



ANSI-ASQ National Accreditation Board

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005 AND ANSI/NCSL Z540-1-1994

System Scale Corporation

8101 Industry Drive
Little Rock, AR 72117
Sean Rainey Phone: 501-562-2900
Email: srainey@system-scale.com Website: www.ssclabdivision.com

CALIBRATION

Valid to: February 1, 2019

Certificate Number: AC-1756

Electromagnetic-DC / Low Frequency

Parameter/ Equipment	Range	Calibration and Measurement Capability [Expressed as Uncertainty (\pm)]	Reference Standard or Equipment
DC Voltage – Measure ²	(10 to 100) mV 100 mV to 1 V (1 to 10) V (10 to 100) V 100 V to 1 kV	15 μ V/V + 3 μ V 16 μ V/V + 0.3 μ V 16 μ V/V + 0.05 μ V 16 μ V/V + 0.3 μ V 17 μ V/V + 0.1 μ V	HP 3458A opt 002
DC Voltage - Source ²	Up to 320 mV 320 mV to 3.2 V (3.2 to 32) V (32 to 320) V 320 V to 1.05 kV	19 μ V/V + 4 μ V 0.2 mV/V + 40 μ V 2.1 mV/V + 0.42 mV 21 mV/V + 4.5 mV 63 mV/V + 20 mV	Wavetek 9100 with Opt 100/600
DC Current - Measure ²	(10 to 100) μ A 100 μ A to 10 mA (10 to 100) mA 100 mA to 1 A	28 μ A/A + 8 μ A 25 μ A/A + 5 μ A 45 μ A/A + 5 μ A 0.18 mA/A + 10 μ A	HP 3458A Opt 002
DC Current - Source ²	Up to 320 μ A 320 μ A to 3.2 mA (3.2 to 32) mA (32 to 320) mA 320 mA to 3.2 A (3.2 to 10.5) A (10.5 to 20) A	0.1 μ A/A + 10 nA 0.4 μ A/A + 80 nA 4.5 μ A/A + 0.9 μ A 51 μ A/A + 9.6 μ A 1.9 mA/A + 0.12 mA 5.8 mA/A + 0.94 mA 11 mA/A + 4.5 mA	Wavetek 9100 with Opt 100/600



Electromagnetic-DC / Low Frequency

Parameter/ Equipment	Range	Calibration and Measurement Capability [Expressed as Uncertainty (\pm)]	Reference Standard or Equipment
AC Voltage - Measure	<p>(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</p> <p>100 mV 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 (1 to 2) MHz</p> <p>(10 to 100) 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</p> <p>100 V to 1 kV (1 to 40) Hz 40 Hz to 1 kHz (1 to 20) kHz (20 to 50) kHz (50 to 100) kHz</p>	<p>0.3 mV/V + 30 μV 0.2 mV/V + 11 μV 0.3 mV/V + 11 μV 1 mV/V + 11 μV 5 mV/V + 11 μV 40 mV/V + 20 μV</p> <p>0.7 mV/V + 0.4 mV 0.7 mV/V + 0.2 mV 1.4 mV/V + 0.2 mV 3 mV/V + 0.2 mV 8 mV/V + 0.3 mV 30 mV/V + 1 mV 0.1 V/V + 1 mV 0.1 V/V + 1 mV</p> <p>20 mV/V + 4 mV 20 mV/V + 2 mV 20 mV/V + 2 mV 35 mV/V + 2 mV 0.1 V/V + 2 mV 0.4 V/V + 10 mV 1.5 V/V + 10 mV</p> <p>0.4 V/V + 40 mV 0.4 V/V + 20 mV 0.6 V/V + 20 mV 1 V/V + 20 mV 3 V/V + 20 mV</p>	HP 3458A opt 002
AC Voltage - Source ²	<p>Up to 10 mV 10 Hz to 3 kHz (3 to 10) kHz (10 to 30) kHz (30 to 50) kHz (50 to 100) kHz</p> <p>(10 to 32) mV 10 Hz to 3 kHz (3 to 10) kHz (10 to 30) kHz (30 to 50) kHz (50 to 100) kHz</p>	<p>4 μV/V + 0.38 mV 4 μV/V + 0.51 mV 6 μV/V + 0.96 mV 9 μV/V + 1 mV 20 μV/V + 5 mV</p> <p>13 μV/V + 0.1 mV 13 μV/V + 0.13 mV 19 μV/V + 0.24 mV 29 μV/V + 0.48 mV 64 μV/V + 1 mV</p>	Wavetek 9100 with Opt 100/600



