



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005  
& ANSI/NCSL Z540-1-1994

EUSTIS CO., INC./PYROCOM CALIBRATION LAB  
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CALIBRATION

Valid To: October 31, 2018

Certificate Number: 2496.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following calibrations<sup>1</sup>:

I. Thermodynamics

Parameter/Equipment	Range	CMC <sup>2</sup> (±)	Comments
Temperature – Measuring Equipment			Hart Scientific 1560 thermometer with 5628 PRT, 2560 module, and 2566 TC module
Calibration of Thermocouples:			
Type E	-196 °C	0.29 °C	Liquid Nitrogen (ECP 311)
Type J		0.32 °C	
Type K		0.40 °C	
Type N		0.32 °C	
Type T		0.29 °C	
Type E	(-30 to 125) °C	0.27 °C	7103 oil bath (ECP 336)
Type J		0.31 °C	
Type K		0.40 °C	
Type N		0.33 °C	
Type T		0.27 °C	

Parameter/Equipment	Range	CMC <sup>2</sup> (±)	Comments
Temperature – Measuring Equipment (cont)			Hart Scientific 1560 thermometer with 5628 PRT, 2560 module, and 2566 TC module
Calibration of Thermocouples:			
Type B	(25 to 100) °C	0.67 °C	9127 dry well (ECP 301)
Type E		0.29 °C	
Type J		0.33 °C	
Type K		0.40 °C	
Type N		0.33 °C	
Type R		0.59 °C	
Type S		0.52 °C	
Type T		0.29 °C	
Type B	(101 to 300) °C	0.67 °C	
Type E		0.29 °C	
Type J		0.33 °C	
Type K		0.40 °C	
Type N		0.33 °C	
Type R		0.60 °C	
Type S		0.52 °C	
Type T		0.29 °C	
Type T	(301 to 400) °C	0.35 °C	
Type B	(301 to 600) °C	0.68 °C	
Type E		0.30 °C	
Type J		0.33 °C	
Type K		0.41 °C	
Type N		0.33 °C	
Type R		0.60 °C	
Type S		0.52 °C	

Parameter/Equipment	Range	CMC <sup>2</sup> (±)	Comments
Temperature – Measuring Equipment (cont)			Hart Scientific 1560 thermometer with type S thermocouple, and 2566 & 2565 TC modules
Calibration of Thermocouples:			
Type B	(35 to 200) °C	0.99 °C	9112 furnace (ECP 302)
Type E		0.79 °C	
Type J		0.80 °C	
Type K		0.84 °C	
Type N		0.80 °C	
Type R		0.94 °C	
Type S		0.90 °C	
Type T		0.79 °C	
Type T	(201 to 400) °C	0.82 °C	
Type B	(201 to 500) °C	1.1 °C	
Type E		0.82 °C	
Type J		0.84 °C	
Type K		0.87 °C	
Type N		0.84 °C	
Type R		0.97 °C	
Type S		0.93 °C	
Type B	(501 to 600) °C	1.1 °C	
Type E		0.84 °C	
Type J		0.85 °C	
Type K		0.89 °C	
Type N		0.85 °C	
Type R		0.99 °C	
Type S	0.94 °C		
Type B	(601 to 700) °C	1.1 °C	
Type E		0.88 °C	
Type J		0.89 °C	
Type K		0.92 °C	
Type N		0.89 °C	
Type R		1.1 °C	
Type S	0.98 °C		
Type E	(701 to 800) °C	0.90 °C	

Parameter/Equipment	Range	CMC <sup>2</sup> (±)	Comments
Temperature – Measuring Equipment (cont)			Hart Scientific 1560 thermometer with type S thermocouple, and 2566 & 2565 TC modules
Calibration of Thermocouples:			
Type B	(701 to 1000) °C	1.1 °C	9112 furnace (ECP 302)
Type J		0.91 °C	
Type K		0.94 °C	
Type N		0.91 °C	
Type R		1.1 °C	
Type S		0.99 °C	
Type B	(1001 to 1100) °C	1.3 °C	
Type K		1.2 °C	
Type N		1.2 °C	
Type R		1.3 °C	
Type S	1.2 °C		
Type T	(35 to 300) °C	0.87 °C	
Type T	(301 to 400) °C	0.88 °C	
Type B	(35 to 400) °C	1.1 °C	
Type E		0.87 °C	
Type J		0.88 °C	
Type K		0.91 °C	
Type N		0.88 °C	
Type R		1.1 °C	
Type S	0.96 °C		
Type B	(401 to 600) °C	1.1 °C	
Type E		0.89 °C	
Type J		0.90 °C	
Type K		0.93 °C	
Type N		0.90 °C	
Type R		1.1 °C	
Type S	0.99 °C		
Type E	(601 to 800) °C	0.93 °C	
Type B	(601 to 1000) °C	1.2 °C	
Type J		0.95 °C	
Type K		0.97 °C	
Type N		0.95 °C	
Type R		1.1 °C	
Type S		1.1 °C	

