



# CERTIFICATE OF ACCREDITATION

*This is to attest that*

## **ELECTRO-MECHANICAL INSTITUTE (HOUSING & BUILDING NATIONAL RESEARCH CENTER)**

87 EL-TAHRIR ST, DOKKI, GIZA  
CAIRO 11511, EGYPT

### **Calibration Laboratory CL-148**

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 May 6, 2020

Expiration Date December 1, 2022



A handwritten signature in black ink, reading 'Raj Nathan'.

**President**

Visit [www.iasonline.org](http://www.iasonline.org) for current accreditation information.

# 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)

## (HOUSING & BUILDING NATIONAL RESEARCH CENTER)

[www.hbrc.edu.eg](http://www.hbrc.edu.eg)

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Accredited to ISO/IEC 17025:2017

Effective Date May 6, 2020

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

MEASURED QUANTITY or DEVICE TYPE CALIBRATED	RANGE	UNCERTAINTY <sup>1,2</sup> (±)	CALIBRATION PROCEDURE AND/OR STANDARD EQUIPMENT USED
<b>Dimensional</b>			
Vernier Caliper	0 mm to 150 mm	10 µm	Gauge Block Set, Grade 1
<b>Mechanical</b>			
Pressure Gauge	1 bar to 600 bar	0.6 %	Comparison with Master Pressure Gauge
Universal Compression and Tension Testers	0.1 kN to 400 kN 400 kN to 600 kN 600 kN to 1000 kN	1.5 kN 3 kN 5 kN	MATEST Load Cell & Digital Indicator
Scales/Balances	0 kg to 100 kg 100 kg to 200 kg 0 kg to 5 kg 0 kg to 1 kg 0 g to 200 g	11 g 30 g 1.4 g 1.2 mg 0.4 µg	'F' class weights 'E2' class weights
<b>Thermal</b>			
Thermocouples "J" Type "K" Type "T" Type	150 °C to 600 °C 150 °C to 600 °C 150 °C to 400 °C	1.7 °C 1.6 °C 1.1 °C	Dry Block Calibrator FLUKE 9150
Ovens/Furnaces	0 °C to 450 °C	1.9 °C	Thermocouples

<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.

\* 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.