



CERTIFICATE OF ACCREDITATION

ANSI-ASQ National Accreditation Board

500 Montgomery Street, Suite 625, Alexandria, VA 22314, 877-344-3044

This is to certify that

Total Calibration Solutions, Inc.

7722 Metric Drive

Mentor, OH 44060

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

ISO/IEC 17025:2005

and national standard

ANSI/NCSL Z540-1-1994

while demonstrating technical competence in the field(s) of

CALIBRATION

Refer to the accompanying Scope(s) of Accreditation for information regarding the types of calibrations and/or tests to which this accreditation applies.

AC-1994

Certificate Number

ANAB Approval



Valid to: 10/13/2017

Version No. 0001

Issued: 10/14/2015



This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. 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 January 2009).



ANSI-ASQ National Accreditation Board

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

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CALIBRATION

Valid to: October 13, 2017

Certificate Number: AC - 1994

I. Electromagnetic - DC/Low Frequency

PARAMETER / EQUIPMENT	RANGE	CALIBRATION & MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
*DC Voltage - Measure	Up to 100 mV 100 mV to 1 V (1 to 10) V (10 to 100) V 100 V to 1 kV (1 to 200) kV	1.4 μV 8 μV 77 μV 1.1 mV 25 mV 400 V	HP 3458A Opt 002 Ross 200K, HP 3458A Opt 002	OEM/GIDEP Sourced Calibration Procedures
*DC Voltage - Source	Up to 330 mV 330 mV to 3.3 V (3.3 to 33) V (33 to 330) V 330 V to 1 kV	8.2 μV 41 μV 0.45 mV 6.5 mV 23 mV	Fluke 5522A	
*DC Current - Measure	Up to 100 μA 100 μA to 1 mA (1 to 10) mA (10 to 100) mA 100 mA to 1 A (1 to 3) A (3 to 11) A (11 A to 20.5) A	7.4 nA 84 nA 0.70 μA 9 μA 0.11 mA 11 mA 40 mA 73 mA	HP 3458A Opt 002 HP 34330A Shunt	



PARAMETER / EQUIPMENT	RANGE	CALIBRATION & MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
*AC Voltage - Source	Up to 33 mV		Fluke 5522A	OEM/GIDEP Sourced Calibration Procedures
	(10 to 45) Hz	35 µV		
	45 Hz to 10 kHz	12 µV		
	(10 to 20) kHz	14 µV		
	(20 to 50) kHz	42 µV		
	(50 to 100) kHz	0.14 mV		
	(100 to 500) kHz	0.34 mV		
	(33 to 330) mV			
	(10 to 45) Hz	0.12 mV		
	45 Hz to 10 kHz	60 µV		
	(10 to 20) kHz	65 µV		
	(20 to 50) kHz	0.13 mV		
	(50 to 100) kHz	0.32 mV		
	330 mV to 3.3 V			
	(10 to 45) Hz	11 mV		
	45 Hz to 10 kHz	0.59 mV		
	(10 to 20) kHz	0.73 mV		
	(20 to 50) kHz	1.1 mV		
	(50 to 100) kHz	2.9 mV		
	(100 to 500) kHz	9.1 mV		
(3.3 to 33) V				
(10 to 45) Hz	11 mV			
45 Hz to 10 kHz	5.9 mV			
(10 to 20) kHz	9.1 mV			
(20 to 50) kHz	13 mV			
(50 to 100) kHz	33 mV			
(33 to 330) V				
45 Hz to 1 kHz	69 mV			
(1 to 10) kHz	79 mV			
(10 to 20) kHz	94 mV			
(20 to 50) kHz	0.12 V			
(50 to 100) kHz	0.53 V			
330 V to 1.02 kV				
45 Hz to 1 kHz	0.34 V			
(1 to 5) kHz	0.28 V			
(5 to 10) kHz	0.33 V			
(1.02 to 50) kV				
60 Hz	0.58 kV	Hipot with Ross 200K, HP3458A Opt 002		

