



PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

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

Dallas Calibration Services, LLC
3225 Interstate 30, Suite G, Mesquite, TX 75150

*(Hereinafter called the Organization) and hereby declares that Organization is accredited
in accordance with the recognized International Standard:*

ISO/IEC 17025:2017

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):

Dimensional, Electrical, Mechanical, and 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:

Tracy Szerszen
President

Initial Accreditation Date:

February 07, 2015

Issue Date:

January 19, 2023

Expiration Date:

March 31, 2025

Accreditation No:

84384

Certificate No:

L23-45

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

Dallas Calibration Services, LLC

3225 Interstate 30, Suite G, Mesquite, TX 75150
Contact Name: Gregg Shuman Phone: 972-270-0809

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

Dimensional

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
Calipers ^{FO}	Up in to 12 in	(543 + 25L) μ in	Gage Blocks GIDEP
Indicators ^{FO}	0.001 6 in to 1 in	(536 + 25L) μ in	
Micrometer ^{FO}	Up to 12 in	(90 + 2L) μ in	

Electrical

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE OR NOMINAL DEVICE SIZE AS APPROPRIATE	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (±)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED
Equipment to Measure DC Voltage ^{FO}	Up to 330 mV	13.2 μV/V + 3 μV	Fluke 5502A GIDEP
	0.33 V to 3.3 V	88.1 μV/V + 5 μV	
	3.3 V to 33 V	880 μV/V + 50 μV	
	33 V to 330 V	10 mV/V + 0.5 mV	
	330 V to 1 020 V	30 mV/V + 1.5 mV	
Equipment to Source DC Voltage ^{FO}	Up to 100 mV	4.51 μV/V + 3 μV	Keysight 3458A GIDEP
	100 mV to 1 V	9.45 μV/V + 0.3 μV	
	1 V to 10 V	570 μV/V + 0.5 μV	
	10 V to 100 V	0.67 mV/V + 0.003 mV	
	100 V to 1 050 V	8.06 mV/V + 0.01 mV	
Equipment to Measure AC Voltage at the listed frequencies ^{FO}			
10 Hz to 45 Hz	1 mV to 33 mV	32.2 μV/V + 20 μV	Fluke 5502A GIDEP
45 Hz to 10 kHz	1 mV to 33 mV	22.1 μV/V + 20 μV	
10 kHz to 20 kHz	1 mV to 33 mV	39.6 μV/V + 20 μV	
20 kHz to 50 kHz	1 mV to 33 mV	21.6 μV/V + 40 μV	
50 kHz to 100 kHz	1 mV to 33 mV	74.8 μV/V + 33 μV	
100 kHz to 500 kHz	1 mV to 33 mV	760 μV/V + 60 μV	
Equipment to Measure AC Voltage at the listed frequencies ^{FO}			
10 Hz to 45 Hz	33mV to 330 mV	163 μV/V + 20 μV	Fluke 5502A GIDEP
45 Hz to 10 kHz	33mV to 330 mV	66.5 μV/V + 20 μV	
10 kHz to 20 kHz	33mV to 330 mV	154 μV/V + 20 μV	
20 kHz to 50 kHz	33mV to 330 mV	255 μV/V + 40 μV	
50 kHz to 100 kHz	33mV to 330 mV	506 μV/V + 170 μV	
100 kHz to 500 kHz	33mV to 330 mV	1.01 mV/V + 330 μV	



