

The ANSI National Accreditation Board

Hereby attests that

System Scale Corporation

8101 Industry Drive North Little Rock, AR 72117

Fulfills the requirements of

ISO/IEC 17025:2017

and national standard

ANSI/NCSL Z540-1-1994 (R2002)

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.

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R. Douglas Leonard Jr., VP, PILR SBU

Expiry Date: 01 February 2025 Certificate Number: AC-1756





The ANSI National Accreditation Board

Hereby attests that

System Scale Corporation 3905 Steve Reynolds Blvd, Suite 100 Norcross, GA 30093

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.

Jason Stine, Vice President

Expiry Date: 24 May 2026 Certificate Number: AC-1756.10 A B A South A A Color of the South A S







SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

System Scale Corporation

3905 Steve Reynolds Blvd, Suite 100
Norcross, GA 30093
Sean Rainey 501-562-2900 srainey@system-scale.com

CALIBRATION

Valid to: May 24, 2026 Certificate Number: AC-1756.10

Mass and Mass Related

Version 002 Issued: May 21, 2024

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Balances 1			
(0.000 01 g resolution)	Up to 210 g	0.69 mg	
(0.000 1 g resolution)	Up to 100 g	0.33 mg	
·	Up to 210 g	0.69 mg	
	Up to 320 g	1.1 mg	
(0.001 g resolution)	Up to 100 g	1.1 mg	
	Up to 500 g	2 mg	
	Up to 1 kg	3.7 mg	ASTM E617 Class 1
	Up to 5 kg	15 mg	Weights and NIST
			Handbook 44 utilized for
(0.01 g resolution)	Up to 100 g	9 mg	the calibration of the
	Up to 500 g	9.9 mg	weighing system.
	Up to 2 kg	15 mg	
	Up to 6 kg	25 mg	
(0.1 g resolution)	Up to 1 kg	98 mg	
(ori gressianon)	Up to 5 kg	99 mg	
	Up to 10 kg	0.11 g	
	op to 10 kg	0.11 g	
(1 g resolution)	Up to 2 kg	1.2 g	
	Up to 6 kg	1.5 g	
Balances ¹			NIST Class F Weights and
(0.1 g resolution)	Up to 24 kg	2.8 g	NIST Handbook 44 utilized
			for the calibration of the
(1 g resolution)	Up to 35 kg	2.8 g	weighing system.





Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Scales ¹			
(0.001 lb resolution)	Up to 50 lb	0 <mark>.00</mark> 7 4 lb	
	Up to 100 lb	0.016 lb	
(0.01 lb resolution)	Up to 50 lb	0.017 lb	
, , , , , , , , , , , , , , , , , , ,	Up to 100 lb	0.022 lb	
	Up to 300 lb	0.052 lb	
(0.1 lb resolution)	Up to 50 lb	0.082 lb	
	Up to 300 lb	0.11 lb	ASTM E617 Class 6,
	Up to 500 lb	0.12 lb	NIST Class F Weights
	Up to 1 000 lb	0.2 lb	and NIST Handbook 44
	Up to 5 000 lb	0.7 lb	utilized for the calibration
		1.401	of the weighing system.
(1 lb resolution)	Up to 500 lb	0.82 lb	
	Up to 1 000 lb	1.4 lb	
	Up to 5 000 lb	1.4 lb	
	Up to 10 000 lb	1.7 lb	
(10 lb resolution)	Up to 20 000 lb	8.3 lb	
	Up to 100 000 lb	8.7 lb	
(20 lb resolution)	Up to 200 000 lb	24 lb	

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. AC-1756.10.

Jason Stine, Vice President

Version 002 Issued: May 21, 2024





SCOPE OF ACCREDITATION T'O ISO/IEC 17025:2017 AND

ANSI/NCSL Z540-1-1994 (R2002)

System Scale Corporation

8101 Industry Drive
North Little Rock, AR 72117
Sean Rainey 501-562-2900 srainey@system-scale.com

CALIBRATION

Valid to: February 1, 2025 Certificate Number: AC-1756

Acoustics and Vibration

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Sound Level Meter	1 kHz 94 dB 114 dB	0.43 dB 0.3 dB	Sound Calibrator

Chemical Quantities

Version 015 Issued: January 5, 2023

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
	4 pH	0.021 pH	
pH Meters ¹	7 pH	0.021 pH	Accredited pH Solutions
	10 pH	0.021 pH	
	10 μS	0.69 μS	
	100 μS	2.2 μS	Accredited Conductivity
Conductivity Meters ¹	1 000 μS	5.5 μS	Solutions
	10 000 μS	50 μS	Solutions
	100 000 μS	470 μS	





Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
DC Voltage – Measure ¹	(0 to 100) mV 100 mV to 1 V (1 to 10) V (10 to 100) V (100 to 1 000) V	16 μ V/V + 0.4 μ V 17 μ V/V + 0.1 μ V 17 μ V/V + 4.4 μ V 16 μ V/V + 67 μ V 17 μ V/V + 1.2 mV	HP 3458 opt 002 8.5 Digit Multimeter
DC Voltage – Source ¹	(0 to 329.9) mV (0 to 3.299) V (0 to 32.999) V (30 to 329.999) V (100 to 1 020) V	$15.5 \mu\text{V/V} + 1.2 \mu\text{V}$ $10.2 \mu\text{V/V} + 2.5 \mu\text{V}$ $10.6 \mu\text{V/V} + 20 \mu\text{V}$ $14.8 \mu\text{V/V} + 0.11 \text{mV}$ $14 \mu\text{V/V} + 1.7 \text{mV}$	Fluke 5522A/6 Multiproduct Calibrator with 600 MHz Scope Option (Ranges Locked)
DC Current – Measure ¹	(10 to 100) µA (0.1 to 1) mA (1 to 10) mA (10 to 100) mA (0.1 to 1) A	29 μA/A + 1.4 nA 26 μA/A + 12 nA 27 μA/A + 0.12 μA 47 μA/A + 1.1 μA 0.14 mA/A + 14 μA	HP 3458 opt 002 8.5 Digit Multimeter
DC Current – Source ¹	(0 to 329.9) µA (0 to 3.299 9) mA (0 to 32.999) mA (0 to 329.99) mA (0 to 1.099 9) A (1.1 to 2.999) A (0 to 10.99) A (11 to 20.5) A	0.11 mA/A + 17 nA 93.3 μA/A + 43 nA 80 μA/A + 0.27 μA 88 μA/A + 2.2 μA 0.17 mA/A + 36 μA 0.39 mA/A + 0.2 mA 0.39 mA/A + 0.45 mA 7.1 mA/A + 23 mA	Fluke 5522A/6 Multiproduct Calibrator with 600 MHz Scope Option (Ranges Locked)
AC Voltage – Measure ¹	(10 to 100) mV (1 to 40) Hz 40 Hz to 1 kHz (1 to 20) kHz (20 to 50) kHz (50 to 100) kHz (100 to 300) kHz 100 kHz to 1 MHz (1 to 4) MHz (4 to 8) MHz (0.1 to 10) V (1 to 40) Hz 40 Hz to 1 kHz (1 to 20) kHz (20 to 50) kHz (50 to 100) kHz (100 to 300) kHz (100 to 300) kHz	$\begin{array}{c} 0.33 \text{ mV/V} + 3.8 \mu\text{V} \\ 0.2 \text{ mV/V} + 1.9 \mu\text{V} \\ 0.31 \text{ mV/V} + 1.9 \mu\text{V} \\ 1.1 \text{ mV/V} + 1.9 \mu\text{V} \\ 5.7 \text{ mV/V} + 1.7 \mu\text{V} \\ 47 \text{ mV/V} + 2.4 \mu\text{V} \\ 14 \text{ mV/V} + 5.9 \mu\text{V} \\ 80 \text{ mV/V} + 17 \mu\text{V} \\ 0.24 \text{V/V} + 14 \mu\text{V} \\ 0.11 \text{ mV/V} + 5.1 \mu\text{V} \\ 0.19 \text{ mV/V} + 3 \mu\text{V} \\ 0.37 \text{ mV/V} + 1 \mu\text{V} \\ 0.95 \text{ mV/V} + 1 \mu\text{V} \\ 3.6 \text{ mV/V} \\ 11 \text{ mV/V} + 7.1 \text{ mV} \end{array}$	HP 3458 opt 002 8.5 Digit Multimeter





Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
	(0.1 to 10) V		
	(1 to 2) MHz	17 m <mark>V/V</mark> + 6.6 mV	
	(1 to 4) MHz	1.1 mV/V + 8 mV	
	(4 to 8) MHz	1.3 mV/V + 8 mV	
	(8 to 10) MHz	1.7 mV/V + 8 mV	
	(10 to 100) V		
	(1 to 40) Hz	0.22 mV/V + 6 mV	
	40 Hz to 1 kHz	0.22 mV/V + 4 mV	
	(1 to 20) kHz	0.22 mV/V + 4 mV	HP 3458 opt 002
AC Voltage – Measure ¹	(20 to 50) kHz	0.4 mV/V + 3.7 mV	8.5 Digit Multimeter
	(50 to 100) kHz	1.5 mV/V + 2.2 mV	8.5 Digit Wultimeter
	(100 to 300) kHz	4.7 mV/V + 11 mV	
	300 kHz to 1 MHz	18 mV/V + 11 mV	
	(100 to 1 000) V		
	(1 to 40) Hz	0.46 mV/V + 48 mV	
	40 Hz to 1 kHz	0.46 mV/V + 24 mV	
	(1 to 20) kHz	0.7 mV/V + 24 mV	
	(20 to 5 <mark>0) kHz</mark>	1.5 mV/V + 22 mV	
	(50 to 100) kHz	3.5 mV/V + 22 mV	
	(1 to 32.99) mV		
	(10 to 40) Hz	$0.94 \text{ mV/V} + 7.1 \mu\text{V}$	
	45 Hz to 10 kHz	$0.18 \text{ mV/V} + 7.1 \mu\text{V}$	
	(10 to 20) kHz	$0.23 \text{ mV/V} + 7.6 \mu\text{V}$	
	(20 to 50) kHz	$1.1 \text{ mV/V} + 9.3 \mu\text{V}$	
	(50 to 100) kHz	$4.1 \text{ mV/V} + 16.6 \mu\text{V}$	
	(100 to 500) kHz	$9.4 \text{ mV/V} + 62 \mu\text{V}$	
	(33 to 329.99) mV		
	(10 to 45) Hz	$0.37 \text{ mV/V} + 8.9 \mu\text{V}$	Fluke 5522A/6
	45 Hz to 10 kHz	$0.17 \text{ mV/V} + 10 \mu\text{V}$	Multiproduct Calibrator
AC Voltage – Source ¹	(10 to 20) kHz	$0.18 \text{ mV/V} + 12 \mu\text{V}$	with 600 MHz
	(20 to 50) kHz	$0.41 \text{ mV/V} + 14 \mu\text{V}$	Scope Option
	(50 to 100) kHz	$0.95 \text{ mV/V} + 37 \mu\text{V}$	Scope Option
	(100 to 500) kHz	$2.3 \text{ mV/V} + 83 \mu\text{V}$	
	(0.33 to 3.299) V		
	(10 to 45) Hz	$0.34 \text{ mV/V} + 66 \mu\text{V}$	
	45 Hz to 10 kHz	$0.18 \text{ mV/V} + 72 \mu\text{V}$	
	(10 to 20) kHz	0.21 mV/V + 0.1 mV	
	(20 to 50) kHz	0.33 mV/V + 0.1 mV	
	(50 to 100) kHz	0.79 mV/V + 0.2 mV	
	(100 to 500) kHz	2.7 mV/V + 1 mV	



Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
AC Voltage – Source ¹	(3.3 to 32.99) V (10 to 45) Hz 45 Hz to 10 kHz (10 to 20) kHz 20 to 50 kHz 50 to 100 kHz (33 to 329.99) V 45 Hz to 1 kHz (10 to 20) kHz (20 to 50) kHz (50 to 100) kHz (330 to 1 020) V 45 Hz to 1 kHz (1 to 5) kHz (5 to 10) kHz	0.38 mV/V + 0.66 mV 0.18 mV/V + 0.72 mV 0.27 mV/V + 1 mV 0.39 mV/V + 1.1 mV 1 mV/V + 2.4 mV 0.22 mV/V + 2.3 mV 0.24 mV/V + 7.2 mV 0.3 mV/V + 11 mV 0.32 mV/V + 26 mV 2.3 mV/V + 64 mV 0.28 mV/V + 26 mV 0.34 mV/V + 17 mV 0.34 mV/V + 17 mV	Fluke 5522A/6 Multiproduct Calibrator with 600 MHz Scope Option
AC Voltage – Source ¹ (AUX Output)	(10 to 329.99) mV (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 3.299) V (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 (10 to 30) kHz (10 to 20) Hz (20 to 45) Hz (10 to 20) Hz (20 to 45) Hz (3.3 to 5) V (10 to 20) Hz (20 to 45) Hz 45 Hz to 1 kHz (1 to 5) kHz (5 to 10) kHz	0.53 mV 0.43 mV 0.43 mV 0.52 mV 0.52 mV 1.1 mV 0.71 mV 0.55 mV 0.57 mV 1.7 mV 1.7 mV 3.3 mV 8.1 mV 0.64 mV 1.7 mV 1.8 mV	Fluke 5522A/6 Multiproduct Calibrator with 600 MHz Scope Option
AC Current – Measure ¹	(10 to 100) µA (10 to 20) Hz (20 to 45) Hz (45 to 100) Hz 100 Hz to 5 kHz	4.6 mA/A + 36 nA 1.7 mA/A + 37 nA 0.73 mA/A + 37 nA 0.73 mA/A + 37 nA	HP 3458 opt 002 8.5 Digit Multimeter



Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
	(1 to 100) mA (10 to 20) Hz	$4.7 \text{ mA/A} + 23 \mu\text{A}$	
	(20 to 45) Hz	$1.8 \text{ mA/A} + 23 \mu\text{A}$	
	(45 to 100) Hz	$0.7 \text{ mA/A} + 23 \mu\text{A}$	
	100 Hz to 5 kHz	$0.35 \text{mA/A} + 24 \mu \text{A}$	
	(5 to 20) kHz	$0.7 \text{ mA/A} + 23 \mu \text{A}$	
	(20 to 50) kHz	$4.7 \text{ mA/A} + 46 \mu \text{A}$	HD 2450 + 002
AC Current – Measure ¹	(50 to 100) kHz	6.4 mA/A + 0.17 mA	HP 3458 opt 002
	100 mA to 1 A	1 /	8.5 Digit Multimeter
	(10 to 20) Hz	4.7 mA/A + 0.23 mA	
	(20 to 45) Hz	1.9 mA/A + 0.23 mA	
	(45 to 100) Hz	1 mA/A + 0.23 mA	
	100 Hz to 5 kHz	1.2 mA/A + 0.23 mA	
	(5 to 20) kHz	3.5 mA/A + 0.23 mA	
	(20 to 50) kHz	11 mA/A + 0.56 mA	
	(29 to 329.99) μA		
	(10 to 20) Hz	$2.3 \text{ mA/A} + 0.14 \mu\text{A}$	
	(20 to 45) Hz	$1.7 \text{ mA/A} + 0.14 \mu \text{A}$	
	45 Hz to 1 kHz	$1.5 \text{ mA/A} + 0.12 \mu \text{A}$	
	(1 to 5) kHz	$3.7 \text{ mA/A} + 0.19 \mu\text{A}$	
	(5 to 10) kHz	$9.3 \text{ mA/A} + 0.23 \mu\text{A}$	
	(10 to 30) kHz	$18 \text{ mA/A} + 0.55 \mu\text{A}$	
	(0.33 to 3.299) mA		
	(10 to 20) Hz	$2.2 \text{ mA/A} + 0.57 \mu\text{A}$	Elvies 5522 A /6
	(20 to 45) Hz	$1.4 \text{ mA/A} + 0.38 \mu\text{A}$	Fluke 5522A/6
AC Current – Source ¹	45 Hz to 1 kHz	$1.2 \text{ mA/A} + 0.18 \mu\text{A}$	Multiproduct Calibrator
	(1 to 5) kHz	$2.3 \text{ mA/A} + 0.23 \mu\text{A}$	with 600 MHz
	(5 to 10) kHz	$5.4 \text{ mA/A} + 2.1 \mu\text{A}$	Scope Option
	(10 to 30) kHz	$12 \text{ mA/A} + 0.8 \mu\text{A}$	
	(3.3 to 32.99) mA		
	(10 to 20) Hz	$2 \text{ mA/A} + 43 \mu\text{A}$	
	(20 to 45) Hz	$1 \text{ mA/A} + 39 \mu \text{A}$	
	45 Hz to 1 kHz	$0.47 \text{ mA/A} + 23 \mu\text{A}$	
	(1 to 5) kHz	$1.2 \text{ mA/A} + 58 \mu\text{A}$	
	(5 to 10) kHz	2.3 mA/A + 0.15 mA	
	(10 to 30) kHz	4.7 mA/A + 0.23 mA	





