PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

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

CMM Calibration and Services
228 Energy Avenue
Rockford, IL 61109

(Hereinafter called the Organization) and hereby declares that Organization 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 (as outlined by the joint ISO-ILAC-IAF Communiqué dated January 2009):

Calibration of CMM, Optical/Vision Comparators, Surface Plates,
Hard Gauging and Hardness Testers with CMM Dimensional Verification/Inspection
(As detailed in the supplement)

Such testing and/or calibration services shall only be offered at or from the address given above. 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:

The validity of this certificate is mandated through ongoing surveillance.

Tracy Szerszen
President/Operations Manager

Perry Johnson Laboratory
Accreditation, Inc. (PJLA)
26555 Evergreen, Suite 1325
Southfield, Michigan 48076

Initial Accreditation Date:	Issue Date:	Revision Date:	Expiration Date:
October 27, 2002	March 31, 2009	September 24, 2009	March 30, 2011

Accreditation No.	Certificate No:	Page No:
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CMM Calibration and Services
228 Energy Avenue
Rockford, IL 61109-2615

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

Dimensional

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE (AND SPECIFICATION WHERE APPROPRIATE)	BEST MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (±)	REMARKS
CNC Linear Displacement Accuracy	X: 0 m to 80 m Y: 0 m to 80 m Z: 0 m to 80 m	(1 + 1.9L) µm	
1, 2, 3 Blocks	2.54 cm to 7.62 cm (1 in to 3 in)	(1.016 + 0.002 7) µm [(40 + 2.7L) µin]	
Angle Gage Blocks	0° to 45°	3”	
Auto Collimator	0’ to 10’	0.35”	
Bench Micrometer	0 cm to 5.08 cm (0 in to 2 in)	(1.016 + 0.002 7 L) µm [(50 +27L) µin]	
Calipers	0 cm to 182.88 cm (0 in to 72 in)	(10.1 + 3.0E-2L) µm [397.8 + 30.2L] µin	
Caliper Checker	0 cm to 182.88 cm (0 in to 72 in)	(0.4 + 6E-3L) µm [(14 + 6L) µin]	
Dial Bore Gage	2.54 cm to 25.4 cm (1 in to 10 in)	(2.4 +5E-3L) µm [(103 + 35L) µin]	
Dial Indicator Calibrator	0 cm to 2.54 cm (0 in to 1 in)	(.5 +2E-3L) µm [(40 + 2L) µin)]	
Dial/Test Elect Indicators	0 cm to 10.16cm (0 in to 4 in)	(1.47E+1) µm [(5.79E+2) µin]	
Dial Sink/Counterbore Gage	0 cm to 2.54 cm (0 in to 1 in)	4.45 µm (175 µin)	
Gage Ball	0.13 cm to 2.54 cm	0.3 µm	
Gage Blocks, Steel Gage Blocks, TC/CC/Ceramic	0.025 cm to 10.16 cm (0.01 in to 4 in)	(0.11 + 0.001L) µm [(4.4 + 1L) µin]	
	12.7 cm to 25.4 cm (5 in to 10 in)	(.23 + .005L) µm [(9.0 + 5L) µin]	
	30.48 cm to 50.8 cm (12 in to 20 in)	(.43 + .005L) µm [(17.0 + 5L) µin]	
Height Gage 4 in or less	0.001 in	(5.78E+2 + 2.20E-1L) µin	
Height Gage 4 in to 24 in	0.001 in	(5.74E+2 + 1.11L) µin	
Height Master	0 cm to 121.92 cm (0 in to 48 in)	(1 + 5E-3L) µm [(36 + 5L) µin]	

