



CERTIFICATE OF ACCREDITATION

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.

R. Douglas Leonard Jr., VP, PILR SBU

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



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)

System Scale Corporation

8101 Industry Drive

North Little Rock, AR 72117

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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

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

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 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 μ V/V + 1.2 μ V 10.2 μ V/V + 2.5 μ V 10.6 μ V/V + 20 μ V 14.8 μ V/V + 0.11 mV 14 μ V/V + 1.7 mV	Fluke 5522A/6 Multiproduct Calibrator with 600 MHz Scope Option (Ranges Locked)
DC Current – Measure ¹	(10 to 100) μ A (0.1 to 1) mA (1 to 10) mA (10 to 100) mA (0.1 to 1) A	29 μ A/A + 1.4 nA 26 μ A/A + 12 nA 27 μ A/A + 0.12 μ A 47 μ A/A + 1.1 μ A 0.14 mA/A + 14 μ A	HP 3458 opt 002 8.5 Digit Multimeter
DC Current – Source ¹	(0 to 329.9) μ A (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 μ A/A + 43 nA 80 μ A/A + 0.27 μ A 88 μ A/A + 2.2 μ A 0.17 mA/A + 36 μ A 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 300 kHz to 1 MHz	0.33 mV/V + 3.8 μ V 0.2 mV/V + 1.9 μ V 0.31 mV/V + 1.9 μ V 1.1 mV/V + 1.9 μ V 5.7 mV/V + 1.7 μ V 47 mV/V + 2.4 μ V 14 mV/V + 5.9 μ V 80 mV/V + 17 μ V 0.24 V/V + 14 μ V 0.13 mV/V + 5.1 μ V 0.11 mV/V + 5.1 μ V 0.19 mV/V + 3 μ V 0.37 mV/V + 1 μ V 0.95 mV/V + 1 μ V 3.6 mV/V 11 mV/V + 7.1 mV	HP 3458 opt 002 8.5 Digit Multimeter

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
AC Voltage – Measure ¹	(0.1 to 10) V		HP 3458 opt 002 8.5 Digit Multimeter
	(1 to 2) MHz	17 mV/V + 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	
	(20 to 50) kHz	0.4 mV/V + 3.7 mV	
	(50 to 100) kHz	1.5 mV/V + 2.2 mV	
	(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 50) kHz	1.5 mV/V + 22 mV	
	(50 to 100) kHz	3.5 mV/V + 22 mV	
AC Voltage – Source ¹	(1 to 32.99) mV		Fluke 5522A/6 Multiproduct Calibrator with 600 MHz Scope Option
	(10 to 40) Hz	0.94 mV/V + 7.1 μ V	
	45 Hz to 10 kHz	0.18 mV/V + 7.1 μ V	
	(10 to 20) kHz	0.23 mV/V + 7.6 μ V	
	(20 to 50) kHz	1.1 mV/V + 9.3 μ V	
	(50 to 100) kHz	4.1 mV/V + 16.6 μ V	
	(100 to 500) kHz	9.4 mV/V + 62 μ V	
	(33 to 329.99) mV		
	(10 to 45) Hz	0.37 mV/V + 8.9 μ V	
	45 Hz to 10 kHz	0.17 mV/V + 10 μ V	
	(10 to 20) kHz	0.18 mV/V + 12 μ V	
	(20 to 50) kHz	0.41 mV/V + 14 μ V	
	(50 to 100) kHz	0.95 mV/V + 37 μ V	
	(100 to 500) kHz	2.3 mV/V + 83 μ V	
	(0.33 to 3.299) V		
	(10 to 45) Hz	0.34 mV/V + 66 μ V	
	45 Hz to 10 kHz	0.18 mV/V + 72 μ 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	