Certificate of Accreditation: Supplement

Dallas Calibration Services, LLC

3225 Interstate 30, Suite G, Mesquite, TX 75150
Contact Name: Gregg Shuman Phone: 972-270-0809

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

Electrical

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE OR NOMINAL DEVICE SIZE AS APPROPRIATE	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (±)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED
Equipment to Measure AC Voltage at the listed frequencies ^{FO}			
10 Hz to 45 Hz	0.33 V to 3.3 V	1.07 mV/V + 60 μV	Fluke 5502A GIDEP
45 Hz to 10 kHz	0.33 V to 3.3 V	650 μV/V + 60 μV	
10 kHz to 20 kHz	0.33 V to 3.3 V	1.6 mV/V + 60 μV	
20 kHz to 50 kHz	0.33 V to 3.3 V	2.21 mV/V + 60 μV	
50 kHz to 100 kHz	0.33 V to 3.3 V	4.91 mV/V + 200 μV	
100 kHz to 500 kHz	0.33 V to 3.3 V	10.71 mV/V + 900 μV	
Equipment to Measure AC Voltage at the listed frequencies ^{FO}			
10 Hz to 45 Hz	3.3 V to 33 V	11.06 mV/V + 800 μV	Fluke 5502A GIDEP
45 Hz to 10 kHz	3.3 V to 33 V	6.64 mV/V + 600 μV	
10 kHz to 20 kHz	3.3 V to 33 V	15.4 mV/V + 600 μV	
20 kHz to 50 kHz	3.3 V to 33 V	22.1 mV/V + 600 μV	
50 kHz to 100 kHz	3.3 V to 33 V	50.7 mV/V + 2 000 μV	
10 Hz to 45 Hz	3.3 V to 33 V	11.06 mV/V + 800 μV	
Equipment to Measure AC Voltage at the listed frequencies ^{FO}			
45 Hz to 1 kHz	33 V to 330 V	111 mV/V + 3 mV	Fluke 5502A GIDEP
1 kHz to 10 kHz	33 V to 330 V	177 mV/V + 9 mV	
10 kHz to 20 kHz	33 V to 330 V	199 mV/V + 9 mV	
20 kHz to 50 kHz	33 V to 330 V	265 mV/V + 9 mV	
50 kHz to 100 kHz	33 V to 330 V	532 mV/V + 80 mV	
Equipment to Measure AC Voltage at the listed frequencies ^{FO}			
45 Hz to 1 kHz	330 V to 1 020 V	342 mV/V + 20 mV	Fluke 5502A GIDEP
1 kHz to 5 kHz	330 V to 1 020 V	546 mV/V + 20 mV	
5 kHz to 10 kHz	330 V to 1 020 V	614 mV/V + 20 mV	
Equipment to Source AC Voltage at the listed frequencies ^{FO}			
1 Hz to 40 Hz	1 mV to 10 mV	20.1 μV/V + .03 μV	Keysight 3458A GIDEP
40 Hz to 1 kHz	1 mV to 10 mV	13.5 μV/V + .03 μV	
1 kHz to 20 kHz	1 mV to 10 mV	20.1 μV /V+ .03 μV	
20 kHz to 50 kHz	1 mV to 10 mV	66.7 μV/V + .03 μV	
50 kHz to 100 kHz	1 mV to 10 mV	333 μV/V + .03 μV	
100 kHz to 300 kHz	1 mV to 10 mV	2.67 mV/V + 0.2 μV	



