



PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

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

Thermco Products Inc
10 Millpond Drive Unit 10 Lafayette, NJ 07848

(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 April 2017):

Thermodynamic Calibration
(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:

Initial Accreditation Date:

February 3, 2012

Issue Date:

July 12, 2018

Expiration Date:

July 12, 2020

Accreditation No.:

69071

Certificate No.:

L18-329

Tracy Szerszen
President/Operations Manager

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

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.pjllabs.com



Certificate of Accreditation: Supplement

Thermco Products Inc

10 Mill Pond Drive, Lafayette, NJ 07848
 Contact Name: Rich D'atria Phone: 973-300-9100

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

Thermodynamic

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE OR NOMINAL DEVICE SIZE AS APPROPRIATE	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (\pm)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED
Digital Thermometer & PRT ^F	-80 °C to -20 °C	0.065 °C	Fluke Bath 7381 b0b279 Burns IPRT 5615 853277 Fluke Super Thermometer 1594A & 2590 Multiplexer
	-20 °C to -0 °C	0.046 °C	Fluke Bath 7321 A56058 Burns IPRT 5626 1086 Fluke Super Thermometer 1594A & 2590 Multiplexer
	0 °C to 100 °C	0.038 °C	Fluke Bath 7321 A56058 Burns IPRT 5626 1086 Burns IPRT 5626 1086 Fluke Super Thermometer 1594A & 2590 Multiplexer
	100 °C to 200 °C	0.098 °C	Fluke Bath 6331 A56073 Burns IPRT 5626 1095 Fluke Super Thermometer 1594A & 2590 Multiplexer
Glass Thermometer Spirit ^F	-80 °C to -20 °C	0.11 °C	Fluke Bath 7381 b0b279 Burns IPRT 5626 853277 Fluke Super Thermometer 1594A & 2590 Multiplexer
	-20 °C to 0 °C	0.11 °C	Fluke Bath 7321 A56058 Burns IPRT 5626 1086 Fluke Super Thermometer 1594A & 2590 Multiplexer
	0 °C to 37 °C	0.11 °C	Fluke Bath 7321 A56058 Burns IPRT 5626 1086 Fluke Super Thermometer 1594A & 2590 Multiplexer
	37 °C to 100 °C	0.11 °C	Fluke Bath 6331 A38002 Burns IPRT 5626 1085 Fluke Super Thermometer 1594A & 2590 Multiplexer
Glass Thermometer Mercury ^F	-20 °C to 0 °C	0.062 °C	Fluke Bath 7321 A56058 Burns IPRT 5626 1086 Fluke Super Thermometer 1594A & 2590 Multiplexer
	0 °C to 37 °C	0.064 °C	Fluke Bath 7321 A56058 Burns IPRT 5626 1086 Fluke Super Thermometer 1594A & 2590 Multiplexer



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Glass Thermometer Mercury ^F	37 °C to 100 °C	0.066 °C	Fluke Bath 6331 A38002 Burns IPRT 5626 1085 Fluke Super Thermometer 1594A & 2590 Multiplexer
	100 °C to 200 °C	0.069 °C	Fluke Bath 6331 A56073 Burns IPRT 5626 1095 Fluke Super Thermometer 1594A & 2590 Multiplexer
	200 °C to 300 °C	0.069 °C	Fluke Bath 6331 A56073 Burns IPRT 5615 856968 Fluke Super Thermometer 1594A & 2590 Multiplexer
Humidity ^F	10 % to 30 %	1.3 % of reading	Vaisala MI70/HMP75 w/Thermotron Chamber SM1.0
	30 % to 50 %	1.4 % of reading	
	50 % to 60 %	1.4 % of reading	
	60 % to 80 %	1.4 % of reading	
	80 % to 95 %	1.5 % of reading	

- 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.
- 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.
- 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.