



National Voluntary Laboratory Accreditation Program



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

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CALIBRATION LABORATORIES

NVLAP LAB CODE 200717-0

DC/LF ELECTROMAGNETICS

NVLAP Code: 20/E02

AC Current Measure

<i>Current Range</i>	<i>Frequency Range</i>	<i>Best Uncertainty (\pm)^{note 1}</i>	<i>Remarks</i>
200 μ A	1 Hz to 10 Hz	(500 μ A/A + 20 nA)	8508A
200 μ A	10 Hz to 10 kHz	(500 μ A/A + 20 nA)	8508A
200 μ A	10 kHz to 30 kHz	(713 μ A/A + 20 nA)	8508A
200 μ A	30 kHz to 100 kHz	(4 ma/A + 20 nA)	8508A
2 mA	1 Hz to 10 Hz	(310 μ A/A + 200 nA)	8508A
2 mA	10 Hz to 10 kHz	(300 μ A/A + 200 nA)	8508A
2 mA	10 kHz to 30 kHz	(710 μ A/A + 200 nA)	8508A
2 mA	30 kHz to 100 kHz	(4 ma/A + 200 nA)	8508A
20 mA	1 Hz to 10 Hz	(310 μ A/A + 2 μ A)	8508A
20 mA	10 Hz to 10 kHz	(300 μ A/A + 2 μ A)	8508A
20 mA	10 kHz to 30 kHz	(710 μ A/A + 2 μ A)	8508A
20 mA	30 kHz to 100 kHz	(4 ma/A + 2 μ A)	8508A
200 mA	10 Hz to 10 kHz	(500 μ A/A + 20 μ A)	8508A
200 mA	10 kHz to 30 kHz	(710 μ A/A + 20 μ A)	8508A
200 mA	30 kHz to 100 kHz	(4 ma/A + 20 μ A)	8508A
2 A	10 Hz to 2 kHz	(620 μ A/A + 200 μ A)	8508A
2 A	2 kHz to 10 kHz	(725 μ A/A + 200 μ A)	8508A
2 A	10 kHz to 30 kHz	(3 mA/A + 200 μ A)	8508A

2009-04-01 through 2010-03-31

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20 A	10 Hz to 2 kHz	(820 μ A/A + 2 mA)	8508A
20 A	2 kHz to 10 kHz	(2.5 mA/A + 2 mA)	8508A

