PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

Perry Johnson Laboratory Accreditation, Inc. has assessed the Laboratory of:

RF Precision Laboratories S.A. de C.V.
Quinta San Ignacio No. 1021, Fraccionamiento Quintas del Valle
Ciudad Juárez, Chihuahua, México. CP. 32540

(Hereinafter called the Organization) and hereby declares that Organization 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
(as outlined by the joint ISO-ILAC-IAF Communiqué dated April 2017):

Mechanical, Mass, Force and Weighing Devices, Optical, Acoustic, Chemical Electrical, Thermodynamic, Dimensional and Time and Frequency Calibration
(As detailed in the supplement)

Accreditation claims for such testing and/or calibration services shall only be made from addresses referenced within this certificate. This Accreditation is granted subject to the system rules governing the Accreditation referred to above, and the Organization hereby covenants with the Accreditation body's duty to observe and comply with the said rules.

For PJLA:

Tracy Szerszen
President

Perry Johnson Laboratory Accreditation, Inc. (PJLA)
755 W. Big Beaver, Suite 1325
Troy, Michigan 48084

Initial Accreditation Date:	*Issue Date:*	*Expiration Date:*
June 26, 2006	November 10, 2023	November 30, 2025

Accreditation No.:	*Certificate No.:*
54869	L23-862

The validity of this certificate is maintained through ongoing assessments based on a continuous accreditation cycle. The validity of this certificate should be confirmed through the PJLA website: www.pjlabs.com

Certificate of Accreditation: Supplement

RF Precision Laboratories S.A. de C.V.
Quinta San Ignacio No. 1021, Fraccionamiento Quintas del Valle
Ciudad Juárez, Chihuahua, México. CP. 32540
Contact Name: Carlos Peraza Cadena Phone: 656-233-3471

Accreditation is granted to the facility to perform the following calibrations:

Mechanical

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE (AND SPECIFICATION WHERE APPROPRIATE)	CALIBRATION OR MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (±)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED	CALIBRATION MEASUREMENT METHOD OR PROCEDURES USED
Vacuum Gauge[FO]	Up to -15 psi (Up to -103.421 kPa)	0.2% of reading	Mensor CPG2400	CEM ME-003
Torque Tools Torsional Par Wrenches Electrical Screwdrivers[FO]	1 lbf.in to 10 lbf.in	1.8 % of reading	Torque Transducer Mountz BMX10 Torque Analyzer, LTT-2100 250i Torque Analyzer Mountz TL100F	ISO 6789-2
	2.5 lbf.in to 250 lbf.in	1.8 % of reading		
	120 lbf.in to 1200 lbf.in	1.8 % of reading		
Flow Meters[FO]	0.01 L/min to 20 L/min (0.021cfh to 42.3 cfh)	0.0013 L/min (0.002 7 cfh)	TSI 20	CEM ME-009
	Up to 300 L/min (Up to 635.6 ft^3/h)	0.6 L/min (1.3 ft^3/h)	TSI 300	
Pressure Devices[FO]	Up to 15 inH_2O	0.22 inH_2O	Fluke 922 Mensor CPG2400	CEM ME-003
	Up to 30 psi	0.2 % of reading		
	30 psi to 300 psi	0.5 % of reading	Crystal M1	
	300 psi to 3 000 psi	0.5 % of reading	Fluke 700G29, Precision Pressure	
	500 psi to 10 000 psi	0.2% of reading	Pressure Module, Fluke 750P31	
Torque Analyzer & Torque Transducers[FO]	4 lbf.in to 105 lbf.in	1.3% of reading	Wheel & Mass Weight Class F	Euramet-cg-14
	0.45 N.m to 46.58 N.m	0.5 % of reading		
Pipettes[F]	10 µL	0.25 µL	Analytic Balance	ASTM E1154
	20 µL	0.29 µL		
	30 µL	0.49 µL		
	100 µL	0.6 µL		
	200 µL	0.75 µL		
	500 µL	0.86 µL		
	1 mL	1.3 µL		
	2 mL	1.5 µL		
	5 mL	1.5 µL		
	10 mL	2.8 µL		
	20 mL	5.5 µL		
	50 mL	14 µL		
	100 mL	69 µL		
	200 mL	55 µL		
	220 mL	97 µL		

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Mass, Force and Weighing Devices

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Force Devices -Tension and Compression – Source and Measure[FO]	45.359 kgf to 4 535.924 kgf	0.3 % of reading	Load Cell Futek LSB400	ISO 7500-1
Force Devices – Compression and Tension- Source and Measure[FO]	889.6 N to 44.13 kN (200 lb·f to 10 000 lb·f)	0.5 % of reading	Load Cell Futek	
Force Devices – Compression and Tension- and Measure[FO]	100 g to 5 000 g	0.058 % of reading	Weights Class F	
	1 lbf to 10 lbf	0.78 % of reading		
Scales and Balances[FO]	10 mg to 500 g	$(9 \times 10^{-4} + 1.6 \times 10^{-4}\text{Wt})$ g	Weight Set Rice Lake Class "F"	NOM-010-SCFI
	500 g to 118.5 kg	$(8.46 \times 10^{-2} + 1.13 \times 10^{-4}\text{Wt})$ g		
Analytic Scales[F]	20 g to 320 g	0.001 5 g	Weight Set Troemner Class 1	
Mass Weight Class M2, M3, 7[F]	2 g	0.072 mg	Analytical Balance & Weight Set Class F2 Double Substitution	OIML R111
	5 g	0.072 mg		
	10 g	0.072 mg		
	20 g	0.072 mg		
	50 g	0.098 mg		
	100 g	0.2 mg		
	200 g	0.67 mg		

Optical

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE (AND SPECIFICATION WHERE APPROPRIATE)	CALIBRATION OR MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (±)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED	CALIBRATION MEASUREMENT METHOD OR PROCEDURES USED
Luxmeters[F]	19 lux to 3 360 lux	1.2 %	Luxmeter Class A Sonopan L200P	NIST 250-95

Acoustic

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE (AND SPECIFICATION WHERE APPROPRIATE)	CALIBRATION OR MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (±)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED	CALIBRATION MEASUREMENT METHOD OR PROCEDURES USED
Sound Level Meter[FO] Fixed point Frequency @ 1 kHz	94 dB	0.61 dB	Sound Level Meter Extech	IEC 61672-1
	114 dB	0.61 dB		

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Equipment to Measure DC Voltage[FO]	30 mV to 329.999 9 mV	20 µV/V + 1 µV	Fluke 5522A with COIL	CENAM Technical Guide
	330 mV to 3.299 999 V	11 µV/V + 2 µV		
	3.3 V to 32.999 99 V	12 µV/V + 20 µV		
	30 V to 329.999 9 V	18 µV/V + 150 µV		
	100 V to 1 000 V	18 µV/V + 1 500 µV		
Equipment to Measure DC Current[FO]	30 µA to 329.999 µA	150 µA/A + 0.02 µA		
	330 µA to 3.299 99 mA	100 µA/A + 0.05 µA		
	3.3 mA to 32.999 9 mA	100 µA/A + 0.25 µA		
	30 mA to 329.999 mA	100 µA/A + 2.5 µA		
	330 mA to 1.099 99 A	200 µA/A + 40 µA		
	1.1 A to 2.999 99 A	380 µA/A + 40 µA		
	3.3 A to 18 A	500 µA/A + 500 µA		
	10 A to 900 A	500 µA/A + 500 µA		
Equipment to Measure Resistance[FO]	3 Ω to 10.999 9 Ω	40 µΩ/Ω + 0.051 Ω		
	11 Ω to 32.999 9 Ω	30 µΩ/Ω + 0.052 Ω		
	33 Ω to 109.999 9 Ω	28 µΩ/Ω + 0.052 Ω		
	110 Ω to 329.999 9 Ω	28 µΩ/Ω + 0.052 Ω		
	330 Ω to 1.0999 99 kΩ	28 µΩ/Ω + 0.052 Ω		
	1.1 kΩ to 3.299 999 kΩ	28 µΩ/Ω + 0.07 Ω		
	3.3 kΩ to 10.999 99 kΩ	28 µΩ/Ω + 0.07 Ω		
	11 kΩ to 32.999 99 kΩ	28 µΩ/Ω + 0.25 Ω		
	33 kΩ to 109.999 9 kΩ	28 µΩ/Ω + 0.25 Ω		
	110 kΩ to 329.999 9 kΩ	32 µΩ/Ω + 2.005 Ω		
	330 kΩ to 1.099 999 MΩ	32 µΩ/Ω + 2.005 Ω		
	1.1 MΩ to 3.299 999 MΩ	60 µΩ/Ω + 50 Ω		
	3.3 MΩ to 10.999 99 MΩ	130 µΩ/Ω + 50 Ω		
	11 MΩ to 32.999 99 MΩ	250 µΩ/Ω + 2 500 Ω		
	33 MΩ to 109.999 9 MΩ	500 µΩ/Ω + 3 000 Ω		
	110 MΩ to 329.999 9 MΩ	3 000 µΩ/Ω + 100 000 Ω		
	330 MΩ to 1 100 MΩ	15 000 µΩ/Ω + 500 000 Ω		