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Indicator (up to 1.0 in travel)	0.001 in	(5.79E+2) µin	
	0.000 1 in	(6.93E+1) µin	
Intramic/Bore Mic	0.51 cm to 15.24 cm (0.2 in to 6 in)	(2.4 + 5E-3L) µm [(95 + 5L) µin]	
Inside Micrometer	8.0 in to 60.0 in	(0.79 + 8.61 X 10^{-3}L) µm (31.16 + 8.61L µin)	Grade AS1 Long gage Blocks
Kalmaster	0 cm to 45.72 cm (0 in to 18 in)	(42 +7L) µm	
Length Standards	0 cm to 152.4 cm (0 in to 60 in)	0.84 + 2.2E-3L) µm (33 + 2.2 L) µin	
Levels	Up to 35.6 cm (Up to 14 in)	3.64 µm (143 µin)	
Micrometer, OD			
0.001 in Resolution	0.0 in to 4.0 in	(5.78E2 +2.2E-1L) µin	
0.0001 in Resolution	0.0 in to 4.0 in	(5.75E1 + 1.68L) µin	
Micrometer, OD			
0.001 in Resolution	4.0 in to 24.0 in	(5.74E2 +9.7E-1L) µin	
0.0001 in Resolution	4.0 in to 24.0 in	(5.35E1 + 5.27L) µin	
Micrometer Head	0 cm to 5.08 cm (0 in to 2 in)	(0.5 + 2E-3L) µm [(20 + 2L) µin]	
Mic Master, OD	0cm to 0.305 cm (0 in to 12 in)	(1.65E-1 + 1.08 E-2L) µm [(6.51 + 1.08 E+1L) µin]	
Parallels	0 cm to 1.22 cm (0 in to 48 in)	[(0.89 + 0.16(L/0.012)] µm {[35 + 6(L/12)] µin}	
Pitch Gage	1 TPI to 100 TPI	(2.54 + 0.010D) µm [(100 + 10D) µin]	
Plain Taper Plug	0 cm to 25.4 cm (0 in to 10 in)	7.62 µm (300 µin)	
Plain Plug Gages	0.05 in to 14.0 in	(18.47 + 5.58L) µin	Grade 2 Gage Blocks and Super Micrometer
Plain Ring Gages	0.25 in to 10.0 in	(4.5 + 2.1L) µin	Calibration Grade K Croblox Class XXX Cylindrical Rings Labmaster Model U3062070

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Radius Gages	Up to 2.54 cm (Up to 1 in)	18.034 µm (710 µin)	
Repeat-o-Meter	0 cm to 0.026 cm (0 in to 0.01 in)	0.57 µm (22.3 µin)	
Sine Bar/Plate	2.0 in to 10 in	0.00023 in/in	
Squares	0 cm to 2.54 cm (1 in to 12 in)	2.80 µm (110 µin)	
	30.48 cm to 60.96 cm (12 in to 24 in)	2.80 µm (110 µin)	
Steel Rule	0 cm to 243.84 cm (0 in to 96 in)	(148 + 0.15E-3L) µm [(5.8E3 + 0.15L) µin]	
Straight Edge	0 cm to 152.4 cm (0 in to 60 in)	(1.1 + 1.1E-2L) µm [(43.5 + 10.8L) µin]	
Thickness/Feeler/Pin Gages	0.002 6 cm to 2.54 cm (0.001 in to 1 in)	(1.6 + 0.028D) µm [(62 + 28D) µin]	
Thread Measuring Wires	0 cm to 0.64 cm (0 in to 0.250 in)	(0.49 + 0.008D) µm [(19 + 8D) µin]	
Thread Plug Gages Pitch Diameter	1-12 to 6.248-16	(85.82 + 7.42L) µin	
Thread Ring Gages	0-80 to 1.5-6	17 µm (664 µin)	Comparison to Master Plugs
V Blocks	0 cm to 30.48 cm (0 in to 12 in)	(1.2 + 0.006L) µm [(46 + 6L) µin]	
CMM Calibration and Inspection Volumetric Performance	1 000 mm	3.8 µm	
Force Gage	10 lb to 100 lb	(1.70E-1 + 2.00E-3 F)lb	
Optical Comparators Linear	0 in to 12 in	250 µin	
Optical Comparators Angular	0° to 360°	0.10 °	
Optical Comparators Magnification	10x	0.04L	
	20x	0.025L	
	50x	0.015L	

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Granite Surface Plates Flatness	Up to 0.91 m Diagonal (Up to 36 in Diagonal)	1.12 µm	
	0.91 m to 1.37 m Diagonal (36 in to 54 in Diagonal)	1.38 µm	

