

CERTIFICATE OF ACCREDITATION

The ANSI National Accreditation Board

Hereby attests that

Accurate Calibration, Inc. 9735 Alpaca Street South El Monte, CA 91733

Fulfills the requirements of

ISO/IEC 17025:2017

and national standard

ANSI/NCSL Z540-1-1994 (R2002)

In the field of

CALIBRATION

This certificate is valid only when accompanied by a current scope of accreditation document. The current scope of accreditation can be verified at www.anab.org.

Jason Stine, Vice President

Expiry Date: 07 December 2024 Certificate Number: AC-1240









SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017 AND

ANSI/NCSL Z540-1-1994 (R2002)

Accurate Calibration, Inc.

9735 Alpaca Street South El Monte, CA 91733 Guy Uriel (626) 762-1520

CALIBRATION

Valid to: December 7, 2024 Certificate Number: AC-1240

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Temperature – Digital Indicator	Type J (32 to 1 112) °F Type K	0.22 °F	
	(32 to 2 400) °F Type N (32 to 2 400) °F	0.28 °F 0.41 °F	Fluke 8842A 5.5 Digit Multimeter; AMS 2750G
	Type R (32 to 2 400) °F Type S	2 °F 2 °F	
	(32 to 2 400) °F Type T (-300 to 392) °F	0.3 °F	
Thermocouple Temperature Simulation ¹ (Controllers and Recorders)	Type J (-200 to 2 100) °F Type K	0.74 °F	Fluke 724 Process Calibrator; AMS 2750G
	(-200 to 2 400) °F Type N	0.72 °F	
	(-200 to 2 100) °F Type R	0.73 °F	
	(-4 to 3 100) °F Type S	1.4 °F	
	(-4 to 3 100) °F Type T	1.4 °F	
	(-328 to 750) °F	0.73 °F	





Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Pressure Gauges	(0 to 10 000) psi	1.2 psi	Digital Pressure
(Hydraulic)	(10 000 to 15 000) psi	1.5 psi	Gauge Additel 680
Vacuum Sensors/Gauges (Pneumatic)	(0.0001 to 0.1) Torr	5.8 % of reading	MKS Baratron Capacitance Manometer
Vacuum Sensors/Gauges (Pneumatic)	(0.1 to 1) Torr	5.3 % of reading + 3.4 mTorr	MKS Baratron Capacitance Manometer
Vacuum Sensors/Gauges (Pneumatic)	(1 to 750) Torr	5.1 % of reading + 49 mTorr	MKS Baratron Capacitance Manometer
Vacuum Sensors/Gauges (Pneumatic)	(0.01 to 30) inHg	0.047 % of reading + 0.073 inHg	Ashcroft 2089 Digital Pressure Gauge
Vacuum Sensors/Gauges ¹ (Pneumatic)	(0.1 to 30) inHg	0.068 % of reading + 0.09 inHg	Ashcroft 1082 Test Gauge

Thermodynamic

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Temperature – Measure	Type J (32 to 1 112) °F Type K (32 to 2 400) °F Type N (32 to 2 400) °F Type R (32 to 2 300) °F	0.68 °F 0.71 °F 1.1 °F 1.3 °F	Fluke 725 Process Calibrator, Type S Thermocouple Standard; AMS 2750G
Temperature – Measure	Type S (32 to 2 400) °F Type T (-300 to 392) °F	1.3 °F 0.68 °F	Fluke 725 Process Calibrator, Type S Thermocouple Standard; AMS 2750G
Temperature Uniformity Surveys ¹	(32 to 1 000) °F (1 000 to 1 800) °F (1 800 to 2 400) °F	0.063 % of reading + 3.4 °F 0.28 % of reading + 1.2 °F 0.65 % of reading + 5.5 °F	Yokogawa GP20 Data Recorder, Type K Thermocouples; AMS 2750G
Humidity – Measure	(10 to 30) %RH (30 to 50) %RH (50 to 70) %RH (70 to 95) %RH	1 %RH 1.1 %RH 1.3 %RH 1.5 %RH	Rotronic HP32/Hygroclip2 Humidity Meter with Probe





Thermodynamic

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Infrared Thermometers (IR)	(-18 to 100) °C	1.5 °C	Omega BB701 Blackbody Source (Cavity) $\mathcal{E} = 0.95, \lambda = (8 \text{ to } 14) \mu \text{m}$
Infrared Thermometers (IR)	(100 to 260) °C (260 to 583) °C (583 to 760) °C (760 to 982) °C	2.5 °C 5.2 °C 7.5 °C 9.9 °C	Omega BB-4A Blackbody Source (Cavity) ε = 0.99, λ = (8 to 14) μm

Calibration and Measurement Capability (CMC) is expressed in terms of the measurement parameter, measurement range, expanded uncertainty of measurement and reference standard, method, and/or equipment. The expanded uncertainty of measurement is expressed as the standard uncertainty of the measurement multiplied by a coverage factor of 2 (*k*=2), corresponding to a confidence level of approximately 95%.

Notes:

- 1. On-site calibration service is available for this parameter, since on-site conditions are typically more variable than those in the laboratory, larger measurement uncertainties are expected on-site than what is reported on the accredited scope.
- 2. This scope is formatted as part of a single document including Certificate of Accreditation No. AC-1240.

Jason Stine, Vice President