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Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Resistance – Source ¹	$\begin{array}{c} (33 \text{ to } 109.99) \text{ k}\Omega \\ (110 \text{ to } 329.9) \text{ k}\Omega \\ (0.33 \text{ to } 1.09) \text{ M}\Omega \\ (1.1 \text{ to } 3.29) \text{ M}\Omega \\ (3.3 \text{ to } 10.9) \text{ M}\Omega \\ (11 \text{ to } 32.99) \text{ M}\Omega \\ (33 \text{ to } 109.99) \text{ M}\Omega \\ (110 \text{ to } 329.99) \text{ M}\Omega \\ (330 \text{ to } 1 100) \text{ M}\Omega \end{array}$	$\begin{array}{c} 24~\mu\Omega/\Omega + 0.13~\Omega \\ 24~\mu\Omega/\Omega + 2.5~\Omega \\ 42~\mu\Omega/\Omega + 2.9~\Omega \\ 0.11~m\Omega/\Omega + 45~\Omega \\ 0.19~m\Omega/\Omega + 0.11~k\Omega \\ 0.52~m\Omega/\Omega + 2.1~k\Omega \\ 0.43~m\Omega/\Omega + 1.7~k\Omega \\ 2.3~m\Omega/\Omega + 82~k\Omega \\ 13~m\Omega/\Omega + 59~k\Omega \end{array}$	Fluke 5522A/6 Multiproduct Calibrator with 600 MHz Scope Option
Electrical Simulation of Thermocouple Indicating Devices – Measure/Source ¹	Type E (-250 to -100) °C (-100 to -25) °C (-25 to 350) °C (350 to 650) °C (650 to 1 000) °C Type J (-210 to -100) °C (-100 to -30) °C (-30 to 150) °C (150 to 760) °C (760 to 1 200) °C Type K (-200 to -100) °C (-100 to -25) °C (-25 to 120) °C (120 to 1 000) °C (1 000 to 1 372) °C Type N (-200 to -100) °C (-100 to -25) °C (-25 to 120) °C (120 to 410) °C (410 to 1 300) °C Type R (0 to 250) °C (250 to 400) °C (400 to 1 000) °C (1 000 to 1 767) °C	0.58 °C 0.19 °C 0.17 °C 0.19 °C 0.25 °C 0.32 °C 0.19 °C 0.17 °C 0.21 °C 0.27 °C 0.39 °C 0.22 °C 0.19 °C 0.31 °C 0.47 °C 0.47 °C 0.23 °C 0.22 °C 0.22 °C 0.32 °C 0.32 °C 0.47 °C 0.66 °C 0.41 °C 0.39 °C 0.47 °C	Fluke 5522A/6 Multiproduct Calibrator with 600 MHz Scope Option





Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Electrical Simulation of Thermocouple Indicating Devices – Measure/Source ¹	Type S (0 to 250) °C (250 to 1 000) °C (1 000 to 1 400) °C (1 400 to 1 767) °C Type T (-250 to -150) °C (-150 to 0) °C (0 to 120) °C (120 to 400) °C	0.55 °C 0.42 °C 0.43 °C 0.54 °C 0.73 °C 0.29 °C 0.19 °C 0.17 °C	Fluke 5522A/6 Multiproduct Calibrator with 600 MHz Scope Option
Electrical Simulation of RTD Indicating Devices – Source ¹	Pt 385, 100 Ω (-200 to -80) °C (-80 to 0) °C (0 to 100) °C (100 to 300) °C (300 to 400) °C (400 to 630) °C (630 to 800) °C	0.06 °C 0.06 °C 0.083 °C 0.11 °C 0.12 °C 0.14 °C 0.27 °C	Fluke 5522A/6 Multiproduct Calibrator with 600 MHz Scope Option
Capacitance – Source ¹	(220 to 399.9) pF (0.4 to 1.099) nF (1.1 to 3.299 9) nF (3.3 to 10.999) nF (11 to 32.999) nF (110 to 329.99) nF (0.33 to 1.099 9) µF (1.1 to 3.299) µF (1.1 to 32.999) µF (11 to 32.999) µF (33 to 109.99) µF (10 to 329.99) µF (10 to 329.99) µF (11 to 3.299) mF (1.1 to 3.299) mF (1.1 to 3.2999) mF (3.3 to 10.999) mF	5.6 pF/F + 12 pF 5 pF/F + 13 pF 5 pF/F + 17 pF 2.7 pF/F + 16 pF 2.3 pF/F + 0.17 nF 2.7 pF/F + 0.16 nF 1.8 pF/F + 1.2 nF 2.7 pF/F + 1.6 nF 1.8 pF/F + 12 nF 2.7 pF/F + 16 nF 3.6 pF/F + 0.11 μF 5.2 pF/F + 0.14 μF 4.1 pF/F + 1.1 μF 5.1 pF/F + 1.5 μF 4.1 pF/F + 1.5 μF 4.1 pF/F + 1.1 μF 5.1 pF/F + 1.5 μF 4.1 pF/F + 1.1 μF 5.1 pF/F + 0.1 mF 13 pF/F + 0.13 mF	Fluke 5522A/6 Multiproduct Calibrator with 600 MHz Scope Option
Oscilloscopes 1 Amplitude – DC into 50Ω load into $1 M\Omega$ load	(0 to 6.6) V	$3 \text{ mV/V} + 47 \mu\text{V}$ $0.59 \text{ mV/V} + 47 \mu\text{V}$	Fluke 5522A/6 Multiproduct Calibrator with 600 MHz Scope Option



Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
	10 Hz to 100 kHz ± 1 mVp-p to ± 6 Vp-p	$3 \text{ mV/V} + 47 \mu\text{V}$	
into 1 MΩ load Amplitude – Edge	± 1 mVp-p to 130 Vp-p 5 mV to 2.5 V	$1.2 \text{ mV/V} + 47 \mu\text{V}$ 24 mV/V + 0.23 mV	Fluke 5522A/6
Leveled Sine Wave into 50 Ω load	5 mVp-p to 5.5 Vp-p 50 kHz 50 kHz to 100 MHz (100 to 300) MHz (300 to 600) MHz	24 mV/V + 0.37 mV 24 mV/V + 0.37 mV 47 mV/V + 0.37 mV 71 mV/V + 0.37 mV	Multiproduct Calibrator with 600 MHz Scope Option
Time Markers	(2 to 5) ns 10 ns (20 to 50) ns 100 ns to 20 ms 50 ms to 5 s	0.12 ns 0.12 ns 0.12 ns 11 ns 29 μs	

