



CERTIFICATE OF ACCREDITATION

The ANSI National Accreditation Board

Hereby attests that

Mobile Instrument Company, Inc.
745 Lakeside Drive
Mobile, AL 36693

Fulfills the requirements of

ISO/IEC 17025:2017

In the field of

CALIBRATION

This certificate is valid only when accompanied by a current scope of accreditation document.
The current scope of accreditation can be verified at www.anab.org.

A handwritten signature in black ink, appearing to be 'J. Stine', is positioned above a horizontal line.

Jason Stine, Vice President

Expiry Date: 02 February 2028
Certificate Number: AC-2549



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

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CALIBRATION

ISO/IEC 17025 Accreditation Granted: **02 February 2026**

Certificate Number: **AC-2549** Certificate Expiry Date: **02 February 2028**

Chemical Quantities

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
pH Meters	4 pH 7 pH 10 pH	0.02 pH 0.02 pH 0.02 pH	Comparison to Accredited pH Buffer Solutions
Conductivity Meters	10 µS/cm 100 µS/cm 1 413 µS/cm 10 000 µS/cm	1 µS/cm 4.5 µS/cm 16 µS/cm 56 µS/cm	Comparison to Accredited Conductivity Solutions
Refractometers	10 °brix 40 °brix	0.061 °brix	Comparison to Accredited Aqueous Solutions

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
DC Voltage – Source ¹	Up to 330 mV 330 mV to 3.3 V (3.3 to 33) V (33 to 330) V (330 to 1 000) V	16 µV/V + 1 µV 8.7 µV/V + 2 µV 9.4 µV/V + 20 µV 14 µV/V + 0.15 mV 14 µV/V + 1.5 mV	Comparison to Fluke 5520A Multiproduct Calibrator

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
DC Voltage – Measure	Up to 100 mV 100 mV to 1V (1 to 10) V (10 to 100) V (100 to 1 000) V	11 μ V/V + 0.3 μ V 12 μ V/V + 0.3 μ V 11 μ V/V + 0.5 μ V 12 μ V/V + 30 μ V 12 μ V/V + 0.1 mV	Comparison to HP 3458A 8.5 Digit Multimeter
DC High Voltage – Measure ¹	(0.5 to 150) kV	0.5 % of reading	Comparison to HP 3458A Multimeter w/ High Voltage Inc. DVR-150 Divider
DC Current – Source ¹	Up to 330 μ A 330 μ A to 3.3 mA 3.3 mA to 33 mA 33 mA to 330 mA 330 mA to 1.1 A (1.1 to 3.0) A (3.0 to 11) A (11 to 20.5) A	120 μ A/A + 20 nA 78 μ A/A + 20 nA 78 μ A/A + 0.25 μ A 78 μ A/A + 2.5 μ A 0.16 mA/A + 40 μ A 0.3 mA/A + 40 μ A 0.39 mA/A + 0.5 mA 0.78 mA/A + 0.75 mA	Comparison to Fluke 5520A Multiproduct Calibrator
DC Current – Measure	Up to 100 μ A (0.1 to 1) mA (1 to 10) mA (10 to 100) mA (0.1 to 1) A	26 μ A/A + 0.8 nA 26 μ A/A + 5 nA 26 μ A/A + 50 nA 43 μ A/A + 0.5 μ A 0.12 mA/A + 10 μ A	Comparison to HP 3458A 8.5 Digit Multimeter
DC Current – Measure	(1 to 200) A	0.021 % reading	Comparison to HP 3458A 8.5 Digit Multimeter, Ohm Labs CS-200 Current Shunt
DC Current – Measure	(200 to 1 000) A	0.26 % of reading	Comparison to HP 3458A 8.5 Digit Multimeter, Ohm Labs CS-1000 Current Shunt
DC Current Clamp Meters ¹ (Toroidal)	(16.5 to 150) A (150 to 1 000) A	0.23 % reading + 17 mA 0.22 % reading + 88 mA	Comparison to Fluke 5520A Multiproduct Calibrator, 50-turn Coil
DC Current Clamp Meters ¹ (Non-Toroidal)	(16.5 to 150) A (150 to 1 000) A	0.41 % reading + 0.14 A 0.46 % reading + 0.54 A	Comparison to Fluke 5520A Multiproduct Calibrator, 50-turn Coil