Electromagnetic-DC / Low Frequency

Parameter/ Equipment	Range	Calibration and Measurement Capability [Expressed as Uncertainty (\pm)]	Reference Standard or Equipment
AC Voltage - Source ²	(32 to 320) mV		
	10 Hz to 3 kHz	0.1 mV/V + 20 μ V	
	(3 to 10) kHz	0.1 mV/V + 30 μ V	
	(10 to 30) kHz	0.2 mV/V + 50 μ V	
	(30 to 50) kHz	0.3 mV/V + 0.1 mV	
	(50 to 100) kHz	0.6 mV/V + 0.26 mV	
	320 mV to 3.2 V		
	10 Hz to 3 kHz	1.3 mV/V + 0.19 mV	
	(3 to 10) kHz	1.3 mV/V + 0.26 mV	
	(10 to 30) kHz	1.9 mV/V + 0.48 mV	
	(30 to 50) kHz	2.9 mV/V + 0.96 mV	
	(50 to 100) kHz	6.4 mV/V + 2 mV	
	(3.2 to 32) V		
	10 Hz to 3 kHz	13 mV/V + 2 mV	
	(3 to 10) kHz	19 mV/V + 3 mV	
	(10 to 30) kHz	26 mV/V + 5 mV	
	(30 to 50) kHz	48 mV/V + 10 mV	
	(50 to 100) kHz	0.1 V/V + 30 mV	
	(32 to 105) V		
	10 Hz to 3 kHz	42 mV/V + 6 mV	
	(3 to 10) kHz	63 mV/V + 8 mV	
	(10 to 30) kHz	84 mV/V + 20 mV	
	(30 to 50) kHz	0.1 V/V + 30 mV	
	(50 to 100) kHz	0.4 V/V + 10 mV	
	(105 to 320) V		
	(40 to 100) Hz	0.2 V/V + 20 mV	
	100 Hz to 1 kHz	0.2 V/V + 20 mV	
	(1 to 3) kHz	0.3 V/V + 20 mV	
(3 to 10) kHz	0.3 V/V + 30 mV		
(10 to 20) kHz	0.4 V/V + 50 mV		
(20 to 30) kHz	0.5 V/V + 60 mV		
(320 to 800) V			
(40 to 100) Hz	0.4 V/V + 60 mV		
100 Hz to 1 kHz	0.4 V/V + 60 mV		
(1 to 3) kHz	0.6 V/V + 60 mV		
(3 to 10) kHz	0.6 V/V + 0.1 V		
(10 to 20) kHz	1 V/V + 0.16 V		
(20 to 30) kHz	1.2 V/V + 0.21 V		
800 V to 1.05 kV			
(40 to 100) Hz	0.5 V/V + 0.13 V		
100 Hz to 1 kHz	0.5 V/V + 0.13 V		
(1 to 3) kHz	0.8 V/V + 0.13 V		
(3 to 10) kHz	0.8 V/V + 0.21 V		
(10 to 20) kHz	1 V/V + 0.32 V		

Wavetek 9100
with Opt 100/600



Electromagnetic-DC / Low Frequency

Parameter/ Equipment	Range	Calibration and Measurement Capability [Expressed as Uncertainty (\pm)]	Reference Standard or Equipment
Resistance - Measure ²	(1 to 10) Ω (10 to 100) Ω 100 Ω to 100 k Ω 100 k Ω to 1 M Ω (1 to 10) M Ω (10 to 100) M Ω 100 M Ω to 1 G Ω	23 $\mu\Omega/\Omega$ + 0.1 m Ω 23 $\mu\Omega/\Omega$ + 0.1 m Ω 11 $\mu\Omega/\Omega$ + 0.1 Ω 63 $\mu\Omega/\Omega$ + 4 Ω 0.83 Ω/Ω + 100 Ω 0.1 m Ω/Ω + 10 k Ω 10 m Ω/Ω + 10 k Ω	HP 3458A Opt 002
Resistance - Source ²	Up to 40 Ω (40 to 400) Ω 400 Ω to 4 k Ω (4 to 40) k Ω (40 to 400) k Ω 400 k Ω to 4 M Ω (4 to 40) M Ω (40 to 400) M Ω	20 m Ω/Ω + 20 m Ω 0.8 Ω/Ω + 20 m Ω 0.8 Ω/Ω + 80 m Ω 8 Ω/Ω + 0.8 Ω 80 Ω/Ω + 8 Ω 0.8 k Ω/Ω + 100 Ω 20 k Ω/Ω + 2 k Ω 0.2 m Ω/Ω + 40 k Ω	Wavetek 9100 with Opt 100/600
Oscilloscope ² - Square Wave Function Into 50 Ω Into 1 M Ω DC Function Into 50 Ω Into 1 M Ω Sine Wave Into 1 M Ω Into 50 Ω Into 50 Ω Edge Function Into 50 Ω Into 1 M Ω Time Markers Function Into 50 Ω	4.44 mV to 3.336 V 4.44 mV to 133.44 V 4.44 mV to 2.78 V -4.44 mV to -2.78 V 4.44 mV to 133.44 V -4.44 mV to -133.44 V 4.44 mV to 133.44 V 4.44 mV to 5.6 V 10.656 mV to 5.560 V 88.8 mV to 1.112 V 888mV to 55.6 V 2 nS to 5.5 S	0.25 % of reading 0.25 % of reading 0.2 % of reading + 40 μ V 0.2 % of reading + 40 μ V 0.2 % of reading + 40 μ V 0.2 % of reading + 40 μ V 0.25 % of reading 0.25 % of reading 1.5 % of reading 3 % of reading 3 % of reading 25 parts in 10 ⁶ S	Wavetek 9100 with Opt 100/600