AC Current Source

<i>Current Range</i>	<i>Frequency Range</i>	<i>Best Uncertainty (\pm)^{note 1} (in % of applied current + floor)</i>	<i>Remarks</i>
29.00 μ A to 329.99 μ A	10 Hz to 20 Hz	(0.2 + 0.1 μ A)	5520A
29.00 μ A to 329.99 μ A	20 Hz to 45 Hz	(0.15 + 0.1 μ A)	5520A
29.00 μ A to 329.99 μ A	45 Hz to 1 kHz	(0.125 + 0.1 μ A)	5520A
29.00 μ A to 329.99 μ A	1 kHz to 5 kHz	(0.3 + 0.15 μ A)	5520A
29.00 μ A to 329.99 μ A	5 kHz to 10 kHz	(0.8 + 0.2 μ A)	5520A
29.00 μ A to 329.99 μ A	10 kHz to 30 kHz	(1.6 + 0.4 μ A)	5520A
0.33 mA to 3.2999 mA	10 Hz to 20 Hz	(0.2 + 0.15 μ A)	5520A
0.33 mA to 3.2999 mA	20 Hz to 45 Hz	(0.125 + 0.15 μ A)	5520A
0.33 mA to 3.2999 mA	45 Hz to 1 kHz	(0.1 + 0.15 μ A)	5520A
0.33 mA to 3.2999 mA	1 kHz to 5 kHz	(0.2 + 0.2 μ A)	5520A
0.33 mA to 3.2999 mA	5 kHz to 10 kHz	(0.5 + 0.3 μ A)	5520A
0.33 mA to 3.2999 mA	10 kHz to 30 kHz	(1.0 + 0.6 μ A)	5520A
3.3 mA to 32.999 mA	10 Hz to 20 Hz	(0.18 + 2 μ A)	5520A
3.3 mA to 32.999 mA	20 Hz to 45 Hz	(0.09 + 2 μ A)	5520A
3.3 mA to 32.999 mA	45 Hz to 1 kHz	(0.04 + 2 μ A)	5520A
3.3 mA to 32.999 mA	1 kHz to 5 kHz	(0.08 + 2 μ A)	5520A
3.3 mA to 32.999 mA	5 kHz to 10 kHz	(0.2 + 3 μ A)	5520A
3.3 mA to 32.999 mA	10 kHz to 30 kHz	(0.4 + 4 μ A)	5520A
33 mA to 329.99 mA	10 Hz to 20 Hz	(0.18 + 20 μ A)	5520A
33 mA to 329.99 mA	20 Hz to 45 Hz	(0.09 + 20 μ A)	5520A
33 mA to 329.99 mA	45 Hz to 1 kHz	(0.04 + 20 μ A)	5520A
33 mA to 329.99 mA	1 kHz to 5 kHz	(0.10 + 50 μ A)	5520A
33 mA to 329.99 mA	5 kHz to 10 kHz	(0.2 + 100 μ A)	5520A
33 mA to 329.99 mA	10 kHz to 30 kHz	(0.4 + 200 μ A)	5520A
0.33 A to 1.09999 A	10 Hz to 45 Hz	(0.18 + 100 μ A)	5520A
0.33 A to 1.09999 A	45 Hz to 1 kHz	(0.05 + 100 μ A)	5520A
0.33 A to 1.09999 A	1 kHz to 5 kHz	(0.6 + 1000 μ A)	5520A
0.33 A to 1.09999 A	5 kHz to 10 kHz	(2.5 + 5000 μ A)	5520A

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1.1 A to 2.99999 A	10 Hz to 45 Hz	(0.18 + 100 μ A)	5520A
1.1 A to 2.99999 A	45 Hz to 1 kHz	(0.06 + 100 μ A)	5520A
1.1 A to 2.99999 A	1 kHz to 5 kHz	(0.6 + 1 mA)	5520A
1.1 A to 2.99999 A	5 kHz to 10 kHz	(2.5 + 5 mA)	5520A
3 A to 10.9999 A	45 Hz to 100 Hz	(0.06 + 2 mA)	5520A
3 A to 10.9999 A	100 Hz to 1 kHz	(0.10 + 2 mA)	5520A
3 A to 10.9999 A	1 kHz to 5 kHz	(3.0 + 2 mA)	5520A
11 A to 20.5 A	45 Hz to 100 Hz	(0.12 + 5 mA)	5520A
11 A to 20.5 A	100 Hz to 1 kHz	(0.15 + 5 mA)	5520A
11 A to 20.5 A	1 kHz to 5 kHz	(3.0 + 5 mA)	5520A
20 A to 150 A	50 Hz to 400 Hz	(0.3 + 20 mA)	5520A/5500A Coil
150 A to 1000 A	50 Hz to 400 Hz	(0.3 + 90 mA)	5520A/5500A Coil

NVLAP Code: 20/E05

DC Current Measure

Current Range	Best Uncertainty (\pm) ^{note 1}	Remarks
± 100 nA	(0.25% + 0.06 nA)	8508A
± 1 μ A	(200 μ A/A + 0.1 nA)	8508A
± 10 μ A	(25 μ A/A + 0.2 nA)	8508A
± 200 μ A	(12 μ A/A + 0.4 nA)	8508A
± 2 mA	(12 μ A/A + 4.0 nA)	8508A
± 20 mA	(14 μ A/A + 40 nA)	8508A
± 200 mA	(48 μ A/A + 800 nA)	8508A
± 2 A	(200 μ A/A + 16 μ A)	8508A
± 20 A	(400 μ A/A + 0.4 mA)	8508A