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Equipment to Measure AC Voltage At the listed frequencies[FO]			Fluke 5522A	CENAM Technical Guide
10 Hz to 45 Hz	1 mV to 32.999 mV	800 µV/V + 6 µV		
45 Hz to 10 kHz	1 mV to 32.999 mV	150 µV/V + 6 µV		
10 kHz to 20 kHz	1 mV to 32.999 mV	200 µV/V + 6 µV		
20 kHz to 50 kHz	1 mV to 32.999 mV	1 000 µV/V + 6 µV		
50 kHz to 100 kHz	1 mV to 32.999 mV	3 500 µV/V + 12 µV		
100 kHz to 500 kHz	1 mV to 32.999 mV	8 000 µV/V + 50 µV		
Equipment to Measure AC Voltage At the listed frequencies[FO]				
10 Hz to 45 Hz	33 mV to 329.999 mV	300 µV/V + 8 µV		
45 Hz to 10 kHz	33 mV to 329.999 mV	145 µV/V + 8 µV		
10 kHz to 20 kHz	33 mV to 329.999 mV	160 µV/V + 8 µV		
20 kHz to 50 kHz	33 mV to 329.999 mV	350 µV/V + 8 µV		
50 kHz to 100 kHz	33 mV to 329.999 mV	800 µV/V + 32 µV		
100 kHz to 500 kHz	33 mV to 329.999 mV	2 000 µV/V + 70 µV		
Equipment to Measure AC Voltage At the listed frequencies[FO]				
10 Hz to 45 Hz	0.33 V to 3.299 99 V	300 µV/V + 50 µV		
45 Hz to 10 kHz	0.33 V to 3.299 99 V	150 µV/V + 60 µV		
10 kHz to 20 kHz	0.33 V to 3.299 99 V	190 µV/V + 60 µV		
20 kHz to 50 kHz	0.33 V to 3.299 99 V	300 µV/V + 50 µV		
50 kHz to 100 kHz	0.33 V to 3.299 99 V	700 µV/V + 125 µV		
100 kHz to 500 kHz	0.33 V to 3.299 99 V	2 400 µV/V + 600 µV		
Equipment to Measure AC Voltage At the listed frequencies[FO]				
10 Hz to 45 Hz[FO]	3.3 V to 32.999 9 V	300 µV/V + 650 µV		
45 Hz to 10 kHz[FO]	3.3 V to 32.999 9 V	150 µV/V + 600 µV		
10 kHz to 20 kHz[FO]	3.3 V to 32.999 9 V	240 µV/V + 600 µV		
20 kHz to 50 kHz	3.3 V to 32.999 9 V	350 µV/V + 600 µV		
50 kHz to 100 kHz	3.3 V to 32.999 9 V	900 µV/V + 1 600 µV		

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Equipment to Measure AC Voltage At the listed frequencies[FO]			Fluke 5522A	CENAM Technical Guide
45 Hz to 1 kHz	33 V to 329.999 V	190 µV/V + 2 000 µV		
1 kHz to 10 kHz	33 V to 329.999 V	150 µV/V + 6 000 µV		
10 kHz to 20 kHz	33 V to 329.999 V	240 µV/V + 6 000 µV		
20 kHz to 50 kHz	33 V to 329.999 V	350 µV/V + 6 000 µV		
50 kHz to 100 kHz	33 V to 329.999 V	2 000 µV/V + 50 000 µV		
Equipment to Measure AC Voltage At the listed frequencies[FO]				
45 Hz to 1 kHz	330 V to 1 020 V	300 µV/V + 10 000 µV		
1 kHz to 5 kHz	330 V to 1 020 V	250 µV/V + 10 000 µV		
5 kHz to 10 kHz	330 V to 1 020 V	300 µV/V + 10 000 µV		
Equipment to Measure AC Current At the listed frequencies[FO]				
10 Hz to 20 Hz	29 µA to 329.99 µA	0.2 % of reading + 0.1 µA		
20 Hz to 45 Hz	29 µA to 329.99 µA	0.15 % of reading + 0.1 µA		
45 Hz to 1 kHz	29 µA to 329.99 µA	0.13 % of reading + 0.1µA		
1 kHz to 5 kHz	29 µA to 329.99 µA	0.3 % of reading + 0.15 µA		
5 kHz to 10 kHz	29 µA to 329.99 µA	0.8 % of reading + 0.2 µA		
10 kHz to 30 kHz	29 µA to 329.99 µA	1.6 % of reading + 0.4 µA		
Equipment to Measure AC Current At the listed frequencies[FO]				
10 Hz to 20 Hz	0.33 mA to 3.2999 mA	0.2 % of reading + 0.15 µA		
20 Hz to 45 Hz	0.33 mA to 3.2999 mA	0.13 % of reading + 0.15 µA		
Equipment to Measure AC Voltage At the listed frequencies[FO]				
45 Hz to 1 kHz	33 V to 329.999 V	190 µV/V + 2 000 µV		
1 kHz to 10 kHz	33 V to 329.999 V	150 µV/V + 6 000 µV		
10 kHz to 20 kHz	33 V to 329.999 V	240 µV/V + 6 000 µV		
20 kHz to 50 kHz	33 V to 329.999 V	350 µV/V + 6 000 µV		
50 kHz to 100 kHz	33 V to 329.999 V	2 000 µV/V + 50 000 µV		

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Equipment to Measure AC Voltage At the listed frequencies[FO]			Fluke 5522A	CENAM Technical Guide
45 Hz to 1 kHz	330 V to 1 020 V	300 µV/V + 10 000 µV		
1 kHz to 5 kHz	330 V to 1 020 V	250 µV/V + 10 000 µV		
5 kHz to 10 kHz	330 V to 1 020 V	300 µV/V + 10 000 µV		
Equipment to Measure AC Current At the listed frequencies[FO]				
10 Hz to 20 Hz	29 µA to 329.99 µA	0.2 % of reading + 0.1 µA		
20 Hz to 45 Hz	29 µA to 329.99 µA	0.15 % of reading + 0.1 µA		
45 Hz to 1 kHz	29 µA to 329.99 µA	0.13 % of reading + 0.1 µA		
1 kHz to 5 kHz	29 µA to 329.99 µA	0.3 % of reading + 0.15 µA		
5 kHz to 10 kHz	29 µA to 329.99 µA	0.8 % of reading + 0.2 µA		
10 kHz to 30 kHz	29 µA to 329.99 µA	1.6 % of reading + 0.4 µA		
Equipment to Measure AC Current At the listed frequencies[FO]				
10 Hz to 20 Hz	0.33 mA to 3.2999 mA	0.2 % of reading + 0.15 µA		
20 Hz to 45 H	0.33 mA to 3.2999 mA	0.13 % of reading + 0.15 µA		
45 Hz to 1 kHz	0.33 mA to 3.2999 mA	0.1 % of reading + 0.15 µA		
1 kHz to 5 kHz	0.33 mA to 3.2999 mA	0.2 % of reading + 0.2 µA		
5 kHz to 10 kHz	0.33 mA to 3.2999 mA	0.5 % of reading + 0.3 µA		
10 kHz to 30 kHz	0.33 mA to 3.2999 mA	1 % of reading + 0.6 µA		
Equipment to Measure AC Current At the listed frequencies[FO]				
10 Hz to 20 Hz	3.3 mA to 32.999 mA	0.18 % of reading + 2 µA		
20 Hz to 45 Hz	3.3 mA to 32.999 mA	0.09 % of reading + 2 µA		
45 Hz to 1 kHz	3.3 mA to 32.999 mA	0.04 % of reading + 2 µA		
1 kHz to 5 kHz	3.3 mA to 32.999 mA	0.08 % of reading + 2 µA		
5 kHz to 10 kHz	3.3 mA to 32.999 mA	0.2 % of reading + 3 µA		
10 kHz to 30 kHz	3.3 mA to 32.999 mA	0.4 % of reading + 4 µA		

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Equipment to Measure AC Current At the listed frequencies[FO]			Fluke 5522A	CENAM Technical Guide
10 Hz to 20 Hz	33 mA to 329.99 mA	0.18 % of reading + 20 µA		
20 Hz to 45 Hz	33 mA to 329.99 mA	0.09 % of reading + 20 µA		
45 Hz to 1 kHz	33 mA to 329.99 mA	0.04 % of reading + 20 µA		
1 kHz to 5 kHz	33 mA to 329.99 mA	0.1 % of reading + 50 µA		
5 kHz to 10 kHz	33 mA to 329.99 mA	0.2 % of reading + 100 µA		
10 kHz to 30 kHz	33 mA to 329.99 mA	0.4 % of reading + 200 µA		
Equipment to Measure AC Current At the listed frequencies[FO]				
10 Hz to 45 Hz	0.33 A to 1.099 99 A	0.18 % of reading + 100 µA		
45 Hz to 1 kHz	0.33 A to 1.099 99 A	0.05 % of reading + 100 µA		
1 kHz to 5 kHz	0.33 A to 1.099 99 A	0.6 % of reading + 1 000 µA		
5 kHz to 10 kHz	0.33 A to 1.099 99 A	2.5 % of reading + 5 000 µA		
Equipment to Measure AC Current At the listed frequencies[FO]				
10 Hz to 45 Hz	1.1 A to 2.999 99 A	0.18 % of reading + 100 µA		
45 Hz to 1 kHz	1.1 A to 2.999 99 A	0.06 % of reading + 100 µA		
1 kHz to 5 kHz	1.1 A to 2.999 99 A	0.6 % of reading + 1 000 µA		
5 kHz to 10 kHz	1.1 A to 2.999 99 A	2.5 % of reading + 5 000 µA		
Equipment to Measure AC Current At the listed frequencies[FO]				
45 Hz to 100 Hz	3 A to 10.999 9 A	0.06 % of reading + 2 000 µA		
100 Hz to 1 kHz	3 A to 10.999 9 A	0.1 % of reading + 2 000 µA		
1 kHz to 5 kHz	3 A to 10.999 9 A	3 % of reading + 2 000 µA		
Equipment to Measure Capacitance[FO]	0.19 nF to 0.399 9 nF	0.5 % of reading + 0.01 nF		
	0.4 nF to 1.099 9 nF	0.5 % of reading + 0.01 nF		
	1.1 nF to 3.299 9 nF	0.5 % of reading + 0.01 nF		
	3.3 nF to 10.999 9 nF	0.25 % of reading + 0.01 nF		
	11 nF to 32.999 9 nF	0.25 % of reading + 0.1 nF		
	33 nF to 109.999 nF	0.25 % of reading + 0.1 nF		
	110 µF to 329.999 µF	0.45 % of reading + 300 nF		

