



# CERTIFICATE OF ACCREDITATION

*This is to attest that*

## **DMTE CALIBRATION LLC**

5916 FRANCES AVENUE NORTHEAST  
TACOMA, WASHINGTON 98422, U.S.A.

### **Calibration Laboratory CL-129**

has met the requirements of AC204, *IAS Accreditation Criteria for Calibration Laboratories*, and has demonstrated compliance with ISO/IEC Standard 17025:2017, *General requirements for the competence of testing and calibration laboratories*. This organization is accredited to provide the services specified in the scope of accreditation.

Effective Date August 28, 2023

Expiration Date June 1, 2024



A handwritten signature in black ink that reads "Raj Nathan".

**President**

# SCOPE OF ACCREDITATION

International Accreditation Service, Inc.

3060 Saturn Street, Suite 100, Brea, California 92821, U.S.A. | [www.iasonline.org](http://www.iasonline.org)

## DMTE CALIBRATION LLC

[www.dmtecalibration.com](http://www.dmtecalibration.com)

**Contact Name** Glenn Miller

**Contact Phone** + 1-253-678-7676

*Accredited to ISO/IEC 17025:2017*

*Effective Date August 28, 2023*

### CALIBRATION AND MEASUREMENT CAPABILITY (CMC)\*

MEASURED QUANTITY or DEVICE TYPE CALIBRATED	RANGE	UNCERTAINTY <sup>1,2</sup> (±)	CALIBRATION METHOD OR PROCEDURE, STANDARD EQUIPMENT (OPTIONAL)
<b>Dimensional</b>			
Calipers, Dial Indicators, LVDTs, Micrometers	Up to 4 in 4 in to 12 in 12 in to 24 in	290 µin 310 µin 350 µin	Gauge Blocks, ASME B89.1.13 Gauge Blocks, ASME B89.1.10M
Extensometer/ Deflectometer	Up to 1 in 1 in to 2 in	39 µin 310 µin	Heidenhain MT 60K, ASTM E83 Renishaw XL-80, ASTM E83
Gage Length	Up to 12 in	0.0011 in	Digital Caliper, ASTM E83
Crosshead Distance	Up to 40 in	0.000091 in	Renishaw XL-80, ASTM E2309
Angle Rotation	Up to 180°	0.008°	Digital Angle Encoder, ASTM E2309
<b>Mechanical</b>			
Compression – Load Cells	50 lbf to 1150 lbf 200 lbf to 11500 lbf 4048 lbf to 135 klbf 3000 lbf to 235 klbf	0.068 % 0.17 % 0.13 % 0.17 %	Class F Weights, ASTM E4, ASTM E74 Load Cell/Digital Readout
Tension – Load Cells, Dynamometers	50 lbf to 1150 lbf 200 lbf to 11500 lbf 2372 lbf to 135 klbf 3237 lbf to 235 klbf	0.12 % 0.11 % 0.078 % 0.17 %	Class F Weights, ASTM E4, ASTM E74 Load Cell/Digital Readout
Crosshead Speed	0.01 mm/min to 60 m/min	0.12 %	Renishaw XL-80, ASTM E2658
Torque Cells	0.2 lbf-in to 221 lbf-in 316 lbf-in to 885 lbf-in	0.72 % 0.34 %	Torque Arm, Digital Protractor, Class F Weights, ASTM E2624

\* If information in this CMC is presented in non-SI units, the conversion factors stated in NIST Special Publication 811 "Guide for the Use of the International System of Units (SI)" apply.

# SCOPE OF ACCREDITATION

International Accreditation Service, Inc.