DC Current Source

± 0 to 329.999 μ A	(150 μ A/A + 0.02 μ A)	5520A
± 0 to 3.29999 mA	(100 μ A/A + 0.05 μ A)	5520A
± 0 to 32.9999 mA	(100 μ A/A + 0.25 μ A)	5520A
± 0 to 329.999 mA	(100 μ A/A + 2.5 μ A)	5520A
± 0 to 1.09999 A	(200 μ A/A + 40 μ A)	5520A
± 1.1 to 2.99999 A	(380 μ A/A + 40 μ A)	5520A
± 0 to 10.9999 A	(500 μ A/A + 500 μ A)	5520A

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±11 to 20.5 A (1000 μA/A + 750 μA) 5520A

Resistance Measure

<i>Resistance Range</i>	<i>Best Uncertainty (±) ^{note 1}</i>	<i>Remarks</i>
2 Ω	(30 μΩ/Ω + 4.0 μΩ)	8508A
20 Ω	(15 μΩ/Ω + 20 μΩ)	8508A
200 Ω	(9 μΩ/Ω + 50 μΩ)	8508A
2 kΩ	(9.3 μΩ/Ω + 0.5 mΩ)	8508A
20 kΩ	(9 μΩ/Ω + 5 mΩ)	8508A
200 kΩ	(9 μΩ/Ω + 50 mΩ)	8508A
2 MΩ	(9 μΩ/Ω + 1 Ω)	8508A
20 MΩ	(340 μΩ/Ω + 0.4 kΩ)	8508A
200 MΩ	(0.2% + 6 kΩ)	8508A
2 GΩ	(0.3% + 2.2 MΩ)	8508A

Resistance Source

<i>Resistance Range</i>	<i>Best Uncertainty (±) ^{note 1} (in μΩ/Ω + floor in Ω)</i>	<i>Remarks</i>
0 to 10.9999 Ω	(40 + 0.001)	5520A
11 Ω to 32.9999 Ω	(30 + 0.0015)	5520A
33 Ω to 109.9999 Ω	(28 + 0.0014)	5520A
110 Ω to 329.9999 Ω	(28 + 0.002)	5520A
330 Ω to 1.099999 kΩ	(28 + 0.002.)	5520A
1.1 kΩ to 3.299999 kΩ	(29 + 0.02)	5520A
3.3 kΩ to 10.99999 kΩ	(28 + 0.02)	5520A
11 kΩ to 32.99999 kΩ	(28 + 0.2)	5520A
33 kΩ to 109.9999 kΩ	(28 + 0.2)	5520A
110 kΩ to 329.9999 kΩ	(32 + 2.5)	5520A
330 kΩ to 1.099999 MΩ	(33 + 3)	5520A
1.1 MΩ to 3.299999 MΩ	(80 + 50)	5520A
3.3 MΩ to 10.99999 MΩ	(140 + 50)	5520A
11 MΩ to 32.99999 MΩ	(400 + 2500)	5520A
33 MΩ to 109.9999 MΩ	(600 + 4500)	5520A
110 MΩ to 329.9999 MΩ	(3000 + 120 000)	5520A

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330 MΩ to 1100 MΩ

(15 000 + 600 000)

5520A

Electrical Substitution of RTDs
Source using 5520A

<i>Temperature Range in °C</i>	<i>Best Uncertainty (±) in °C ^{note 1}</i>	<i>RTD Type</i>
-200 to -80	0.05	PT 385 (100 Ω)
-80 to 0	0.05	PT 385 (100 Ω)
0 to 100	0.07	PT 385 (100 Ω)
100 to 300	0.09	PT 385 (100 Ω)
300 to 400	0.10	PT 385 (100 Ω)
400 to 630	0.12	PT 385 (100 Ω)
630 to 800	0.23	PT 385 (100 Ω)

NVLAP Code: 20/E06
DC Voltage Measure

<i>DC Voltage Range</i>	<i>Best Uncertainty (±) ^{note 1} (in μV/V + floor in μV)</i>	<i>Remarks</i>
±200 mV	(30 + 0.5)	8508A
±2 V	(3.5 + 2)	8508A
±20 V	(3.5 + 5.0)	8508A
±200 V	(5.5 + 50)	8508A
±1000 V	(5.5 + 550)	8508A