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Equipment to Measure Capacitance[FO]	0.33 mF to 1.099 99 mF	0.45 % of reading + 1 µF	Fluke 5522A	CENAM Technical Guide
	1.1 mF to 3.299 9 mF	0.45 % of reading + 3 µF		
	3.3 mF to 10.999 9 mF	0.45 % of reading + 10 µF		
	11 µF to 32.999 9 µF	0.4 % of reading + 30 nF		
	33 µF to 109.999 µF	0.45 % of reading + 100 nF		
	110 µF to 329.999 µF	0.45 % of reading + 300 nF		
	0.33 mF to 1.099 99 mF	0.45 % of reading + 1 µF		
	1.1 mF to 3.299 9 mF	0.45 % of reading + 3 µF		
	3.3 mF to 10.999 9 mF	0.45 % of reading + 10 µF		
Temperature Calibration, Indication and control Equipment used with Thermocouple Type B[FO]	600 °C to 800 °C	0.44 °C	Fluke 5522A Electrical Simulation of Thermocouple Output	EC/GM/11.02
	800 °C to 1 000 °C	0.34 °C		
	1 000 °C to 1 550 °C	0.3 °C		
	1 550 °C to 1 820 °C	0.33 °C		
Temperature Calibration, Indication and control Equipment used with Thermocouple Type C[FO]	0 °C to 150 °C	0.3 °C		
	150 °C to 650 °C	0.26 °C		
	650 °C to 1 000 °C	0.31 °C		
	1 000 °C to 1 800 °C	0.5 °C		
	1 800 °C to 2 316 °C	0.84 °C		
Temperature Calibration, Indication and control Equipment used with Thermocouple Type E[FO]	-250 °C to -100 °C	0.5 °C		
	-100 °C to -25 °C	0.16 °C		
	-25 °C to 350 °C	0.14 °C		
	350 °C to 650 °C	0.16 °C		
	650 °C to 1 000 °C	0.21 °C		
Temperature Calibration, Indication and control Equipment used with Thermocouple Type J[FO]	-210 °C to -100 °C	0.27 °C		
	-100 °C to -30 °C	0.16 °C		
	-30 °C to 150 °C	0.14 °C		
	150 °C to 760 °C	0.17 °C		
	760 °C to 1 200 °C	0.23 °C		
Temperature Calibration, Indication and control Equipment used with Thermocouple Type K[FO]	-200 °C to -100 °C	0.33 °C		
	-100 °C to -25 °C	0.18 °C		
	-25 °C to 120 °C	0.16 °C		
	120 °C to 1 000 °C	0.26 °C		
	1 000 °C to 1 372 °C	0.4 °C		

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Temperature Calibration, Indication and control Equipment used with Thermocouple Type L[FO]	-200 °C to -100 °C	0.37 °C	Fluke 5522A Electrical Simulation of Thermocouple Output	EC/GM/11.02
	-100 °C to 800 °C	0.26 °C		
	800 °C to 900 °C	0.17 °C		
Temperature Calibration, Indication and control Equipment used with Thermocouple Type R[FO]	0 °C to 250 °C	0.57 °C		
	250 °C to 400 °C	0.35 °C		
	400 °C to 1 000 °C	0.33 °C		
	1 000 °C to 1 767 °C	0.4 °C		
Temperature Calibration, Indication and control Equipment used with Thermocouple Type S[FO]	0 °C to 250 °C	0.47 °C		
Temperature Calibration, Indication and control Equipment used with Thermocouple Type S[FO]	250 °C to 1 000 °C	0.36 °C		
	1 000 °C to 1 400 °C	0.37 °C		
	1 400 °C to 1 767 °C	0.46 °C		
Temperature Calibration, Indication and control Equipment used with Thermocouple Type T[FO]	-250 °C to -150 °C	0.63 °C		
	-150 °C to 0 °C	0.24 °C		
	0 °C to 120 °C	0.16 °C		
	120 °C to 400 °C	0.14 °C		
Temperature Calibration, Indication and control Equipment used with Thermocouple Type U[FO]	-200 °C to 0 °C	0.56 °C		
	0 °C to 600 °C	0.27 °C		
Temperature Calibration, Indication, and Control Equipment use with RTD Type Pt 395, 100 Ω[FO]	-200 °C to -80 °C	0.05 °C	Fluke 5522A Electrical Simulation of RTD Output	
	-80 °C to 0 °C	0.05 °C		
	0 °C to 100 °C	0.07 °C		
	100 °C to 300 °C	0.09 °C		
	300 °C to 400 °C	0.1 °C		
	400 °C to 630 °C	0.12 °C		
	630 °C to 800 °C	0.23 °C		
Temperature Calibration, Indication, and Control Equipment use with RTD Pt 3926, 100 Ω[FO]	-200 °C to -80 °C	0.05 °C		
	-80 °C to 0 °C	0.05 °C		
	0 °C to 100 °C	0.07 °C		
	100 °C to 300 °C	0.09 °C		

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Temperature Calibration, Indication, and Control Equipment use with RTD Pt 3926, 100 Ω^{FO}	300 °C to 400 °C	0.1 °C	Fluke 5522A Electrical Simulation of RTD Output	EC/GM/11.02
	400 °C to 630 °C	0.12 °C		
Temperature Calibration, Indication, and Control Equipment use with RTD Pt 3916, 100 Ω^{FO}	-200 °C to -190 °C	0.25 °C		
	-190 °C to -80 °C	0.04 °C		
	-80 °C to 0 °C	0.05 °C		
	0 °C to 100 °C	0.06 °C		
	100 °C to 260 °C	0.07 °C		
	260 °C to 300 °C	0.08 °C		
	300 °C to 400 °C	0.09 °C		
	400 °C to 600 °C	0.1 °C		
	600 °C to 630 °C	0.23 °C		
Temperature Calibration, Indication, and Control Equipment use with RTD Pt 385, 200 Ω^{FO}	-200 °C to -80 °C	0.04 °C		
	-80 °C to 0 °C	0.04 °C		
	0 °C to 100 °C	0.04 °C		
	100 °C to 260 °C	0.05 °C		
	260 °C to 300 °C	0.12 °C		
	300 °C to 400 °C	0.13 °C		
	400 °C to 600 °C	0.14 °C		
	600 °C to 630 °C	0.16 °C		
Temperature Calibration, Indication, and Control Equipment use with RTD Pt 385, 500 Ω^{FO}	-200 °C to -80 °C	0.04 °C		
	-80 °C to 0 °C	0.05 °C		
	0 °C to 100 °C	0.05 °C		
	100 °C to 260 °C	0.06 °C		
	260 °C to 300 °C	0.08 °C		
	300 °C to 400 °C	0.08 °C		
	400 °C to 600 °C	0.09 °C		
	600 °C to 630 °C	0.11 °C		
Temperature Calibration, Indication, and Control Equipment use with RTD Pt 385, 1 000 Ω^{FO}	-200 °C to -80 °C	0.03 °C		
	-80 °C to 0 °C	0.03 °C		
	0 °C to 100 °C	0.04 °C		