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
AC Voltage – Source ¹	(3.3 to 32.99) V		Fluke 5522A/6 Multiproduct Calibrator with 600 MHz Scope Option
	(10 to 45) Hz	0.38 mV/V + 0.66 mV	
	45 Hz to 10 kHz	0.18 mV/V + 0.72 mV	
	(10 to 20) kHz	0.27 mV/V + 1 mV	
	20 to 50 kHz	0.39 mV/V + 1.1 mV	
	50 to 100 kHz	1 mV/V + 2.4 mV	
	(33 to 329.99) V		
	45 Hz to 1 kHz	0.22 mV/V + 2.3 mV	
	(1 to 10) kHz	0.24 mV/V + 7.2 mV	
	(10 to 20) kHz	0.3 mV/V + 11 mV	
	(20 to 50) kHz	0.32 mV/V + 26 mV	
	(50 to 100) kHz	2.3 mV/V + 64 mV	
AC Voltage – Source ¹ (AUX Output)	(330 to 1 020) V		Fluke 5522A/6 Multiproduct Calibrator with 600 MHz Scope Option
	45 Hz to 1 kHz	0.34 mV/V + 17 mV	
	(1 to 5) kHz	0.28 mV/V + 26 mV	
	(5 to 10) kHz	0.34 mV/V + 17 mV	
	(10 to 329.99) mV		
	(10 to 20) Hz	0.53 mV	
	(20 to 45) Hz	0.43 mV	
	45 Hz to 1 kHz	0.43 mV	
	(1 to 5) kHz	0.52 mV	
	(5 to 10) kHz	0.52 mV	
	(10 to 30) kHz	1.1 mV	
	(0.33 to 3.299) V		
	(10 to 20) Hz	0.71 mV	
	(20 to 45) Hz	0.55 mV	
	45 Hz to 1 kHz	0.57 mV	
	(1 to 5) kHz	1.7 mV	
	(5 to 10) kHz	1.7 mV	
	(10 to 30) kHz	3.3 mV	
AC Current – Measure ¹	(3.3 to 5) V		HP 3458 opt 002 8.5 Digit Multimeter
	(10 to 20) Hz	8.1 mV	
	(20 to 45) Hz	0.61 mV	
	45 Hz to 1 kHz	0.64 mV	
	(1 to 5) kHz	1.7 mV	
	(5 to 10) kHz	1.8 mV	
	(10 to 100) μ A		
	(10 to 20) Hz	4.6 mA/A + 36 nA	
	(20 to 45) Hz	1.7 mA/A + 37 nA	
	(45 to 100) Hz	0.73 mA/A + 37 nA	
	100 Hz to 5 kHz	0.73 mA/A + 37 nA	

Electrical – DC/Low Frequency

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

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
AC Current – Source ¹	(33 to 329.99) mA		Fluke 5522A/6 Multiproduct Calibrator with 600 MHz Scope Option
	(10 to 20) Hz	2 mA/A + 43 μ A	
	(20 to 45) Hz	1 mA/A + 39 μ A	
	45 Hz to 1 kHz	0.47 mA/A + 23 μ A	
	(1 to 5) kHz	1.2 mA/A + 58 μ A	
	(5 to 10) kHz	2.3 mA/A + 0.15 mA	
	(10 to 30) kHz	4.7 mA/A + 0.23 mA	
	(0.33 to 1.099 9) A		
	(10 to 45) Hz	2.1 mA/A + 0.13 mA	
	45 Hz to 1 kHz	0.6 mA/A + 0.11 mA	
	(1 to 5) kHz	6.9 mA/A + 1.2 mA	
	(5 to 10) kHz	28 mA/A + 6.6 mA	
	(1.1 to 2.999) A		
	(10 to 45) Hz	2.1 mA/A + 0.34 mA	
	45 Hz to 1 kHz	0.8 mA/A + 16 μ A	
	(1 to 5) kHz	6.9 mA/A + 1.2 mA	
	(5 to 10) kHz	29 mA/A + 6.2 mA	
	(3 to 10.99) A		
	(45 to 100) Hz	0.64 mA/A + 3.2 mA	
	100 Hz to 1 kHz	1.3 mA/A + 2 mA	
	(1 to 5) kHz	34 mA/A + 7.1 mA	
Resistance – Measure ¹	(0 to 10) Ω	21 $\mu\Omega/\Omega$ + 0.17 m Ω	HP 3458 opt 002 8.5 Digit Multimeter
	(10 to 100) Ω	24 $\mu\Omega/\Omega$ + 1.2 m Ω	
	(0.1 to 1) k Ω	19 $\mu\Omega/\Omega$ + 1.3 m Ω	
	(1 to 10) k Ω	19 $\mu\Omega/\Omega$ + 13 m Ω	
	(10 to 100) k Ω	19 $\mu\Omega/\Omega$ + 0.13 Ω	
	(0.1 to 1) M Ω	24 $\mu\Omega/\Omega$ + 4.7 Ω	
	(1 to 10) M Ω	99 $\mu\Omega/\Omega$ + 0.11 k Ω	
	(10 to 100) M Ω	11 $\mu\Omega/\Omega$ + 1.1 k Ω	
	(0.1 to 1) G Ω	17 k Ω	
Resistance – Source ¹	(0 to 10.9) Ω	37 $\mu\Omega/\Omega$ + 0.8 m Ω	Fluke 5522A/6 Multiproduct Calibrator with 600 MHz Scope Option
	(11 to 32.9) Ω	13 $\mu\Omega/\Omega$ + 22 $\mu\Omega$	
	(33 to 109.99) Ω	59 $\mu\Omega/\Omega$ + 1.8 m Ω	
	(110 to 329.99) Ω	23 $\mu\Omega/\Omega$ + 1.6 m Ω	
	(0.33 to 1.09) k Ω	24 $\mu\Omega/\Omega$ + 1.3 m Ω	
	(1.1 to 3.299) k Ω	28 $\mu\Omega/\Omega$ + 10 m Ω	
	(3.3 to 10.99) k Ω	23 $\mu\Omega/\Omega$ + 19 m Ω	
	(11 to 32.999) k Ω	23 $\mu\Omega/\Omega$ + 0.16 Ω	