Electrical

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AC Volts-Source 1.0mV to 32.999mV	10 Hz to 45 Hz	0.08 % + 6 µV	Fluke 5520A/SC600
	45 Hz to 10 kHz	0.015 % + 6 µV	
	10 kHz to 20 kHz	0.020 % + 6 µV	
	20 kHz to 50 kHz	0.10 % + 6 µV	
	50 kHz to 100 kHz	0.35 % + 12 µV	
	100 kHz to 500 kHz	0.8 % + 50 µV	
AC Volts- Source 33 mV to 329.999 mV	10 Hz to 45 Hz	0.03 % + 8 µV	
	45 Hz to 10 kHz	0.0145 % + 8 µV	
	10 kHz to 20 kHz	0.016 % + 8 µV	
	20 kHz to 50 kHz	0.035 % + 8 µV	
	50 kHz to 100 kHz	0.08 % + 32 µV	
	100 kHz to 500 kHz	0.2 % + 70 µV	
AC Volts- Source .33 V to 3.299 V	10 Hz to 45 Hz	0.03 % + 50 µV	
	45 Hz to 10 kHz	0.015 % + 60 µV	
	10 kHz to 20 kHz	0.019 % + 60 µV	
	20 kHz to 50 kHz	0.03 % + 50 µV	
	50 kHz to 100 kHz	0.07 % + 125 µV	
	100 kHz to 500 kHz	0.24 % + 600 µV	
AC Volts-Source 3.30 V to 32.999 V	10 Hz to 45 Hz	0.03 % + 650 µV	
	45 Hz to 10 kHz	0.015 % + 600 µV	
	10 kHz to 20 kHz	0.024 % + 600 µV	
	20 kHz to 50 kHz	0.035 % + 600 µV	
	50 kHz to 100 kHz	0.090 % + 1600 µV	

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AC Volts- Source 33 V to 329.999 V	45 Hz to 1 kHz	0.019 % + 2 000 µV	Fluke 5520A/SC600
	1 kHz to 10 kHz	0.02 % + 6 000 µV	
	10 kHz to 20 kHz	0.025 % + 6 000 µV	
	20 kHz to 50 kHz	0.03 % + 6 000 µV	
	50 kHz to 100 kHz	0.20% + 50 000 µV	
AC Volts - Source 300 V to 1020 V	45 Hz to 1 kHz	0.03 % + 10 000 µV	
	1 kHz to 5 kHz	0.025 % + 10 000 µV	
	5 kHz to 10 kHz	0.03 % + 10 000 µV	
AC Volts – Source 10 mV to 329.999 mV	10 Hz to 20 Hz	0.2% + 370 µV	
	20 Hz to 45 Hz	0.1% + 370 µV	
	45 Hz to 1 kHz	0.1% + 370 µV	
	1 kHz to 5 kHz	0.2 % + 450 µV	
	5 kHz to 10 kHz	0.4 % + 450 µV	
	10 kHz to 30 kHz	5.0 % + 900 µV	
AC Volts- Source 10 mV to 329.999 mV	10 Hz to 20 Hz	0.2 % + 450 µV	
	20 Hz to 45 Hz	0.1 % + 450 µV	
	45 Hz to 1 kHz	0.09 % + 450 µV	
	1 kHz to 5 kHz	0.2 % + 1 400 µV	
	5 kHz to 10 kHz	0.4 % + 1 400 µV	
	10 kHz to 30 kHz	5.0 % + 2 800 µV	
AC Volts- Source 3.3 V to 5 V	10 Hz to 20 Hz	0.2 % + 450 µV	
	20 Hz to 45 Hz	0.1 % + 450 µV	
	45 Hz to 1 kHz	0.09 % + 450 µV	
	1 kHz to 5 kHz	0.2 % + 1 400 µV	
	5 kHz to 10 kHz	0.4 % + 1 400 µV	
AC Current- Source 29.00 µA to 329.99 µA	10 Hz to 20 Hz	0.2 % + 0.1 µA	
	20 Hz to 45 Hz	0.15 % + 0.1 µA	
	45 Hz to 1 kHz	0.125 % + 0.1 µA	
	1 kHz to 5 kHz	0.3 % + 0.15 µA	
	5 kHz to 10 kHz	0.8 % + 0.2 µA	
	10 kHz to 30 kHz	1.6 % + 0.4 µA	