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Temperature Calibration, Indication, and Control Equipment use with RTD Pt 385, 1 000 Ω[FO]	100 °C to 260 °C	0.05 °C	Fluke 5522A Electrical Simulation of RTD Output	EC/GM/11.02
	260 °C to 300 °C	0.06 °C		
	300 °C to 400 °C	0.07 °C		
	400 °C to 600 °C	0.07 °C		
	600 °C to 630 °C	0.23 °C		
Temperature Calibration, Indication, and Control Equipment use with RTD PtNi 385, 120 Ω[FO]	-80 °C to 0 °C	0.08 °C		
	0 °C to 100 °C	0.08 °C		
	100 °C to 260 °C	0.14 °C		
Temperature Calibration, Indication, and Control Equipment use with RTD Cu 427, 10 Ω[FO]	-100 °C to 260 °C	0.3 °C		
Equipment to Measure RF/Microwave Tuned RF Power At the listed Frequency[FO]			Power Sensor Rohde & Schwarz NRP18S	T.O. 33K3-4-2894-1
10 kHz to 2.6 GHz	-0.1 dB to -3 dB	0.02 dB		
Equipment to Output RF/Microwave Tuned RF Power At the listed Frequency[FO]				
10 kHz to 2.6 GHz	-3 dB to -10 dB	0.02 dB		
10 kHz to 2.6 GHz	-10 dB to - 40 dB	0.08 dB		
10 kHz to 2.6 GHz	-40 dB to -50 dB	0.14 dB		
10 kHz to 2.6 GHz	-50 dB to -80 dB	0.2 dB		
10 kHz to 2.6 GHz	-80 dB to -90 dB	0.26 dB		
10 kHz to 2.6 GHz	-90 dB to -110 dB	0.3 dB		
Equipment to Measure RF / Microwave Amplitude Modulation[FO]	0.15 MHz to 10 MHz	2.1 % of reading	Spectrum Analyzer Rohde & Schwarz FSEM30	T.O. 33K3-4-2894-1
	10 MHz to 1 300 MHz	1.1 % of reading		
Equipment to Measure Frequency Modulation[FO]	0.25 MHz to 10 MHz	2.1 % of reading		
	10 MHz to 1 300 MHz	1.1 % of reading		
Equipment to Measure RF Absolute Power Coaxial Thermocouple Power Sensors w/Meter[FO]	30 dB to -20 dB 20 Hz to 26.5 GHz SWR ≤ 1.15:1 500 MHz to 1 300 MHz	0.071 dB		

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Equipment to Measure RF Absolute Power Attenuation for Coaxial Steps Attenuators[FO]	Up to 11 dB	0.01 dB/10 dB	Spectrum Analyzer Rohde & Schwarz FSEM30	T.O. 33K3-4-2894-1
Equipment to Measure RF Absolute Power Coaxial Diode Power Sensors At the listed frequencies[FO]			Power Sensor Rohde & Schwarz NRP18S	T.O. 33K4-4-35-1
100 kHz to 300 kHz SWR ≤ 1.6:1	20 dB to -30 dB	0.05 dB		
300 kHz to 1 MHz SWR ≤ 1.2:1	20 dB to -30 dB	0.049 dB		
1 MHz to 2 GHz SWR ≤ 1.1:1	20 dB to -30 dB	0.051dB		
2 GHz to 4.2 GHz SWR ≤ 1.3:1	20 dB to -30 dB	0.5 dB		
Equipment to Measure RF Absolute Power Coaxial Diode Power Sensors At the listed frequencies[FO]				
10 MHz to 30 MHz SWR ≤ 1.4:1[FO]	-20 dB to -70 dB	0.074 dB		
30 MHz to 4 GHz SWR ≤ 1.15:1[FO]	-20 dB to -70 dB	0.074 dB		
4 GHz to 10 GHz SWR ≤ 1.21:1	-20 dB to -70 dB	0.077 dB		
10 GHz to 15 GHz SWR ≤ 1.3:1	-20 dB to -70 dB	0.1 dB		
15 GHz to 18 GHz SWR ≤ 1.35:1	-20 dB to -70 dB	0.11 dB		
Equipment to Measure Sine Wave, 2.4 mm At the listed frequencies[FO]			Spectrum Analyzer Rohde & Schwarz FSEM30	
10 MHz to 2 GHz SWR 1.6:1	10 dB	1.2 dB		
2 GHz to 8.4 GHz SWR 1.6:1	10 dB	1.3 dB		

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Equipment to Measure Sine Wave, 2.4 mm At the listed frequencies[FO]			Power Sensor Rohde & Schwarz NRP18S	T.O. 33K3-4-2894-1
10 MHz to 2 GHz SWR 1.6:1	-10 dB	0.6 dB		
2 GHz to 8.4 GHz SWR 1.6:1	-10 dB	0.7 dB		
10 MHz to 2 GHz SWR 1.6:1	-60 dB	0.9 dB		
2 GHz to 8.4 GHz SWR 1.6:1	-60 dB	1 dB		
2 GHz to 8.4 GHz SWR 1.8:1	-60 dB	1.2 dB		
10 MHz to 2 GHz SWR 1.6:1	-60 dB	1.4 dB		
2 GHz to 8.4 GHz SWR 1.6:1	-60 dB	1.5 dB		
2 GHz to 8.4 GHz SWR 1.8:1	-60 dB	1.7 dB		
Equipment to Output Frequency[FO]	10 Hz to 2.7 GHz	0.1 MHz	Fluke PM6690	T.O. 33K3-4-2894-1
	500 MHz to 26.5 GHz	0.01 Hz	Rohde & Schwarz FSEM30	
Power Meter[FO]	13 dBm	0.78 dBm	Rohde & Schwarz SMQ03	T.O. 33K4-4-35-1
	7 dBm	0.43 dBm		
	5 dBm	0.31 dBm		
	0 dBm	0.081 dBm		
	-10 dBm	0.61 dBm		
	-20 dBm	1.2 dBm		
	-40 dBm	2.4 dBm		
	-80 dBm	2.4 dBm		
	-100 dBm	2.4 dBm		
	-120 dBm	2.4 dBm		
Oscilloscope Amplitude DC[FO]	1 mV to 6.6 V	0.2 % of reading + 31 µV	Fluke 5522A 50 Ω, 1 MΩ	T.O. 33K3-4-19-1
	6.6 V to 130 V	0.039 % of reading + 31 µV		
	40 µV to 200 V	0.25 % of reading + 1 µV		
	1 mV to 6.6 V	0.2 % of reading + 31 µV		
	1 mV to 130 V	0.075 % of reading + 31 µV		

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Oscilloscope Leveled Sine Wave[FO]	50 kHz Reference	1.6 % of reading + 240 µV	Fluke 5522A	T.O. 33K3-4-19-1
Oscilloscope Amplitude [FO] (50 kHz) At the listed frequency				
50 kHz to 100 MHz	5 mV to 5.5 V	2.7 % of reading + 240 µV		
100 MHz to 300 MHz	5 mV to 5.5 V	3.1 % of reading + 240 µV		
100 MHz to 600 MHz	5 mV to 5.5 V	3.1 % of reading + 240 µV		
300 MHz to 1 100 MHz	5 mV to 3.5 V	4.7 % of reading + 240 µV		
Oscilloscope Flatness [FO] (50 kHz) At the listed frequency				
50 kHz to 100 MHz	5 mV to 5.5 V	1.2 % of reading + 78 µV		
100 MHz to 300 MHz	5 mV to 5.5 V	1.6 % of reading + 78 µV		
100 MHz to 600 MHz	5 mV to 5.5 V	3.1 % of reading + 78 µV		
300 MHz to 1 100 MHz	5 mV to 3.5 V	3.1 % of reading + 78 µV		
Oscilloscope Time Marker[FO]	0.2 Hz to 1 GHz	5 000 000 Hz/MHz		
Oscilloscope Rise Time[FO]	0.25 Hz to 1KHz	0.3 ns		
HV Output[FO]	1 kV to 6 kV DC/AC	1.2 % of reading	Fluke 80 K-06	T.O. 33K1-4-181-1
Spectrum Analyzer Network Analyzer Power Sensor, Power Meter Frequency Counter Oscilloscope[FO]	300 kHz to 3.3 GHz	0.01 Hz	Rohde & Schwarz SMQ03B	T.O. 33K3-4-2894-1
DC Power Supply AC Power Source 250 W (0 V to 120 V)	Up to 60 A	0.025 % of reading + 0.05 % FS	DC Electronic Load BK Precision 8601	T.O. 33K1-4-60-1
Measurement and Output of Electrostatic Discharge (ESD)[FO]	750 kΩ to 100 MΩ	5 % of reading	Tester Calibration Unit Desco 07010 CTE701A	ANSI/ESD S20.20-2021
Equipment to Output RF Power At the listed frequencies[FO]	9 kHz to 2.7 GHz	0.1 Hz	Fluke PM6690	T.O. 33K3-4-2894-1

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Equipment to Output RF Power At the listed frequencies[FO] 9 kHz to 3.3 GHz Spectrum Analyzer Network Analyzer Power Sensor, Power Meter Frequency Counter Oscilloscope	300 kHz to 3.3 GHz (-144 dBm to 13 dBm)	0.1 Hz (0.01 dBm)	Signal Generator Rohde & Schwarz SMQ03B	T.O. 33K3-4-44-1
	-10 dB to -80 dB	0.05 dB	Stabilized Light Source Opto Test OP250	T.O. 33K1-4-60-1
	Up to 500 MHz	0.1 MHz	Oscilloscope DSOX3052T KEYSIGHT	Technical Note No. 1337 NIST
Equipment to Measure DC Voltage[FO]	30 mV to 329.999 9 mV	37 µV/V + 10 µV	Fluke 5500A	Euramet cg-15
	330 mV to 3.299 999 V	3.6 µV/V + 20 µV		
	3.3 V to 32.999 99 V	3.8 µV/V + 220 µV		
	30 V to 329.999 9 V	5.4 µV/V + 1200 µV		
Equipment to Measure DC Current[FO]	30 µA to 329.999 µA	39 µA/A + 11 µA		
	330 µA to 3.299 99 mA	21 µA/A + 12 µA		
	3.3 mA to 32.999 9 mA	22 µA/A + 8 µA		
	30 mA to 329.999 mA	27 µA/A + 8 µA		
	330 mA to 1.099 99 A	41 µA/A + 32 µA		
	1.1 A to 2.999 99 A	41 µA/A + 48 µA		
	3.3 A to 10.999 9 A	80 µA/A + 25 µA		
Equipment to Measure Resistance[FO]	3 Ω to 10.999 9 Ω	10 µΩ/Ω + 0.5 µΩ		
	11 Ω to 32.999 9 Ω	30 µΩ/Ω + 0.8 µΩ		
	33 Ω to 109.999 9 Ω	8.7 µΩ/Ω + 1.1 µΩ		
	110 Ω to 329.999 9 Ω	12 µΩ/Ω + 1.1 µΩ		
	330 Ω to 1.099 999 kΩ	8 µΩ/Ω + 1.1 µΩ		
	1.1 kΩ to 3.299 999 kΩ	12 µΩ/Ω + 1.2 µΩ		
	3.3 kΩ to 10.999 99 kΩ	7.5 µΩ/Ω + 1.2 µΩ		
	11 kΩ to 32.999 99 kΩ	13 µΩ/Ω + 1.2 µΩ		
	33 kΩ to 109.999 9 kΩ	18 µΩ/Ω + 1.3 µΩ		
	110 kΩ to 329.999 9 kΩ	19 µΩ/Ω + 1.3 µΩ		
	330 kΩ to 1.099 999 MΩ	21 µΩ/Ω + 1.3 µΩ		