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Resistance – Source ¹	Up to 11 Ω	45 μΩ/Ω + 1 mΩ	Comparison to Fluke 5520A Multiproduct Calibrator
	(11 to 33) Ω	26 μΩ/Ω + 1.5 mΩ	
	(33 to 110) Ω	23 μΩ/Ω + 1.4 mΩ	
	(110 to 330) Ω	23 μΩ/Ω + 2 mΩ	
	(.33 to 1.1) kΩ	25 μΩ/Ω + 2 mΩ	
	(1.1 to 3.3) kΩ	22 μΩ/Ω + 20 mΩ	
	(3.3 to 11) kΩ	22 μΩ/Ω + 20 mΩ	
	(11 to 33) kΩ	22 μΩ/Ω + 0.2 Ω	
Resistance – Source ¹	(33 to 110) kΩ	24 μΩ/Ω + 0.2 Ω	Comparison to Fluke 5520A Multiproduct Calibrator
	(110 to 330) kΩ	25 μΩ/Ω + 2 Ω	
	(.33 to 1.1) MΩ	25 μΩ/Ω + 2 Ω	
	(1.1 to 3.3) MΩ	47 μΩ/Ω + 30 Ω	
	(3.3 to 11) MΩ	0.11 mΩ/Ω + 50 Ω	
	(11 to 33) MΩ	0.2 mΩ/Ω + 2.5 kΩ	
	(33 to 110) MΩ	0.39 mΩ/Ω + 3 kΩ	
	(110 to 330) MΩ	2.4 mΩ/Ω + 0.1 MΩ	
Resistance – Measure	330 MΩ to 1.1 GΩ	12 mΩ/Ω + 0.5 MΩ	Comparison to HP 3458A 8.5 Digit Multimeter
	Up to 1 Ω	73 μΩ/Ω + 2 μΩ	
	(1 to 10) Ω	27 μΩ/Ω + 50 μΩ	
	(10 to 100) Ω	16 μΩ/Ω + 0.5 mΩ	
	(100 to 1 000) Ω	13 μΩ/Ω + 0.5 mΩ	
	(1 to 10) kΩ	14 μΩ/Ω + 5 mΩ	
	(10 to 100) kΩ	13 μΩ/Ω + 50 mΩ	
	(100 to 1 000) kΩ	19 μΩ/Ω + 2 Ω	
	(1 to 10) MΩ	54 μΩ/Ω + 0.1 kΩ	
	(10 to 100) MΩ	0.54 mΩ/Ω + 1 kΩ	
(0.1 to 1) GΩ	6.3 mΩ/Ω + 10 kΩ		

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
AC Voltage – Source ¹	(1 to 33) mV		Comparison to Fluke 5520A Multiproduct Calibrator
	(10 to 45) Hz	0.65 mV/V + 6 μV	
	45 Hz to 10 kHz	0.15 mV/V + 6 μV	
	(10 to 20) kHz	0.18 mV/V + 6 μV	
	(20 to 50) kHz	0.79 mV/V + 6 μV	
	(50 to 100) kHz	2.8 mV/V + 12 μV	
	(100 to 500) kHz	6.2 mV/V + 50 μV	
	(33 to 330) mV		
	(10 to 45) Hz	0.24 mV/V + 8 μV	
	45 Hz to 10 kHz	0.12 mV/V + 8 μV	
	(10 to 20) kHz	0.13 mV/V + 8 μV	
	(20 to 50) kHz	0.28 mV/V + 8 μV	
	(50 to 100) kHz	0.62 mV/V + 32 μV	
	(100 to 500) kHz	2 mV/V + 70 μV	
	330 mV to 3.3 V		
	(10 to 45) Hz	0.24 mV/V + 50 μV	
	45 Hz to 10 kHz	0.12 mV/V + 60 μV	
	(10 to 20) kHz	0.15 mV/V + 60 μV	
	(20 to 50) kHz	0.24 mV/V + 50 μV	
	(50 to 100) kHz	0.55 mV/V + 0.13 mV	
	(100 to 500) kHz	1.9 mV/V + 0.6 mV	
	(3.3 to 33) V		
	(10 to 45) Hz	0.24 mV/V + 0.65 mV	
	45 Hz to 10 kHz	0.12 mV/V + 0.6 mV	
	(10 to 20) kHz	0.19 mV/V + 0.6 mV	
	(20 to 50) kHz	0.28 mV/V + 0.6 mV	
	(50 to 100) kHz	0.7 mV/V + 1.6 mV	
	(33 to 330) V		
	45 Hz to 1 kHz	0.15 mV/V + 2 mV	
	(1 to 10) kHz	0.16 mV/V + 6 mV	
(10 to 20) kHz	0.2 mV/V + 6 mV		
(20 to 50) kHz	0.24 mV/V + 6 mV		
(50 to 100) kHz	1.6 mV/V + 50 mV		
(330 to 1 020) V			
45 Hz to 1 kHz	0.24 mV/V + 10 mV		
(1 to 5) kHz	0.2 mV/V + 10 mV		
(5 to 10) kHz	0.24 mV/V + 10 mV		