Electromagnetic-DC / Low Frequency

Parameter/ Equipment	Range	Calibration and Measurement Capability [Expressed as Uncertainty (\pm)]	Reference Standard or Equipment
AC Current - Measure ²	(10 to 100) μA (10 to 20) Hz (20 to 45) Hz 45 Hz to 1 kHz 100 μA to 100 mA (10 to 20) Hz (20 to 45) Hz 45 Hz 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 Hz to 100 Hz 100 Hz to 5 kHz (5 to 20) kHz (20 to 50) kHz	0.4 μ A/A + 0.03 μ A 0.2 μ A/A + 0.03 μ A 0.1 μ A/A + 0.03 μ A 0.4 mA/A + 20 μ A 0.2 mA/A + 20 μ A 0.1 mA/A + 20 μ A 0.1 mA/A + 20 μ A 0.1 mA/A + 20 μ A 0.4 mA/A + 40 μ A 0.6 mA/A + 0.15 mA 4 mA/A + 0.2 mA 2 mA/A + 0.2 mA 1 mA/A + 0.2 mA 1 mA/A + 0.2 mA 3 mA/A + 0.2 mA 10 mA/A + 0.4 mA	HP 3458A Opt 002
AC Current - Source ²	Up to 32 μA 10 Hz to 3 kHz (3 to 10) kHz (10 to 20) kHz (20 to 30) kHz (32 to 320) μA 10 Hz to 3 kHz (3 to 10) kHz (10 to 20) kHz (20 to 30) kHz 320 μA to 3.2 mA 10 Hz to 3 kHz (3 to 10) kHz (10 to 20) kHz (20 to 30) kHz (3.2 to 32) mA 10 Hz to 3 kHz (3 to 10) kHz (10 to 20) kHz (20 to 30) kHz (32 to 320) mA 10 Hz to 3 kHz (3 to 10) kHz (10 to 20) kHz (20 to 30) kHz	0.1 μ A/A + 0.9 μ A 0.1 μ A/A + 2 μ A 0.1 μ A/A + 6 μ A 0.1 μ A/A + 9 μ A 0.2 μ A/A + 0.3 μ A 0.3 μ A/A + 0.6 μ A 0.6 μ A/A + 2 μ A 0.6 μ A/A + 3 μ A 2.3 μ A/A + 0.3 μ A 3.2 μ A/A + 0.6 μ A 6.4 μ A/A + 2 μ A 6.4 μ A/A + 3 μ A 26 μ A/A + 3.2 μ A 32 μ A/A + 6.4 μ A 64 μ A/A + 13 μ A 80 μ A/A + 23 μ A 0.3 mA/A + 32 μ A 0.8 mA/A + 48 μ A 0.6 mA/A + 64 μ A 0.8 mA/A + 96 μ A	Wavetek 9100 with Opt 100/600 w/10 turn coil w/50 turn coil

