PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

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

Precision Calibration Systems, LLC

117 East Main Street, Suite 100, Morristown, TN 37814
101-1 Noles Street, Decherd, TN 37324

(Hereinafter called the Organization) and hereby declares that Organization is accredited in accordance with the recognized International Standard:

ISO/IEC 17025:2005
& Meets the Requirements of ANSI/NCSI Z540.1-1994
& ANSI/NCSI Z540.3-2006 sub-clause 5.3

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 January 2009):

Calibration of Dimensional, Electrical, Mass, Force and Weighing Devices
Mechanical, Chemical, Thermodynamic, and Time & Frequency Equipment
(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/Operations Manager

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

Initial Accreditation Date:	*Issue Date:*	*Expiration Date:*
May 19, 2012	May 17, 2017	August 31, 2019

Accreditation No.:	*Certificate No.:*
73403	L17-211

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

Precision Calibration Systems, LLC
117 East Main Street, Suite 100, Morristown, TN 37814
101-1 Noles Street, Decherd, TN 37324
Contact Name: Brandon Goodman Phone: 423-278-0946

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

Dimensional

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE OR NOMINAL DEVICE SIZE AS APPROPRIATE	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (±)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED
Micrometers[FO]	Up to 1 in	60 µin	Gage Blocks
	1 in to 12 in	140 µin	
Caliper[FO]	Up to 6 in	63 µin	Gage Blocks & Length Standards
	6 in to 24 in	430 µin	
	24 in to 40 in	730 µin	
Standard Length[FO]	Up to 11.5 in	65 µin	Universal Supermic P&W Labmaster
Standard Diameter[FO]	Up to 4 in	590 µin	
Pin and Plug Gauges[FO]	Up to 6 in	74 µin	
Feeler Gauges[FO]	Up to 0.2 in	28 µin	
External Threads Major Diameter[FO]	Up to 6 in	69 µin	
External Threads Pitch Diameter[FO]	Up to 6 in	111 µin	Universal Supermic P&W Labmaster/ Labmasrer Wires
Snap Gauges[FO]	Up to 11.5 in	380 µin	Universal Supermicrometer P&W Labmaster
Ring Gauges[FO]	0 in to 1 in	9.5 µin	Universal Supermicrometer P&W Labmaster
	1 in to 6 in	14 µin	
	6 in to 11 in	29 µin	
Dimensional Measurement Inspection[FO]	X Axis up to 12 in	190 µin	Vision System & LH600 2D Height Gauge
	Y Axis up to 8 in	170 µin	
	Z Axis up to 24 in	50 µin	
Surface Finish Measurement[FO]	0.1 to 400 µin Ra	2.3 µin Ra	Profilometer
Surface Finish Equipment[FO]	0.1 to 400 µin Ra	2.1 µin Ra	Master Finish Standards
ULM[FO]	0 in to 4 in	9.5 µin	Gage Blocks & Length Standards
	4 in to 12 in	150 µin	
	12 in to 24 in	500 µin	
Steel Rules[FO]	Up to 72 in	0.005 5 in	Master Steel Rule, Reticle
Diameter of Sphere[FO]	Up to 3 in	580 µin	Universal Supermicrometer P&W Labmaster
Optical Comparators (X & Y Linearity) [FO]	Up to 20 in	0.000 6 in	Glass Master, Gage Blocks
Optical Comparators (magnification) [FO]	5X to 100X	0.000 6 in	Glass Master, Magnification Glass Scale, Gage Blocks

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Optical Comparators (Stage squareness) [O]	Up to 12 in	0.000 14 in	Glass Master & Dial Indicator
Height Gauges [FO]	Up to 12 in (Up to 300 mm)	180 µin (4.57 µm)	Gauge Block Height Master
	12 in to 24 in (Up to 600 mm)	280 µin (7.11 µm)	
Dial/Digital Indicators [O]	Up to 4 in	11 µin	Universal Supermic P&W Labmaster
Vision Machine			Gauge Blocks / Glass Masters
X/Y Axis [FO]	Up to 12 in	(110 + 10L) µin	
Z Axis [FO]	Up to 8 in	(80 + 35L) µin	
Gauge Block [F]	0.05 in to 4 in	4.01 µin	P&W Labmaster
	4 in to 8 in	6.79 µin	