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Equipment to Measure Resistance[FO]	1.1 MΩ to 3.299 999 MΩ	98 µΩ/Ω + 30 µΩ	Fluke 5500A	UNE-EN 50470-1
	3.3 MΩ to 10.999 99 MΩ	73 µΩ/Ω + 30 µΩ		
	11 MΩ to 32.999 99 MΩ	0.51 mΩ/Ω + 45 mΩ		
	33 MΩ to 109.999 9 MΩ	0.5 mΩ/Ω + 45 mΩ		
	110 MΩ to 329.999 9 MΩ	1.5 mΩ/Ω + 88 mΩ		
	330 MΩ to 1 100 MΩ	1.5 mΩ/Ω + 91 mΩ		
Equipment to Measure AC Voltage At the listed frequencies[FO]				
10 Hz to 45 Hz	1 mV to 32.999 mV	0.029 % of reading + 12 µV		
45 Hz to 10 kHz	1 mV to 32.999 mV	0.018 % of reading + 15 µV		
10 kHz to 20 kHz	1 mV to 32.999 mV	0.016 % of reading + 18 µV		
20 kHz to 50 kHz	1 mV to 32.999 mV	0.016 % of reading + 15 µV		
50 kHz to 100 kHz	1 mV to 32.999 mV	0.016 % of reading + 11 µV		
100 kHz to 500 kHz	1 mV to 32.999 mV	0.016 % of reading + 11 µV		
Equipment to Measure AC Voltage At the listed frequencies[FO]				
10 Hz to 45 Hz	33 mV to 329.999 mV	0.008 6 % of reading + 8 µV		
45 Hz to 10 kHz	33 mV to 329.999 mV	0.009 5 % of reading + 10 µV		
10 kHz to 20 kHz	33 mV to 329.999 mV	0.011 % of reading + 11 µV		
20 kHz to 50 kHz	33 mV to 329.999 mV	0.022 % of reading + 10 µV		
50 kHz to 100 kHz	33 mV to 329.999 mV	0.022 % of reading + 31 µV		
100 kHz to 500 kHz	33 mV to 329.999 mV	0.032 % of reading + 52 µV		
Equipment to Measure AC Voltage At the listed frequencies[FO]				
10 Hz to 45 Hz	0.33 V to 3.299 99 V	0.0061 % of reading + 48 µV		
45 Hz to 10 kHz	0.33 V to 3.299 99 V	0.006 6 % of reading + 51 µV		
10 kHz to 20 kHz	0.33 V to 3.299 99 V	0.014 % of reading + 51 µV		
20 kHz to 50 kHz	0.33 V to 3.299 99 V	0.014 % of reading + 51 µV		
50 kHz to 100 kHz	0.33 V to 3.299 99 V	0.032 % of reading + 74 µV		
100 kHz to 500 kHz	0.33 V to 3.299 99 V	0.032 % of reading + 74 µV		

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Equipment to Measure AC Voltage At the listed frequencies[FO]			Fluke 5500A UNE-EN 50470-1	Euramet cg-15
10 Hz to 45 Hz	3.3 V to 32.999 9 V	0.006 1 % of reading + 320 µV		
45 Hz to 10 kHz	3.3 V to 32.999 9 V	0.006 6 % of reading + 320 µV		
10 kHz to 20 kHz	3.3 V to 32.999 9 V	0.006 6 % of reading + 320 µV		
20 kHz to 50 kHz	3.3 V to 32.999 9 V	0.014 % of reading + 620 µV		
50 kHz to 100 kHz	3.3 V to 32.999 9 V	0.032 % of reading + 860 µV		
Equipment to Measure AC Voltage At the listed frequencies[FO]				
45 Hz to 1 kHz	33 V to 329.999 V	0.007 1 % of reading + 2 000 µV		
1 kHz to 10 kHz	33 V to 329.999 V	0.007 1 % of reading + 2 000 µV		
10 kHz to 20 kHz	33 V to 329.999 V	0.008 1 % of reading + 2 500 µV		
20 kHz to 50 kHz	33 V to 329.999 V	0.014 % of reading + 2 800 µV		
50 kHz to 100 kHz	33 V to 329.999 V	0.016 % of reading + 2 900 µV		
Equipment to Measure AC Voltage At the listed frequencies[FO]				
45 Hz to 1 kHz	330 V to 1 020 V	0.016 % of reading + 9 500 µV		
1 kHz to 5 kHz	330 V to 1 020 V	0.017 % of reading + 9 500 µV		
5 kHz to 10 kHz	330 V to 1 020 V	0.017 % of reading + 9 500 µV		
Equipment to Measure AC Current At the listed frequencies[FO]				
10 Hz to 20 Hz	29 µA to 329.99 µA	0.13 % of reading + 0.1 µA		
20 Hz to 45 Hz	29 µA to 329.99 µA	0.13 % of reading + 0.1 µA		
45 Hz to 1 kHz	29 µA to 329.99 µA	0.1 % of reading + 0.1 µA		
1 kHz to 5 kHz	29 µA to 329.99 µA	0.1 % of reading + 0.2 µA		
5 kHz to 10 kHz	29 µA to 329.99 µA	0.72 % of reading + 0.3 µA		
10 kHz to 30 kHz	29 µA to 329.99 µA	0.72 % of reading + 0.3 µA		
Equipment to Measure AC Current At the listed frequencies[FO]				
10 Hz to 20 Hz	0.33 mA to 3.299 9 mA	0.072 % of reading + 0.3 µA		
20 Hz to 45 Hz	0.33 mA to 3.299 9 mA	0.072 % of reading + 0.3 µA		

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Equipment to Measure AC Voltage At the listed frequencies[FO]			Fluke 5500A UNE-EN 50470-1	Euramet cg-15
45 Hz to 1 kHz	33 V to 329.999 V	0.0071 % of reading + 2 000 µV		
1 kHz to 10 kHz	33 V to 329.999 V	0.0071 % of reading + 2 000 µV		
10 kHz to 20 kHz	33 V to 329.999 V	0.0081 % of reading + 2 500 µV		
20 kHz to 50 kHz	33 V to 329.999 V	0.014 % of reading + 2 800 µV		
50 kHz to 100 kHz	33 V to 329.999 V	0.016 % of reading+ 2 900 µV		
Equipment to Measure AC Voltage At the listed frequencies[FO]				
45 Hz to 1 kHz	330 V to 1 020 V	0.016 % of reading + 9 500 µV		
1 kHz to 5 kHz	330 V to 1 020 V	0.017 % of reading + 9 500 µV		
5 kHz to 10 kHz	330 V to 1 020 V	0.017 % of reading + 9 500 µV		
Equipment to Measure AC Current At the listed frequencies[FO]				
10 Hz to 20 Hz	29 µA to 329.99 µA	0.13 % of reading + 0.1 µA		
20 Hz to 45 Hz	29 µA to 329.99 µA	0.13 % of reading + 0.1 µA		
45 Hz to 1 kHz	29 µA to 329.99 µA	0.13 % of reading + 0.1 µA		
1 kHz to 5 kHz	29 µA to 329.99 µA	0.10 % of reading + 0.2 µA		
5 kHz to 10 kHz	29 µA to 329.99 µA	0.72 % of reading + 0.3 µA		
10 kHz to 30 kHz	29 µA to 329.99 µA	0.72 % of reading + 0.3 µA		
Equipment to Measure AC Current At the listed frequencies[FO]				
10 Hz to 20 Hz	0.33 mA to 3.299 9 mA	0.072 % of reading + 0.3 µA		
20 Hz to 45 H	0.33 mA to 3.299 9 mA	0.072 % of reading + 0.15 µA		
45 Hz to 1 kHz	0.33 mA to 3.299 9 mA	0.072 % of reading + 0.15 µA		
1 kHz to 5 kHz	0.33 mA to 3.299 9 mA	0.072 % of reading + 0.2 µA		
5 kHz to 10 kHz	0.33 mA to 3.299 9 mA	0.072 % of reading + 0.3 µA		
10 kHz to 30 kHz	0.33 mA to 3.299 9 mA	0.072 % of reading + 0.5 µA		