Electromagnetic-DC / Low Frequency

Parameter/ Equipment	Range	Calibration and Measurement Capability [Expressed as Uncertainty (\pm)]	Reference Standard or Equipment
AC Current - Source ²	320 mA to 10.5 A 10 Hz to 3 kHz (3 to 10) kHz (3.2 to 10.5) A 10 Hz to 3 kHz (3 to 10) kHz (10.5 to 20) A 10 Hz to 3 kHz (3 to 10) kHz (3.2 to 32) A (10 to 100) Hz (100 to 440) Hz (32 to 200) A (10 to 100) Hz (100 to 440) Hz (16 to 160) A (10 to 100) Hz (160 to 1 000) A (10 to 100) Hz	10 mA/A + 0.48 mA 26 mA/A + 2.6 mA 21 mA/A + 3 mA 52 mA/A + 10 mA 40 mA/A + 6.9 mA 0.1 A/A + 23 mA 64 mA/A + 5.5 mA 0.2 A/A + 27 mA 0.4 A/A + 90 mA 1.3 A/A + 0.25 A 0.3 A/A + 28 mA 2.1 A/A + 0.45 A	Wavetek 9100 with Opt 100/600 w/10 turn coil w/50 turn coil
Electrical Calibration of Thermocouple Indicators ² -	Type E (-250 to -200) °C (-200 to -100) °C (-100 to 100) °C (100 to 1 000) °C Type J (-210 to -100) °C (-100 to 800) °C (800 to 1 000) °C (1 000 to 1 200) °C Type K (-250 to -200) °C (-200 to -100) °C (-100 to 100) °C (100 to 600) °C (600 to 1 372) °C Type N (-200 to -100) °C (700 to 900) °C (900 to 1 100) °C (1 100 to 1 300) °C Type R (0 to 100) °C (100 to 200) °C (200 to 1 600) °C (1 600 to 1 767) °C	0.52 °C 0.26 °C 0.2 °C 0.25 °C 0.29 °C 0.23 °C 0.25 °C 0.27 °C 0.66 °C 0.32 °C 0.23 °C 0.27 °C 0.32 °C 0.39 °C 0.27 °C 0.26 °C 0.28 °C 0.6 °C 0.47 °C 0.41 °C 0.33 °C	Wavetek 9100 Opt 100/600



Electromagnetic-DC / Low Frequency

Parameter/ Equipment	Range	Calibration and Measurement Capability [Expressed as Uncertainty (±)]	Reference Standard or Equipment
Electrical Calibration of Thermocouple Indicators ²	Type S (0 to 200) °C (200 to 1 000) °C (1 000 to 1 400) °C (1 400 to 1 767) °C Type T (-250 to -200) °C (-200 to -100) °C (-100 to 0) °C (0 to 400) °C	0.57 °C 0.43 °C 0.41 °C 0.42 °C 0.68 °C 0.32 °C 0.26 °C 0.2 °C	Wavetek 9100 Opt 100/600
Capacitance Source	(0.5000 to 4) nF ≤ 350Hz 350Hz to 1.5kHz (4.0001 to 40) nF ≤ 350Hz 350Hz to 1.5kHz (40.001 to 400) nF ≤ 350Hz 350Hz to 1.5kHz (0.4 to 4) μF ≤ 350Hz 350Hz to 1.5kHz (4.0001μF to 40) μF ≤ 350Hz 350Hz to 1.5kHz (40.001 to 400) μF ≤ 350Hz 350Hz to 1.5kHz (0.4 to 4) mF ≤ 350Hz 350Hz to 1.5kHz (4.0001 to 40) mF ≤ 350Hz 350Hz to 1.5kHz	% Output + Floor 0.3 + 15pF 0.6 + 30.0pF 0.3 + 30pF 0.6 + 60pF 0.3 + 160pF 0.6 + 320pF 0.4 + 1.6nF 0.8 + 3.2nF 0.5 + 16.0nF 1.0 + 32.0nF 0.5 + 160nF 1.0 + 320nF 0.5 + 1.6 μF 1.0 + 3.2 μF 1.0 + 60μF 2.0 + 120 μF	Wavetek 9100 with Opt 100/600

Time & Frequency

Parameter/ Equipment	Range	Calibration and Measurement Capability [Expressed as Uncertainty (±)]	Reference Standard or Equipment
Stop Watches	(1/1000) S to 24 h	38 mS	NIST SP 960-12 GPS receiver
Optical Tachometers (1 to 10 000) rpm	0.5 Hz to 16.6 kHz	0.25 parts in 10 ⁶ Hz	Wavetek 9100 Opt 100/600