DC Voltage Source

±0 to 329.9999 mV	(20 + 1)	5520A
±0 to 3.299999 V	(12 + 2)	5520A
±0 to 32.99999 V	(12 + 20)	5520A
±30 to 329.9999 V	(18 + 150)	5520A
±100 to 1000.000 V	(18 + 1500)	5520A

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CALIBRATION LABORATORIES

NVLAP LAB CODE 200717-0

Electrical Simulation of Thermocouple Devices
Source and Measure using 5520A

<i>Temperature Range in °C</i>	<i>Best Uncertainty (±) in °C ^{note 1}</i>	<i>Thermocouple Type</i>
-210 to -100	0.29	J
-100 to -30	0.18	J
-30 to 150	0.15	J
150 to 760	0.19	J
760 to 1200	0.34	J
-200 to -100	0.33	K
-100 to -25	0.22	K
-25 to 120	0.24	K
120 to 1000	0.26	K
1000 to 1372	0.42	K
-250 to -150	0.63	T
-150 to 0	0.25	T
0 to 120	0.43	T
120 to 400	0.14	T

NVLAP Code: 20/E09
AC Voltage Measure

<i>AC Voltage Range</i>	<i>Frequency Range</i>	<i>Best Uncertainty (±) ^{note 1} (in μV/V + floor in V)</i>	<i>Remarks</i>
200 mV	1 Hz to 10 Hz	(165 + 14 μ)	8508A
200 mV	10 Hz to 40 Hz	(140 + 4.0 μ)	8508A
200 mV	40 Hz to 100 Hz	(115 + 4.0 μ)	8508A
200 mV	100 Hz to 2 kHz	(120 + 2.0 μ)	8508A
200 mV	2 kHz to 10 kHz	(137 + 4.0 μ)	8508A
200 mV	10 kHz to 30 kHz	(340 + 8.0 μ)	8508A
200 mV	30 kHz to 100 kHz	(765 + 20 μ)	8508A
2 V	1 Hz to 10 Hz	(150 + 122 μ)	8508A
2 V	10 Hz to 40 Hz	(120 + 22 μ)	8508A
2 V	40 Hz to 100 Hz	(95 + 22 μ)	8508A
2 V	100 Hz to 2 kHz	(75 + 20 μ)	8508A
2 V	2 kHz to 10 kHz	(200 + 50 μ)	8508A

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2 V	10 kHz to 30 kHz	(220 + 42 μ)	8508A
2 V	30 kHz to 100 kHz	(570 + 200 μ)	8508A
2 V	100 kHz to 300 kHz	(3000 + 2.0 m)	8508A
20 V	1 Hz to 10 Hz	(150 + 1.24 m)	8508A
20 V	10 Hz to 40 Hz	(115 + 0.3 m)	8508A
20 V	40 Hz to 100 Hz	(90 + 0.22 m)	8508A
20 V	100 Hz to 2 kHz	(75 + 0.24 m)	8508A
20 V	2 kHz to 10 kHz	(110 + 0.2 m)	8508A
20 V	10 kHz to 30 kHz	(220 + 0.4 m)	8508A
20 V	30 kHz to 100 kHz	(570 + 2.0 m)	8508A
20 V	100 kHz to 300 kHz	(3000 + 20 m)	8508A
200 V	40 Hz to 100 Hz	(90 + 2.0 m)	8508A
200 V	100 Hz to 2 kHz	(76 + 2.0 m)	8508A
200 V	2 kHz to 10 kHz	(110 + 2.0 m)	8508A
200 V	10 kHz to 30 kHz	(220 + 4.0 m)	8508A
200 V	30 kHz to 100 kHz	(570 + 20 m)	8508A
200 V	100 kHz to 300 kHz	(3000 + 0.2)	8508A
1000 V	40 Hz to 10 kHz	(115 + 20 m)	8508A
1000 V	10 kHz to 30 kHz	(225 + 40 m)	8508A