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AC Current - Source 0.33 A to 3.299 A	10 Hz to 20 Hz	0.2 % + 0.15 µA	Fluke 5520A/SC600
	20 Hz to 45 Hz	0.125 % + 0.15 µA	
	45 Hz to 1 kHz	0.1 % + 0.15 µA	
	1 kHz to 5 kHz	0.2 % + 0.2 µA	
	5 kHz to 10 kHz	0.5 % + 0.3 µA	
	10 kHz to 30 kHz	1.0 % + 0.6 µA	
AC Current - Source 3.3 mA to 32.999 mA	10 Hz to 20 Hz	0.18 % + 2 µA	
	20 Hz to 45 Hz	0.09 % + 2 µA	
	45 Hz to 1 kHz	0.04 % + 2 µA	
	1 kHz to 5 kHz	0.08 % + 2 µA	
	5 kHz to 10 kHz	0.2 % + 3 µA	
	10 kHz to 30 kHz	0.4 % + 4 µA	
AC Current - Source 33 mA to 329.999 mA	10 Hz to 20 Hz	0.18 % + 20 µA	
	20 Hz to 45 Hz	0.09 % + 20 µA	
	45 Hz to 1 kHz	0.04 % + 20 µA	
	1 kHz to 5 kHz	0.10 % + 50 µA	
	5 kHz to 10 kHz	0.2 % + 100 µA	
	10 kHz to 30 kHz	0.4 % + 200 µA	
AC Current- Source 0.33 A to 1.099 99 A	10 Hz to 45 Hz	0.18 % + 100 µA	
	45 Hz to 1 kHz	0.05 % + 100 µA	
	1 kHz to 5 kHz	0.6 % + 1 000 µA	
	5 kHz to 10 kHz	2.5% 5 000 µA	
AC Current- Source 1.1 A to 2.999 99 A	10 Hz to 45 Hz	0.18 % + 100 µA	
	45 Hz to 1 kHz	0.06 % + 100 µA	
	1 kHz to 5 kHz	0.6 % + 1 000 µA	
	5 kHz to 10 kHz	2.5 % + 5 000 µA	
AC Current- Source 3 A to 10.999 A	45 Hz to 100 Hz	0.06 % + 2 000 µA	
	100 Hz to 1 kHz	0.10 % + 2 000 µA	
	1 kHz to 5 kHz	3.0 % + 2 000 µA	
AC Current- Source 11 A to 20.5 A	45 Hz to 100 Hz	0.12 % + 5 000 µA	
	100 Hz to 1 kHz	0.15 % + 5 000 µA	
	1 kHz to 5 kHz	3.0 % + 5 000 µA	

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AC Current- Source 29.00 µA to 329.99 µA	10 Hz to 100 Hz	0.25 % + 0.2 µA	Fluke 5520A/SC600
	100 Hz to 1 kHz	0.6 % + 0.5 µA	
AC Current- Source 0.33 mA to 3.299 9 mA	10 Hz to 100 Hz	0.25 % + 0.3 µA	
	100 Hz to 1 kHz	0.6 % + 0.8 µA	
	500 Hz to 1 kHz	Output	
AC Current- Source 33 mA to 329.99 mA	10 Hz to 100 Hz	0.08 % + 40 µA	
	100 Hz to 1 kHz	0.2 % + 100 µA	
AC Current- Source 33 mA to 329.99 mA	10 Hz to 100 Hz	0.12 % + 200 µA	
	100 Hz to 440 Hz	0.3 % + 1 000 µA	
AC Current- Source 3 A to 20.5 A	10 Hz to 100 Hz	0.12 % + 2 000 µA	
	100 Hz to 1 Kz	1.0 % + 5 000 µA	
DC Volts- Source Fluke 5520A/SC600	0 mV to 329.999 9 mV	0.002 % + 1 µV	
	0 V to 3.299 99 V	0.0011 % + 2 µV	
	0 V to 32.99 99 V	0.0012 % + 20 µV	
	30 V to 329.999 9 V	0.0018 % + 150 µV	
	100 V to 1.020 V	0.0018 % + 1 500 µV	
DC Current -Source Fluke 5520A/SC600	0 µA to 329.999 µA	0.0150 % + 0.002 µA	Fluke 5520A/SC600
	0 mA to 32.999 9 µA	0.01 % + 0.005 µA	
	0 mA to to 329.999 mA	0.01 % + 0.025 µA	
	0 mA to 329.999 mA	0.01 % + 2.5 µA	
	0 A to 1.099 99 A	0.02 % + 40 µA	
	1.1 A to 2.999 99 A	0.0380% + 40 µA	
	0 A to 10.999 99 A	0.05 % + 500 µA	
	11A to 20.5 A	0.10 % + 750 µA	