PARAMETER / EQUIPMENT	RANGE	CALIBRATION & MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
*AC Current - Source	(29 to 330) µA		Fluke 5522A	OEM/GIDEP Sourced Calibration Procedures
	(10 to 20) Hz	0.82 µA		
	(20 to 45) Hz	0.64 µA		
	45 Hz to 1 kHz	0.55 µA		
	(1 to 5) kHz	1.2 µA		
	(5 to 10) kHz	3.0 µA		
	(10 to 30) kHz	6.0 µA		
	330 µA to 3.3 mA			
	(10 to 20) Hz	7.6 µA		
	(20 to 45) Hz	4.8 µA		
	45 Hz to 1 kHz	3.9 µA		
	(1 to 5) kHz	8.0 µA		
	(5 to 10) kHz	19 µA		
	(10 to 30) kHz	38 µA		
	(3.3 to 33) mA			
	(10 to 20) Hz	66 µA		
	(20 to 45) Hz	34 µA		
	45 Hz to 1 kHz	17 µA		
	(1 to 5) kHz	32 µA		
	(5 to 10) kHz	74 µA		
	(10 to 30) kHz	0.14 mA		
	(33 to 330) mA			
	(10 to 20) Hz	0.65 mA		
	(20 to 45) Hz	0.34 mA		
	45 Hz to 1 kHz	0.16 mA		
	(1 to 5) kHz	0.41 mA		
	(5 to 10) kHz	0.81 mA		
	(10 to 30) kHz	1.6 mA		
330 mA to 1.1 A				
(10 to 45) Hz	2.2 mA			
45 Hz to 1 kHz	0.71 mA			
(1 to 5) kHz	8.1 mA			
(5 to 10) kHz	35 mA			
(1.1 to 3) A				
(10 to 45) Hz	6.2 mA			
45 Hz to 1 kHz	2.2 mA			
(1 to 5) kHz	21 mA			
(3 to 11) A				
(45 to 100) Hz	10 mA			
100 Hz to 1 kHz	15 mA			
(1 to 5) kHz	0.38 A			
(11 to 20.5) A				
(45 to 100) Hz	34 mA			
100 Hz to 1 kHz	41 mA			
(1 to 5) kHz	0.70 A			



PARAMETER / EQUIPMENT	RANGE	CALIBRATION & MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
*AC Current - Measure	Up to 100 µA 10 Hz to 5 kHz 100 µA to 1 mA 10 Hz to 5 kHz (1 to 10) mA 10 Hz to 5 kHz (10 to 100) mA 10 Hz to 5 kHz 100 mA to 1.1 A 10 Hz to 5 kHz (1.1 to 3) A (10 to 40) Hz 40 Hz to 1 kHz (1 to 5) kHz (3 to 11) A 45 Hz to 1 kHz (1 to 5) kHz (11 to 20.5) A 45 Hz to 1 kHz (1 to 5) kHz	0.11 µA 0.6 µA 6.1 µA 61 µA 1.4 mA 13 mA 12 mA 0.20 A 43 mA 0.64 A 12 mA 0.20 A	HP 3458A Opt 002 with HP 34330A Shunt	OEM/GIDEP Sourced Calibration Procedures
*Inductance - Source	100 µH to 1 mH (1 to 10) mH (10 to 100) mH 100 mH to 1 H (1 to 10) H	17 µH 0.14 µH 0.69 mH 6.9 mH 69 mH	GR 1491D Decade Box, RLC GenRad 1689	
*Inductance - Measure	100 µH to 1 mH (1 to 10) mH (10 to 100) mH 100 mH to 1 H (1 to 10) H	0.24 µH 2.4 µH 24 µH 0.24 mH 2.3 mH	RLC GenRad 1689	
*Capacitance - Measure	Up to 1 nF (1 to 10) nF (10 to 100) nF 100 nF to 1 µF (1 to 1.111) µF	0.64 pF 2.4 pF 26 pF 0.41 nF 0.44 nF	RLC GenRad 1689	