AC Voltage Source

1.0 mV to 32.999 mV	10 Hz to 45 Hz	(800 + 6 μ)	5520A
1.0 mV to 32.999 mV	45 Hz to 10 kHz	(150 + 6.2 μ)	5520A
1.0 mV to 32.999 mV	10 kHz to 20 kHz	(205 + 6 μ)	5520A
1.0 mV to 32.999 mV	20 kHz to 50 kHz	(1000 + 6 μ)	5520A
1.0 mV to 32.999 mV	50 kHz to 100 kHz	(3500 + 12 μ)	5520A
1.0 mV to 32.999 mV	100 kHz to 500 kHz	(8000 + 50 μ)	5520A
33 mV to 329.999 mV	10 Hz to 45 Hz	(300 + 8 μ)	5520A
33 mV to 329.999 mV	45 Hz to 10 kHz	(146 + 8 μ)	5520A
33 mV to 329.999 mV	10 kHz to 20 kHz	(160 + 8 μ)	5520A
33 mV to 329.999 mV	20 kHz to 50 kHz	(350 + 8 μ)	5520A
33 mV to 329.999 mV	50 kHz to 100 kHz	(800 + 32 μ)	5520A
33 mV to 329.999 mV	100 kHz to 500 kHz	(2000 + 70 μ)	5520A
0.33 mV to 3.29999 V	10 Hz to 45 Hz	(300 + 50 μ)	5520A

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0.33 mV to 3.29999 V	45 Hz to 10 kHz	(235 + 60 μ)	5520A
0.33 mV to 3.29999 V	10 kHz to 20 kHz	(190 + 60 μ)	5520A
0.33 mV to 3.29999 V	20 kHz to 50 kHz	(300 + 50 μ)	5520A
0.33 mV to 3.29999 V	50 kHz to 100 kHz	(700 + 125 μ)	5520A
0.33 mV to 3.29999 V	100 kHz to 500 kHz	(2400 + 600 μ)	5520A
3.3 V to 32.9999 V	10 Hz to 45 Hz	(300 + 650 μ)	5520A
3.3 V to 32.9999 V	45 Hz to 10 kHz	(150 + 600 μ)	5520A
3.3 V to 32.9999 V	10 kHz to 20 kHz	(240 + 600 μ)	5520A
3.3 V to 32.9999 V	20 kHz to 50 kHz	(350 + 600 μ)	5520A
3.3 V to 32.9999 V	50 kHz to 100 kHz	(900 + 1.6 m)	5520A
33 V to 329.999 V	10 Hz to 45 Hz	(190 + 2 m)	5520A
33 V to 329.999 V	45 Hz to 10 kHz	(200 + 6 m)	5520A
33 V to 329.999 V	10 kHz to 20 kHz	(250 + 6 m)	5520A
33 V to 329.999 V	20 kHz to 50 kHz	(300 + 6 m)	5520A
33 V to 329.999 V	50 kHz to 100 kHz	(2000 + 50 m)	5520A
330 V to 1020 V	45 Hz to 1 kHz	(300 + 10 m)	5520A
330 V to 1020 V	1 kHz to 5 kHz	(250 + 10 m)	5520A
330 V to 1020 V	5 kHz to 10 kHz	(300 + 10 m)	5520A

NVLAP Code: 20/E10

Capacitance Source

Capacitance Range	Best Uncertainty (±) ^{note 1} (in % of output + floor in nF)	Remarks
3.3 nF to 10.9999 nF	(0.25 + 0.01)	5520A
11 nF to 32.9999 nF	(0.25 + 0.13)	5520A
33 nF to 109.999 nF	(0.25 + 0.13)	5520A
110 nF to 329.999 nF	(0.2 + 0.64)	5520A
0.33 μF to 1.09999 μF	(0.25 + 1.2)	5520A
1.1 μF to 3.29999 μF	(0.2 + 6.39)	5520A
3.3 μF to 10.9999 μF	(0.28 + 12)	5520A