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Resistance – Source ¹	(33 to 109.99) kΩ (110 to 329.9) kΩ (0.33 to 1.09) MΩ (1.1 to 3.29) MΩ (3.3 to 10.9) MΩ (11 to 32.99) MΩ (33 to 109.99) MΩ (110 to 329.99) MΩ (330 to 1 100) MΩ	24 μΩ/Ω + 0.13 Ω 24 μΩ/Ω + 2.5 Ω 42 μΩ/Ω + 2.9 Ω 0.11 mΩ/Ω + 45 Ω 0.19 mΩ/Ω + 0.11 kΩ 0.52 mΩ/Ω + 2.1 kΩ 0.43 mΩ/Ω + 1.7 kΩ 2.3 mΩ/Ω + 82 kΩ 13 mΩ/Ω + 59 kΩ	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 0.26 °C 0.23 °C 0.22 °C 0.32 °C 0.66 °C 0.41 °C 0.39 °C 0.47 °C	Fluke 5522A/6 Multiproduct Calibrator with 600 MHz Scope Option

Electrical – DC/Low Frequency

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 (33 to 109.99) nF (110 to 329.99) nF (0.33 to 1.099 9) μF (1.1 to 3.299) μF (3.3 to 10.999) μF (11 to 32.999) μF (33 to 109.99) μF (110 to 329.99) μF (0.33 to 1.099 9) mF (1.1 to 3.299 9) mF (3.3 to 10.999) mF (11 to 32.999) mF (33 to 110) 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 + 11 μF 5.1 pF/F + 14 μF 7.3 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 50 Ω load into 1 MΩ load	(0 to 6.6) V (0 to 130) V	3 mV/V + 47 μV 0.59 mV/V + 47 μV	Fluke 5522A/6 Multiproduct Calibrator with 600 MHz Scope Option

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Oscilloscopes ¹			
Amplitude – Square Wave into 50 Ω load	10 Hz to 100 kHz ± 1 mVp-p to ± 6 Vp-p	3 mV/V + 47 μ V	Fluke 5522A/6 Multiproduct Calibrator with 600 MHz Scope Option
Amplitude – Square Wave into 1 M Ω load	± 1 mVp-p to 130 Vp-p	1.2 mV/V + 47 μ V	
Amplitude – Edge	5 mV to 2.5 V	24 mV/V + 0.23 mV	
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	
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 μ s	