PARAMETER / EQUIPMENT	RANGE	CALIBRATION & MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
*Capacitance - Source				
20 Hz to 1 kHz	100 pF to 1 nF	0.67 pF	1423A Decade Box	OEM/GIDEP Sourced Calibration Procedures
20 Hz to 1 kHz	(1 to 10) nF	6.3 pF		
20 Hz to 1 kHz	(10 to 100) nF	74 pF		
20 Hz to 1 kHz	100 nF to 1 μF	0.62 nF		
10 Hz to 10 kHz	(220 to 400) pF	15 pF	Fluke 5522A	
10 Hz to 10 kHz	400 pF to 1.1 nF	18 pF		
10 Hz to 3 kHz	(1.1 to 3.3) nF	23 pF		
10 Hz to 1 kHz	(3.3 to 11) nF	44 pF		
10 Hz to 1 kHz	(11 to 33) nF	0.17 nF		
10 Hz to 1 kHz	(33 to 110) nF	0.44 nF		
10 Hz to 1 kHz	(110 to 330) nF	0.92 nF		
(10 to 600) Hz	330 nF to 1.1 μF	4.1 nF		
(10 to 300) Hz	(1.1 to 3.3) μF	12 nF		
(10 to 150) Hz	(3.3 to 11) μF	44 nF		
(10 to 120) Hz	(11 to 33) μF	0.18 μF		
(10 to 80) Hz	(33 to 110) μF	0.70 μF		
(0 to 50) Hz	(110 to 330) μF	2.0 μF		
(0 to 20) Hz	330 μF to 1.1 mF	12 μF		
(0 to 6) Hz	(1.1 to 3.3) mF	20 μF		
(0 to 2) Hz	(3.3 to 11) mF	89 μF		
(0 to 0.6) Hz	(11 to 33) mF	0.31 mF		
(0 to 0.2) Hz	(33 to 110) mF	1.4 mF		
*DC Resistance - Source				
	Up to 10 Ω	1.6 mΩ	Fluke 5522A	
	100 Ω in 10 Ω Steps	3.1 mΩ	ESI RS925A Resistance Decade Box	
	1 kΩ in 100 Ω Steps	27 mΩ		
	10 kΩ in 1 kΩ Steps	0.26 Ω		
	100 kΩ in 10 kΩ Steps	2.6 Ω		
	1.1 MΩ in 100 kΩ Steps	29 Ω		
	(1.1 to 3.3) MΩ	0.29 kΩ	Fluke 5522A	
	(3.3 to 11) MΩ	0.35 kΩ		
	(11 to 33) MΩ	12 kΩ		
	(33 to 110) MΩ	66 kΩ		
	(110 to 330) MΩ	1.2 MΩ		
	330 MΩ to 1.1 GΩ	18 MΩ		
*DC Resistance - Measure				
	Up to 10 Ω	0.31 mΩ	HP 3458A Opt 002	
	(10 to 100) Ω	2.7 mΩ		
	100 Ω to 1 kΩ	18 mΩ		
	(1 to 10) kΩ	0.18 Ω		
	(10 to 100) kΩ	1.8 Ω		
	100 kΩ to 1 MΩ	25 Ω		
	(1 to 10) MΩ	0.78 kΩ		
	(10 to 100) MΩ	68 kΩ		



