrators ¹	(4 to 854) in H ₂ O (30 to 1 000) psi (1 000 to 10 000) psi	0.000 33 psi/psi 0.000 14 psi/psi 0.000 33 psi/psi	Ametek DWT (PK-854, HK-1000, R-50)
Pressure Indicators and Gauges ¹	Up to 1 in H ₂ O Up to 5 psi Up to 30 psi Up to 500 psi (100 to 1 000) psi (1 000 to 10 000) psi	0.005 in H ₂ O 0.002 5 psi 0.015 psi 0.05 psi 0.25 % of reading 0.25 % of reading	Pressure modules and transducers
Vacuum ¹	Up to 28 inHg	0.042 inHg	MKS 270B Signal Conditioner with MKS 390HA/270 Vacuum Gauge
Torque Testers ¹ , analyzers, transducers	(8 to 36) lbf·in (40 to 300) lbf·in (22 to 651) lbf·ft	0.19 % of reading 0.19 % of reading 0.19 % of reading	ASTM E2428 Torque Arms and loading weights
Torque wrenches ¹	(8 to 36) lbf·in (40 to 300) lbf·in (22 to 651) lbf·ft	0.75 % of reading 0.75 % of reading 0.75 % of reading	ASTM E2624 Torque testers
Absolute Pressure ¹	0 torr	1 E ⁻⁶ torr	MKS PVS-6/Ion Gauge
	(1 to 10) torr (100 to 1 000) torr	0.08 % of reading 0.08 % of reading	MKS 390HA/270 Vacuum Gauge
Direct Verification of Hardness ¹ Testing Machines: Verification of Test Force	(1 to 3 000) kgf	0.25% of reading	ASTM E10, ASTM E18, ASTM E92, ASTM E384 Working force standards
Verification of the Indentation Optical Measuring System	(0.01 to 5) mm	0.001 mm	Stage micrometer
Deflection Measuring System	(0.05 to 0.025) mm	0.1 μm	Gauge Blocks



ANSI National Accreditation Board

Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Rockwell Hardness ¹ Testers	HRA Low	0.28 HRA	Indirect verification per ASTM E18, ASTM E110 using Hardness test blocks
	HRA Med	0.17 HRA	
	HRA High	0.16 HRA	
	HRBW Low	1.4 HRBW	
	HRBW Med	0.87 HRBW	
	HRBW High	0.42 HRBW	
	HRC Low	0.4 HRC	
	HRC Med	0.36 HRC	
	HRC High	0.32 HRC	
	HRD Low	0.27 HRD	
	HRD Med	0.26 HRD	
	HRD High	0.18 HRD	
	HRE Low	0.54 HRE	
	HRE Med	0.54 HRE	
	HRE High	0.54 HRE	
	HRF Low	0.54 HRF	
	HRF Med	0.4 HRF	
	HRF High	0.4 HRF	
	HRG Low	0.76 HRG	
	HRG Med	0.36 HRG	
	HRG High	0.36 HRG	
HRH Low	0.54 HRH		
HRH Med	0.41 HRH		
HRH High	0.41 HRH		
HRK Low	0.64 HRK		
HRK Med	0.4 HRK		
HRK High	0.4 HRK		
(90 to 114) HRL	0.36 HRL		
(115 to 130) HRL	0.36 HRL		
(70 to 99) HRM	0.56 HRM		
(100 to 130) HRM	0.56 HRM		





Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Rockwell Superficial Hardness ¹ Testers	(40 to 84) HRP	0.91 HRP	Indirect verification per ASTM E18, ASTM E110 using Hardness test blocks
	(85 to 130) HRP	0.65 HRP	
	(100 to 119) HRR	0.41 HRR	
	(120 to 130) HRR	0.24 HRR	
	(110 to 111) HRS	0.95 HRS	
	(112 to 130) HRS	0.2 HRS	
	(80 to 103) HRV	0.95 HRV	
	(104 to 130) HRV	0.2 HRV	
	HR15N Low	0.39 HR15N	
	HR15N Med	0.19 HR15N	
	HR15N High	0.19 HR15N	
	HR30N Low	0.55 HR30N	
	HR30N Med	0.28 HR30N	
	HR30N High	0.28 HR30N	
	HR45N Low	0.43 HR45N	
	HR45N Med	0.22 HR45N	
	HR45N High	0.19 HR45N	
	HR15TW Low	0.37 HR15TW	
	HR15TW Med	0.21 HR15TW	
	HR15TW High	0.21 HR15TW	
HR30TW Low	0.9 HR30TW		
HR30TW Med	0.66 HR30TW		
HR30TW High	0.39 HR30TW		
HR45TW Low	0.73 HR45TW		
HR45TW Med	0.41 HR45TW		
HR45TW High	0.41 HR45TW		
(80 to 88) HR15W	0.67 HR15W		
(89 to 100) HR15W	0.67 HR15W		
(40 to 64) HR30W	0.9 HR30W		
(65 to 100) HR30W	0.76 HR30W		



Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment		
Rockwell Superficial Hardness ¹ Testers	(10 to 47) HR45W (48 to 100) HR45W	0.30 HR45W 0.13 HR45W	Hardness test blocks Indirect verification per ASTM E18, ASTM E110		
	(80 to 87) HR15X (88 to 100) HR15X	0.62 HR15X 0.33 HR15X			
	(60 to 78) HR30X (79 to 100) HR30X (40 to 68) HR45X (69 to 100) HR45X	0.99 HR30X 0.15 HR30X 0.81 HR45X 0.35 HR45X			
	(85 to 93) HR15Y (94 to 100) HR15Y	1.3 HR15Y 0.63 HR15Y			
	(60 to 87) HR30Y (88 to 100) HR30Y	0.82 HR30Y 0.37 HR30Y			
	(60 to 81) HR45Y (82 to 100) HR45Y	0.94 HR45Y 0.3 HR45Y			
	Brinell Hardness Testers ¹	1/62.5 (200 to 400) HBW (400 to 600) HBW		9.5 HBW 25 HBW	Indirect verification per ASTM E10 using Brinell Test Blocks & Brinell Scope
		2.5/187.5 (200 to 400) HBW (400 to 600) HBW		6.2 HBW 15 HBW	
		10/500 (20 to 100) HBW (100 to 150) HBW		1 HBW 1.5 HBW	
		5/1 000 (200 to 400) HBW (400 to 600) HBW		4 HBW 8 HBW	
10/1 000 (200 to 400) HBW (400 to 600) HBW		3.3 HBW 7 HBW			
10/1 500 (200 to 400) HBW (400 to 600) HBW		2.7 HBW 6.5 HBW			
10/2 000 (200 to 400) HBW (400 to 600) HBW		2.2 HBW 5.2 HBW			

Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment		
Brinell Hardness Testers ¹	10/2 500 (200 to 400) HBW (400 to 600) HBW	2 HBW 4.4 HBW	Indirect verification per ASTM E10 using Brinell Test Blocks & Brinell Scope		
	10/3 000 (200 to 400) HBW (400 to 600) HBW	1.9 HBW 4.9 HBW			
Vickers ¹ Hardness Testers ≥1 kgf	HV 1 200 HV 400 HV 700 HV	4.1 HV 8 HV 18 HV	Indirect verification per ASTM E92, ASTM E384 using Hardness test blocks		
	HV 2 200 HV 400 HV 700 HV	3 HV 8 HV 14 HV			
	HV 5 200 HV 400 HV 700 HV	3 HV 6 HV 11 HV			
	HV 10 200 HV 400 HV 700 HV	3 HV 6 HV 11 HV			
	HV 20 200 HV 400 HV 700 HV	3 HV 6 HV 11 HV			
	HV 30 200 HV 400 HV 700 HV	3 HV 4 HV 7 HV			
	HV 50 200 HV 400 HV 700 HV	3 HV 4 HV 7 HV			
	Vickers ¹ Hardness Testers <1 kgf	HV 0.01 200 HV 400 HV 700 HV		10 HV 20 HV 35 HV	Indirect verification per ASTM E92, ASTM E384 using Hardness test blocks

Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Vickers ¹ Hardness Testers <1 kgf	HV 0.025		Indirect verification per ASTM E92, ASTM E384 using Hardness test blocks
	200 HV	10 HV	
	400 HV	20 HV	
	700 HV	35 HV	
	HV 0.05		
	200 HV	10 HV	
	400 HV	20 HV	
	700 HV	35 HV	
	HV 0.1		
	200 HV	8 HV	
	400 HV	20 HV	
	700 HV	35 HV	
	HV 0.2		
	200 HV	8 HV	
	400 HV	18 HV	
	700 HV	35 HV	
	HV 0.3		
	200 HV	5 HV	
	400 HV	14 HV	
	700 HV	24 HV	
	HV 0.5		
200 HV	5 HV		
400 HV	12 HV		
700 HV	24 HV		
HV 1			
200 HV	4 HV		
400 HV	8 HV		
700 HV	17 HV		
Knoop ¹ Micro-Indentation Hardness Testers	HK 0.01		Indirect verification per ASTM E92, ASTM E384 using Hardness test blocks
	200 HK	7 HK	
	400 HK	16 HK	
	700 HK	33 HK	
	HK 0.025		
	200 HK	7 HK	
	400 HK	14 HK	
	700 HK	22 HK	
	HK 0.05		
	200 HK	7 HK	
	400 HK	14 HK	
	700 HK	20 HK	

Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Knoop ¹ Micro-Indentation Hardness Testers	HK 0.1		Indirect verification per ASTM E92, ASTM E384 using Hardness test blocks
	200 HK	7 HK	
	400 HK	12 HK	
	700 HK	19 HK	
	HK 0.2 and 0.3		
	200 HK	5 HK	
	400 HK	8 HK	
	700 HK	17 HK	
	HK 0.5 and 1		
	200 HK	5 HK	
	400 HK	7 HK	
	700 HK	15 HK	

Thermodynamic

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Temperature – Generate ¹	0 °C	0.01 °C	Ice Bath
Temperature – Generate ¹	(-78 to 150) °C	0.1 °C	Baths, Secondary Standard PRT, Instrulab 4312A thermometer
Temperature – Generate ¹	(150 to 660) °C	1.2 °C	Dry Block, Standard PRT, Instrulab 4312A thermometer
Temperature – Measure ¹	(-78 to 660) °C	0.05 °C	Secondary Standard PRT, Instrulab 4312A thermometer
Temperature – Measure ¹	(660 to 1 200) °C	5.5 °C	Type N Thermocouple, Fluke 744 Process Calibrator
Dry Block (Well) Calibration ¹	(-78 to 660) °C	0.5 °C	Secondary Standard PRT, Instrulab 4312A thermometer
PRT/RTD ¹	(-78 to 660) °C	0.1 °C	Ice Bath, Liquid baths, Dry Block Calibrator Secondary
Thermocouples ¹	(-78 to 660) °C	0.5 °C	

Thermodynamic

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Liquid in Glass Thermometers ¹	(-78 to 150) °C	0.1 °C	Standard PRT, Instrulab 4312A thermometer
Infrared (IR) Gun ¹	(0 to 300) °C	2 °C	Infrared Calibrator $\epsilon = 0.95, \lambda = (8 \text{ to } 14) \mu\text{m}$
Humidity- Generate ¹	(11, 33, 57, 75, & 90) %RH	0.75 %RH	Custom Humidity Chamber, Salts, Vaisala Humidity Transmitter


Time and Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Timers ¹	1 min to 24 h	0.25 s	NRC Time Signal
Frequency – Measure ¹	(1 to 40) Hz 40 Hz to 10 MHz	805 uHz/Hz + 0.000 83 Hz 160 uHz/Hz + 0.006 5 Hz	Agilent 3458A Multimeter
Frequency – Source ¹	1 Hz to 10 MHz	120 uHz/Hz + 0.000 62 Hz	RIGOL DG 1022 Generator

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. L = length in inches.
3. This scope is formatted as part of a single document including Certificate of Accreditation No. AC-1402.



Vice President