Length – Dimensional Metrology

Version 015 Issued: January 5, 2023

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Gage Blocks ³	Up to 4 in (5 to 6) in	$(3.5 + 1.4L) \mu in$ $(12 + 2L) \mu in$	Master Gage Blocks, Mitutoyo Gage Block Comparator
Plain Ring Gages ³	(0.04 to 12) in	(26 + 12 <i>L</i>) μin	LabMaster Laser Measuring System
Plug Gages ³	Up to 14 in	(9.1 + 0.7 <i>L</i>) μin	LabMaster Laser Measuring System
Reference Spheres ³	Up to 4 in	(4.8 + 8.7 <i>L</i>) μin	LabMaster Laser Measuring System
Pin Gages	Up to 1 in	9 μin	LabMaster Laser Measuring System
Indicators	Up to 1 in	120 μin	Gage Blocks, Indicator Calibrator





Length – Dimensional Metrology

Version 015 Issued: January 5, 2023

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Indicators ¹	Up to 1 in (1 to 5) in	60 μin 71 μin	Gage Blocks
Micrometers, Depth Micrometers ^{1,3}	Up to 20 in	(57 + 8.1 <i>L</i>) μin	Gage Blocks
Calipers 1,3	Up to 80 in	$(287 + 2.8L) \mu in$	Gage Blocks
Height Gages 1,3	Up to 40 in	$(13 + 8.7L) \mu in$	Gage Blocks
Shims	Up to 250 mils	11 μin	LabMaster Laser Measuring System
Thickness Coating Gage 1,3	Up to 206 mils	(12 + 48L) µin	Shims
Optical Comparators ^{1,3} Linearity Angularity Magnification	Up to 16 in Up to 180° (10 to 100) X	220 µin 47" 0.002 1 in	Inspection Master, Angle Block
Microscopes ¹	Up to 1.0 in	1 200 μin	Stage Micrometer I1110, Ruler
Precision Rules	(6 to 72) in	0.014 in	Precision Rule, Microscope
Measuring Tapes	(6 to 100) ft	0.073 in	Precision Rule, Microscope
Roughness Gage	16.1 μin Ra 119.5 μin Ra	3.6 μin 3.8 μin	Roughness Standard
Surface Plate ^{1,3} Overall Flatness Local Area Flatness	Up to 161 <i>DL</i> Up to 0.001 in	(5.4 – 0.97 <i>DL</i>) μin 26 μin	Electronic Leveling System Repeat-O-Meter
Thread Plugs ³ Pitch Diameter	Up to 8 in	150 μin	Labmaster Laser Measuring System, Thread Wires
Major Diameter	(0.118 to 3.9) in	110 μin	IAC MasterScanner
Pitch Diameter	(0.118 to 3.9) in	130 μin	
Pitch (Lead)	(0.118 to 3.9) in	54 μin	
Flank Angles	Up to 0.3 in	7′	
Taper	(0.118 to 3.9) in	39 μin	





Length – Dimensional Metrology

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Degree Thread Rings ³			
Major Diameter	(0.118 to 3.9) in	110 μin	
Pitch Diameter	(0.118 to 3.9) in	130 μin	
Pitch (Lead)	(0.118 to 3.9) in	53 μin	IAC MasterScanner
Flank Angles	Up to 0.3 in	6.3'	
Taper	(0.118 to 3.9) in	38 μin	
Thread Wires	Up to 0.15 in	29 μin	LabMaster Laser Measuring System
Angle ³	Up to 90°	1.9'	Optical Comparator
Digital Protractors ³	Up to 360°	0.37'	Angle Blocks, Height Gage
Dial Protractors ^{1,3}	Up to 360°	10′	Angle Blocks
Length Measurements ³	Up to 100 in	$(113 + 7.2L) \mu in$	Comparison to Gage Blocks

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Balances 1,2			
(0.000 01 g resolution)	Up to 200 g	0.27 mg	
(0.000 1 g resolution)	Up to 100 g	0.33 mg	ASTM E617 Class 1
, , , ,	Up to 210 g	0.69 mg	Weights and NIST
	Up to 320 g	1.1 mg	Handbook 44 utilized for the calibration of the
(0.001 g resolution)	Un to 100 a	1.1 mg	
(0.001 g resolution)	Up to 100 g	1.1 mg	weighing system.
	Up to 500 g	2 mg	
	Up to 1 kg	3.7 mg	
	Up to 5 kg	5.1 mg	





Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Balances 1,2			1
(0.01 g resolution)	Up to 100 g	9 mg	
	Up to 500 g	9.9 mg	
	Up to 2 kg	15 mg	ASTM E617 Class 1
	Up to 6 kg	25 mg	Weights and NIST
			Handbook 44 utilized for
(0.1 g resolution)	Up to 1 kg	98 mg	the calibration of the
	Up to 5 kg	99 mg	weighing system.
	Up to 10 kg	0.11 g	
(1 g resolution)	Up to 2 kg	0.82 g	
(1 g reservien)	Up to 6 kg	1.3 g	
Balances 1,2			NIST Class F Weights and
(0.1 g resolution)	Up to 24 kg	2.8 g	NIST Handbook 44 utilized
			for the calibration of the
(1 g resolution)	Up to 35 kg	2.8 g	weighing system.
Scales 1,2	A A .	A A A A	
(0.001 lb resolution)	Up to 50 lb	0.007 4 lb	
	Up to 100 lb	0.016 lb	
(0.01 lb resolution)	Up to 50 lb	0.017 lb	ASTM E617 Class 6, NIST
,	Up to 100 lb	0.022 lb	Class F Weights and NIST
	Up to 300 lb	0.052 lb	Handbook 44 utilized for
	•		the calibration of the
(0.1 lb resolution)	Up to 50 lb	0.082 lb	weighing system.
	Up to 300 lb	0.11 lb	
	Up to 500 lb	0.12 lb	
	Up to 1 000 lb	0.2 lb	
	Up to 5 000 lb	0.7 lb	
Scales 1,2		0.65.11	
(1 lb resolution)	Up to 500 lb	0.82 lb	
	Up to 1 000 lb	1.4 lb	ASTM E617 Class 6, NIST
	Up to 5 000 lb	1.4 lb	Class F Weights and NIST
	Up to 10 000 lb	1.7 lb	Handbook 44 utilized for
(10 lb resolution)	Up to 20 000 lb	8.3 lb	the calibration of the
(10 10 10301441011)	Up to 100 000 lb	8.7 lb	weighing system.
	op 10 100 000 10	0., 10	
(20 lb resolution)	Up to 200 000 lb	24 lb	





Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Mass Determination (ASTM E617 Classes 5, 6, 7, and NIST Class F Weights)	1 g 2 g 5 g 10 g 20 g 50 g 100 g 200 g 500 g 1 kg 2 kg 5 kg	0.6 mg 3.4 mg 3.4 mg 3.5 mg 4.6 mg	Balance, ASTM E617 Class 1 Weights
Vacuum ¹	Up to 29 inHg	0.007 6 inHg	Master Vacuum Transducer
Pressure Gages ¹ (Pneumatic)	Up to 50 inH ₂ O	0.035 inH ₂ O	Master Pressure Transducer
Pressure Gages ¹ (Pneumatic)	Up to 30 psig Up to 100 psig Up to 500 psig Up to 1 000 psig Up to 3 000 psig	0.003 7 psi 0.016 psi 0.064 psi 0.13 psi 0.39 psi	Master Pressure Transducer
	(5.8 to 1 000) psig	0.015 % of reading + 0.02 psi	Deadweight Tester
Pressure Gages ¹ (Hydraulic)	Up to 10 000 psig	3.2 psi	Master Pressure Transducer
Air Velocity	492 ft/min 984 ft/min 1969 ft/min 2953 ft/min	25 ft/min 27 ft/min 30 ft/min 35 ft/min	Master Anemometer, Open Jet Wind Tunnel
Force Gages ¹ (Compression and Tension)	Up to 100 lbf (100 to 500) lbf (500 to 1 000) lbf (1 000 to 10 000) lbf (1 000 to 100 000) lbf	0.008 1 % of reading + 0.002 9 lbf 0.019 % of reading + 0.015 lbf 0.004 5 % of reading + 0.086 lbf 0.009 2 % of reading + 1.3 lbf 4.5 lbf	Load Cells, Master Weights





Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Durometers Indenter Dimensions			Direct verification to ASTM D2240
Extension Types A, C Types B, D	Up to 2.5 mm Up to 2.5 mm	7.9 µm 7.1 µm	Gage Blocks
Diameter Types A, C	Up to 1.27 mm	11 μm	Optical Projection
Types B, D		10 μm	Optical Projection
Radius	Up to 0.05 in	280 μin	
Angle Types A, C Types B, D	35° 30°	0.28° 0.19°	
Spring Force Types A, B, E, O Types D, C, DO		0.61 N 0.53 N	Master Weights
Brinell Hardness Testers ¹	(72 to 277) HBW	3.4 HBW	Indirect verification per ASTM E10 using Hardness Blocks.
Rockwell Hardness Testers ¹	HRA Low Middle High HRBW Low Middle High HRC Low Middle High HRC Low Middle High HREW Low Middle High	1.3 HRA 1.3 HRA 1.2 HRBW 1.2 HRBW 1.2 HRBW 1.3 HRC 1.3 HRC 0.66 HRC 1.3 HREW 1.3 HREW 1.5 HREW	Indirect verification per ASTM E18 using Hardness Blocks.





Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
	HR15N		
	Low	1 <mark>.3 HR15N</mark>	
	Middle	1.3 HR15N	
	High	0.92 HR15N	
	HR30N	A	
	Low	1.3 HR30N	
	Middle	1.3 HR30N	
	High	1.3 HR30N	
P 1 110 6 1	HR45N	1.2 JUD 450 J	Indirect verification per
Rockwell Superficial	Low	1.3 HR45N	ASTM E18 using
Hardness Testers ¹	Middle	1.3 HR45N	Hardness Blocks.
	High	0.89 HR45N	
	HR15TW Low	1.8 HR15TW	
	Middle	1.3 HR15TW	
	High	1.3 HR151 W 1.3 HR15TW	
	HR30TW	1.3 HK151 W	
	Low	1.8 HR30TW	
	Middle	1.8 HR30TW	
	High	1.3 HR30TW	
	(5 to 50) lbf·in	0.29 lbf·in	
	(10 to 100) lbf·in	0.29 lbf·in	
Torque Tools ¹	(10 to 100) lbf·ft	0.3 lbf·ft	Torque Transducers
•	(25 to 250) lbf·ft	0.73 lbf·ft	•
	(100 to 1 000) lbf·ft	3 lbf·ft	
	(1 to 10) lbf·in	0.033 % of reading + 0.002 4 lbf·in	
	(5 to 50) lbf·in	0.03% of reading + 0.006 lbf·in	
Torque Transducers	(10 to 100) lbf·in	0.026% of reading + 0.017 lbf·in	Т А
	(10 to 100) lbf·ft	0.047% of reading + 0.011 lbf·ft	Torque Arm,
	(25 to 250) lbf·ft	0.048 lbf·ft	Master Weights
	(80 to 800) lbf·ft	0.028% of reading + 0.2 lbf·ft	
	(100 to 1 000) lbf·ft	0.18 lbf·ft	





Thermodynamic

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Infrared Devices ¹	50 °C 125 °C 250 °C 375 °C 500 °C	0.52 °C 0.8 °C 1.4 °C 1.9 °C 2.5 °C	Blackbody Source (Flat Plate) $ \epsilon = 0.95, \lambda = (8 \text{ to } 14) \mu\text{m} $
	600 °C 800 °C 1 000 °C 1 200 °C	8.4 °C 9.6 °C 11 °C 12 °C	Blackbody Source (Cavity) $\xi = 0.99, \lambda = (0.9 \text{ to } 14) \mu\text{m}$
Temperature – Measure ¹	(-200 to 1 372) °C	0.26 °C	Thermocouple Calibrator, Datalogger, Temperature Probe
Temperature Probes (Source)	(-45 to 125) °C (50 to 660) °C (0 to 1 200) °C	0.14 °C 0.11 % of reading + 0.37 °C 0.054 % of reading + 0.32 °C	Dry-well, PRT, Type S Thermocouple, Environmental Chamber
Chart Recorders Relative Humidity Temperature	(20 to 90) %RH (-17 to 177) °C	1.8 %RH 0.53 °C	Environmental Chamber, Datalogger

Time and Frequency

Version 015 Issued: January 5, 2023

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Frequency – Measure ¹	(1 to 40) Hz 40 Hz to 10 MHz	0.06 % of reading + 0.7 mHz 0.012 % of reading + 1.2 Hz	HP 3458 opt 002 8.5 Digit Multimeter
Frequency – Source ¹	10 mHz to 119.99 Hz (120 to 1199.9) Hz (1.2 to 11.999) kHz (12 to 119.99) kHz (120 to 1199.9) kHz (120 to 1199.9) kHz	1.3 mHz 12 mHz 0.12 Hz 1.2 Hz 12 Hz 12 Hz 0.12 KHz	Fluke 5522A/6 Multiproduct Calibrator with 600 MHz Scope Option
Stopwatches	5 ms to 24 h	0.87 s	Stopwatch Calibrator
Optical Tachometers	(1 to 100 000) rpm	0.002 2 % of reading + 0.21 rpm	Fluke 5522A/6 Multiproduct Calibrator with 600 MHz Scope Option





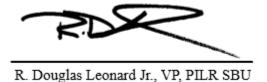
Calibration and Measurement Capability (CMC) is expressed in terms of the measurement parameter, measurement range, expanded uncertainty of measurement and reference standard, method, and/or equipment. The expanded uncertainty of measurement is expressed as the standard uncertainty of the measurement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

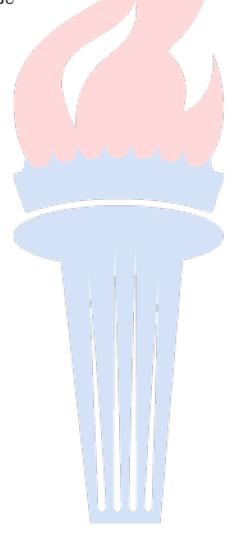
Notes:

- 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. Scale calibration performed on-site only.

Version 015 Issued: January 5, 2023

- 3. L = length in inches; DL = diagonal length in inches; ' = arc-minute; '' = arc-second.
- 4. This scope is formatted as part of a single document including Certificate of Accreditation No. AC-1756.









The ANSI National Accreditation Board

Hereby attests that

System Scale Corporation

4808 Alma Highway Van Buren, AR 72956

Fulfills the requirements of

ISO/IEC 17025:2017

and national standard

ANSI/NCSL Z540-1-1994 (R2002)

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.