PARAMETER / EQUIPMENT	RANGE	CALIBRATION & MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
* Oscilloscopes				
Amplitude - DC				
50 Ω	(-6.6 to 6.6) V	20 mV		
1 MΩ	(-130 to 130) V	15 mV		
Amplitude - Square Wave				
50 Ω	1 mV to 6.6 V (p-p)	13 mV		
1 MΩ	1 mV to 130 V (p-p)	18 mV		
Frequency	10 Hz to 10 kHz	29 Hz		
Time Markers into				
50Ω Load	1 ns to 20 ms	8.2 μs		
	50 ms to 5 s	29 ms		
Leveled Sine Wave				
(5 mV to 5.5 V) p-p	50 kHz reference	0.13 V		
	50 kHz to 100 MHz	0.10 V		
	(100 to 300) MHz	0.14 V		
	(300 to 600) MHz	0.26 V		
(5 mV to 3.5 V) p-p	600 MHz to 1.1 GHz	0.20 V		
Edge Characteristics into				
50Ω Load			Fluke 5522A/SC1100	OEM/GIDEP
Rise Time	Up to 300 ps	+0/-120 ps		Sourced
Amplitude	4.5 mV to 2.75 V	63 mV		Calibration
Frequency	1 kHz to 10 MHz	29 Hz		Procedures
Wave Generator				
Square, Sine, Triangle				
Amplitude				
Into 50 Ω Load	(1.8 mV to 55 V) p-p	88 mV		
Into 1 MΩ Load	(1.8 mV to 55 V) p-p	2.0 V		
Frequency	10 Hz to 100 kHz	0.29 Hz		
Pulse - Source				
50 Ω Load				
Period	22 ms to 200 ns	6.1 ns		
Width	45.5 Hz to 5 MHz			
	(4 to 500) ns	1.2 ns		
Input Resistance				
Measurement	(40 to 60) Ω	56 mΩ		
	500 kΩ to 1.5MΩ	2.5 kΩ		
Oscilloscope Capacitance				
Measurement	(5 to 50) pF	1.3 pF		

PARAMETER / EQUIPMENT	RANGE	CALIBRATION & MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
* Electrical Simulation of Thermocouple Indicators				
Type B	(600 to 800) °C (800 to 1 000) °C (1 000 to 1 550) °C (1 550 to 1 820) °C	0.53 °C 0.42 °C 0.37 °C 0.40 °C		
Type C	(0 to 150) °C (150 to 650) °C (650 to 1 000) °C (1 000 to 1 800) °C (1 800 to 2 316) °C	0.35 °C 0.31 °C 0.38 °C 0.59 °C 0.98 °C		
Type E	(-250 to -100) °C (-100 to -25) °C (-25 to 350) °C (350 to 650) °C (650 to 1 000) °C	0.58 °C 0.19 °C 0.17 °C 0.19 °C 0.25 °C		
Type J	(-210 to -100) °C (-100 to -30) °C (-30 to 150) °C (150 to 760) °C (760 to 1 200) °C	0.33 °C 0.20 °C 0.17 °C 0.21 °C 0.27 °C	Fluke 5522A	OEM/GIDEP Sourced Calibration Procedures
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	0.39 °C 0.22 °C 0.19 °C 0.31 °C 0.48 °C		
Type L	(-200 to -100) °C (-100 to 800) °C (800 to 900) °C	0.44 °C 0.32 °C 0.22 °C		
Type N	(-200 to -100) °C (-100 to -25) °C (-25 to 120) °C (120 to 410) °C (410 to 1 300) °C	0.47 °C 0.26 °C 0.23 °C 0.22 °C 0.33 °C		
Type R	(0 to 250) °C (250 to 400) °C (400 to 1 000) °C (1 000 to 1 767) °C	0.67 °C 0.42 °C 0.40 °C 0.48 °C		