Length – Dimensional Metrology

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) μ in (12 + 2L) μ in	Master Gage Blocks, Mitutoyo Gage Block Comparator
Plain Ring Gages ³	(0.04 to 12) in	(26 + 12L) μ in	LabMaster Laser Measuring System
Plug Gages ³	Up to 14 in	(9.1 + 0.7L) μ in	LabMaster Laser Measuring System
Reference Spheres ³	Up to 4 in	(4.8 + 8.7L) μ in	LabMaster Laser Measuring System
Pin Gages	Up to 1 in	9 μ in	LabMaster Laser Measuring System
Indicators	Up to 1 in	120 μ in	Gage Blocks, Indicator Calibrator

Length – Dimensional Metrology

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 + 8.1L) µin	Gage Blocks
Calipers ^{1,3}	Up to 80 in	(287 + 2.8L) µin	Gage Blocks
Height Gages ^{1,3}	Up to 40 in	(13 + 8.7L) µin	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 DL Up to 0.001 in	(5.4 – 0.97DL) 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			IAC MasterScanner
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	
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) μin	Comparison to Gage Blocks

Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Balances ^{1,2}			ASTM E617 Class 1 Weights and NIST Handbook 44 utilized for the calibration of the weighing system.
(0.000 01 g resolution)	Up to 200 g	0.27 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	
	Up to 5 kg	5.1 mg	

Mass and Mass Related

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

Mass and Mass Related

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 0.6 mg 0.6 mg 0.6 mg 0.6 mg 0.6 mg 0.6 mg 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

Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Durometers			Direct verification to ASTM D2240
Indenter Dimensions			
Extension			Gage Blocks
Types A, C	Up to 2.5 mm	7.9 μ m	
Types B, D	Up to 2.5 mm	7.1 μ m	
Diameter			Optical Projection
Types A, C	Up to 1.27 mm	11 μ m	
Types B, D	Up to 1.27 mm	10 μ m	
Radius	Up to 0.05 in	280 μ in	
Angle			
Types A, C	35°	0.28°	
Types B, D	30°	0.19°	
Spring Force			Master Weights
Types A, B, E, O	Up to 8.05 N	0.61 N	
Types D, C, DO	Up to 44.45 N	0.53 N	
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	1.3 HRA	
	Middle	1.3 HRA	
	High	1.2 HRA	
	HRBW		
	Low	1.9 HRBW	
	Middle	1.2 HRBW	
	High	1.2 HRBW	
	HRC		
	Low	1.3 HRC	
	Middle	1.3 HRC	
	High	0.66 HRC	
	HREW		
	Low	1.3 HREW	
	Middle	1.3 HREW	
	High	1.5 HREW	

Mass and Mass Related

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

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) $\epsilon = 0.99, \lambda = (0.9 \text{ to } 14) \mu\text{m}$
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	(20 to 90) %RH	1.8 %RH	Environmental Chamber, Datalogger
Temperature	(-17 to 177) °C	0.53 °C	

Time and Frequency

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 (1.2 to 2) MHz	1.3 mHz 12 mHz 0.12 Hz 1.2 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

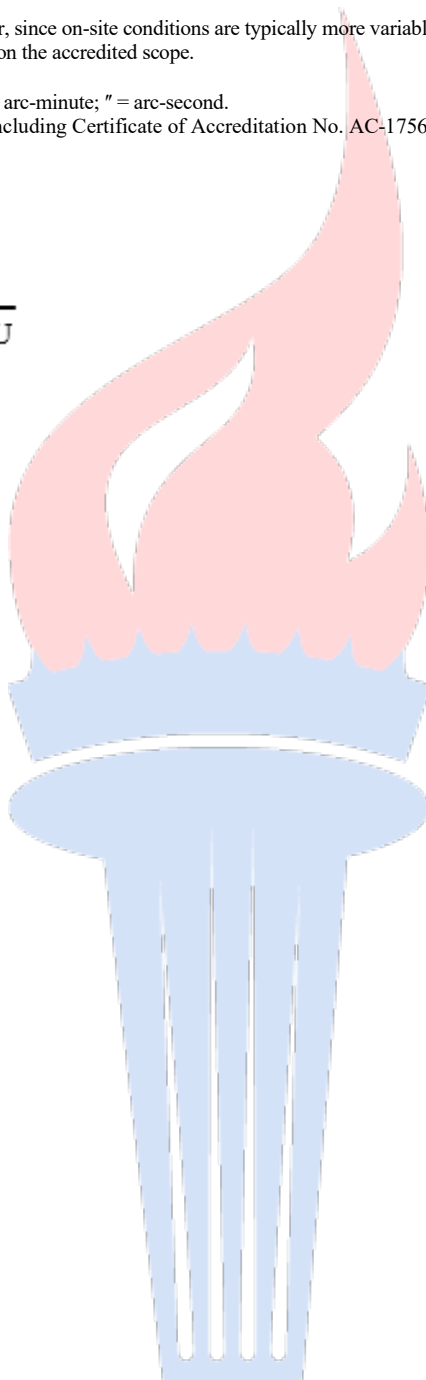
Calibration and Measurement Capability (CMC) is expressed in terms of the measurement parameter, measurement range, expanded uncertainty of measurement and reference standard, method, and/or equipment. The expanded uncertainty of measurement is expressed as the standard uncertainty of the measurement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