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Equipment to Measure AC Current At the listed frequencies[FO]			Fluke 5500A UNE-EN 50470-1	Euramet cg-15
10 Hz to 20 Hz	3.3 mA to 32.999 mA	0.012 % of reading + 0.5 µA		
20 Hz to 45 Hz	3.3 mA to 32.999 mA	0.012 % of reading + 0.5 µA		
45 Hz to 1 kHz	3.3 mA to 32.999 mA	0.017 % of reading + 0.5 µA		
1 kHz to 5 kHz	3.3 mA to 32.999 mA	0.017 % of reading + 0.5 µA		
5 kHz to 10 kHz	3.3 mA to 32.999 mA	0.017 % of reading + 0.5 µA		
10 kHz to 30 kHz	3.3 mA to 32.999 mA	0.15 % of reading + 0.5 µA		
Equipment to Measure AC Current At the listed frequencies[FO]				
10 Hz to 20 Hz	33 mA to 329.99 mA	0.015 % of reading + 20 µA		
20 Hz to 45 Hz	33 mA to 329.99 mA	0.015 % of reading + 20 µA		
45 Hz to 1 kHz	33 mA to 329.99 mA	0.015 % of reading + 20 µA		
1 kHz to 5 kHz	33 mA to 329.99 mA	0.017 % of reading + 50 µA		
5 kHz to 10 kHz	33 mA to 329.99 mA	0.017 % of reading + 100 µA		
10 kHz to 30 kHz	33 mA to 329.99 mA	0.017 % of reading + 200 µA		
Equipment to Measure AC Current At the listed frequencies[FO]				
10 Hz to 45 Hz	0.33 A to 1.099 99 A	0.016 % of reading + 200 µA		
45 Hz to 1 kHz	0.33 A to 1.099 99 A	0.016 % of reading + 200 µA		
1 kHz to 5 kHz	0.33 A to 1.099 99 A	0.017 % of reading + 1 000 µA		
5 kHz to 10 kHz	0.33 A to 1.099 99 A	0.017 % of reading + 4 500 µA		
Equipment to Measure AC Current At the listed frequencies[FO]				
10 Hz to 45 Hz	1.1 A to 2.999 99 A	0.017 % of reading + 200 µA		
45 Hz to 1 kHz	1.1 A to 2.999 99 A	0.033 % of reading + 200 µA		
1 kHz to 5 kHz	1.1 A to 2.999 99 A	0.033 % of reading + 1 000 µA		
5 kHz to 10 kHz	1.1 A to 2.999 99 A	0.033 % of reading + 4 500 µA		

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Equipment to Measure AC Current At the listed frequencies[FO]			Fluke 5500A UNE-EN 50470-1	Euramet_cg-15
45 Hz to 100 Hz	3 A to 10.999 9 A	0.017 % of reading + 2 000 µA		
100 Hz to 1 kHz	3 A to 10.999 9 A	0.033 % of reading + 2 000 µA		
1 kHz to 5 kHz	3 A to 10.999 9 A	0.033 % of reading + 2 000 µA		
Equipment to Measure Capacitance[FO]	0.19 nF to 0.399 9 nF	0.10 % of reading + 0.01 nF		
	0.4 nF to 1.099 9 nF	0.10 % of reading + 0.01 nF		
	1.1 nF to 3.299 9 nF	0.08 % of reading + 0.1 nF		
	3.3 nF to 10.999 9 nF	0.08 % of reading + 0.1 nF		
	11 nF to 32.999 9 nF	0.08 % of reading + 0.1 nF		
	33 nF to 109.999 nF	0.08 % of reading + 0.1 nF		
	110 µF to 329.999 µF	0.08 % of reading + 100 nF		
	0.33 mF to 1.099 99 mF	0.08 % of reading + 200 nF		
	1.1 mF to 3.299 9 mF	0.14 % of reading + 5 µF		
	3.3 mF to 10.999 9 mF	0.14 % of reading + 10 µF		
	11 µF to 32.999 9 µF	0.14 % of reading + 30 nF		
	33 µF to 109.999 µF	0.14 % of reading + 200 nF		
	110 µF to 329.999 µF	0.14 % of reading + 200 nF		
	0.33 mF to 1.099 99 mF	0.14 % of reading + 2 µF		
	1.1 mF to 3.299 9 mF	0.14 % of reading + 2 µF		
	3.3 mF to 10.999 9 mF	0.14 % of reading + 10 µF		
Temperature Calibration, Indication and control Equipment used with Thermocouple Type B[FO]	600 °C to 800 °C	0.18 °C	Fluke 5500A Electrical Simulation of Thermocouple Output	UNE-EN 50470-1 Euramet_cg-15
	800 °C to 1 000 °C	0.21 °C		
	1 000 °C to 1 550 °C	0.23 °C		
	1 550 °C to 1 820 °C	0.21 °C		
Temperature Calibration, Indication and control Equipment used with Thermocouple Type C[FO]	0 °C to 150 °C	0.18 °C		
	150 °C to 650 °C	0.13 °C		
	650 °C to 1 000 °C	0.11 °C		
	1 000 °C to 1 800 °C	0.21 °C		
	1 800 °C to 2 316 °C	0.25 °C		
Temperature Calibration, Indication and control Equipment used with Thermocouple Type E[FO]	-250 °C to -100 °C	0.22 °C		
	-100 °C to -25 °C	0.25 °C		

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Temperature Calibration, Indication and control Equipment used with Thermocouple Type E^{FO}	-25 °C to 350 °C	0.041 °C	Fluke 5500A Electrical Simulation of Thermocouple Output	UNE-EN 50470-1 Euramet cg-15
	350 °C to 650 °C	0.024 °C		
	650 °C to 1 000 °C	0.054 °C		
Temperature Calibration, Indication and control Equipment used with Thermocouple Type J^{FO}	-210 °C to -100 °C	0.018 °C		
	-100 °C to -30 °C	0.01 °C		
	-30 °C to 150 °C	0.025 °C		
	150 °C to 760 °C	0.015 °C		
	760 °C to 1 200 °C	0.015 °C		
Temperature Calibration, Indication and control Equipment used with Thermocouple Type K^{FO}	-200 °C to -100 °C	0.026 °C		
	-100 °C to -25 °C	0.013 °C		
	-25 °C to 120 °C	0.01 °C		
	120 °C to 1 000 °C	0.01 °C		
	1 000 °C to 1 372 °C	0.014 °C		
Temperature Calibration, Indication and control Equipment used with Thermocouple Type L^{FO}	-200 °C to -100 °C	0.37 °C		
	-100 °C to 800 °C	0.26 °C		
	800 °C to 900 °C	0.25 °C		
Temperature Calibration, Indication and control Equipment used with Thermocouple Type R^{FO}	0 °C to 250 °C	0.067 °C		
	250 °C to 400 °C	0.021 °C		
	400 °C to 1 000 °C	0.032 °C		
	1 000 °C to 1 767 °C	0.022 °C		
Temperature Calibration, Indication and control Equipment used with Thermocouple Type S^{FO}	-250 °C to -150 °C	0.067 °C		
	-150 °C to 0 °C	0.12 °C		
	0 °C to 250 °C	0.11 °C		
	250 °C to 1 000 °C	0.25 °C		
	1 000 °C to 1 400 °C	0.25 °C		
	1 400 °C to 1 767 °C	0.18 °C		
Temperature Calibration, Indication and control Equipment used with Thermocouple Type T^{FO}	-250 °C to -150 °C	0.012 °C		
	-150 °C to 0 °C	0.018 °C		
	0 °C to 120 °C	0.025 °C		
	120 °C to 400 °C	0.021 °C		
Temperature Calibration, Indication and control Equipment used with Thermocouple Type U^{FO}	-200 °C to 0 °C	0.25 °C		
	0 °C to 600 °C	0.22 °C		

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Temperature Calibration, Indication and control Equipment used with RTD Type Pt 395, 100 Ω^{FO}	-200 °C to -80 °C	0.05 °C	Fluke 5500A Electrical Simulation of RTD Output	UNE-EN 50470-1
	-80 °C to 0 °C	0.05 °C		
	0 °C to 100 °C	0.08 °C		
	100 °C to 300 °C	0.08 °C		
	300 °C to 400 °C	0.09 °C		
	400 °C to 630 °C	0.11 °C		
	630 °C to 800 °C	0.15°C		
	-200 °C to 630 °C	0.15 °C		
Temperature Calibration Indication and control Equipment used with RTD Type Pt 3926, 100 Ω^{FO}	-200 °C to 630 °C	0.2 °C		
Temperature Calibration Indication and control Equipment used with RTD Type Pt 385, 200 Ω^{FO}	-200 °C to 630 °C	0.2 °C		
Temperature Calibration Indication and control Equipment used with RTD Type Pt 385, 500 Ω^{FO}	-200 °C to 630 °C	0.25 °C		
Temperature Calibration Indication and control Equipment used with RTD Type Pt 385, 1 000 Ω^{FO}	-200 °C to 630 °C	0.15 °C		
Temperature Calibration Indication and control Equipment used with RTD Type Pt Ni 385, 120 Ω^{FO}	-80 °C to 260 °C	0.2 °C		
Temperature Calibration Indication and control Equipment used with RTD Type Cu 427, 10 Ω^{FO}	-100 °C to 260 °C	0.15 °C		
Temperature Calibration Indication and control Equipment used with RTD Type Pt 385, 100 Ω^{FO}	-200 °C to 100 °C	0.07 °C	Fluke 754 Electrical Simulation of RTD Output	
	100 °C to 800 °C	0.02 % of reading + 0.05 °C		
Temperature Calibration Indication and control Equipment used with RTD Type Pt 385, 200 Ω^{FO}	-200 °C to 100 °C	0.07 °C		
	100 °C to 630 °C	0.02 % of reading + 0.05 °C		