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
AC Voltage – Measure	Up to 10 mV		Comparison to HP 3458A 8.5 Digit Multimeter
	(1 to 40) Hz	0.031 % of reading + 3 μV	
	40 Hz to 1 kHz	0.022 % of reading + 1.1 μV	
	(1 to 20) kHz	0.031 % of reading + 1.1 μV	
	(20 to 50) kHz	0.1 % of reading + 1.1 μV	
	(50 to 100) kHz	0.5 % of reading + 1.1 μV	
	(100 to 300) kHz	4 % of reading + 2 μV	
	(10 to 100 mV)		
	(1 to 40) Hz	0.007 3 % of reading + 2 μV	
	40 Hz to 1 kHz	0.007 4 % of reading + 2 μV	
	(1 to 20) kHz	0.015 % of reading + 2 μV	
	(20 to 50) kHz	0.031 % of reading + 2 μV	
	(50 to 100) kHz	0.081 % of reading + 2 μV	
	(100 to 300) kHz	0.3 % of reading + 10 μV	
	(0.3 to 1) MHz	1 % of reading + 10 μV	
	100 mV to 1 V		
	(1 to 40) Hz	0.007 4 % of reading + 40 μV	
	40 Hz to 1 kHz	0.007 4 % of reading + 20 μV	
	(1 to 20) kHz	0.015 % of reading + 20 μV	
	(20 to 50) kHz	0.031 % of reading + 20 μV	
	(50 to 100) kHz	0.081 % of reading + 20 μV	
	(100 to 300) kHz	0.3 % of reading + 0.1 mV	
	300 kHz to 1 MHz	1 % of reading + 0.1 mV	
	1 to 10 V		
	(1 to 40) Hz	0.007 3 % of reading + 0.4 mV	
	40 Hz to 1 kHz	0.007 3 % of reading + 0.2 mV	
	(1 to 20) kHz	0.015 % of reading + 0.2 mV	
	(20 to 50) kHz	0.031 % of reading + 0.2 mV	
(50 to 100) kHz	0.081 % of reading + 0.2 mV		
(100 to 300) kHz	0.3 % of reading + 1 mV		
300 kHz to 1 MHz	1 % of reading + 1 mV		
(1 to 100) V			
40 Hz to 1 kHz	0.021 % of reading + 2 mV		
(1 to 20) kHz	0.021 % of reading + 2 mV		
(20 to 50) kHz	0.036 % of reading + 2 mV		
(50 to 100) kHz	0.12 % of reading + 2 mV		
(100 to 300) kHz	0.4 % of reading + 10 mV		
(1 to 1 000) V			
40 Hz to 1 kHz	0.041 % of reading + 20 mV		
(1 to 20) kHz	0.061 % of reading + 20 mV		