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TIME & FREQUENCY

NVLAP Code: 20/F01

Tachometers

<i>Range</i>	<i>Best Uncertainty</i> (\pm) ^{note 1} <i>(in % of measured + floor)</i>	<i>Remarks</i>
>0 to 20.00 RPM	0.02 + 0.001 RPM	Ametek 1965 Strobe Standard
20.01 to 999.99 RPM	0.015 + 0.01 RPM	Ametek 1965 Strobe Standard
1000.0 to 9999.9 RPM	0.015 + 0.1 RPM	Ametek 1965 Strobe Standard
10000 to 20000 RPM	0.015 + 1 RPM	Ametek 1965 Strobe Standard

NVLAP Code: 20/F05

Stopwatches & Timers

<i>Range</i>	<i>Best Uncertainty</i> (\pm) ^{note 1}	<i>Remarks</i>
1.5, 3, 24 Hour Test	1 s	True Time XL-DC

Frequency Measure

<i>Range</i>	<i>Best Uncertainty</i> (\pm) ^{note 1}	<i>Remarks</i>
5 Hz to 10 MHz	0.74 μ Hz/Hz	PM 6681

MECHANICAL

NVLAP Code: 20/M05

Flow Rate

Measure of Flow of Gases

<i>Range</i>	<i>Best Uncertainty</i> (\pm) ^{note 1}	<i>Remarks</i>
5 sccm to 20 sccm	0.05 sccm	DHI molbloc/molbox
20 sccm to 250 slm	0.25 %	DHI molbloc/molbox

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NVLAP Code: 20/M08

Mass

<i>Range</i>	<i>Best Uncertainty (±) ^{note 1}</i>	<i>Remarks</i>
25 kg	9.0 mg	Echelon I
20 kg	7.0 mg	Echelon I
10 kg	1.5 mg	Echelon I
5 kg	0.69 mg	Echelon I
3 kg	0.45 mg	Echelon I
2 kg	0.34 mg	Echelon I
1 kg	0.049 mg	Echelon I
500 g	0.032 mg	Echelon I
300 g	0.030 mg	Echelon I
200 g	0.0250 mg	Echelon I
100 g	0.0320 mg	Echelon I
50 g	0.0160 mg	Echelon I
30 g	0.0105 mg	Echelon I
20 g	0.0080 mg	Echelon I
10 g	0.0070 mg	Echelon I
5 g	0.00350 mg	Echelon I
3 g	0.00300 mg	Echelon I
2 g	0.00250 mg	Echelon I
1 g	0.00220 mg	Echelon I
500 mg	0.00100 mg	Echelon I
300 mg	0.00070 mg	Echelon I
200 mg	0.00060 mg	Echelon I
100 mg	0.00070 mg	Echelon I
50 mg	0.00060 mg	Echelon I
30 mg	0.00063 mg	Echelon I
20 mg	0.00055 mg	Echelon I
10 mg	0.00062 mg	Echelon I
5 mg	0.00050 mg	Echelon I
3 mg	0.00046 mg	Echelon I
2 mg	0.00041 mg	Echelon I
1 mg	0.00057 mg	Echelon I

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20 kg	7.0 mg	Echelon II
10 kg	3.2 mg	Echelon II
5 kg	2.9 mg	Echelon II
3 kg	2.8 mg	Echelon II
2 kg	2.8 mg	Echelon II
1 kg	0.14 mg	Echelon II
500 g	0.080 mg	Echelon II
300 g	0.096 mg	Echelon II
200 g	0.073 mg	Echelon II
100 g	0.062 mg	Echelon II
50 g	0.031 mg	Echelon II
30 g	0.019 mg	Echelon II
20 g	0.013 mg	Echelon II
10 g	0.0083 mg	Echelon II
5 g	0.0043 mg	Echelon II
3 g	0.0028 mg	Echelon II
2 g	0.0021 mg	Echelon II
1 g	0.0018 mg	Echelon II
500 mg	0.0012 mg	Echelon II
300 mg	0.00098 mg	Echelon II
200 mg	0.00091 mg	Echelon II
100 mg	0.00094 mg	Echelon II
50 mg	0.00085 mg	Echelon II
30 mg	0.00080 mg	Echelon II
20 mg	0.00079 mg	Echelon II
10 mg	0.00083 mg	Echelon II
5 mg	0.00076 mg	Echelon II
3 mg	0.00073 mg	Echelon II
2 mg	0.00073 mg	Echelon II
1 mg	0.00075 mg	Echelon II
500 kg	1.0 g	Echelon III
250 kg	1.0 g	Echelon III