Thermodynamic

Parameter/ Equipment	Range	Calibration and Measurement Capability [Expressed as Uncertainty (\pm)]	Reference Standard or Equipment
Temperature - Infrared ²	Up to 500 °C Up to 1200 °C	1.2 °C 1.7 °C	Black Body, Dry Well
Relative Humidity ² - Fixed Points NaCl LiCl	75.5 % RH 11.3 % RH	0.76 % RH 0.76 % RH	Salt Solutions ASTM E104
Chart Recorders Relative Humidity Temperature	(20 to 90) % RH (-17 to 177) °C	3 % RH 0.21 °C	Enviromental Chamber, Datalogger

Mechanical

Parameter/ Equipment	Range	Calibration and Measurement Capability [Expressed as Uncertainty (\pm)]	Reference Standard or Equipment
Vacuum ²	Up to 27 in Hg	0.006 inHg	Transducer
Balances ³	Up to 20 g (20 to 200) g 200g to 1 kg (1 to 2) kg (2 to 5) kg (5 to 10) kg	0.58 mg 2.3 mg 12 mg 12 mg 0.47 g 1.1 g	Class F1 Weights to NIST Handbook 44
Scales ³	(0 to 10) lb (10 to 20) lb (20 to 50) lb (50 to 100) lb (100 to 500) lb (500 to 1 000) lb (1 000 to 5 000) lb (5 000 to 100 000) lb	0.003 lb 0.005 lb 0.02 lb 0.03 lb 0.06 lb 0.12 lb 1.5 lb 21 lb	Class F1 and F Weights to NIST Handbook 44
Torque Transducers	(0 to 100) lbf-in (0 to 100) lbf-ft (0 to 250) lbf-ft (0 to 1 000) lbf-ft	0.0058 lbf-in 0.0058 lbf-ft 0.058 lbf-ft 0.058 lbf-ft	Weights, Torque Arm
Torque Wrenches	Up to 100 lbf-in Up to 100 lbf-ft (100 to 250) lbf-ft (250 to 1 000) lbf-ft	0.58 lbf-in 0.58 lbf-ft 0.58 lbf-ft 0.58 lbf-ft	Torque Transducer
Torque Transducers ²	(0 to 1 000) lbf-ft	0.091 lbf-ft	Weights, Torque Arm
Torque Wrenches ²	(0 to 1 000) lbf-ft	2.9 lbf-ft	Torque Transducer
Force ² - Compression & Tension	(0 to 100 000) lbf	13 lbf	Load Cells
Force - Compression & Tension	(0 to 1 000) lbf (0 to 10 000) lbf	0.022 lbf 0.19 lbf	Ultra Precision Load Cells
Pressure Gages Oil	Up to 10 000 psi	3.1 psi	Deadweight Tester

Mechanical

Parameter/ Equipment	Range	Calibration and Measurement Capability [Expressed as Uncertainty (±)]	Reference Standard or Equipment
Pressure Gages Air	Up to 300 psi Up to 50 inH ₂ O Up to 100 psi Up to 1 000 psi	0.04 psi 0.004 in H ₂ O 0.02 psi 0.08 psi	Transducer
	(5.8 to 1 000) psi	0.007 psi	Deadweight Tester
Pressure Gages² Oil	Up to 10 000 psi	3.1 psi	Deadweight Tester
Pressure Gages² Air	Up to 300 psi Up to 50 in H ₂ O Up to 100 psi Up to 1 000 psi	0.06 psi 0.02 in H ₂ O 0.09 psi 0.16 psi	Transducer
	Mass	Up to 210 g	0.3 mg
Indirect Verification to ASTM E10 of Brinell Hardness Testers ²	(72 to 277) HBW	3.4 HBW	Hardness Blocks
Indirect Verification to ASTM E18 of Rockwell Hardness Testers ²	HRA		Hardness Blocks
	Low	0.37 HRA	
	Middle	0.37 HRA	
	High	0.27 HRA	
	HRBW		
	Low	0.53 HRBW	
	Middle	0.32 HRBW	
	High	0.32 HRBW	
	HRC		
	Low	0.38 HRC	
	Middle	0.38 HRC	
	High	0.29 HRC	
HREW			
Low	0.53 HRE		
Middle	0.53 HRE		
High	0.53 HRE		