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
AC High Voltage – Measure ¹	(1 to 70) kV 60 Hz	0.52 % of reading	Comparison to HP 3458A 8.5 Digit Multimeter, High Voltage Inc. DVR-150 Divider
AC Current – Source ¹	(29 to 330) μ A (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	1.6 mA/A + 0.1 μ A 1.2 mA/A + 0.1 μ A 0.97 mA/A + 0.1 μ A 3.8 mA/A + 0.15 μ A 6.2 mA/A + 0.2 μ A 13 mA/A + 0.4 μ A	Comparison to Fluke 5520A Multiproduct Calibrator
AC Current – Source ¹	(0.33 to 3.3) 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 (3.3 to 33) 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 (33 to 330) 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 (0.33 to 1.1) A (10 to 45) Hz 45 Hz to 1 kHz (1 to 5) kHz (5 to 10) kHz	1.6 mA/A + 0.15 μ A 0.97 mA/A + 0.15 μ A 0.78 mA/A + 0.1 μ A 1.6 mA/A + 0.2 μ A 3.9 mA/A + 0.3 μ A 7.8 mA/A + 0.6 μ A 1.4 mA/A + 2 μ A 0.7 mA/A + 2 μ A 0.32 mA/A + 2 μ A 0.62 mA/A + 2 μ A 1.6 mA/A + 3 μ A 3.1 mA/A + 4 μ A 1.4 mA/A + 20 μ A 0.7 mA/A + 20 μ A 0.32 mA/A + 20 μ A 0.78 mA/A + 50 μ A 1.6 mA/A + 0.1 mA 3.1 mA/A + 0.2 mA 1.4 mA/A + 0.1 mA 0.4 mA/A + 0.1 mA 4.7 mA/A + 1 mA 20 mA/A + 5 mA	Comparison to Fluke 5520A Multiproduct Calibrator

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
AC Current – Source ¹	(1.1 to 3) A (10 to 45) Hz 45 Hz to 1 kHz (1 to 5) kHz (5 to 10) kHz (3 to 11) A (45 to 100) Hz 100 Hz to 1 kHz (1 to 5) kHz (11 to 20.5) A (45 to 100) Hz 100 Hz to 1 kHz (1 to 5) kHz	1.4 mA/A + 0.1 mA 0.47 mA/A + 0.1 mA 4.7 mA/A + 1 mA 20 mA/A + 5 mA 0.49 mA/A + 2 mA 0.78 mA/A + 2 mA 24 mA/A + 2 mA 0.94 mA/A + 5 mA 1.2 mA/A + 5 mA 24 mA/A + 5 mA	Comparison to Fluke 5520A Multiproduct Calibrator
AC Current Clamp Meters ¹ (Toroidal)	(16.5 to 150) A (45 to 65) Hz (65 to 100) Hz (100 to 440) Hz (150 to 1 000) A (45 to 65) Hz (65 to 100) Hz (100 to 440) Hz	0.27 % reading + 30 mA 0.64 % reading + 27 mA 0.68 % reading + 32 mA 0.25 % reading + 0.34 A 0.63 % reading + 0.10 A 1.0 % reading + 0.11 A	Comparison to Fluke 5520A Multi Product Calibrator w/ 50 Turn Coil
AC Current Clamp Meters ¹ (Non-Toroidal)	(16.5 to 150) A (45 to 65) Hz (65 to 100) Hz (100 to 440) Hz (150 to 1 000) A (45 to 65) Hz (65 to 100) Hz (100 to 440) Hz	0.48 % reading + 0.26 A 0.82 % reading + 0.26 A 0.85 % reading + 0.3 A 0.5 % reading + 1 A 0.82 % reading + 1 A 1.2 % reading + 1.2 A	Comparison to Fluke 5520A Multi Product Calibrator w/ 50 Turn Coil
AC Current – Measure ¹	Up to 100 µA (10 to 20) Hz (20 to 45) Hz 45 Hz to 5 kHz (0.1 to 1) mA (10 to 20) Hz (20 to 45) Hz (45 to 100) Hz 100 Hz to 5 kHz (5 to 20) kHz (20 to 50) kHz	0.4 % of reading + 30 nA 0.16 % of reading + 30 nA 0.061 % of reading + 30 nA 0.4 % of reading + 0.2 µA 0.16 % of reading + 0.2 µA 0.062 % of reading + 0.2 µA 0.031 % of reading + 0.2 µA 0.061 % of reading + 0.2 µA 0.4 % of reading + 0.4 µA	Comparison to HP 3458A 8.5 Digit Multimeter