SDE

R. Douglas Leonard Jr., VP, PILR SBU

Expiry Date: 01 February 2025 Certificate Number: AC-1756.01





SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017 AND

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System Scale Corporation

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Sean Rainey 501-562-2900 srainey@system-scale.com

CALIBRATION

Valid to: February 1, 2025 Certificate Number: AC-1756.01

Mass and Mass Related

Version 007 Issued: January 5, 2023

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Balances ¹			
(0.000 01 g resolution)	Up to 210 g	0.69 mg	
(0.000 1 g resolution)	Up to 100 g Up to 210 g Up to 320 g	0.33 mg 0.69 mg 1.1 mg	
(0.001 g resolution)	Up to 100 g Up to 500 g Up to 1 kg Up to 5 kg	1.1 mg 2 mg 3.7 mg 15 mg	ASTM E617 Class 1 Weights and NIST
(0.01 g resolution)	Up to 100 g Up to 500 g Up to 2 kg Up to 6 kg	9 mg 9.9 mg 15 mg 25 mg	Handbook 44 utilized for the calibration of the weighing system.
(0.1 g resolution)	Up to 1 kg Up to 5 kg Up to 10 kg	98 mg 99 mg 0.11 g	
(1 g resolution)	Up to 2 kg Up to 6 kg	1.2 g 1.5 g	



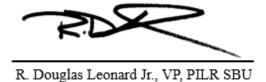


Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Balances ^{1,2}			NIST Class F Weights and
(0.1 g resolution)	Up to 24 kg	2.8 g	NIST Handbook 44 utilized
			for the calibration of the
(1 g resolution)	Up to 35 kg	2.8 g	weighing system.
Scales ¹			
(0.001 lb resolution)	Up to 50 lb	0.007 4 lb	
	Up to 100 lb	0.016 lb	
	-		
(0.01 lb resolution)	Up to 50 lb	0.017 lb	
	Up to 100 lb	0.022 lb	
	Up to 300 lb	0.052 lb	
(0.1 lb resolution)	Up to 50 lb	0.082 lb	ASTM E617 Class 6
	Up to 300 lb	0.11 lb	weights, NIST Class F
	Up to 500 lb	0.12 lb	weights and NIST
	Up to 1 000 lb	0.2 lb	Handbook 44 utilized for
	Up to 5 000 lb	0.7 lb	the calibration of the
			weighing system.
(1 lb resolution)	Up to 500 lb	0.82 lb	weighing system.
	Up to 1 000 lb	1.4 lb	
	Up to 5 000 lb	1.4 lb	
	Up to 10 000 lb	1.7 lb	
		The same of the sa	
(10 lb resolution)	Up to 20 000 lb	8.3 lb	
	Up to 100 000 lb	8.7 lb	
(20 lb resolution)	Up to 200 000 lb	24 lb	

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. AC-1756.01.



Version 007 Issued: January 5, 2023





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Hereby attests that

System Scale Corporation

2212 N. Yellowood Avenue Broken Arrow, OK 74012

Fulfills the requirements of

ISO/IEC 17025:2017

and national standard

ANSI/NCSL Z540-1-1994 (R2002)

In the field of

CALIBRATION

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Expiry Date: 01 February 2025 Certificate Number: AC-1756.02





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System Scale Corporation

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Sean Rainey 501-562-2900 srainey@system-scale.com

CALIBRATION

Valid to: February 1, 2025 Certificate Number: AC-1756.02

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Balances ¹			
(0.000 01 g resolution)	Up to 210 g	0.69 mg	
(0.000 1 g resolution)	Up to 100 g Up to 210 g Up to 320 g	0.33 mg 0.69 mg 1.1 mg	
(0.001 g resolution)	Up to 100 g Up to 500 g Up to 1 kg Up to 5 kg	1.1 mg 2 mg 3.7 mg 15 mg	ASTM E617 Class 1 Weights and NIST
(0.01 g resolution)	Up to 100 g Up to 500 g Up to 2 kg Up to 6 kg	9 mg 9.9 mg 15 mg 25 mg	Handbook 44 utilized for the calibration of the weighing system.
(0.1 g resolution)	Up to 1 kg Up to 5 kg Up to 10 kg	98 mg 99 mg 0.11 g	
(1 g resolution)	Up to 2 kg Up to 6 kg	1.2 g 1.5 g	



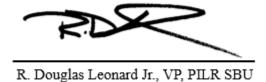


Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Balances ¹			NIST Class F Weights and
(0.1 g resolution)	Up to 24 kg	2.8 g	NIST Handbook 44 utilized
			for the calibration of the
(1 g resolution)	Up to 35 kg	2.8 g	weighing system.
Scales ¹			
(0.001 lb resolution)	Up to 50 lb	0.007 4 lb	
	Up to 100 lb	0.016 lb	
	-		
(0.01 lb resolution)	Up to 50 lb	0.017 lb	
	Up to 100 lb	0.022 lb	
	Up to 300 lb	0.052 lb	
(0.1 lb resolution)	Up to 50 lb	0.082 lb	ASTM E617 Class 6
	Up to 300 lb	0.11 lb	weights, NIST Class F
	Up to 500 lb	0.12 lb	weights and NIST
	Up to 1 000 lb	0.2 lb	Handbook 44 utilized for
	Up to 5 000 lb	0.7 lb	the calibration of the
			weighing system.
(1 lb resolution)	Up to 500 lb	0.82 lb	weighing system.
	Up to 1 000 lb	1.4 lb	
	Up to 5 000 lb	1.4 lb	
	Up to 10 000 lb	1.7 lb	
		The same of the sa	
(10 lb resolution)	Up to 20 000 lb	8.3 lb	
	Up to 100 000 lb	8.7 lb	
(20 lb resolution)	Up to 200 000 lb	24 lb	

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. AC-1756.02.







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System Scale Corporation

6759 Reese Road Memphis, TN 38133

Fulfills the requirements of

ISO/IEC 17025:2017

and national standard

ANSI/NCSL Z540-1-1994 (R2002)

In the field of

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Expiry Date: 01 February 2025 Certificate Number: AC-1756.04





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CALIBRATION

Valid to: February 1, 2025 Certificate Number: AC-1756.04

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Balances ¹			
(0.000 01 g resolution)	Up to 210 g	0.69 mg	
(0.000 1 g resolution)	Up to 100 g	0.33 mg	
	Up to 210 g	0.69 mg	
	Up to 320 g	1.1 mg	
(0.001 g resolution)	Up to 100 g	1.1 mg	
	Up to 500 g	2 mg	
	Up to 1 kg	3.7 mg	ASTM E617 Class 1
	Up to 5 kg	15 mg	Weights and NIST
(0.01 g resolution)	Up to 100 g	9 mg	Handbook 44 utilized for the calibration of the
(0.01 g resolution)	Up to 500 g	9.9 mg	weighing system.
	Up to 2 kg	15 mg	weighing system.
	Up to 6 kg	25 mg	
	op to ong	25 mg	
(0.1 g resolution)	Up to 1 kg	98 mg	
	Up to 5 kg	99 mg	
	Up to 10 kg	0.11 g	
	11 . 21	12	
(1 g resolution)	Up to 2 kg	1.2 g	
	Up to 6 kg	1.5 g	



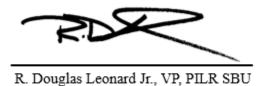


Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Balances ¹			NIST Class F Weights and
(0.1 g resolution)	Up to 24 kg	2.8 g	NIST Handbook 44 utilized
			for the calibration of the
(1 g resolution)	Up to 35 kg	2.8 g	weighing system.
Scales ¹			
(0.001 lb resolution)	Up to 50 lb	0.007 4 lb	
	Up to 100 lb	0.016 lb	
	•		
(0.01 lb resolution)	Up to 50 lb	0.017 lb	
	Up to 100 lb	0.022 lb	
	Up to 300 lb	0.052 lb	
(0.1 lb resolution)	Up to 50 lb	0.082 lb	A STM E (17 Class (
	Up to 300 lb	0.11 lb	ASTM E617 Class 6
	Up to 500 lb	0.12 lb	weights, NIST Class F
	Up to 1 000 lb	0.2 lb	weights and NIST Handbook 44 utilized for
	Up to 5 000 lb	0.7 lb	the calibration of the
(1 lb resolution)	Up to 500 lb	0.82 lb	weighing system.
	Up to 1 000 lb	1.4 lb	
	Up to 5 000 lb	1.4 lb	
	Up to 10 000 lb	1.7 lb	
	•		
(10 lb resolution)	Up to 20 000 lb	8.3 lb	
,	Up to 100 000 lb	8.7 lb	
	^		
(20 lb resolution)	Up to 200 000 lb	24 lb	

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. AC-1756.04.