Electrical

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE OR NOMINAL DEVICE SIZE AS APPROPRIATE	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (±)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED
Electrical Souring- AC Current [FO]	Up to 329.999 µA	1.7 µA	Fluke 5522A Electrical Calibrator
	329.999 µA to 3.299 99 mA	9.6 µA	
	3.299 999 9 mA to 32.999 99 mA	16 µA	
	32.999 99 mA to 329.999 9 mA	0.57 mA	
	329.999 mA to 1.099 99 A	0.51 mA	
	1.1 A to 2.999 99 A	3.5 mA	
	2.999 99 A to 10.999 9 A	35 mA	
	10.999 9 A to 20 A	46 mA	
	20 A to 1 010 A	2.2 A	w/ 50 turn coil
	329.999 9 V to 1 020 V	0.31 V	Fluke 5522A Electrical Calibrator
Electrical Sourcing – AC Volts [FO]	0.1 mV to 32.999 mV	0.1 mV	
	32.999 mV to 33 mV	0.66 mV	
	330 mV to 3.299 999 V	7.9 mV	
	3.299 999 V to 32.999 99 V	32 mV	
	32.999 99 V to 329.999 9 V	0.34 V	
	329.999 9 V to 1 020 V	0.31 V	

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Electrical Sourcing – DC Current[FO]	0 µA to 329.999 µA	0.05 µA	Fluke 5522A Electrical Calibrator
	329.999 µA to 3.299 99 mA	0.33 µA	
	3.299 999 9 mA to 32.999 99 mA	3.3 µA	
	32.999 99 mA to 329.999 9 mA	36 mA	
	329.999 mA to 1.099 99A	0.22 mA	
	1.1 A to 2.999 99 A	1.7 mA	
	2.999 99 A to 10.999 9 A	5.6 mA	
	10.999 9 A to 20 A	36 mA	
	20 A to 1 010A	2.2 A	w/ 50 turn coil
Electrical Sourcing - DC Volts[FO]	0.1 mV to 330 mV	22 µV	Fluke 5522A Electrical Calibrator
	330 mV to 3.299 999 V	39 µV	
	3.299 999 V to 32.999 99 V	0.4 mV	
	32.999 99 V to 329.999 9 V	6.1 mV	
	329.999 9 V to 1 020 V	19.9 mV	
Electrical Sourcing - Capacitance[FO]	Up to 399.999 pF	0.02 nF	
	0.4 nF to 10.999 nF	0.07 nF	
	11 nF to 1.099 9 µF	0.01 µF	
	1.1 µF to 32.999 µF	0.29 µF	
	33 µF to 1.099 9 mF	0.02 mF	
	1.1 mF to 32.999 mF	0.53 mF	
	33 mF to 110 mF	2.6 mF	
Electrical Sourcing - Frequency[FO]	0.01 Hz to 119.99 Hz	0.6 Hz	
	120 Hz to 1 199.9 Hz	0.01 Hz	
	1 200 Hz to 11.999 kHz	0.06 kHz	
	12 kHz to 119.99 kHz	0.6 kHz	

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Electrical Sourcing - Resistance[FO]	Up to 10.999 Ω	1.1 mΩ	Fluke 5522A Electrical Calibrator
	11 Ω to 32.999 Ω	1.9 mΩ	
	32.999 Ω to 109.999 Ω	2 mΩ	
	109.999 Ω to 329.999 Ω	9.5 mΩ	
	330 Ω to 1.099 99 kΩ	0.04 Ω	
	1.1 kΩ to 3.299 99 kΩ	0.1 Ω	
	3.3 kΩ to 10.999 kΩ	0.3 Ω	
	11 kΩ to 32.999 kΩ	1 Ω	
	33 kΩ to 109.999 kΩ	3.4 Ω	
	110 kΩ to 329.999 kΩ	11 Ω	
	330 kΩ to 1.099 9 MΩ	0.1 kΩ	
	1.1 MΩ to 3.299 9 MΩ	0.2 kΩ	
	3.3 MΩ to 10.999 9 MΩ	1.4 kΩ	
	11 MΩ to 32.999 MΩ	8.7 kΩ	
	33 MΩ to 109.999 MΩ	56 kΩ	
	110 MΩ to 329.999 MΩ	1 MΩ	
	330 MΩ to 1 100 MΩ	17 MΩ	
Temperature Calibraiton, Indication, and Control Equipment used with RTD Cu427 10Ω[FO]	-100 °C to 260 °C	0.32 °C	Fluke 5502A Electrical Simulation of RTD Output
Temperature Calibraiton, Indication, and Control Equipment used with RTD PT 385 100Ω[FO]	-200 °C to 300 °C	0.15 °C	
	300 °C to 630 °C	0.18 °C	
	630 °C to 800 °C	0.26 °C	
Temperature Calibraiton, Indication, and Control Equipment used with RTD PT 385 200Ω[FO]	-200 °C to 100 °C	0.12 °C	
	100 °C to 630 °C	0.20 °C	
Temperature Calibraiton, Indication, and Control Equipment used with RTD PT 385 500Ω[FO]	-200 °C to 100 °C	0.13 °C	
	100 °C to 630 °C	0.16 °C	
Temperature Calibraiton, Indication, and Control Equipment used with RTD PT 385 1000Ω[FO]	-200 °C to 100 °C	0.12 °C	
	100 °C to 630 °C	0.26 °C	