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
AC Current – Measure ¹	(1 to 10) mA		Comparison to HP 3458A 8.5 Digit Multimeter
	(10 to 20) Hz	0.4 % of reading + 2 μ A	
	(20 to 45) Hz	0.16 % of reading + 2 μ A	
	(45 to 100) Hz	0.061 % of reading + 2 μ A	
	100 Hz to 5 kHz	0.031 % of reading + 2 μ A	
	(5 to 20) kHz	0.061 % of reading + 2 μ A	
	(20 to 50) kHz	0.4 % of reading + 4 μ A	
	(10 to 100) mA		
	(10 to 20) Hz	0.4 % of reading + 20 μ A	
	(20 to 45) Hz	0.16 % of reading + 20 μ A	
	(45 to 100) Hz	0.061 % of reading + 20 μ A	
	100 Hz to 5 kHz	0.031 % of reading + 20 μ A	
	(5 to 20) kHz	0.061 % of reading + 20 μ A	
	(20 to 50) kHz	0.4 % of reading + 40 μ A	
	(0.1 to 1) A		
(10 to 20) Hz	0.4 % of reading + 0.2 mA		
(20 to 45) Hz	0.17 % of reading + 0.2 mA		
(45 to 100) Hz	0.081 % of reading + 0.2 mA		
100 Hz to 5 Hz	0.11 % of reading + 0.2 mA		
(5 to 20) kHz	0.3 % of reading + 0.2 mA		
Capacitance – Source ¹	(0.19 to 3.3) nF		Comparison to Fluke 5520A Multiproduct Calibrator
	DC to 3 kHz	0.56 % of reading + 0.01 nF	
	10 Hz to 1 kHz		
	(3.3 to 11) nF	0.25 % of reading + 0.01 nF	
	(11 to 33) nF	0.43 % of reading + 0.1 nF	
	(33 to 110) nF	0.28 % of reading + 0.1 nF	
(110 to 330) nF	0.21 % of reading + 0.3 nF		

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Capacitance – Source ¹	(0.33 to 1.1) μ F (10 to 600) Hz	0.22 % of reading + 1 nF	Comparison to Fluke 5520A Multiproduct Calibrator
	(1.1 to 3.3) μ F (10 to 300) Hz	0.22 % of reading + 3 nF	
	(3.3 to 11) μ F (10 to 150) Hz	0.2 % of reading + 10 nF	
	(11 to 33) μ F (10 to 120) Hz	0.49 % of reading + 30 nF	
	(33 to 110) μ F (10 to 80) Hz	0.37 % of reading + 0.1 μ F	
	(110 to 330) μ F (DC to 50) Hz	0.4 % of reading + 0.3 μ F	
	(0.33 to 1.1) mF (DC to 20) Hz	0.36 % of reading + 1 μ F	
	(1.1 to 3.3) mF (DC to 6) Hz	0.35 % of reading + 3 μ F	
	(3.3 to 11) mF (DC to 2) Hz	0.35 % of reading + 10 μ F	
	Electrical Simulation of Thermocouple Indicating Devices – Source/Measure ¹	Type B (600 to 800) °C	
(800 to 1 000) °C		0.27 °C	
(1 000 to 1 550) °C		0.26 °C	
(1 550 to 1 820) °C		0.29 °C	
Type E (-250 to -100) °C		0.41 °C	
(-100 to -25) °C		0.16 °C	
(-25 to 350) °C		0.15 °C	
(350 to 650) °C		0.17 °C	
(650 to 1 000) °C		0.2 °C	
Type J (-210 to -100) °C		0.24 °C	
(-100 to -30) °C		0.18 °C	
(-30 to 150) °C		0.13 °C	
(150 to 760) °C		0.18 °C	
(760 to 1 200) °C		0.2 °C	