Notes:

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. Scale calibration performed on-site only.
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.



R. Douglas Leonard Jr., VP, PILR SBU





CERTIFICATE OF ACCREDITATION

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.

R. Douglas Leonard Jr., VP, PILR SBU

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



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)

System Scale Corporation

4808 Alma Highway

Van Buren, AR 72956

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

CALIBRATION

Valid to: **February 1, 2025**

Certificate Number: **AC-1756.01**

Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Balances ¹			ASTM E617 Class 1 Weights and NIST Handbook 44 utilized for the calibration of the weighing system.
(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	
	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	
	Up to 5 kg	15 mg	
(0.01 g resolution)	Up to 100 g	9 mg	
	Up to 500 g	9.9 mg	
	Up to 2 kg	15 mg	
	Up to 6 kg	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	
	Up to 6 kg	1.5 g	

Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Balances ^{1,2} (0.1 g resolution)	Up to 24 kg	2.8 g	NIST Class F Weights and NIST Handbook 44 utilized for the calibration of the weighing system.
(1 g resolution)	Up to 35 kg	2.8 g	
Scales ¹ (0.001 lb resolution)	Up to 50 lb Up to 100 lb	0.007 4 lb 0.016 lb	ASTM E617 Class 6 weights, NIST Class F weights and NIST Handbook 44 utilized for the calibration of the weighing system.
(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	
	Up to 500 lb	0.12 lb	
	Up to 1 000 lb	0.2 lb	
	Up to 5 000 lb	0.7 lb	
(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:

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- This scope is formatted as part of a single document including Certificate of Accreditation No. AC-1756.01.



R. Douglas Leonard Jr., VP, PILR SBU



CERTIFICATE OF ACCREDITATION

The ANSI National Accreditation Board

Hereby attests that

System Scale Corporation

2212 N. Yellowwood 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

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-1756.02



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)

System Scale Corporation

2212 N. Yellowwood Avenue

Broken Arrow, OK 74012

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

CALIBRATION

Valid to: **February 1, 2025**

Certificate Number: **AC-1756.02**

Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Balances ¹			ASTM E617 Class 1 Weights and NIST Handbook 44 utilized for the calibration of the weighing system.
(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	
	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	
	Up to 5 kg	15 mg	
(0.01 g resolution)	Up to 100 g	9 mg	
	Up to 500 g	9.9 mg	
	Up to 2 kg	15 mg	
	Up to 6 kg	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	
	Up to 6 kg	1.5 g	

Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Balances ¹ (0.1 g resolution)	Up to 24 kg	2.8 g	NIST Class F Weights and NIST Handbook 44 utilized for the calibration of the weighing system.
(1 g resolution)	Up to 35 kg	2.8 g	
Scales ¹ (0.001 lb resolution)	Up to 50 lb Up to 100 lb	0.007 4 lb 0.016 lb	ASTM E617 Class 6 weights, NIST Class F weights and NIST Handbook 44 utilized for the calibration of the weighing system.
(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	
	Up to 500 lb	0.12 lb	
	Up to 1 000 lb	0.2 lb	
	Up to 5 000 lb	0.7 lb	
(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-1756.02.