Parameter/Equipment	Range	CMC <sup>2</sup> (±)	Comments
Temperature – Measuring Equipment (cont)			Hart Scientific 1560 thermometer with type S thermocouple, and 2566 & 2565 TC module
Calibration of Thermocouples:			
Type B	(1001 to 1100) °C	1.3 °C	Thermcraft high temperature furnace (ECP 326)
Type K		1.2 °C	
Type N		1.2 °C	
Type R		1.3 °C	
Type S		1.2 °C	
Type B	(1101 to 1210) °C	2.8 °C	
Type K		2.7 °C	
Type N		2.7 °C	
Type R		2.7 °C	
Type S		2.7 °C	
Type E	(-80 to 100) °C	0.27 °C	7380 oil bath (ECP 339)
Type J		0.31 °C	
Type K		0.40 °C	
Type N		0.32 °C	
Type T		0.27 °C	
Type B	(35 to 100) °C	0.69 °C	9173 met. well (ECP 341)
Type E		0.33 °C	
Type J		0.37 °C	
Type K		0.43 °C	
Type N		0.37 °C	
Type R		0.62 °C	
Type S		0.54 °C	
Type T		0.33 °C	
Type T	(101 to 300) °C	0.45 °C	

Parameter/Equipment	Range	CMC <sup>2</sup> (±)	Comments
Temperature – Measuring Equipment (cont)  Calibration of Thermocouples:			Hart Scientific 1560 thermometer with 5628 PRT, 2560 module, and 2566 TC module
Type B	(101 to 400) °C	0.76 °C	9173 met. well (ECP 341)
Type E		0.45 °C	
Type J		0.47 °C	
Type K		0.53 °C	
Type N		0.47 °C	
Type R		0.69 °C	
Type S		0.62 °C	
Type T	(301 to 400) °C	0.49 °C	
Type B	(401 to 660) °C	0.85 °C	
Type E		0.60 °C	
Type J		0.62 °C	
Type K		0.66 °C	
Type N		0.62 °C	
Type R		0.79 °C	
Type S		0.73 °C	
Temperature – Measuring Equipment  Calibration of RTDs:			Hart Scientific 1560 thermometer with 5628 PRT, 2560 module, and 2562 module
Pt 385, 100 Ω and Pt 392, 100 Ω	-196 °C	0.12 °C	Liquid Nitrogen (ECP 312)
	(-80 to 100) °C	0.13 °C	7380 oil bath (ECP 340)
	(-30 to 100) °C	0.13 °C	7103 oil bath (ECP 337)
	(101 to 125) °C	0.14 °C	
	(25 to 100) °C	0.13 °C	9127 dry well (ECP 303)
Pt 385, 100 Ω and Pt 392, 100 Ω	(101 to 300) °C	0.14 °C	
	(301 to 600) °C	0.15 °C	
	(35 to 100) °C	0.21 °C	9173 met. well (ECP 342)
	(101 to 300) °C	0.37 °C	
	(301 to 660) °C	0.54 °C	

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<sup>1</sup> This laboratory offers commercial calibration service.

<sup>2</sup> Calibration and Measurement Capability Uncertainty (CMC) is the smallest uncertainty of measurement that a laboratory can achieve within its scope of accreditation when performing more or less routine calibrations of nearly ideal measurement standards or nearly ideal measuring equipment. CMCs represent expanded uncertainties expressed at approximately the 95 % level of confidence, usually using a coverage factor of  $k = 2$ . The actual measurement uncertainty of a specific calibration performed by the laboratory may be greater than the CMC due to the behavior of the customer's device and to influences from the circumstances of the specific calibration.



## Accredited Laboratory

A2LA has accredited

### EUSTIS CO., INC./PYROCOM CALIBRATION LAB

Lynnwood, WA

for technical competence in the field of

### Calibration

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 *General requirements for the competence of testing and calibration laboratories*. This laboratory also meets the requirements for ANSI/NCSL Z540.1-1994 and any additional program requirements in the field of calibration. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (*refer to joint ISO-ILAC-IAF Communiqué dated 8 January 2009*).

Presented this 1<sup>st</sup> day of August 2016.



A handwritten signature in blue ink, reading "Jim C. Bunt".

Senior Director of Quality and Communications  
For the Accreditation Council  
Certificate Number 2496.01  
Valid to October 31, 2018

*For the calibrations to which this accreditation applies, please refer to the laboratory's Calibration Scope of Accreditation.*