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Electrical Simulation of Thermocouple Indicating Devices – Source/Measure ¹	Type K		Comparison to Fluke 5520A Multiproduct Calibrator
	(-200 to -100) °C	0.29 °C	
	(-100 to -25) °C	0.19 °C	
	(-25 to 120) °C	0.16 °C	
	(120 to 1 000) °C	0.23 °C	
	(1 000 to 1 372) °C	0.32 °C	
	Type N		
	(-200 to -100) °C	0.34 °C	
	(-100 to -25) °C	0.21 °C	
	(-25 to 120) °C	0.19 °C	
	(120 to 410) °C	0.17 °C	
	(410 to 1 300) °C	0.24 °C	
	Type R		
	(0 to 250) °C	0.49 °C	
	(250 to 400) °C	0.3 °C	
	(400 to 1 000) °C	0.28 °C	
	(1 000 to 1 767) °C	0.33 °C	
	Type S		
(0 to 250) °C	0.4 °C		
(250 to 1 000) °C	0.3 °C		
(1 000 to 1 400) °C	0.32 °C		
(1 400 to 1 767) °C	0.38 °C		
Type T			
(-250 to -150) °C	0.51 °C		
(-150 to 0) °C	0.24 °C		
(0 to 120) °C	0.18 °C		
(120 to 400) °C	0.16 °C		
Electrical Simulation of RTD Measuring Equipment – Source ¹	Pt 385, 100 Ω		Comparison to Fluke 5520A Multiproduct Calibrator
	(-200 to 0) °C	0.04 °C	
	(0 to 100) °C	0.055 °C	
	(100 to 300) °C	0.071 °C	
	(300 to 400) °C	0.078 °C	
	(400 to 630) °C	0.094 °C	
	(630 to 800) °C	0.18 °C	
	Pt 3926, 100 Ω		
	(-200 to 0) °C	0.04 °C	
	(0 to 100) °C	0.055 °C	
	(100 to 300) °C	0.071 °C	
	(300 to 400) °C	0.078 °C	
	(400 to 630) °C	0.094 °C	

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment	
Electrical Simulation of RTD Measuring Equipment – Source ¹	Pt 3916, 100 Ω		Comparison to Fluke 5520A Multiproduct Calibrator	
	(-200 to -190) °C	0.2 °C		
	(-190 to -80) °C	0.032 °C		
	(-80 to 0) °C	0.04 °C		
	(0 to 100) °C	0.047 °C		
	(100 to 260) °C	0.055 °C		
	(260 to 300) °C	0.063 °C		
	(300 to 400) °C	0.07 °C		
	(400 to 600) °C	0.078 °C		
	(600 to 630) °C	0.18 °C		
	Pt 385, 200 Ω			
	(-200 to 100) °C	0.032 °C		
	(100 to 260) °C	0.04 °C		
	(260 to 300) °C	0.094 °C		
	(300 to 400) °C	0.11 °C		
	(400 to 600) °C	0.11 °C		
	(600 to 630) °C	0.13 °C		
	Pt 385, 500 Ω			
	(-200 to -80) °C	0.032 °C		
	(-80 to 100) °C	0.04 °C		
	(100 to 260) °C	0.047 °C		
	(260 to 400) °C	0.063 °C		
	(400 to 600) °C	0.071 °C		
	(600 to 630) °C	0.086 °C		
	Pt 385, 1000 Ω			
	(-200 to 0) °C	0.024 °C		
	(0 to 100) °C	0.032 °C		
	(100 to 260) °C	0.041 °C		
(260 to 300) °C	0.047 °C			
(300 to 400) °C	0.055 °C			
(400 to 600) °C	0.056 °C			
(600 to 630) °C	0.18 °C			
Ni 385, 120 Ω				
(-200 to 0) °C	0.063 °C			
(0 to 100) °C	0.063 °C			
(100 to 260) °C	0.11 °C			
Cu 427, 10 Ω				
(-100 to 260) °C	0.24 °C			