Certificate of Accreditation: Supplement

Dallas Calibration Services, LLC

3225 Interstate 30, Suite G, Mesquite, TX 75150
Contact Name: Gregg Shuman Phone: 972-270-0809

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

Electical

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
Equipment to Source AC Voltage at the listed frequencies ^{FO}			
1 Hz to 40 Hz	100 mV to 10 V	776 μ V/V + 400 μ V	Keysight 3458A GIDEP
40 Hz to 1 kHz	100 mV to 10 V	927 μ V/V + 200 μ V	
1 kHz to 20 kHz	100 mV to 10 V	0.93 mV/V + 200 μ V	
20 kHz to 50 kHz	100 mV to 10 V	2 mV/V + 200 μ V	
50 kHz to 100 kHz	100 mV to 10 V	6.22 mV/V + 200 μ V	
100 kHz to 300 kHz	100 mV to 10 V	20.5 mV/V + 1 000 μ V	
300 kHz to 1Mhz	100 mV to 10 V	76.7 mV/V + 1 000 μ V	
1 Mhz to 2 Mhz	100 mV to 10 V	107 mV/V + 1 000 μ V	
Equipment to Source AC Voltage at the listed frequencies ^{FO}			
1 Hz to 40 Hz	10 V to 100 V	15.7 mV/V + 4 mV	Keysight 3458A GIDEP
40 Hz to 1 kHz	10 V to 100 V	15.7 mV/V + 2 mV	
1 kHz to 20 kHz	10 V to 100 V	20.7 mV/V + 2 mV	
20 kHz to 50 kHz	10 V to 100 V	27.7 mV/V + 2 mV	
50 kHz to 100 kHz	10 V to 100 V	92.3 mV/V + 2 mV	
100 kHz to 300 kHz	10 V to 100 V	292 mV/V + 10 mV	
300 kHz to 1Mhz	10 V to 100 V	1.01 V/V + 10 mV	
Equipment to Source AC Voltage at the listed frequencies ^{FO}			
1 Hz to 40 Hz	100 V to 1 000 V	293 mV/V + 40 mV	Keysight 3458A GIDEP
40 Hz to 1 kHz	100 V to 1 000 V	293 mV/V + 20 mV	
1 kHz to 20 kHz	100 V to 1 000 V	418 mV/V + 20 mV	
20 kHz to 50 kHz	100 V to 1 000 V	809 mV/V + 20 mV	
50 kHz to 100 kHz	100 V to 1 000 V	2.01 V/V + 20 mV	
Equipment to Measure AC Current at the listed frequencies ^{FO}			
10 Hz to 20 Hz	30 μ A to 330 μ A	0.44 μ A/A + 0.1 μ A	Fluke 5502A GIDEP
20 Hz to 45 Hz	30 μ A to 330 μ A	0.33 μ A/A + 0.1 μ A	
45 Hz to 1 kHz	30 μ A to 330 μ A	0.28 μ A/A + 0.1 μ A	
1 kHz to 5 kHz	30 μ A to 330 μ A	0.66 μ A/A + 0.15 μ A	
5 kHz to 10 kHz	30 μ A to 330 μ A	1.76 μ A/A + 0.2 μ A	
10 kHz to 30 kHz	30 μ A to 330 μ A	3.52 μ A/A + 0.4 μ A	



Certificate of Accreditation: Supplement

Dallas Calibration Services, LLC
 3225 Interstate 30, Suite G, Mesquite, TX 75150
 Contact Name: Gregg Shuman Phone: 972-270-0809

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

Electrical

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE OR NOMINAL DEVICE SIZE AS APPROPRIATE	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (±)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED
Equipment to Measure AC Current at the listed frequencies ^{FO}			
10 Hz to 20 Hz	330 µA to 3.3 mA	4.27 µA/A + 0.15 µA	Fluke 5502A GIDEP
20 Hz to 45 Hz	330 µA to 3.3 mA	2.2 µA/A + 0.15 µA	
45 Hz to 1 kHz	330 µA to 3.3 mA	2.2 µA/A + 0.15 µA	
1 kHz to 5 kHz	330 µA to 3.3 mA	4.4 µA/A + 0.2 µA	
5 kHz to 10 kHz	330 µA to 3.3 mA	11 µA/A + 0.3 µA	
10 kHz to 30 kHz	330 µA to 3.3 mA	22.1 µA/A + 0.6 µA	
Equipment to Measure AC Current at the listed frequencies ^{FO}			
10 Hz to 20 Hz	3.3 mA to 33 mA	39.6 µA/A + 2 µA	Fluke 5502A GIDEP
20 Hz to 45 Hz	3.3 mA to 33 mA	19.8 µA/A + 2 µA	
45 Hz to 1 kHz	3.3 mA to 33 mA	8.8 µA/A + 2 µA	
1 kHz to 5 kHz	3.3 mA to 33 mA	17.6 µA/A + 2 µA	
5 kHz to 10 kHz	3.3 mA to 33 mA	44 µA/A + 3 µA	
10 kHz to 30 kHz	3.3 mA to 33 mA	88 µA/A + 4 µA	
Equipment to Measure AC Current at the listed frequencies ^{FO}			
10 Hz to 20 Hz	33 mA to 330 mA	399 µA/A + 20 µA	Fluke 5502A GIDEP
20 Hz to 45 Hz	33 mA to 330 mA	199 µA/A + 20 µA	
45 Hz to 1 kHz	33 mA to 330 mA	90.5 µA/A + 20 µA	
1 kHz to 5 kHz	33 mA to 330 mA	221 µA/A + 50 µA	
5 kHz to 10 kHz	33 mA to 330 mA	441 µA/A + 100 µA	
10 kHz to 30 kHz	33 mA to 330 mA	881 µA/A + 200 µA	
Equipment to Measure AC Current at the listed frequencies ^{FO}			
10 Hz to 45 Hz	330 mA to 1 A	1.33 mA/A + 0.1 mA	Fluke 5502A GIDEP
45 Hz to 1 kHz	330 mA to 1 A	0.31 mA/A + 1 mA	
1 kHz to 5 kHz	330 mA to 1 A	4.41 mA/A + 1 mA	
5 kHz to 10 kHz	330 mA to 1 A	18.4 mA/A + 5 mA	
Equipment to Measure AC Current at the listed frequencies ^{FO}			
10 Hz to 45 Hz	1 A to 3 A	3.61 mA/A + 0.1 mA	Fluke 5502A GIDEP
45 Hz to 1 kHz	1 A to 3 A	1.22 mA/A + 0.1 mA	
1 kHz to 5 kHz	1 A to 3 A	12.1 mA/A + 1 mA	
5 kHz to 10 kHz	1 A to 3 A	50.8 mA/A + 5 mA	