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1420 Donelson Pike, Suite B7 Nashville, TN 37217

Fulfills the requirements of

ISO/IEC 17025:2017

and national standard

ANSI/NCSL Z540-1-1994 (R2002)

In the field of

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Expiry Date: 01 February 2025 Certificate Number: AC-1756.05





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ANSI/NCSL Z540-1-1994 (R2002)

System Scale Corporation

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Sean Rainey 501-562-2900 srainey@system-scale.com

CALIBRATION

Valid to: February 1, 2025 Certificate Number: AC-1756.05

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Balances ¹			
(0.000 01 g resolution)	Up to 210 g	0.69 mg	
(0.000 1 g resolution)	Up to 100 g	0.33 mg	
	Up to 210 g	0.69 mg	
	Up to 320 g	1.1 mg	
(0.001 g resolution)	Up to 100 g	1.1 mg	
	Up to 500 g	2 mg	
	Up to 1 kg	3.7 mg	ASTM E617 Class 1
	Up to 5 kg	15 mg	Weights and NIST
(0.01 g resolution)	Up to 100 g	9 mg	Handbook 44 utilized for the calibration of the
(0.01 g resolution)	Up to 500 g	9.9 mg	weighing system.
	Up to 2 kg	15 mg	weighing system.
	Up to 6 kg	25 mg	
	Орюбк	25 mg	
(0.1 g resolution)	Up to 1 kg	98 mg	
	Up to 5 kg	99 mg	
	Up to 10 kg	0.11 g	
(1 g resolution)	Up to 2 kg	1.2 g	
(1 g lesolation)	Up to 6 kg	1.5 g	

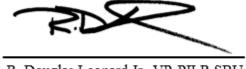




Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Balances ¹			NIST Class F Weights and
(0.1 g resolution)	Up to 24 kg	2.8 g	NIST Handbook 44 utilized
			for the calibration of the
(1 g resolution)	Up to 35 kg	2.8 g	weighing system.
Scales ¹		/	
(0.001 lb resolution)	Up to 50 lb	0.007 4 lb	
	Up to 100 lb	0.016 lb	
(0.01 lb resolution)	Up to 50 lb	0.017 lb	
	Up to 100 lb	0.022 lb	
	Up to 300 lb	0.052 lb	
(0.1 lb resolution)	Up to 50 lb	0.08 <mark>2</mark> lb	ASTM E617 Class 6
	Up to 300 lb	0.11 lb	weights, NIST Class F
	Up to 500 lb	0.12 lb	weights and NIST
	Up to 1 000 lb	0.2 lb	Handbook 44 utilized for
	Up to 5 000 lb	0.7 lb	the calibration of the
(1 lb resolution)	Up to 500 lb	0.82 lb	weighing system.
,	Up to 1 000 lb	1.4 lb	
	Up to 5 000 lb	1.4 lb	
	Up to 10 000 lb	1.7 lb	
(10 lb resolution)	Un to 20,000 lb	8.3 lb	
(10 lb resolution)	Up to 20 000 lb Up to 100 000 lb	8.3 lb 8.7 lb	
	Op to 100 000 lb	0.710	
(20 lb resolution)	Up to 200 000 lb	24 lb	

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%.

- 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.
- This scope is formatted as part of a single document including Certificate of Accreditation No. AC-1756.05.



R. Douglas Leonard Jr., VP, PILR SBU





The ANSI National Accreditation Board

Hereby attests that

System Scale Corporation

595 Pearl Park Plaza Jackson, MS 39208

Fulfills the requirements of

ISO/IEC 17025:2017

and national standard

ANSI/NCSL Z540-1-1994 (R2002)

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.



R. Douglas Leonard Jr., VP, PILR SBU

Expiry Date: 01 February 2025 Certificate Number: AC-1756.06





SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017 AND

ANSI/NCSL Z540-1-1994 (R2002)

System Scale Corporation

595 Pearl Park Plaza
Jackson, MS 39208
Sean Rainey 501-562-2900 srainey@system-scale.com

CALIBRATION

Valid to: February 1, 2025 Certificate Number: AC-1756.06

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Balances ¹			
(0.000 01 g resolution)	Up to 210 g	0.69 mg	
(0.000 1 g resolution)	Up to 100 g Up to 210 g Up to 320 g	0.33 mg 0.69 mg 1.1 mg	
(0.001 g resolution)	Up to 100 g Up to 500 g Up to 1 kg Up to 5 kg	1.1 mg 2 mg 3.7 mg 15 mg	ASTM E617 Class 1 Weights and NIST Handbook 44 utilized for
(0.01 g resolution)	Up to 100 g Up to 500 g Up to 2 kg Up to 6 kg	9 mg 9.9 mg 15 mg 25 mg	the calibration of the weighing system.
(0.1 g resolution)	Up to 1 kg Up to 5 kg Up to 10 kg	98 mg 99 mg 0.11 g	
(1 g resolution)	Up to 2 kg Up to 6 kg	1.2 g 1.5 g	



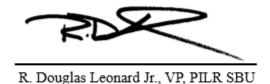


Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Balances ¹			NIST Class F Weights and
(0.1 g resolution)	Up to 24 kg	2.8 g	NIST Handbook 44 utilized
			for the calibration of the
(1 g resolution)	Up to 35 kg	2.8 g	weighing system.
Scales ¹			
(0.001 lb resolution)	Up to 50 lb	0.007 4 lb	
	Up to 100 lb	0.016 lb	
	•		
(0.01 lb resolution)	Up to 50 lb	0.017 lb	
	Up to 100 lb	0.022 lb	
	Up to 300 lb	0.052 lb	
(0.1 lb resolution)	Up to 50 lb	0.082 lb	A STM E (17 Class (
	Up to 300 lb	0.11 lb	ASTM E617 Class 6
	Up to 500 lb	0.12 lb	weights, NIST Class F
	Up to 1 000 lb	0.2 lb	weights and NIST Handbook 44 utilized for
	Up to 5 000 lb	0.7 lb	the calibration of the
(1 lb resolution)	Up to 500 lb	0.82 lb	weighing system.
	Up to 1 000 lb	1.4 lb	
	Up to 5 000 lb	1.4 lb	
	Up to 10 000 lb	1.7 lb	
	•		
(10 lb resolution)	Up to 20 000 lb	8.3 lb	
,	Up to 100 000 lb	8.7 lb	
	^		
(20 lb resolution)	Up to 200 000 lb	24 lb	

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:

- 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.
- This scope is formatted as part of a single document including Certificate of Accreditation No. AC-1756.06.







The ANSI National Accreditation Board

Hereby attests that

System Scale Corporation

6215-120 Rangeline Road Theodore, AL 36582

Fulfills the requirements of

ISO/IEC 17025:2017

and national standard

ANSI/NCSL Z540-1-1994 (R2002)

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.

SP

R. Douglas Leonard Jr., VP, PILR SBU

Expiry Date: 01 February 2025 Certificate Number: AC-1756.07





SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017 AND

ANSI/NCSL Z540-1-1994 (R2002)

System Scale Corporation

6215-120 Rangeline Road
Theodore, AL 36582
Sean Rainey 501-562-2900 srainey@system-scale.com

CALIBRATION

Valid to: February 1, 2025 Certificate Number: AC-1756.07

Mass and Mass Related

Version 007 Issued: January 6, 2023

Mass and Mass Kelated			
Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Balances ¹			
(0.000 01 g resolution)	Up to 210 g	0.69 mg	
(0.000 1 g resolution)	Up to 100 g Up to 210 g Up to 320 g	0.33 mg 0.69 mg 1.1 mg	
(0.001 g resolution)	Up to 100 g Up to 500 g Up to 1 kg Up to 5 kg	1.1 mg 2 mg 3.7 mg 15 mg	ASTM E617 Class 1 Weights and NIST
(0.01 g resolution)	Up to 100 g Up to 500 g Up to 2 kg Up to 6 kg	9 mg 9.9 mg 15 mg 25 mg	Handbook 44 utilized for the calibration of the weighing system.
(0.1 g resolution)	Up to 1 kg Up to 5 kg Up to 10 kg	98 mg 99 mg 0.11 g	
(1 g resolution)	Up to 2 kg Up to 6 kg	1.2 g 1.5 g	