R. Douglas Leonard Jr., VP, PILR SBU



CERTIFICATE OF ACCREDITATION

The ANSI National Accreditation Board

Hereby attests that

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

CALIBRATION

This certificate is valid only when accompanied by a current scope of accreditation document.
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R. Douglas Leonard Jr., VP, PILR SBU

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



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)

System Scale Corporation

6759 Reese Road

Memphis, TN 38133

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

CALIBRATION

Valid to: **February 1, 2025**

Certificate Number: **AC-1756.04**

Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Balances ¹			ASTM E617 Class 1 Weights and NIST Handbook 44 utilized for the calibration of the weighing system.
(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	
	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	
	Up to 5 kg	15 mg	
(0.01 g resolution)	Up to 100 g	9 mg	
	Up to 500 g	9.9 mg	
	Up to 2 kg	15 mg	
	Up to 6 kg	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	
	Up to 6 kg	1.5 g	

Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Balances ¹ (0.1 g resolution)	Up to 24 kg	2.8 g	NIST Class F Weights and NIST Handbook 44 utilized for the calibration of the weighing system.
(1 g resolution)	Up to 35 kg	2.8 g	
Scales ¹ (0.001 lb resolution)	Up to 50 lb Up to 100 lb	0.007 4 lb 0.016 lb	ASTM E617 Class 6 weights, NIST Class F weights and NIST Handbook 44 utilized for the calibration of the weighing system.
(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	
	Up to 500 lb	0.12 lb	
	Up to 1 000 lb	0.2 lb	
	Up to 5 000 lb	0.7 lb	
(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:

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- This scope is formatted as part of a single document including Certificate of Accreditation No. AC-1756.04.



R. Douglas Leonard Jr., VP, PILR SBU



CERTIFICATE OF ACCREDITATION

The ANSI National Accreditation Board

Hereby attests that

System Scale Corporation

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

CALIBRATION

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



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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)

System Scale Corporation

1420 Donelson Pike, Suite B7

Nashville, TN 37217

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

CALIBRATION

Valid to: **February 1, 2025**

Certificate Number: **AC-1756.05**

Mass and Mass Related

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	ASTM E617 Class 1 Weights and NIST Handbook 44 utilized for the calibration of the weighing system.
(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	
	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	
	Up to 5 kg	15 mg	
(0.01 g resolution)	Up to 100 g	9 mg	
	Up to 500 g	9.9 mg	
	Up to 2 kg	15 mg	
	Up to 6 kg	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	
	Up to 6 kg	1.5 g	

Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Balances ¹ (0.1 g resolution)	Up to 24 kg	2.8 g	NIST Class F Weights and NIST Handbook 44 utilized for the calibration of the weighing system.
(1 g resolution)	Up to 35 kg	2.8 g	
Scales ¹ (0.001 lb resolution)	Up to 50 lb Up to 100 lb	0.007 4 lb 0.016 lb	ASTM E617 Class 6 weights, NIST Class F weights and NIST Handbook 44 utilized for the calibration of the weighing system.
(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	
	Up to 500 lb	0.12 lb	
	Up to 1 000 lb	0.2 lb	
	Up to 5 000 lb	0.7 lb	
(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:

- 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



CERTIFICATE OF ACCREDITATION

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.

A handwritten signature in black ink, appearing to read 'R.D.L.', with a long horizontal stroke extending to the right.

R. Douglas Leonard Jr., VP, PILR SBU

Expiry Date: 01 February 2025

Certificate Number: AC-1756.06



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)

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

Mass and Mass Related

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	ASTM E617 Class 1 Weights and NIST Handbook 44 utilized for the calibration of the weighing system.
(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	
	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	
	Up to 5 kg	15 mg	
(0.01 g resolution)	Up to 100 g	9 mg	
	Up to 500 g	9.9 mg	
	Up to 2 kg	15 mg	
	Up to 6 kg	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	
	Up to 6 kg	1.5 g	


Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Balances ¹ (0.1 g resolution)	Up to 24 kg	2.8 g	NIST Class F Weights and NIST Handbook 44 utilized for the calibration of the weighing system.
(1 g resolution)	Up to 35 kg	2.8 g	
Scales ¹ (0.001 lb resolution)	Up to 50 lb Up to 100 lb	0.007 4 lb 0.016 lb	ASTM E617 Class 6 weights, NIST Class F weights and NIST Handbook 44 utilized for the calibration of the weighing system.
(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	
	Up to 500 lb	0.12 lb	
	Up to 1 000 lb	0.2 lb	
	Up to 5 000 lb	0.7 lb	
(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:

- 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.