Certificate of Accreditation: Supplement

Dallas Calibration Services, LLC
3225 Interstate 30, Suite G, Mesquite, TX 75150
Contact Name: Gregg Shuman Phone: 972-270-0809

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

Electrical

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE OR NOMINAL DEVICE SIZE AS APPROPRIATE	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (±)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED
Equipment to Measure AC Current at the listed frequencies ^{FO}			
45 Hz to 100 Hz	3 A to 11 A	4.5 mA/A + 2 mA	Fluke 5502A GIDEP
100 Hz to 1 kHz	3 A to 11 A	7.43 mA/A + 2 mA	
1 kHz to 5 kHz	3 A to 11 A	7.43 mA/A + 2 mA	
Equipment to Measure AC Current at the listed frequencies ^{FO}			
45 Hz to 100 Hz	11 A to 20.5 A	16.6 mA/A + 5 mA	Fluke 5502A GIDEP
100 Hz to 1 kHz	11 A to 20.5 A	20.8 mA/A + 5 mA	
1 kHz to 5 kHz	11 A to 20.5 A	411 mA/A + 5 mA	
Equipment to Source AC Current at the listed frequencies ^{FO}			
10 Hz to 20 Hz	100 µA to 1 mA	2.74 µA/A + 0.03 µA	Keysight 3458A GIDEP
20 Hz to 45 Hz	100 µA to 1 mA	1.2 µA/A + 0.03 µA	
45 Hz to 100 Hz	100 µA to 1 mA	0.8 µA/A + 0.03 µA	
100 Hz to 5 kHz	100 µA to 1 mA	0.8 µA/A + 0.03 µA	
Equipment to Source AC Current at the listed frequencies ^{FO}			
10 Hz to 20 Hz	1 mA to 100 mA	275 µA/A + 20 µA	Keysight 3458A GIDEP
20 Hz to 45 Hz	1 mA to 100 mA	122 µA/A + 20 µA	
45 Hz to 100 Hz	1 mA to 100 mA	83.1 µA/A + 20 µA	
100 kHz to 5 kHz	1 mA to 100 mA	77.2 µA/A + 20 µA	
5 kHz to 20 kHz	1 mA to 100 mA	83.1 µA/A + 20 µA	
20 kHz to 50 kHz	1 mA to 100 mA	275 µA/A + 20 µA	
50 kHz to 100 kHz	1 mA to 100 mA	372 µA/A + 150 µA	
Equipment to Source AC Current at the listed frequencies ^{FO}			
10 Hz to 20 Hz	100 mA to 1 A	2.7 mA/A + 200 µA	Keysight 3458A GIDEP
20 Hz to 45 Hz	100 mA to 1 A	1.15 mA/A + 200 µA	
45 Hz to 100 Hz	100 mA to 1 A	679 µA/A + 200 µA	
100 Hz to 5 kHz	100 mA to 1 A	441 µA /A+ 200 µA	
5 kHz to 20 kHz	100 mA to 1 A	2.05 mA/A + 200 µA	
20 kHz to 50 kHz	100 mA to 1 A	6.68 mA/A + 400 µA	