Mechanical

Parameter/ Equipment	Range	Calibration and Measurement Capability [Expressed as Uncertainty (±)]	Reference Standard or Equipment
Indirect Verification to ASTM E18 of Rockwell Superficial Hardness Testers ²	HR15N Low Middle High	0.57 HR15N 0.57 HR15N 0.27 HR15N	
	HR30N Low Middle High	0.41 HR30N 0.41 HR30N 0.41 HR30N	
	HR45N Low Middle High	0.51 HR45N 0.51 HR45N 0.51 HR45N	
	HR15TW Low Middle High	0.49 HR15TW 0.41 HR15TW 0.41 HR15TW	
	HR30TW Low Middle High	0.43 HR30TW 0.37 HR30TW 0.37 HR30TW	
	Direct Verification to ASTM D2240 of Durometers – Verification of Indenter Shape and Extension: Extension at Zero Reading	Type A, B, E, O	
Verification of the Durometer Spring	Type D, C, DO	0.76 grf	Weights

Dimensional

Parameter/ Equipment	Range	Calibration and Measurement Capability [Expressed as Uncertainty (±)]	Reference Standard or Equipment
Gage Blocks	Up to 4 in	(4.6 + 0.23L) μin	Master Gage Blocks
Plain Ring Gages	(0.04 to 12) in	(34 + 0.59L) μin	LabMaster Laser Measuring System
Plug Gages	Up to 14 in	(11.7 + 3.5L) μin	LabMaster Laser Measuring System
Reference Spheres	Up to 2 in	22 μin	LabMaster Laser Measuring System
Pin Gages	Up to 1 in	14 μin	LabMaster Laser Measuring System
Indicators	Up to 1 in	48 μin	Gage Blocks, Indicator Calibrator
Indicators ²	Over 1 to 5 in	290 μin	Gage Blocks



Dimensional

Parameter/ Equipment	Range	Calibration and Measurement Capability [Expressed as Uncertainty (\pm)]	Reference Standard or Equipment
Micrometers and Depth Micrometers	Up to 12 in	(30 + 1.1L) μ in	Gage Blocks
Micrometers and Depth Micrometers ²	Up to 12 in	(210 + 0.85L) μ in	Gage Blocks
Calipers	Up to 40 in	(290 + 2L) μ in	Gage Blocks
Calipers ²	Up to 40 in	(290 + 6.5L) μ in	Gage Blocks
Height Gages	Up to 40 in	(4.1 + 6.1L) μ in	Gage Blocks
Height Gages ²	Up to 40 in	(4.6 + 11.7L) μ in	Gage Blocks
Optical Comparators² Linearity Squareness Angle Magnification	Up to 16 in (X to X) Deg 10x to 100x	270 μ in 240 μ in 5 arcsec 0.002 in	Inspection Master Angle Master
Optical Comparators² Linearity Squareness Angularity Magnification	Up to 16 in	530 μ in 290 μ in 5 arcsec 0.0021 in	Inspection Master
Microscopes ²	Up to 0.1 in	680 μ in	Stage Micrometer I1110
Precision Rules	(6 to 72) in	0.0074 in	Precision Rule and microscope
Surface Plate Overall Flatness ²	Up to (72 x 144) in	4.7 $\sqrt{(D/4)}$ in	Electronic Leveling System
60 Degree Thread Plugs - Pitch Diameter	Up to 2 in	27 μ in	3 wire
Thread Wires	Up to 0.3 in	13 μ in	LabMaster Laser Measuring System
Angle	Up to 90 deg	1.9 arcmin	Optical Comparator
Protractors	Up to 360 deg	0.37 arcmin	Angle Blocks, Height Gage
Protractors ²	Up to 360 deg	35 arcmin	Angle Blocks
Electronic Levels	Up to 400 S	4.3 S	Sine Plate, Gage Blocks SSCLD-12-01

Fluid Quantities

Parameter/ Equipment	Range	Calibration and Measurement Capability [Expressed as Uncertainty (\pm)]	Reference Standard or Equipment
pH Meters ²	(4.0, 7.0, 10.0) pH	0.03 pH	pH Standards

Fluid Quantities

Parameter/ Equipment	Range	Calibration and Measurement Capability [Expressed as Uncertainty (±)]	Reference Standard or Equipment
Conductivity ²	10 µS (10 to 1 000) µS (1 000 to 100 000) µS	0.62 µS 4.2 µS 0.03 mS	Conductivity Standards

Notes:

1. Calibration and Measurement Capabilities (Expanded Uncertainties) are based on approximately a 95% confidence interval, using a coverage of k=2.
2. *This laboratory offers calibrations in its laboratory and on-site at customer-designated locations. 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.*
3. *Scale calibrations performed on-site only.*
4. *The use of (L) signifies an expression of applied Length in inches.*
5. *The use of (D) signifies an expression of applied Diagonal Length in inches.*
6. *This scope is formatted as part of a single document including the Certificate of Accreditation No. AC – 1756*



Vice President