CERTIFICATE OF ACCREDITATION

This is to attest

ACON CALIBRATION AND INSTRUMENTS TRADING

AL KHAYARIN HOLDING BUILDING, OFFICE NO 214 2ND FLOOR, BLDG NO 194, ZONE 26, STREET 230, C RING ROAD, P.O BOX 12426
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Calibration Laboratory CL-303

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.

Expiration Date June 1, 2026
Effective Date May 7, 2025

International Accreditation Service
Issued under the authority of IAS management

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SCOPE OF ACCREDITATION

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ACON CALIBRATION AND INSTRUMENTS TRADING

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Accredited to ISO/IEC 17025:2017 *Effective Date May 7, 2025*

CALIBRATION AND MEASUREMENT CAPABILITY (CMC)*

MEASURED QUANTITY or DEVICE TYPE CALIBRATED	RANGE	UNCERTAINTY[1,2] (±)	CALIBRATION METHOD OR PROCEDURE, STANDARD EQUIPMENT (OPTIONAL)
Dimensional			
Caliper (Vernier / Dial / Digital)	Up to 300 mm	7.8 µm	Using Slip gauge set and Caliper checker by Direct Measurement Method
Dial Indicator (Plunger)	Up to 10 mm	6.8 µm	Using Dial calibration system by Direct Measurement Method
Dial Indicator (Lever)	Up to 1 mm	6.8 µm	Using Dial calibration Tester by Direct Measurement Method
External Micrometer	Up to 150 mm 150 to 300 mm	0.74 µm 7.8 µm	Using slip gauge set, optical parallel and optical flat by Direct Measurement Method
Micrometer setting Rod	Up to 300 mm	3.7 µm	Using slip gauge set, electronic probe with DRO and granite comparator by Direct Measurement Method
Height Guage	Up to 600 mm	14 µm	Using surface plate, Electronic 2D Height gauge / Caliper checker / slip gauge set by Direct Measurement Method
Dial Calibration Tester	Up to 5 mm	0.56 µm	Using LVDT Probe by Direct Measurement Method
Test Sieve	5 mm to 125 mm	27 µm	Using Electronic caliper Direct Measurement Method

** 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.*

MEASURED QUANTITY or DEVICE TYPE CALIBRATED	RANGE	UNCERTAINTY[1,2] (±)	CALIBRATION METHOD OR PROCEDURE, STANDARD EQUIPMENT (OPTIONAL)
Flakiness & Elongation Gauge	Up to 100 mm	3.4 µm	Using 2D Electronic Height Gauge / Vernier Caliper by direct measurement method
Thickness Gauge	Up to 12.7 mm 12.7 mm to 50 mm	0.67 µm 1.5 µm	Using slip gauge set by direct measurement method
Ultrasonic Thickness gauge	Up to 100 mm	64 µm	Using slip gauge set by direct measurement method
LVDT probe	Up to 25 mm	0.84 µm	Using slip gauge set and comparator by direct measurement method
Pistol Caliper	Up to 80 mm	6.6 µm	Using slip gauge set by direct measurement method
Hegman Gauge	Up to 100 µm	1.2 µm	Using electronic probe with DRO and comparator stand
Cone Penetrometer	Up to 40 mm	64 µm	Using slip gauge set
PCD Gauge	Up to 253 mm	8.1µm	Using 2D Electronic Height Gauge / Granite Surface Plate by direct measurement method
Caliper Checker	Up to 600 mm	6.7 µm	Using 2D Electronic Height Gauge / Granite Surface Plate by direct measurement method
Surface Plate[5]	1000 mm x 1000 mm	1.5 µm	Using Electronic Level by direct measurement method
Mechanical			
Vibration Meter[5]	10 m/s^2 (159.15 Hz)	0.37 m/s^2	Using Vibration Calibrator by Direct method
Anemometers	2.5 m/s to 15 m/s	3.8 %	Using standard pitot tube and wind tunnel by comparison method
Sound Level Meter[5]	94 dB	0.48 dB	Sound level calibrator by Direct method
Torque wrench / Torque Meter (Type I, Class B, C, D, E / Type II, Class A, B, D, E)	1 N m to 60 N m	2.7 %	Using standard Torque transducers by Comparison method
	60 N m to 1000 N m	3.6 %	
RPM Meter / Tachometer (Contact Mode)	200 rpm to 5000 rpm	3.4 rpm	Using Contact – Non-Contact Tachometer and Tachometer Calibrator by comparison method
RPM Meter / Tachometer[5] (Non–contact)	200 rpm to 50000 rpm 50000 rpm to 99000 rpm	6.5 rpm 55 rpm	Using Contact – Non-Contact Tachometer and Tachometer