Certificate of Accreditation: Supplement

Dallas Calibration Services, LLC

3225 Interstate 30, Suite G, Mesquite, TX 75150
Contact Name: Gregg Shuman Phone: 972-270-0809

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

Electrical

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
Equipment to Measure DC Current ^{FO}	Up to 330 μ A	0.030 μ A/A + 0.02 μ A	Fluke 5502A GIDEP
	0.33 mA to 3.3 mA	0.29 μ A/A + 0.05 μ A	
	3.3 mA to 33 mA	2.25 μ A/A + 0.25 μ A	
	33 mA to 330 mA	22.3 μ A/A + 2.5 μ A	
	330 mA to 1.1 A	279 μ A/A + 44 μ A	
	1.1 A to 3 A	766 μ A/A + 44 μ A	
	3 A to 11 A	4.45 mA/A + 500 μ A	
	11 A to 20.5 A	80.4 mA/A + 750 μ A	
Equipment to Source DC Current ^{FO}	Up to 100 nA	0.03 μ A/A + 0.04 nA	Keysight 3458A GIDEP
	100 nA to 1 μ A	0.58 nA/A + 0.04 nA	
	1 μ A to 10 μ A	0.63 nA/A + 0.1 nA	
	10 μ A to 100 μ A	6.32 nA/A + 0.8 nA	
	100 μ A to 1 mA	91.4 nA/A + 5 nA	
	1 mA to 10 mA	257 nA/A + 50 nA	
	10 mA to 100 mA	5.95 μ A/A + 0.5 μ A	
	100 mA to 1 A	136 μ A/A + 10 μ A	
Equipment to Measure Resistance ^{FO}	Up to 11 Ω	1.24 m Ω / Ω + 1 m Ω	Fluke 5502A GIDEP
	11 Ω to 33 Ω	2.78 m Ω / Ω + 1.5 m Ω	
	33 Ω to 110 Ω	6.69 m Ω / Ω + 1.4 m Ω	
	110 Ω to 330 Ω	19.8 m Ω / Ω + 2 m Ω	
	330 Ω to 1.1 k Ω	66.8 m Ω / Ω + 2 m Ω	
	1.1 k Ω to 3.3 k Ω	199 m Ω / Ω + 20 m Ω	
	3.3 k Ω to 11 k Ω	668 m Ω / Ω + 20 m Ω	
	11 k Ω to 33 k Ω	1.98 Ω / Ω + 200 m Ω	
	33 k Ω to 110 k Ω	8.10 Ω / Ω + 200 m Ω	
	110 k Ω to 330 k Ω	46.5 Ω / Ω + 2 Ω	
	330 k Ω to 1.1 M Ω	111 Ω / Ω + 2 Ω	
	1.1 M Ω to 3.3 M Ω	1.57 k Ω / Ω + 30 Ω	
	3.3 M Ω to 11 M Ω	6.63 k Ω / Ω + 50 Ω	
	11 M Ω to 33 M Ω	137 k Ω / Ω + 2.5 k Ω	
	33 M Ω to 110 M Ω	572 k Ω / Ω + 3 k Ω	
	110 M Ω to 330 M Ω	1.1 M Ω / Ω + 100 k Ω	
	330 M Ω to 1 100 M Ω	14.5 M Ω / Ω + 500 k Ω	



Certificate of Accreditation: Supplement

Dallas Calibration Services, LLC
 3225 Interstate 30, Suite G, Mesquite, TX 75150
 Contact Name: Gregg Shuman Phone: 972-270-0809