R. Douglas Leonard Jr., VP, PILR SBU



CERTIFICATE OF ACCREDITATION

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.

R. Douglas Leonard Jr., VP, PILR SBU

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



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)

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

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Balances ¹			ASTM E617 Class 1 Weights and NIST Handbook 44 utilized for the calibration of the weighing system.
(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	
	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	
	Up to 5 kg	15 mg	
(0.01 g resolution)	Up to 100 g	9 mg	
	Up to 500 g	9.9 mg	
	Up to 2 kg	15 mg	
	Up to 6 kg	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	
	Up to 6 kg	1.5 g	


Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Balances ¹ (0.1 g resolution)	Up to 24 kg	2.8 g	NIST Class F Weights and NIST Handbook 44 utilized for the calibration of the weighing system.
(1 g resolution)	Up to 35 kg	2.8 g	
Scales ¹ (0.001 lb resolution)	Up to 50 lb Up to 100 lb	0.007 4 lb 0.016 lb	ASTM E617 Class 6 weights, NIST Class F weights and NIST Handbook 44 utilized for the calibration of the weighing system.
(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	
	Up to 500 lb	0.12 lb	
	Up to 1 000 lb	0.2 lb	
	Up to 5 000 lb	0.7 lb	
(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:

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



R. Douglas Leonard Jr., VP, PILR SBU



CERTIFICATE OF ACCREDITATION

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.

R. Douglas Leonard Jr., VP, PILR SBU

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



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)

System Scale Corporation

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

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	ASTM E617 Class 1 Weights and NIST Handbook 44 utilized for the calibration of the weighing system.
(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	
	Up to 5 kg	15 mg	
(0.01 g resolution)	Up to 100 g	9 mg	
	Up to 500 g	9.9 mg	
	Up to 2 kg	15 mg	
	Up to 6 kg	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	
	Up to 6 kg	1.5 g	

Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Balances ¹ (0.1 g resolution)	Up to 24 kg	2.8 g	NIST Class F Weights and NIST Handbook 44 utilized for the calibration of the weighing system.
(1 g resolution)	Up to 35 kg	2.8 g	
Scales ¹ (0.001 lb resolution)	Up to 50 lb Up to 100 lb	0.007 4 lb 0.016 lb	ASTM E617 Class 6 weights, NIST Class F weights and NIST Handbook 44 utilized for the calibration of the weighing system.
(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	
	Up to 500 lb	0.12 lb	
	Up to 1 000 lb	0.2 lb	
	Up to 5 000 lb	0.7 lb	
(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-1756.08.



R. Douglas Leonard Jr., VP, PILR SBU



CERTIFICATE OF ACCREDITATION

The ANSI National Accreditation Board

Hereby attests that

System Scale Corporation

10157 Williams Lane
Walker, LA 70785

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-1756.09



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)

System Scale Corporation

10157 Williams Lane

Walker, LA 70785

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

CALIBRATION

Valid to: February 1, 2025

Certificate Number: AC-1756.09

Mass and Mass Related

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	ASTM E617 Class 1 Weights and NIST Handbook 44 utilized for the calibration of the weighing system.
(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	
	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	
	Up to 5 kg	15 mg	
(0.01 g resolution)	Up to 100 g	9 mg	
	Up to 500 g	9.9 mg	
	Up to 2 kg	15 mg	
	Up to 6 kg	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	
	Up to 6 kg	1.5 g	


Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Balances ¹ (0.1 g resolution)	Up to 24 kg	2.8 g	NIST Class F Weights and NIST Handbook 44 utilized for the calibration of the weighing system.
(1 g resolution)	Up to 35 kg	2.8 g	
Scales ¹ (0.001 lb resolution)	Up to 50 lb Up to 100 lb	0.007 4 lb 0.016 lb	ASTM E617 Class 6 weights, NIST Class F weights and NIST Handbook 44 utilized for the calibration of the weighing system.
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	Up to 300 lb	0.052 lb	
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	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	
(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	
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	Up to 100 000 lb	8.7 lb	
(20 lb resolution)	Up to 200 000 lb	24 lb	

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Notes:

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