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Temperature Calibration Indication and control Equipment used with RTD Type Pt 385, 500 Ω^{FO}	-200 °C to 100 °C	0.07 °C	Fluke 754 Electrical Simulation of RTD Output	UNE-EN 50470-1
	100 °C to 630 °C	0.02 % of reading + 0.05 °C		
Temperature Calibration Indication and control Equipment used with RTD Type Pt 385, 1 000 Ω^{FO}	-200 °C to 100 °C	0.07 °C		
	100 °C to 630 °C	0.02 % of reading + 0.05 °C		
Temperature Calibration Indication and control Equipment used with RTD Type Pt 3916, 100 Ω^{FO}	-200 °C to 100 °C	0.07 °C		
	100 °C to 630 °C	0.02 % of reading + 0.05 °C		
Temperature Calibration Indication and control Equipment used with RTD Type Pt 3926, 100 Ω^{FO}	-200 °C to 100 °C	0.08 °C		
	100 °C to 630 °C	0.02 % of reading + 0.06 °C		
Temperature Calibration Indication and control Equipment used with RTD Type Cu 427, 10 Ω^{FO}	-100 °C to 260 °C	0.2 °C		
Temperature Calibration Indication and control Equipment used with RTD Type Cu 672, 120 Ω^{FO}	-80 °C to 260 °C	0.1 °C		
Equipment to Measure AC Current At the listed frequencies^{FO}			Fluke 754	
1 Hz to 110 Hz	0.1 mA a 10 mA	0.01 % + 5 uA		
110.1 Hz to 1 100 kHz	0.1 mA a 1 mA	0.01 % + 5 uA		
1 101 kHz to 11 000 kHz	0.1 mA a 1 mA	0.01 % + 5 uA		
11.01 kHz to 50 kHz	0.1 mA a 1 mA	0.01 % + 5 uA		
Equipment to Measure DC Current^{FO}	UP 20 mA	0.01 % + 5 uA		
Temperature Calibration, Indication and control Equipment used with Thermocouple Type B^{FO}	600 °C to 800 °C	1.3 °C	Fluke 754 Electrical Simulation of Thermocouple Output	
	800 °C to 1 000 °C	1 °C		
	1 000 °C to 1 820 °C	0.9 °C		

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Temperature Calibration Indication and control Equipment used with Thermocouple Type C^{FO}	0 °C to 800 °C	0.6 °C	Fluke 754 Electrical Simulation of Thermocouple Output	UNE-EN 50470-1
	800 °C to 1 200 °C	0.8 °C		
	1 200 °C to 1 800 °C	1.1 °C		
	1 800 °C to 2 316 °C	2 °C		
Temperature Calibration Indication and control Equipment used with Thermocouple Type E^{FO}	-250 °C to -200 °C	1.3 °C		
	-200 to -100 °C	0.5 °C		
	-100 °C to 600 °C	0.3 °C		
	600 °C to 1 000 °C	0.4 °C		
Temperature Calibration Indication and control Equipment used with Thermocouple Type J^{FO}	-210 to -100 °C	0.6 °C		
	-100 °C to 800 °C	0.3 °C		
	800 °C to 1 200 °C	0.5 °C		
Temperature Calibration Indication and control Equipment used with Thermocouple Type K^{FO}	-200 °C to -100 °C	0.7 °C		
	-100 to 400 °C	0.3 °C		
	400 °C to 1 200 °C	0.5 °C		
	1 200 °C to 1 372 °C	0.7 °C		
Temperature Calibration Indication and control Equipment used with Thermocouple Type L^{FO}	-200 °C to -100 °C	0.6 °C		
	-100 to 800 °C	0.3 °C		
	800 °C to 900 °C	0.5 °C		
Temperature Calibration Indication and control Equipment used with Thermocouple Type N^{FO}	-200 °C to -100 °C	1 °C		
	-100 °C to 900 °C	0.5 °C		
	900 °C to 1 300 °C	0.6 °C		
Temperature Calibration Indication and control Equipment used with Thermocouple Type R^{FO}	-20 °C to 0 °C	2.3 °C		
	0 °C to 100 °C	1.5 °C		
	100 °C to 1 767 °C	1 °C		
Temperature Calibration Indication and control Equipment used with Thermocouple Type S^{FO}	-20 °C to 0 °C	2.3 °C		
	0 °C to 200 °C	1.5 °C		
	200 °C to 1 400 °C	0.9 °C		
	1 400 °C to 1 767 °C	1.1 °C		
Temperature Calibration Indication and control Equipment used with Thermocouple Type T^{FO}	-250 °C to -200 °C	1.7 °C		
	-200 °C to 0 °C	0.6 °C		
	0 °C to 400 °C	0.3 °C		

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Temperature Calibration Indication and control Equipment used with Thermocouple Type U[FO]	-200 °C to 0 °C	0.6 °C	Fluke 754 Electrical Simulation of Thermocouple Output	UNE-EN 50470-1
	0 °C to 600 °C	0.3 °C		
Temperature Calibration Indication and control Equipment used with Thermocouple Type BP[FO]	0 °C to 1 000 °C	1 °C		
	1 000 °C to 2 000 °C	1.6 °C		
	2 000 °C to 2 500 °C	2 °C		
Temperature Calibration Indication and control Equipment used with Thermocouple Type XK[FO]	-200 °C to 300 °C	0.2 °C		
	300 °C to 800 °C	0.4 °C		
Equipment to Output AC Voltage (Hipot)[FO]	1 kV to 6 kV	0.6 kV	HV Probe 80k-40	
	6 kV to 10 kV	1 kV		
	10 kV to 25 kV	2.5 kV		
Equipment to Output DC Voltage (Hipot)[FO]	1 kV to 6 kV	0.24 kV		
	6 kV to 10 kV	0.4 kV		
	10 kV to 35 kV	1.4 kV		
Equipment to Measure AC Current At the listed frequencies[FO]			Fluke 8846A	
10 Hz to 5 kHz	0.1 µA to 100 µA	0.1 % of reading + 0.4 µA		
5 kHz to 10 kHz	0.1 µA to 100 µA	0.2 % of reading + 2.5 µA		
Equipment to Measure AC Current At the listed frequencies[FO]				
10 Hz to 5 kHz	100 µA to 1 mA	0.15 % of reading + 6 µA		
5 kHz to 10 kHz	100 µA to 1 mA	0.35 % of reading + 70 µA		
Equipment to Measure AC Current At the listed frequencies[FO]				
10 Hz to 5 kHz	1 mA to 10 mA	0.1 % of reading + 40 µA		
5 kHz to 10 kHz	1 mA to 10 mA	0.2 % of reading + 250 µA		
Equipment to Measure AC Current At the listed frequencies[FO]				
10 Hz to 5 kHz	10 mA to 100 mA	0.1 % of reading + 0.4 mA		
5 kHz to 10 kHz	10 mA to 100 mA	0.2 % of reading + 2.8 mA		

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Equipment to Measure AC Current At the listed frequencies[FO]			Fluke 8846A	UNE-EN 50470-1
10 Hz to 1 kHz	100 mA to 400 mA	0.1 % of reading + 0.4 µA		
1 kHz to 10 kHz	100 mA to 400 mA	0.2 % of reading + 2.5 µA		
Equipment to Measure AC Current At the listed frequencies[FO]				
10 Hz to 5 kHz	0.4 A to 1 A	0.1 % of reading + 0.4 µA		
5 kHz to 10 kHz	0.4 A to 1 A	0.35 % of reading + 7 µA		
Equipment to Measure AC Current At the listed frequencies[FO]				
10 Hz to 5 kHz	1 A to 3 A	0.15 % of reading + 6 mA		
5 kHz to 10 kHz	1 A to 3 A	0.35 % of reading + 70 mA		
Equipment to Measure AC Current At the listed frequencies[FO]				
10 Hz to 5 kHz	3 A to 10 A	0.15 % of reading + 6 mA		
5 kHz to 10 kHz	3 A to 10 A	0.35 % of reading + 70 mA		
Equipment to Measure DC Voltage[FO]	1 µV to 100 mV	0.003 7 % of reading + 3.5 µV		
	100 mV to 1 V	0.002 5 % of reading + 7 µV		
	1 V to 10 V	0.002 4 % of reading + 0.05 mV		
	10 V to 100 V	0.003 8 % of reading + 0.6 mV		
	100 V to 1 000 V	0.004 1 % of reading + 10 mV		
Equipment to Measure AC Voltage[FO] 10 Hz to 20 kHz	0.1 mV to 100 mV	0.06 % of reading + 0.04 mV		
	100 mV to 1 V	0.06 % of reading + 0.3 mV		
	1 V to 10 V	0.06 % of reading + 3 mV		
	10 V to 100 V	0.06 % of reading + 30 mV		
	100 V to 1 000 V	0.06 % of reading + 225 mV		
Equipment to Measure Capacitance[FO]	0.1 nF to 1 nF	2 % of reading + 0.025 nF		
	1 nF to 10 nF	1 % of reading + 0.05 nF		
	10 nF to 100 nF	1 % of reading + 0.5 nF		
	0.1 µF to 1 µF	1 % of reading + 5 nF		
	1 µF to 10 µF	1 % of reading + 50 nF		
	10 µF to 100 µF	1 % of reading + 0.5 µF		