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Capacitance –Source	0.19 nF to 0.399 9 nF	0.5 % + 0.01 nF	Fluke 5520A/SC600
	0.4 nF to 1.099 9 nF	0.5 % + 0.01 nF	
	1.1 nF to 3.299 9 nF	0.5 % + 0.01 nF	
	3.3 nF to 10.999 nF	0.25 % + 0.01 nF	
	11 nF to 32.999 nF	0.25 % + 0.1 nF	
	33 nF to 109.99 nF	0.25 % + 0.1 nF	
	110 nF to 329.99 nF	0.25 % + 0.3 nF	
	0.33 µF to 1.09 999 µF	0.25 % + 1 nF	
	1.1 µF to 3.299 99 µF	0.25 % + 3 nF	
	3.3 µF to 10.999 9 µF	0.25 % + 10 nF	
	11 µF to 32.999 9 µF	0.40 % + 30 nF	
	33 µF to 109.999 µF	0.45 % + 100 nF	
Oscilloscopes- DC Voltage (50 Ω)	1 mV to 6.6 V	2.9mV/V + 40 µV	Fluke 5520A/SC600
Oscilloscopes – DC Voltage (1 MΩ)	1 mV to 130 V	544 µV/V + 40 µV	
Oscilloscopes – AC Voltage (50 Ω)	1 mV to 6.6 V	2.9mV/V + 40 µV	
Oscilloscopes – AC Voltage (1 MΩ)	1 mV to 130 V	1.1 µV/V + 40 µV	
Oscilloscopes- Wave Gen. (50 Ω)	0.001 8 Vp-p to 2.5 Vp-p	34.6 mV/V + 100 µV	
Oscilloscopes- Wave Gen. (1 M Ω)	0.001 8 Vp-p to 55 Vp-p	34.6 mV/V + 100 µV	
Oscilloscopes- Input Impedance Measure	50 Ω to 60 Ω 0.5 MΩ to 1 MΩ	1.2 mΩ/Ω	
Oscilloscopes- Leveled Sinewave 50 kHz to 11.1 GHz	5 mV to 5.5 V	50.7 mV/V + 100 µV	

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Capacitance –Source	110 µF to 329.999 µF	0.45 % + 300 nF	Fluke 5520A/SC600
	0.33 µF to 1.099 99 mF	0.45 % + 1 µF	
	1.1 mF to 3.299 9 mF	0.45 % + 3 µF	
	3.3 mF to 10.999 9 mF	0.45 % + 10 µF	
	11 mF to 110 mF	0.75 % + 30 µF	
	33 mF to 100 mF	1.1 % + 100 µF	
Thermocouple Simulation Type E	-250 °C to –100 °C	0.50 °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	
Thermocouple Simulation Type J	-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	
Thermocouple Simulation Type K	-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	0.40 °C	
Thermocouple Simulation Type R	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	0.40 °C	
Thermocouple Simulation Type S	0 °C to 250 °C	0.47 °C	
	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	
Thermocouple Simulation Type T	-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	
Thermocouple Simulation Type B	600 °C to 800 °C	0.44 °C	
	800 °C to 1 000 °C	0.34 °C	
	1 000 °C to 1 550 °C	0.30 °C	
	1 550 °C to 1 820 °C	0.33 °C	