PARAMETER / EQUIPMENT	RANGE	CALIBRATION & MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
*Electrical Simulation of Thermocouple Indicators (cont.) Type S Type T Type U	(0 to 250) °C (250 to 1 000) °C (1 000 to 1 400) °C (1 400 to 1 767) °C (-250 to -150) °C (-150 to 0) °C (0 to 120) °C (120 to 400) °C (-200 to 0) °C (0 to 600) °C	0.56 °C 0.43 °C 0.44 °C 0.54 °C 0.74 °C 0.30 °C 0.19 °C 0.17 °C 0.66 °C 0.33 °C	Fluke 5522A	OEM/GIDEP Sourced Calibration Procedures
*Electrical Simulation of RTD Indicators Pt 385, 100 Ω Pt 385, 200 Ω Pt 385, 500 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 (-200 to -80) °C (-80 to 0) °C (0 to 100) °C (100 to 260) °C (260 to 300) °C (300 to 400) °C (400 to 600) °C (600 to 630) °C (-200 to -80) °C (-80 to 0) °C (0 to 100) °C (100 to 260) °C (260 to 300) °C (300 to 400) °C (400 to 600) °C (600 to 630) °C	0.06 °C 0.06 °C 0.09 °C 0.11 °C 0.12 °C 0.14 °C 0.27 °C 0.05 °C 0.05 °C 0.05 °C 0.06 °C 0.15 °C 0.18 °C 0.18 °C 0.19 °C 0.05 °C 0.06 °C 0.06 °C 0.07 °C 0.09 °C 0.09 °C 0.11 °C 0.13 °C	Fluke 5522A	OEM/GIDEP Sourced Calibration Procedures

PARAMETER / EQUIPMENT	RANGE	CALIBRATION & MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
*Electrical Simulation of RTD Indicators (cont.) Pt 385, 1 000 Ω	(-200 to -80) °C (-80 to 0) °C (0 to 100) °C (100 to 260) °C (260 to 300) °C (300 to 400) °C (400 to 600) °C (600 to 630) °C	0.04 °C 0.04 °C 0.08 °C 0.06 °C 0.07 °C 0.08 °C 0.08 °C 0.27 °C	Fluke 5522A	OEM/GIDEP Sourced Calibration Procedures
*Phase Angle – Source (0 to 360)°	(65 to 500) Hz	0.29°	Fluke 5522A	

II. Electromagnetic - RF/Microwave

PARAMETER / EQUIPMENT	RANGE	CALIBRATION & MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
*RF Power - Measure Up to 18 GHz	-20 to 30 dBm	0.79 dBm	HP 8902A with HP8481 Power Sensor	
*Amplitude Modulation - Measure 150 kHz to 10 MHz 10 MHz to 1.3 GHz	Rate: 50 Hz to 10 kHz (5 to 99)% Rate: 20 Hz to 10 kHz Up to 99% Rate: 50 Hz to 50 kHz (5 to 99)% Rate: 20 Hz to 100 kHz Up to 99%	2.4 % 3.6 % 1.3 % 3.6 %	HP 8902A	OEM/GIDEP Sourced Calibration Procedures
*Frequency Modulation - Measure 250 kHz to 10 MHz 10 MHz to 1.3 GHz	Rate: 20 Hz to 10 kHz ≤ 40 kHz peak Rate: 50 Hz to 100 kHz ≤ 400 kHz peak Rate: 20 Hz to 200 kHz ≤ 400 kHz peak	0.25 kHz 1.3 kHz 5.9 kHz		
*Phase Modulation - Measure	150 kHz to 10 MHz 10 MHz to 1.3 GHz	0.20 rad 14 rad		

III. Time & Frequency

PARAMETER / EQUIPMENT	RANGE	CALIBRATION & MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
*Frequency - Source	1 MHz to 3 GHz	29 parts in 10 ¹⁰	HP E4422B Signal Generator locked to EFRATOM Rubidium Frequency Standard	OEM/GIDEP Sourced Calibration Procedures
*Frequency - Measure	(0.1 to 3) GHz	29 parts in 10 ¹⁰	HP 53132A	

IV. Thermodynamic

PARAMETER / EQUIPMENT	RANGE	CALIBRATION & MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
*Humidity	(10 to 90) %RH	1.3 %	Thunder Scientific 4A-1-MP	OEM/GIDEP Sourced Calibration Procedures
*Temperature	(-200 to 0) °C (0 to 100) °C (100 to 200) °C	0.02 °C 0.018 °C 0.02 °C	Liquid Nitrogen Temperature Bath Fluke 5681 Primary HP 3458A Opt 002	