3060 Saturn Street, Suite 100, Brea, California 92821, U.S.A. | [www.iasonline.org](http://www.iasonline.org)

MEASURED QUANTITY or DEVICE TYPE CALIBRATED	RANGE	UNCERTAINTY <sup>1,2</sup> (±)	CALIBRATION METHOD OR PROCEDURE, STANDARD EQUIPMENT (OPTIONAL)
Torque Wrench	6 lbf-ft to 30 lbf-ft 50 lbf-ft to 600 lbf-ft	2.3 % 1.5 %	Torque Transducer/digital readout, ASME B107.300
Torque Multiplier	600 lbf-ft to 1000 lbf-ft	5.2 %	Torque Transducer/digital readout, ASME B107.300
Scales	0.01 mg to 40 g 40 g to 400 g 400 g to 6 kg 6 kg to 12 kg 12 kg to 34 kg 34 kg to 60 kg	0.08 mg 0.6 mg 5.8 mg 0.58 g 0.59 g 0.37 g	Class 1 Weights, ASTM E898  Class F Weights, ASTM E898
Hardness – Rockwell Indirect	(61 to 84) HRA (24 to 64) HRC (48 to 84) HRBW (75 to 96) HREW (65 to 98) HRFW (94 to 100) HRHW (72 to 92) HR15N (44 to 80) HR30N (26 to 70) HR45N (74 to 92) HR15TW (45 to 82) HR30TW (17 to 72) HR45TW	0.32 HRA 0.45 HRC 1.2 HRBW 0.33 HREW 0.64 HRFW 0.48 HRHW 0.49 HR15N 0.62 HR30N 0.61 HR45N 0.39 HR15TW 0.58 HR30TW 0.7 HR45TW	Hardness Blocks, ASTM E18 and E110
Hardness – Brinell Indirect HBW 10/500 HBW 10/3000	(50 to 166) HBW (101 to 690) HBW	2.8 HBW 8.8 HBW	Hardness Blocks, ASTM E10 and E110
Brinell Scope (Type B)	Up to 10 mm/0.01 mm	0.019 mm	Stage Micrometer, ASTM E10 and E110
Hardness – Knoop & Vickers Indirect			Hardness Blocks, ASTM E92 & E384
HV 0.1	119 HV	6.1 HV	
HV 0.1	639 HV	25 HV	
HV 0.3	114 HV	3.6 HV	
HV 0.3	620 HV	18 HV	
HV 0.5	108 HV	3.5 HV	
HV 0.5	621 HV	13 HV	
HK 0.1	499 HK	19 HK	
HK 0.1	783 HK	30 HK	
HK 0.3	476 HK	20 HK	
HK 0.3	730 HK	20 HK	

# SCOPE OF ACCREDITATION

International Accreditation Service, Inc.

3060 Saturn Street, Suite 100, Brea, California 92821, U.S.A. | [www.iasonline.org](http://www.iasonline.org)

MEASURED QUANTITY or DEVICE TYPE CALIBRATED	RANGE	UNCERTAINTY <sup>1,2</sup> (±)	CALIBRATION METHOD OR PROCEDURE, STANDARD EQUIPMENT (OPTIONAL)
Hardness – Knoop & Vickers Indirect (continued)			Hardness Blocks, ASTM E92 & E384
HK 0.5	461 HK	20 HK	
HK 0.5	710 HK	20 HK	
HK 1.0	471 HK	20 HK	
HK 1.0	703 HK	20 HK	
<b>Thermal</b>			
Ovens, Furnaces and Heated Presses	-190 °C to 1300 °C	2.3 °C	WI-1006 (Elements of ASTM E145) Omega Temperature Meter

<sup>1</sup>The uncertainty covered by the Calibration and Measurement Capability (CMC) is expressed as the expanded uncertainty having a coverage probability of approximately 95 %. It is the smallest measurement uncertainty that a laboratory can achieve within its scope of accreditation when performing calibrations of a best existing device. The measurement uncertainty reported on a calibration certificate may be greater than that provided in the CMC due to the behavior of the calibration item and other factors that may contribute to the uncertainty of a specific calibration.

<sup>2</sup>When uncertainty is stated in relative terms (such as percent, a multiplier expressed as a decimal fraction or in scientific notation), it is in relation to instrument reading or instrument output, as appropriate, unless otherwise indicated.