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Thermocouple Simulation Type C	0 °C to 150 °C	0.30 °C	Fluke 5520A/SC600
	150 °C to 650 °C	0.26 °C	
	650 °C to 1 000 °C	0.31 °C	
	1 000 °C to 1 800 °C	0.50 °C	
	1 800 °C to 2 316 °C	0.84 °C	
Thermocouple Simulation Type L	-200 °C to -100 °C	0.37 °C	
	-100 °C to 800 °C	0.26 °C	
	800 °C to 900 °C	0.17 °C	
Thermocouple Simulation Type N	-200 °C to -100 °C	0.40 °C	
	-100 °C to -25 °C	0.22 °C	
	-25 °C to 120 °C	0.19 °C	
	120 °C to 410 °C	0.18 °C	
	410 °C to 1 300 °C	0.27 °C	

Mechanical

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Norbar Torque	9.49 Nm to 338.95 Nm (7 lbf·ft to 250 lbf·ft)	1.1 Nm (0.81 lbf·ft)	
Pressure Gage	20 psi to 2 000 psi	(2.58E-1 +5.11E-4 F) psi	
Indirect Verification of Rockwell Hardness Testers HRA	Low	1.3 HRA	ASTM E 18-08a and calibrated Rockwell Hardness Test Blocks
	Middle	1.3 HRA	
	High	1.3 HRA	
Indirect Verification of Rockwell Hardness Testers HRBW	Low	1.5 HRBW	
	Middle	1.5 HRBW	
	High	1.4 HRBW	
Indirect Verification of Rockwell Hardness Testers HRC	Low	1.3 HRC	
	Middle	1.3 HRC	
	High	0.78 HRC	
Indirect Verification of Rockwell Hardness Testers HR15N	Low	1.4 HR15N	
	Middle	1.4 HR15N	
	High	1.1 HR15N	

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Mechanical

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Indirect Verification of Rockwell Hardness Testers HR30N	Low	1.4 HR30N	ASTM E 18-08a and calibrated Rockwell Hardness Test Blocks
	Middle	1.4 HR30N	
	High	1.1 HR30N	
Indirect Verification of Rockwell Hardness Testers HR45N	Low	1.5 HR45N	
	Middle	1.5 HR45N	
	High	1.1 HR45N	
Indirect Verification of Rockwell Hardness Testers HR30TW	Low	1.5 HR30TW	
	Middle	1.5 HR30TW	
	High	1.4 HR30TW	

Mass, Force, and Weighing Devices

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE (AND SPECIFICATION WHERE APPROPRIATE)	BEST MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (±)	REMARKS
Tension/Compression	25 lb to 2 000 lb	(1.70-1 + 2.00-3 F) lb	
Weight Scale	1 g to 100 g	(1.13-2 + 5.1-4 wt) g	
	2.5 lb to 110 lb	(4.55-2 + 4.55-3 wt) g	

Time & Frequency

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE (AND SPECIFICATION WHERE APPROPRIATE)	BEST MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (±)	REMARKS
Oscilloscopes- Leveled Sinewave 50 kHz to 11.1 GHz	5 mV to 5.5 V	50.7 mV/V + 100 µV	Fluke 5520A/SC600
Oscilloscopes- Time Markers	1 ns to 5 s	6.4 µs/s	
Oscilloscopes- Pulse Generator Width	4 ns to 45 ns	57.8 ms/s + 500 ps	
	45 ns to 500 ns	57.8 ms/s + 4 ns	
Oscilloscopes- Pulse Generator Period	200 ms to 20 ms	57.8 ms/s + 200 ns	

1. Remarks: This column shall include pertinent information about the calibration of the Measured Instrument or parameter. The information should include the type of standards used and any pertinent information about the measurement method. This column is not to be used for commercial advertisement of laboratory services
2. The Term "L" represents length in inches or millimeters as appropriate to the uncertainty statement.
3. The Term "D" represents diameter.