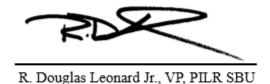


Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Balances ¹			NIST Class F Weights and
(0.1 g resolution)	Up to 24 kg	2.8 g	NIST Handbook 44 utilized
			for the calibration of the
(1 g resolution)	Up to 35 kg	2.8 g	weighing system.
Scales ¹		/	
(0.001 lb resolution)	Up to 50 lb	0.007 4 lb	
	Up to 100 lb	0.016 lb	
(0.01 lb resolution)	Up to 50 lb	0.017 lb	
	Up to 100 lb	0.022 lb	
	Up to 300 lb	0.052 lb	
(0.1 lb resolution)	Up to 50 lb	0.08 <mark>2</mark> lb	ASTM E617 Class 6
	Up to 300 lb	0.11 lb	weights, NIST Class F
	Up to 500 lb	0.12 lb	weights and NIST
	Up to 1 000 lb	0.2 lb	Handbook 44 utilized for
	Up to 5 000 lb	0.7 lb	the calibration of the
(1 lb resolution)	Up to 500 lb	0.82 lb	weighing system.
,	Up to 1 000 lb	1.4 lb	
	Up to 5 000 lb	1.4 lb	
	Up to 10 000 lb	1.7 lb	
(10 lb resolution)	Un to 20,000 lb	8.3 lb	
(10 lb resolution)	Up to 20 000 lb Up to 100 000 lb	8.3 lb 8.7 lb	
	Op to 100 000 lb	0.710	
(20 lb resolution)	Up to 200 000 lb	24 lb	

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:

- 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.
- This scope is formatted as part of a single document including Certificate of Accreditation No. AC-1756.07.







The ANSI National Accreditation Board

Hereby attests that

System Scale Corporation

4393 West 96th Street Indianapolis, IN 46268

Fulfills the requirements of

ISO/IEC 17025:2017

and national standard

ANSI/NCSL Z540-1-1994 (R2002)

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.

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R. Douglas Leonard Jr., VP, PILR SBU

Expiry Date: 01 February 2025 Certificate Number: AC-1756.08





SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017 AND

ANSI/NCSL Z540-1-1994 (R2002)

System Scale Corporation 4393 West 96th Street

4393 West 96th Street Indianapolis, IN 46268 Sean Rainey 501-562-2900 srainey@system-scale.com

CALIBRATION

Valid to: February 1, 2025 Certificate Number: AC-1756.08

Mass and Mass Related

Version 007 Issued: January 5, 2023

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Balances ¹			
(0.000 01 g resolution)	Up to 210 g	0.69 mg	
(0.000 1 g resolution)	Up to 100 g Up to 210 g Up to 320 g	0.33 mg 0.69 mg 1.1 mg	
(0.001 g resolution)	Up to 100 g Up to 500 g Up to 1 kg Up to 5 kg	1.1 mg 2 mg 3.7 mg 15 mg	ASTM E617 Class 1 Weights and NIST Handbook 44 utilized for
(0.01 g resolution)	Up to 100 g Up to 500 g Up to 2 kg Up to 6 kg	9 mg 9.9 mg 15 mg 25 mg	the calibration of the weighing system.
(0.1 g resolution)	Up to 1 kg Up to 5 kg Up to 10 kg	98 mg 99 mg 0.11 g	
(1 g resolution)	Up to 2 kg Up to 6 kg	1.2 g 1.5 g	



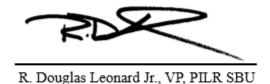


Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Balances ¹			NIST Class F Weights and
(0.1 g resolution)	Up to 24 kg	2.8 g	NIST Handbook 44 utilized
			for the calibration of the
(1 g resolution)	Up to 35 kg	2.8 g	weighing system.
Scales ¹			
(0.001 lb resolution)	Up to 50 lb	0.007 4 lb	
	Up to 100 lb	0.016 lb	
	-		
(0.01 lb resolution)	Up to 50 lb	0.017 lb	
	Up to 100 lb	0.022 lb	
	Up to 300 lb	0.052 lb	
(0.1 lb resolution)	Up to 50 lb	0.082 lb	ASTM E617 Class 6
	Up to 300 lb	0.11 lb	weights, NIST Class F
	Up to 500 lb	0.12 lb	weights and NIST
	Up to 1 000 lb	0.2 lb	Handbook 44 utilized for
	Up to 5 000 lb	0.7 lb	the calibration of the
			weighing system.
(1 lb resolution)	Up to 500 lb	0.82 lb	weighing system.
	Up to 1 000 lb	1.4 lb	
	Up to 5 000 lb	1.4 lb	
	Up to 10 000 lb	1.7 lb	
		The same of the sa	
(10 lb resolution)	Up to 20 000 lb	8.3 lb	
	Up to 100 000 lb	8.7 lb	
(20 lb resolution)	Up to 200 000 lb	24 lb	

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. AC-1756.08.



Version 007 Issued: January 5, 2023





The ANSI National Accreditation Board

Hereby attests that

System Scale Corporation 3905 Steve Reynolds Blvd, Suite 100 Norcross, GA 30093

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.

Jason Stine, Vice President

Expiry Date: 24 May 2024 Certificate Number: AC-1756.10 ARAB

ANSI National Accreditation Board





SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

System Scale Corporation

3905 Steve Reynolds Blvd, Suite 100
Norcross, GA 30093
Sean Rainey 501-562-2900 srainey@system-scale.com

CALIBRATION

Valid to: May 24, 2024 Certificate Number: AC-1756.10

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Balances 1			
(0.000 01 g resolution)	Up to 210 g	0.69 mg	
(0.000 1 g resolution)	Up to 100 g	0.33 mg	
·	Up to 210 g	0.69 mg	
	Up to 320 g	1.1 mg	
(0.001 g resolution)	Up to 100 g	1.1 mg	
	Up to 500 g	2 mg	
	Up to 1 kg	3.7 mg	ASTM E617 Class 1
	Up to 5 kg	15 mg	Weights and NIST
			Handbook 44 utilized for
(0.01 g resolution)	Up to 100 g	9 mg	the calibration of the
	Up to 500 g	9.9 mg	weighing system.
	Up to 2 kg	15 mg	
	Up to 6 kg	25 mg	
(0.1 g resolution)	Up to 1 kg	98 mg	
(ori gressianon)	Up to 5 kg	99 mg	
	Up to 10 kg	0.11 g	
	op to 10 kg	0.11 g	
(1 g resolution)	Up to 2 kg	1.2 g	
	Up to 6 kg	1.5 g	
Balances ¹			NIST Class F Weights and
(0.1 g resolution)	Up to 24 kg	2.8 g	NIST Handbook 44 utilized
			for the calibration of the
(1 g resolution)	Up to 35 kg	2.8 g	weighing system.





Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Scales ¹			
(0.001 lb resolution)	Up to 50 lb	0.007 4 lb	
	Up to 100 lb	0.016 lb	
(0.01 lb resolution)	Up to 50 lb	0.017 lb	
	Up to 100 lb	0.022 lb	
	Up to 300 lb	0.052 lb	
(0.1 lb resolution)	Up to 50 lb	0.082 lb	
,	Up to 300 lb	0.11 lb	ASTM E617 Class 6,
	Up to 500 lb	0.12 lb	NIST Class F Weights
	Up to 1 000 lb	0.2 lb	and NIST Handbook 44
	Up to 5 000 lb	0.7 lb	utilized for the calibration
(1.11	TT	0.02 1	of the weighing system.
(1 lb resolution)	Up to 500 lb	0.82 lb	
	Up to 1 000 lb	1.4 lb	
	Up to 5 000 lb	1.4 lb	
	Up to 10 000 lb	1.7 lb	
(10 lb resolution)	Up to 20 000 lb	8.3 lb	
	Up to 100 000 lb	8.7 lb	
(20 lb resolution)	Up to 200 0000 lb	24 lb	

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. AC-1756.10.

Jason Stine, Vice President

Version 001 Issued: February 12, 2024