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Temperature Calibraiton, Indication, and Control Equipment used with RTD PT 3916 100Ω[FO]	-200 °C to 100 °C	0.28 °C	Fluke 5502A Electrical Simulation of RTD Output
	100 °C to 630 °C	0.27 °C	
Temperature Calibraiton, Indication, and Control Equipment used with RTD PT 3926 100Ω[FO]	-200 °C to 100 °C	0.14 °C	
	100 °C to 630 °C	0.18 °C	
Temperature Calibraiton, Indication, and Control Equipment used with RTD PtNi 385 120Ω[FO]	-80 °C to 100 °C	0.14 °C	
	100 °C to 260 °C	0.18 °C	
Temperature Calibraiton, Indication, and Control Equipment used with Thermocouple Type B[FO]	600 °C to 1 000 °C	0.45 °C	Fluke 5502A Electrical Simulation of Thermocouple Output
	1 000 °C to 1 820 °C	0.35 °C	
Temperature Calibraiton, Indication, and Control Equipment used with Thermocouple Type E[FO]	-250 °C to -25 °C	0.51 °C	
	-25 °C to 1 000 °C	0.24 °C	
Temperature Calibraiton, Indication, and Control Equipment used with Thermocouple Type J[FO]	-210 °C to -30 °C	0.34 °C	
	-30 °C to 1 200 °C	0.29 °C	
Temperature Calibraiton, Indication, and Control Equipment used with Thermocouple Type K[FO]	-200 °C to 120 °C	0.35 °C	
	120 °C to 1 372 °C	0.42 °C	
Temperature Calibraiton, Indication, and Control Equipment used with Thermocouple Type N[FO]	-200 °C to 120 °C	0.42 °C	
	120 °C to 1 300 °C	0.29 °C	
Temperature Calibraiton, Indication, and Control Equipment used with Thermocouple Type R[FO]	0 °C to 400 °C	0.58 °C	
	400 °C to 1 767 °C	0.42 °C	
Temperature Calibraiton, Indication, and Control Equipment used with Thermocouple Type S[FO]	0 °C to 1 000 °C	0.62 °C	
	1 000 °C to 1 767 °C	0.48 °C	
Temperature Calibraiton, Indication, and Control Equipment used with Thermocouple Type T[FO]	-250 °C to 0 °C	0.64 °C	
	0 °C to 400 °C	0.18 °C	