V. Dimensional

PARAMETER / EQUIPMENT	RANGE	CALIBRATION & MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
*Calipers	Up to 40 in	(5.8L + 420) μin	Gage Blocks/ Surface Plate	OEM/GIDEP Sourced Calibration Procedures
*Micrometers	(0 to 1) in (1 to 4) in (4 to 20) in	52 μin (2.5L + 50) μin (4.8L + 90) μin		
*Indicators, Dial, Test	Up to 1 in Up to 4 in	52 μin (9.5L + 70) μin		
*Height Gages	Up to 24 in	(8.2L + 340) μin		

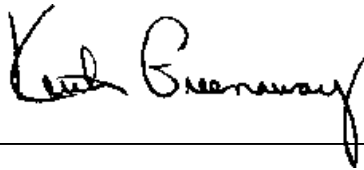
VI. Mechanical

PARAMETER / EQUIPMENT	RANGE	CALIBRATION & MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
*Pressure Gages & Transducers	(0 to 15) psia	0.013 psi	Druck DPI 145	OEM/GIDEP Sourced Calibration Procedures
	(0 to 190) psig	0.025 psi	Fluke PM200-G20M with 6270A Pressure Controller	
	(190 to 200) psig	0.058 psi	Druck DPI-145	
	(200 to 20 000) psig	2.4 psi	Fluke P3116 Deadweight Tester	
*Vacuum	(0.5 to 17) psia	0.013 psi	Druck DPI 145	
*Mass Flow	(0.5 to 50) SCCM (50 to 5 000) SCCM (5 to 100) SLPM (100 to 246) SLPM (246 to 1 300) SLPM (1 300 to 4 917) SLPM	0.15 SCCM 8.5 SCCM 0.19 SLPM 0.52 SLPM 3.6 SLPM 13 SLPM	ML-800-3 ML-800-24 ML-800-75 Fluke 5E2-S Molbloc Fluke 2E3-S Molbloc Fluke 1E4-S Molbloc Fluke Molbox and Mass Flow Terminal	
*Torque Source	(5 to 500) in-lb (41.6 to 250) ft-lb (250 to 800) ft-lb	0.50 in lb 0.25 ft lb 0.80 ft lb	Torque Arms, F Class Weights	
*Torque Tools	(0 to 1.25) in-lb (1.25 to 5) in-lb (5 to 50) in-lb (50 to 180) in-lb (15 to 75) ft-lb (75 to 700) ft-lb	0.0075 in-lb 0.032 in-lb 0.33 in-lb 1.2 in-lb 0.25 ft-lb 2.3 ft-lb	Mountz BMX20Z Mountz BMX80Z Mountz BMX50I Mountz BMX250I Norbar 50593 Norbar 50597	
* Force - Compression & Tension	(Up to 50) lbf (50 to 1 000) lbf (1 000 to 10 000) lbf (10 000 to 50 000) lbf	0.10 lbf 0.63 lbf 6.6 lbf 33 lbf	Class F Weights Interface - 1 000 lbf Interface - 10 000 lbf Interface - 50 000 lbf	

PARAMETER / EQUIPMENT	RANGE	CALIBRATION & MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
* Laboratory and Precision Balances	Up to 100 g (0.1 mg) Up to 500 g (0.1 mg) Up to 1 kg (0.01 g) Up to 20 kg (0.1 g)	0.14 mg 1.2 mg 16 mg 0.13 g	Class 1 Weights	OEM/GIDEP Sourced Calibration Procedures
* Bench Scales	Up to 300 lb (0.05 lb) Up to 600 lb (0.1 lb)	0.06 lb 0.16 lb	Class F Weights	

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 in-laboratory calibration service as well as on-site calibrations 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. Parameters identified by an asterisk (*) are accredited for on-site calibration.
3. The use of L in CMC represents length in inches.
4. This scope is formatted as part of a single document including the Certificate of Accreditation No. AC-1994



Vice President