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Equipment to Measure Capacitance[FO]	0.01 mF to 1 mF	1 % of reading + 0.005 mF	Fluke 8846A	UNE-EN 50470-1
	1 mF to 10 mF	1 % of reading + 0.05 mF		
Equipment to Measure Resistance[FO]	0.1 Ω to 10 Ω	0.01 % of reading + 3 mΩ		
	10 Ω to 100 Ω	0.01 % of reading + 4 mΩ		
	100 Ω to 1 kΩ	0.01 % of reading + 10 mΩ		
	1 kΩ to 10 kΩ	0.01 % of reading + 100 mΩ		
	10 kΩ to 100 kΩ	0.01 % of reading + 1 Ω		
	100 kΩ to 1 MΩ	0.01 % of reading + 10 Ω		
	1 MΩ to 10 MΩ	0.04 % of reading + 100 Ω		
	10 MΩ to 100 MΩ	0.8 % of reading + 10 kΩ		
Equipment to Measure DC Current[FO]	0.01 µA to 100 µA	0.05% of reading + 0.025 µA		
	100 µA to 1 mA	0.05 % of reading + 0.05 µA		
	1 mA to 10 mA	0.05 % of reading + 2 µA		
	10 mA to 100 mA	0.05 % of reading + 5 µA		
	100 mA to 400 mA	0.05 % of reading + 20 µA		
	0.4 A to 1 A	0.05 % of reading + 0.2 mA		
	1 A to 3 A	0.1 % of reading + 2 mA		
	3 A to 10 A	0.15 % of reading + 0.8 mA		
Oscilloscope – Time Markers[FO]	1 GHz	0.1 GHz	Oscilloscope Keysight	DSOX3052T Technical Note No.1337 NIST
	1 s to 500 s	100 ns		

Thermodynamic

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE (AND SPECIFICATION WHERE APPROPRIATE)	CALIBRATION OR MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (±)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED	CALIBRATION MEASUREMENT METHOD OR PROCEDURES USED
Thermo-Hygrometer [F]	10 % HR to 90 % HR	1.2 % of reading	Climate Chamber Novus N323RHT	CEM TH-007 HTI Mod. HT-86
	1 °C to 50 °C	1.2 % of reading		
IR Thermometer [F]	10 °C to 400 °C (20 °F to 752 °F)	0.2 °C	Blackbody Calibrator Omega BB703	CENAM Technical Guide

Certificate of Accreditation: Supplement

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Quinta San Ignacio No. 1021, Fraccionamiento Quintas del Valle
Ciudad Juárez, Chihuahua, México. CP. 32540
Contact Name: Carlos Peraza Cadena Phone: 656-233-3471

Accreditation is granted to the facility to perform the following calibrations:

Dimensional

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE (AND SPECIFICATION WHERE APPROPRIATE)	CALIBRATION OR MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (±)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED	CALIBRATION MEASUREMENT METHOD OR PROCEDURES USED
Calipers[F]	1 mm to 300 mm (Up 12 in)	(14.01 + 9.7 x 10^{-4}L) µm	Block Gages Grade 2 Height Master 515-322	DI-008 CEM
Micrometers[F]	1 mm to 101.6 mm	2.1 µm	Block Gages Grade 2	DI-005 CEM
Height Gages[F]	1 mm to 300 mm (Up 12 in)	14 µm	Height Master 515-322	JIS 20 7517
Protractor[FO]	0.5° to 90°	0.089°	Angle Blocks	DI-003 CEM
Optical Comparator X axis Linearity Y axis Linearity[O]	0.5 in to 12 in	(280 + 58L) µin	Glass Scale Block Gages, Grade 2	JIS B 7184
Optical Comparator Axis Squareness[O]	4 in of X axis travel or maximum, Y axis travel if maximum is less than 4 in	280 µin	Master Square	
Optical Comparator Magnification[O]	10X	0.03 %	Glass Scale	
	20X	0.03 %		
	31.5X	0.03 %		
	62.5X	0.03 %		
	50X	0.04 %		
	100X	0.04 %		
Optical Comparator Angularity[O]	0° to 180°	0.15°	Angle Blocks	
Vision System[O] X, Y and Z axis Linearity	0.5 in to 12 in	(280 + 58L) µin	Glass Scale Angle Blocks Block Gages, Grade 2	JIS B 7184
Microscope[FO] X axis Linearity Y axis Linearity	Up to 10 mm	0.1 mm	Comparison Reticule Mitutoyo 183-108 No.7	
Microscope Angulatory[FO]	0.5° to 360°	0.15°	Comparison Reticule Mitutoyo 183-113 No.12	
Microscope Magnification[FO]	Up to 100x	0.04 % of magnification	Comparison Reticule Mitutoyo 183-102 No.01	
Laser Micrometer[FO]	Up to 1 in (Up to 25.4 mm)	2.2 x 10^{-4} in (5.6 µm)	Master Plug Gages	ISO 14638
Thickness Gages[FO]	1 mm to 25.4 mm	25 µm	Block Gages Grade 2	ASME B89.1.10M
Dial Indicator[FO]	1 mm to 101.6 mm (0.04 in to 4 in)	2.1 µm (8.3 x 10^{-5}) in		

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Thread Gages[FO]	0.1 mm to 25.4 mm	0.002 mm	Vision System QVI and Internal Thread Precision Micrometer	ASME B1.2
Pin Gages[F]	0.1 mm to 25.4 mm	(0.25 + 0.9L) µm	Mitutoyo LSM-6902H	ASME B89.1.5
Granite Surfaces[FO] (Flatness)	424.26 mm to 3 605.55 mm (in diagonal)	0.14 µm	Starrett 776 Electronic Gage Amplifier Head	DI-015 ISO 8512-2

Time and Frequency

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE (AND SPECIFICATION WHERE APPROPRIATE)	CALIBRATION OR MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (±)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED	CALIBRATION MEASUREMENT METHOD OR PROCEDURES USED
Tachometer[FO]	5 rpm to 200 000 rpm	0.028 rpm	Tachometer	ASTM-E1256-95
Chronometers & Timers[FO]	Up 86 400 s	0.036 ms	Universal frequency Counter, Signal Generator & Timer 1/100	Technical Note No. 1337 NIST and NIST 960-12

Chemical

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE (AND SPECIFICATION WHERE APPROPRIATE)	CALIBRATION OR MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (±)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED	CALIBRATION MEASUREMENT METHOD OR PROCEDURES USED
pH Meter[FO]	4 pH to 10 pH	0.015 pH	Buffer solutions Standard Solution	DI-2-PTC-620-RAT-001
Conductivity Meters Fixed Points[F]	1 211 µS/cm	26 µS/cm	MRC Sodium Chloride	CENAM Technical Guide
	12 809 µS/cm	160 µS/cm		

1. The CMC (Calibration and Measurement Capability) stated for calibrations included on this scope of accreditation represents the smallest measurement uncertainty attainable by the laboratory when performing a more or less routine calibration of a nearly ideal device under nearly ideal conditions. It is typically expressed at a confidence level of 95 % using a coverage factor *k* (usually equal to 2). The actual measurement uncertainty associated with a specific calibration performed by the laboratory will typically be larger than the CMC for the same calibration since capability and performance of the device being calibrated and the conditions related to the calibration may reasonably be expected to deviate from ideal to some degree.

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Accreditation is granted to the facility to perform the following calibrations:

2. The laboratories range of calibration capability for all disciplines for which they are accredited is the interval from the smallest calibrated standard to the largest calibrated standard used in performing the calibration. The low end of this range must be an attainable value for which the laboratory has or has access to the standard referenced. Verification of an indicated value of zero in the absence of a standard is common practice in the procedure for many calibrations but by its definition it does not constitute calibration of zero capacity.

3. The presence of a superscript F means that the laboratory performs calibration of the indicated parameter at its fixed location. Example: Outside Micrometer^{F} would mean that the laboratory performs this calibration at its fixed location.

4. The presence of a superscript O means that the laboratory performs calibration of the indicated parameter onsite at customer locations. Example: Outside Micrometer^{O} would mean that the laboratory performs this calibration onsite at the customer's location.

5. The presence of a superscript FO means that the laboratory performs calibration of the indicated parameter both at its fixed location and onsite at customer locations. Example: Outside Micrometer^{FO} would mean that the laboratory performs this calibration at its fixed location and onsite at customer locations.

6. Measurement uncertainties obtained for calibrations performed at customer sites can be expected to be larger than the measurement uncertainties obtained at the laboratories fixed location for similar calibrations. This is due to the effects of transportation of the standards and equipment and upon environmental conditions at the customer site which are typically not controlled as closely as at the laboratories fixed location.

7. The term L represents length in inches or millimeters as appropriate to the uncertainty statement.

8. The term Wt represents weight in pounds or grams (including SI multiple and submultiple units) appropriate to the uncertainty statement.