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Temperature Calibraiton, Indication, and Control Equipment used with Thermocouple Type U[FO]	-250 °C to 0 °C	0.29 °C	Fluke 5502A Electrical Simulation of Thermocouple Output
	0 °C to 600 °C	0.31 °C	
Electrical Measuring AC Current[FO]	1 µA to 100 µA	0.36 µA	Fluke 8846A Precision Multimeter
	100 µA to 1 mA	0.002 4 mA	
	1 mA to 10 mA	0.024 mA	
	10 mA to 100 mA	0.24 mA	
	100 mA to 400 mA	0.84 mA	
	400 mA to 1A	0.002 4 A	
	1 A to 3 A	0.011 A	
	3 A to 10 A	0.036 A	
Electrical Measuring AC Voltage[FO]	0.01 mV to 100 mV	0.16 mV	
	100 mV to 1 V	0.001 5 V	
	1 V to 10 V	0.001 7 V	
	10 V to 100 V	0.001 5 V	
	100 V to 1 000 V	1.5 V	
	1 kV to 6 kV	0.07 kV	Fluke 27 & High Voltage Probe
	6 kV to 20 kV	0.23 kV	
Electrical Measuring - DC Current[FO]	1 µA to 100 µA	0.12 µA	Fluke 8846A Precision Multimeter
	100 µA to 1 mA	0.001 mA	
	1 mA to 10 mA	0.013 mA	
	10 mA to 100 mA	0.11 mA	
	100 mA to 400 mA	0.42 mA	
	400 mA to 1 A	0.001 2 A	
	1 A to 3 A	0.006 6 A	
	3 A to 10 A	0.031 A	
Electrical Measuring - DC Voltage[FO]	0.01 mV to 100 mV	0.011 mV	
	100 mV to 1 V	0.58 mV	
	1 V to 10 V	0.000 48 V	
	10 V to 100 V	0.008 2 V	
	100 V to 1 000 V	0.092 V	
	1 kV to 6 kV	0.095 kV	Fluke 27 & High Voltage Probe
	6 kV to 20 kV	0.24 kV	

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Electrical Measuring - Capacitance[FO]	1 nF	0.065 nF	Fluke 8846A Precision Multimeter
	10 nF	0.028 nF	
	100 nF	2.5 nF	
	1 µF	0.025 µF	
	10 µF	0.25 µF	
	100 µF	2.5 µF	
	1 mF	0.025 mF	
	10 mF	0.25 mF	
	10 0mF	8.2 mF	
Electrical Measuring – Frequency-Fixed Points[FO]	5 Hz	0.01 Hz	Fluke 8846A Precision Multimeter
	10 Hz	0.01 Hz	
	40 Hz	0.24 Hz	
	300 kHz	0.06 kHz	
	1 MHz	0.2 MHz	
Electrical Measuring – Resistance –Fixed Points[FO]	10 Ω	4 mΩ	
	100 Ω	14 mΩ	
	1 kΩ	0.11 Ω	
	10 kΩ	1.1 Ω	
	100 kΩ	11 Ω	
	1 MΩ	110 Ω	
	10 MΩ	4.2 kΩ	
	100 MΩ	0.42 MΩ	
	1 000 MΩ	4.1 MΩ	

Mass, Force, and Weighing Devices

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE OR NOMINAL DEVICE SIZE AS APPROPRIATE	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (±)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED
Force Gauges[FO]	1 lbf to 220 lbf	0.3 % of Reading	Calibrated Weights
Load Cells, Load Stands & Tension/Compression Testers[FO]	1 lbf to 220 lbf	0.23 % of Reading	Calibrated Weights
	220 lbf to 1 000 lbf	0.11 % of Reading	Futek LSB350 Load Cell w/ IHH500 Indicator
	1 000 lbf to 5 000 lbf	0.12 % of Reading	Futek LSB453 Load Cell w/ IHH500 Indicator
	5 000 lbf to 20 000 lbf	0.39 % of Reading	TT-SWO-20K Load Cell w/ IHH500 Indicator

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Load Cells, Load Stands, Compression Testers (compression) FO	20 000 lbf to 300 000 lbf	0.08 % of Reading	TT CLC-300K Load Cell w/ IHH500 Indicator
Analytical Balance FO	1 mg to 50 g	0.25 mg	ASTM Class 1 Weights
	50 g to 200 g	0.6 mg	
	200 g to 10 kg	0.2 g	
Scales FO	Up to 100 lb	0.08 lb	ASTM Class 6 Weights
	100 to 10 000 lb	0.9 lb	Class F Weights
Pipette FO	0.3 to 20 µL	0.13 µL	A&D Pipette Calibrator
	20 to 200 µL	0.98 µL	
	200 to 1 000 µL	1.19 µL	
	1 000 to 10 000 µL	7.56 µL	