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

Electrical

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
Equipment to Source Resistance ^{FO}	Up to 10 Ω	346 $\mu\Omega/\Omega$ + 50.0 $\mu\Omega$	Keysight 3458A GIDEP
	10 Ω to 100 Ω	2.92 m Ω/Ω + 500 $\mu\Omega$	
	100 Ω to 1 k Ω	24.9 m Ω/Ω + 500 $\mu\Omega$	
	1 k Ω to 10 k Ω	257 m Ω/Ω + 5 m Ω	
	10 k Ω to 100 k Ω	2.49 Ω/Ω + 50 m Ω	
	100 k Ω to 1 M Ω	34.3 Ω/Ω + 2.00 Ω	
	1 M Ω to 10 M Ω	1.09 k Ω/Ω + 100 Ω	
	10 M Ω to 100 M Ω	100 k Ω/Ω + 1 k Ω	
	100 M Ω to 1 G Ω	10 M Ω/Ω + 10 k Ω	
Temperature Calibration, Indication and Control Equipment used with Thermocouple Type J ^{FO}	-200 $^{\circ}\text{C}$ to -100 $^{\circ}\text{C}$	0.20 $^{\circ}\text{C}$	Fluke 5502A GIDEP
	-100 $^{\circ}\text{C}$ to -30 $^{\circ}\text{C}$	0.14 $^{\circ}\text{C}$	
	-30 $^{\circ}\text{C}$ to 150 $^{\circ}\text{C}$	0.13 $^{\circ}\text{C}$	
	150 $^{\circ}\text{C}$ to 760 $^{\circ}\text{C}$	0.15 $^{\circ}\text{C}$	
	760 $^{\circ}\text{C}$ to 1 200 $^{\circ}\text{C}$	0.18 $^{\circ}\text{C}$	
Temperature Calibration, Indication and Control Equipment used with Thermocouple Type K ^{FO}	-200 $^{\circ}\text{C}$ to -100 $^{\circ}\text{C}$	0.24 $^{\circ}\text{C}$	
	-100 $^{\circ}\text{C}$ to -25 $^{\circ}\text{C}$	0.15 $^{\circ}\text{C}$	
	-25 $^{\circ}\text{C}$ to 120 $^{\circ}\text{C}$	0.14 $^{\circ}\text{C}$	
	120 $^{\circ}\text{C}$ to 1 000 $^{\circ}\text{C}$	0.20 $^{\circ}\text{C}$	
	100 $^{\circ}\text{C}$ to 1 372 $^{\circ}\text{C}$	0.29 $^{\circ}\text{C}$	
Temperature Calibration, Indication and Control Equipment used with Thermocouple Type S ^{FO}	0 $^{\circ}\text{C}$ to 250 $^{\circ}\text{C}$	0.33 $^{\circ}\text{C}$	
	250 $^{\circ}\text{C}$ to 1 000 $^{\circ}\text{C}$	0.26 $^{\circ}\text{C}$	
	1 000 $^{\circ}\text{C}$ to 1 400 $^{\circ}\text{C}$	0.26 $^{\circ}\text{C}$	
	1 400 $^{\circ}\text{C}$ to 1 767 $^{\circ}\text{C}$	0.33 $^{\circ}\text{C}$	
Temperature Calibration, Indication and Control Equipment used with Thermocouple Type T ^{FO}	-250 $^{\circ}\text{C}$ to -150 $^{\circ}\text{C}$	0.43 $^{\circ}\text{C}$	
	-150 $^{\circ}\text{C}$ to 0 $^{\circ}\text{C}$	0.19 $^{\circ}\text{C}$	
	0 $^{\circ}\text{C}$ to 120 $^{\circ}\text{C}$	0.14 $^{\circ}\text{C}$	
	120 $^{\circ}\text{C}$ to 400 $^{\circ}\text{C}$	0.13 $^{\circ}\text{C}$	



Certificate of Accreditation: Supplement

Dallas Calibration Services, LLC

3225 Interstate 30, Suite G, Mesquite, TX 75150
Contact Name: Gregg Shuman Phone: 972-270-0809

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

Mechanical

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
Vacuum Gauges ^{FO}	-24 inHg to 0 inHg	0.1 inHg + 0.65 % of Reading	Crystal Instruments
Pressure Gauges Pneumatic ^{FO}	Up to 300 psi	0.13 % of Reading	XP-2I GIDEP
Pressure Gauge Hydraulic (Water) ^{FO}	Up to 10 000 psi	0.67 % of Reading	Martel 1919163 GIDEP

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
IR Thermometers ^{FO}	50 °C	1.3 °C	Blackbody Source Fluke 9135 GIDEP
	100 °C		
	150 °C		

1. 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.
2. 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.
3. The presence of a superscript FO means that the laboratory performs calibration of the indicated parameter both at its fixed location and onsite at customer locations. Example: Outside Micrometer^{FO} would mean that the laboratory performs this calibration at its fixed location and onsite at customer locations.
4. Measurement uncertainties obtained for calibrations performed at customer sites can be expected to be larger than the measurement uncertainties obtained at the laboratories fixed location for similar calibrations. This is due to the effects of transportation of the standards and equipment and upon environmental conditions at the customer site which are typically not controlled as closely as at the laboratories fixed location.
5. The term L represents length in inches or millimeters as appropriate to the uncertainty statement.