Length – Dimensional Metrology

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Calipers ^{1,2}	Up to 80 in	$(248 + 8.6L) \mu\text{in}$	Comparison to Gage Blocks
Micrometers ^{1,2}	Up to 60 in	$(19 + 13L) \mu\text{in}$	Comparison to Gage Blocks
Height Gages ²	Up to 24 in	$(180 + 13L) \mu\text{in}$	Comparison to Gage Blocks
Length Standards ²	Up to 60 in	$(13 + 3.7L) \mu\text{in}$	Comparison to Gage Blocks, Mu-checker
Dial Indicators ^{1,2}	Up to 5 in	$(20 + 82L) \mu\text{in}$	Comparison to Gage Blocks
Rulers	Up to 40 in	0.005 8 in	Comparison to Gage Blocks
Cylindrical Pins, Cylindrical Plugs ²	(0.011 to 10) in	$(5 + 8.2L) \mu\text{in}$	Comparison to Pratt & Whitney ULM, Master Gage Blocks
Digital and Mechanical Protractors ²	Up to 90°	8.3"	Comparison to Gage Blocks, Sine Plate
Bore Gages Micrometers ^{1,2}	Up to 20 in	$(116 + 24L) \mu\text{in}$	Comparison to Cylindrical Ring Gages
Eddy Current Thickness Measurement Instruments ^{1,2} (Ferrous and Non-Ferrous)	(0.22, 0.47) mils (3, 10, 20, 40, 60) mils	0.019 mils 0.13 mils	Comparison to Coating Thickness Standards (Nominal Values within +/- 10 %)
Ultrasonic Thickness Instruments	Up to 1 in	580 μin	Comparison to Gage Blocks
Cylindrical Ring Gages ²	Up to 13 in	$(16 + 2L) \mu\text{in}$	Comparison to Pratt & Whitney ULM, Master Gage Blocks, Master Cylindrical Ring Gages
Thread Plugs ² Major Diameter	Up to 12 in	$(19 + 6.3L) \mu\text{in}$	Comparison to Pratt & Whitney ULM, Van Keuren Thread Wires, Master Gage Blocks
Pitch Diameter	Up to 12 in	$(78 + 4.2L) \mu\text{in}$	
Solid Thread Rings Pitch Diameter	Up to 10 in	110 μin	Comparison to Pratt & Whitney ULM

Length – Dimensional Metrology

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Adjustable Thread Rings Pitch Diameter	Up to 10 in	(249 + 1.1L) μin	Tactile Fit using Thread Setting Plug Gages
Precision Levels 0.000 5 in/ft 0.005 in/ft	Up to 15 in	110 μin 110 μin	Comparison to Sine Bar, Gage Blocks, Surface Plate

Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Scales and Balances ^{1,3} (SI)	Up to 6 410 g	0.25 % of reading + 48 μg	ASTM E617 Class 1 Weights and NIST HB 44 utilized in the calibration of the weighing system.
Scales and Balances ^{1,3} (Avoirdupois)	(0.005 to 5 000) lb	0.017 % of applied load	NIST Class F Weights and NIST HB 44 utilized in the calibration of the weighing system.
Hydraulic Pressure Devices ¹ (Gauge Pressure)	(200 to 20 200) psig	0.31 psi or 0.019 % of reading (whichever is greater)	Comparison to Fluke P3116 Dead Weight Tester
Hydraulic Pressure Devices ¹ (Gauge Pressure)	(30 to 30 000) psig (60 to 60 000) psig	33 psi 90 psi	Comparison to Additel ADT680 Pressure Gauge, Heise CM Pressure Gauge
Pneumatic Pressure Devices ¹ (Gauge Pressure)	(-14.5 to 15) psig	0.001 8 psi	Comparison to Fluke RPM4 Pressure Calibrator
Pneumatic Pressure Devices ¹ (Gauge Pressure)	(15 to 100) psig	0.002 9 psi or 0.009 7 % of reading (whichever is greater)	Comparison to Fluke RPM4 Pressure Calibrator
Pneumatic Pressure Devices ¹ (Gauge Pressure)	Up to 2 000 psig	0.032 psi or 0.011 % of reading (whichever is greater)	Comparison to Fluke 6270 Pressure Controller

Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Pneumatic Pressure Devices ¹ (Absolute Pressure)	(0 to 15) psia	0.001 8 psi	Comparison to Fluke RPM4 Pressure Calibrator
	(15 to 100) psia	0.002 9 psi or 0.009 7 % of reading (whichever is greater)	
Pneumatic Pressure Devices ¹ (Absolute Pressure)	(100 to 1 000) psia	0.066 psi or 0.014 % of reading (whichever is greater)	Comparison to Additel 681A Fluke 6270 Pressure Controller
Torque Wrenches ¹	5 ozf-in to 2 000 lbf-ft	0.31 % of reading	Comparison to CDI 2000 Torque Tester
Torque Analyzers, Torque Transducers	5 ozf-in to 2 000 lbf-ft	0.085 % of reading	Comparison to NIST Class F Weights, Torque Arms/Wheels
Force (Tension and Compression)	(0.125 to 600) lbf	0.051 % of reading	Comparison to NIST Class F Weights
Force (Tension and Compression)	(50 to 2 000) lbf	0.011 % of reading	Comparison to Morehouse Universal Calibration Machine w/Load Cells
	(200 to 10 000) lbf	0.011 % of reading	
	(500 to 50 000) lbf	0.011 % of reading	
	(2 000 to 100 000) lbf	0.011 % of reading	
Rockwell Hardness Testers ¹	HRBW		Indirect Verification Method per ASTM E18 using Hardness Blocks.
	(40 to 59) HRBW	0.78 HRBW	
	(60 to 79) HRBW	0.76 HRBW	
	(80 to 100) HRBW	0.7 HRBW	
	HRC		
	(20 to 30) HRC	0.52 HRC	
	(30 to 55) HRC	0.53 HRC	
	(60 to 65) HRC	0.5 HRC	
	HREW		
	(70 to 79) HREW	0.68 HREW	
(84 to 90) HREW	0.66 HREW		
(93 to 100) HREW	0.63 HREW		
Superficial Rockwell Hardness Testers ¹	HR15TW		Indirect Verification Method per ASTM E18 using Hardness Blocks.
	(74 to 80) HR15TW	0.7 HR15TW	
	(81 to 87) HR15TW	0.7 HR15TW	
	(88 to 100) HR15TW	0.51 HR15TW	
	HR30TW		
	(45 to 55) HR30TW	0.59 HR30TW	
(58 to 68) HR30TW	0.55 HR30TW		
(72 to 82) HR30TW	0.54 HR30TW		

Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Leeb Hardness ¹	744 HLD	9.6 HLD	Indirect Verification Method per ASTM A956 using Hardness Block.

Thermodynamic

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Temperature – Measure ^{1,2}	(-196 to 100) °C (100 to 400) °C (400 to 660) °C	0.034 °C 0.055 °C 0.068 °C	Comparison to Fluke 1524 Indicator w/ 5615 or 5609 PRT
Temperature Indicating Devices ^{1,2,4}	(-35 to 100) °C (100 to 400) °C (400 to 660) °C	0.049 °C 0.061 °C 0.085 °C	Comparison to Fluke 1524 Indicator w/ 5615 or 5609 PRT; Liquid Baths, Drywells
Humidity and Temperature Indicating Devices Humidity	(10 to 95) %RH	0.61 %RH	Comparison to Thunder Scientific 2500 Environmental Chamber
Temperature	(15 to 35) °C	0.13 °C	
Humidity and Temperature – Measure ¹ Humidity	(10 to 90) %RH	1.2 %RH	Comparison to Vaisala HM141/HMP46 Temperature/Humidity Indicator
Temperature	(18 to 28) °C	0.27 °C	
Infrared Thermometers ¹	35 °C 100 °C 200 °C 350 °C 500 °C	0.53 °C 0.91 °C 1.3 °C 2.1 °C 2.9 °C	Comparison to Fluke 4181 Infrared Calibrator (Flat Plate) $\lambda = (8 \text{ to } 14) \mu\text{m}$, $\epsilon = (0.9 \text{ to } 1)$

Time and Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Frequency – Source ¹	10 mHz to 2 MHz	2.1 μ Hz/Hz + 5 μ Hz	Comparison to Fluke 5520A Multiproduct Calibrator

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; " = arc-second; 1 mil = 0.001 inch.
3. The CMC for scales and balances is highly dependent upon the resolution of the unit under test. The CMC presented here does not include the resolution of the unit under test. The resolution will be included in the reported measurement uncertainty at the time of calibration.
4. The resolution of the DUT may be different at the time of calibration and will be included in the Measurement Uncertainty (MU).
5. Unless otherwise specified in the far-right column, the calibration procedure/method was written internally.



Jason Stine, Vice President