Mechanical

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE OR NOMINAL DEVICE SIZE AS APPROPRIATE	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (±)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED
Vacuum Gauge FO	-14 psi to 0 psi	0.1 psi	Fluke 744/700PV4
Pressure Gauge FO	0 psi to 500 psi	0.29 psi	Fluke 744/700P07
	500 psi to 10 000 psi	2.4 psi	Fluke 744/700P31
Indirect Verification of Rockwell Hardness Testers HRC FO	20 HRC to 39 HRC	0.34 HRC	Hardness Test Block Masters
	40 HRC to 59 HRC	0.34 HRC	
	60 HRC to 70 HRC	0.32 HRC	
Indirect Verification of Rockwell Hardness Testers HRB FO	50 HRB to 59 HRB	0.33 HRB	
	60 HRB to 79 HRB	0.34 HRB	
	80 HRB to 89 HRB	0.33 HRB	
Indirect Verification of Rockwell Superficial Hardness Testers HR30N FO	40 HR30N to 59 HR30N	0.34 HR30N	
	60 HR30N to 79 HR30N	0.33 HR30N	
	80 HR30N to 90 HR30N	0.32 HR30N	
Knoop Hardness Testers HK (indirect verification) O	100 HK to 200 HK	6.3 HK	
	300 HK to 400 HK	14 HK	
	500 HK to 600 HK	14 HK	
Vickers Hardness Testers HV (indirect verification) O	200 HV to 400 HV	9.9 HV	
	400 HV to 750 HV	12 HV	

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Brinell Hardness Testers HBW (indirect verification) [O]	206 HBW/4.21 mm	0.2 mm	Hardness Test Block Masters-Brinell Scope
	356 HBW/3.23 mm	0.13 mm	
	532 HBW/2.66 mm	0.11 mm	
Torque Wrenches[FO]	1.5 ft·lb to 29 ft·lb	1.2 % of Reading	Norbar Pro-Test 40
	29 ft·lb to 1 100 ft·lb	1.1 % of Reading	Norbar Pro-Test 1500 ER
Torque Testers[FO]	Up to 500 lbf	0.6 % of Reading	Stainless Steel Hanging Weight Set, Lever Arm
Rate of Rotation Source (Contact) [FO]	10 RPM to 3 800 RPM	0.017 % of Reading	Monarch Optical Tach
Rate of Rotation Measure [FO]	1 RPM to 99 999 RPM	0.005 % of Reading	
Rate of Rotation Source (non-contact) [FO]	5 RPM to 99 999 RPM	0.012 % of Reading	Monarch Strobe

Chemical

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE OR NOMINAL DEVICE SIZE AS APPROPRIATE	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (±)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED
pH Meter[FO]	4 pH	0.026 pH	Std Buffer Solution
	7 pH	0.026 pH	
	10 pH	0.026 pH	
Conductivity Meter [FO]	10 µS/cm	0.55 µS/cm	Std Conductivity Solution
	100 µS/cm	2.5 µS/cm	
	1 000 µS/cm	5.5 µS/cm	

Thermodynamic

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Temperature Measuring Equipment- Infrared Thermometers [FO]	25 °C to 500 °C	2.2 °C	Black Body Calibrator, Fluke 744 w/ Probe
Thermohygrometers – Humidity (%RH) [FO]	20 % RH to 95 % RH	2.5 % of Reading	Incubator, Thermohygrometer
Thermohygrometers - Temperature [FO]	5 °C to 60 °C	2.5 °C	Incubator, Thermohygrometer

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Thermodynamic

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Temperature Measuring Equipment [FO]	-90 °C to 40 °C	0.08 °C	PTC-125 Dry Block Calibrator, Hart 850 w/ PRT Probe
	40 °C to 280 °C	0.04 °C	Hart Bath 6022, Hart 850 w/ PRT 5614 Probe
	280 °C to 420 °C	0.16 °C	Jofra PTC 660, Hart 850 w/ PRT 5614 Probe
	420 °C to 660 °C	0.53 °C	Jofra PTC 660, Fluke 744, K Thermocouple
	-200 °C to 420 °C	0.04 °C	Hart 850 w/ PRT 5614 Probe
	400 °C to 1 372 °C	1.3 °C	Fluke 744, K Thermocouple

Time & Frequency

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE OR NOMINAL DEVICE SIZE AS APPROPRIATE	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (±)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED
Timers & Stopwatches [FO]	Up to 24 hr	0.094 s	Naval Atomic Clock/ Calibrated Stopwatch

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.

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.

Certificate of Accreditation: Supplement

Precision Calibration Systems, LLC
117 East Main Street, Suite 100, Morristown, TN 37814
101-1 Noles Street, Decherd, TN 37324
Contact Name: Brandon Goodman Phone: 423-278-0946

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

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.