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200kg	0.70 g	Echelon III
100kg	0.70 g	Echelon III
50 kg	0.50 g	Echelon III
30kg	0.50 g	Echelon III
25 kg	0.016 g	Echelon III
20 kg	0.007 g	Echelon III
10 kg	0.003 g	Echelon III
5 kg	0.002 g	Echelon III
3 kg	0.0015 g	Echelon III
2 kg	0.0015 g	Echelon III
500 lb	1.0 g	Echelon III
250 lb	0.7 g	Echelon III
200 lb	0.6 g	Echelon III
100 lb	400 mg	Echelon III
50 lb	15 mg	Echelon III
25 lb	11 mg	Echelon III
20lb	9.0 mg	Echelon III
10 lb	5.0 mg	Echelon III
5 lb	4.0 mg	Echelon III
3 lb	2.0 mg	Echelon III
2 lb	0.10 mg	Echelon III
1 lb	0.084 mg	Echelon III

THERMODYNAMIC

NVLAP Code: 20/T02

Humidity

Humidity Calibration of Digital Thermo-Hygrometers

Range in % RH

10 to 90

Best Uncertainty in % RH (\pm)^{note 1}

1

Remarks

8500 and 2500 Humidity Generators

2009-04-01 through 2010-03-31

Effective dates

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NVLAP Code: 20/T03

Temperature Calibration of Digital Thermo-Hygrometers

Range in °C	Best Uncertainty in °C (±)^{note 1}	Remarks
0 to 42	0.25	8500 and 2500 Humidity Generators

Laboratory Thermometers

Range in °C	Best Uncertainty in °C (±)^{note 1}	Remarks
-196 to 180	0.0125	SPRT/1590 Liq Nitrogen Dewar/Ice Bath/Stirred Bath/
180 to 420	0.020	SPRT/1590/ Stirred Bath

NVLAP Code: 20/T05

Pressure
Secondary Pressure Standards

Full Scale Range	Best Uncertainty (±)^{note 1}	Remarks^{notes 2,3}
±15 kPa	100 mPa/kPa of reading, 30 mPa/kPa of test span, or 2.7×10^{-1} Pa, whichever is greater	Gauge and Differential Modes
103.4 kPa	100 mPa/kPa of reading, 30 mPa/kPa of test span, or 9.3×10^{-1} Pa, whichever is greater	Gauge Mode
689.5 kPa	100 mPa/kPa of reading, 30 mPa/kPa of test span, or 6.2×10^0 Pa, whichever is greater	Absolute, Gauge, and Differential Gauge Modes
6 894.8 kPa	100 mPa/kPa of reading, 30 mPa/kPa of test span, or 6.2×10^1 Pa, whichever is greater	Absolute, Gauge, and Differential Gauge Modes
103 421 kPa	150 Pa/MPa of reading or 4.7×10^3 Pa, whichever is greater	Absolute and Gauge Modes

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Primary Pressure Standards

±15 kPa

30 mPa/kPa of reading + 13 mPa

Absolute, Absolute Differential,
and Gauge Modes

1. Represents an expanded uncertainty using a coverage factor, $k = 2$, at an approximate level of confidence of 95 %.
2. Unless otherwise noted, the pressure medium used in testing is nitrogen (99% pure).
3. DHI, PPCH uses a hydraulic fluid (PF-5080) as its pressure medium.

2009-04-01 through 2010-03-31

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