MEASURED QUANTITY or DEVICE TYPE CALIBRATED	RANGE	UNCERTAINTY[1,2] (±)	CALIBRATION METHOD OR PROCEDURE, STANDARD EQUIPMENT (OPTIONAL)
			Calibrator by comparison method
Weighing balance[5], Accuracy Class III & coarser (readability: 0.1 g)	1000 g to 6000 g	0.3 g	Using F1 class reference standard weights as per OIML R76
Weighing balance[5], Accuracy Class III & coarser (readability: 1 g)	6000 g to 50000 g	6 g	Using F1 class reference standard weights as per OIML R76
Pressure or Vacuum Gauge[5] (Dial / Digital) & Recorder / Pressure transducer / transmitter / Safety valve / Pressure Switch	-12 psi to 0 psi 0 psi to 300 psi 300 psi to 3000 psi 3000 psi to 10000 psi	2.9 % 0.77 % 0.77 % 0.77 %	Master Digital Pressure Gauge, Pressure calibrator, and Pneumatic and hydraulic Pressure Comparator by Comparison method as per DKD–R6–1 & 2
Thermal			
Temperature for noncontact type Infrared Thermometer / Thermal Imaging camera / Pyrometer[5]	50 °C to 500 °C	2.4 °C	Using IR Thermometer and IR Calibrator by comparison method
Thermo–Hygrometer, Data logger, Humidity Transmitter, Dry and wet bulb thermometer, Humidity meter with sensor, humidity transmitter / transducer	10 %RH to 95 %RH @ 18 °C to 28 °C	1.8 %RH	Using a Calibrated Humidity generator by direct method
	18 °C to 28 °C @ 45 %RH	0.9 °C	
RTD / Thermocouple with or without Indicator / Recorder / Controller, Digital Thermometer, Temperature Gauge, Transducer, Transmitter[5]	-95 °C to 140 °C	0.22 °C	Using PRT / S type thermocouple with Readout, and temperature bath by Comparison method
	140 °C to 650 °C	0.54 °C	
	650 °C to 1200 °C	1.8 °C	
Temperature Indicator with sensor of Freezer, Incubator, Oven, Furnaces, Environmental chamber / rooms[5]	-95 °C to 1200 °C	1.8 °C	Using PRT / S type thermocouple with Readout by comparison method – Single position calibration
Electrical – DC/LF			
DC Voltage Generate[3,5]	0.1 mV to 1020 V	0.15 %	Multi–Product calibrator by Direct Method
DC Current Generate[3,5]	1 μA to 1500 A	0.98 %	Multi–Product calibrator by Direct Method with current coil
AC Voltage Generate[3,5]	mV to 1020 V @ 10 Hz to 10 kHz	0.99 %	Multi–Product calibrator by Direct Method

MEASURED QUANTITY or DEVICE TYPE CALIBRATED	RANGE	UNCERTAINTY[1,2] (±)	CALIBRATION METHOD OR PROCEDURE, STANDARD EQUIPMENT (OPTIONAL)
AC Current Generate[3,5]	10 μA to1500 A @ 50 Hz	1.5 %	Multi–Product calibrator by Direct Method with current coil
Resistance (2 wire and 4 wire) Generate[3,5]	0.1 Ω to 1200 MΩ	0.98 %	Multi–Product calibrator Direct Method
Frequency Generate[3,5]	0.01 Hz to 2 MHz	0.3 %	Multi–Product calibrator by Direct Method
Capacitance Generate[3,5]	0.2 nF to 120 mF @ 10 Hz to 10 kHz	5.6 %	Multi–Product calibrator by Direct Method
Inductance Generate[3,5]	10 μH to 120 H @ 0.005 Hz to 1 kHz	1.7 %	Multi–Product calibrator by Direct Method
Temperature Simulation Generate – Temperature Indicator / Controller / Recorder / Test Kit / Calibrators / Multimeter[3] (RTD ((PT 385(100), PT 385(200), PT 385(500), PT 385(1000), PT 3916(100), PT 3926(100), Cu 10 (427), Cu 50 (428), Cu 100 (428), Ni 120 (672))	-200 °C to 850 °C	0.22 °C	Multi–Product calibrator by Direct Method
Temperature Simulation Generate – Temperature Indicator / Controller / Recorder / Test Kit / Calibrators / Multimeter[3] – Thermocouples (J, K, R, S, T, E, B, N) #	-210 °C to 2300 °C	1.2 °C	Multi–Product calibrator by Direct Method
AC Power Generate[3,5]	15 W to 12 kW @ 50 Hz (± 0.5 PF)	0.55 %	Multi–Product calibrator by Direct Method
DC Power Generate[3,5]	1 W to 30 kW V: 1 V to 1020 V I: 1 A to 30.2 A	0.49 %	Multi–Product calibrator by Direct Method
Phase Angle Generate[3,5]	0° to 180°	0.30°	Multi–Product calibrator by Direct Method
Insulation Resistance and Resistance Generate[3,5]	1 mΩ to 10 TΩ	8.7 %	Electrical Safety Tester Calibrator by Direct Method
Leakage Current Generate[3,5]	0.1 mA to 300 mA	2.4 %	Electrical Safety Tester Calibrator by Direct Method
ELCB/RCD Trip Time Generate[3,5]	50 ms to 2000 ms	1.6 %	Electrical Safety Tester Calibrator by Direct Method
ELCB/RCD Trip Current Generate[3,5] f = 50 Hz	10 mA to 2.5 A	1.2 %	Electrical Safety Tester Calibrator by Direct Method

MEASURED QUANTITY or DEVICE TYPE CALIBRATED	RANGE	UNCERTAINTY[1,2] (±)	CALIBRATION METHOD OR PROCEDURE, STANDARD EQUIPMENT (OPTIONAL)
Loop Impedance Generate[3,5] / Ground Bond Resistance / Earth tester	1 mΩ to 1.7 kΩ	4.9 %	Electrical Safety Tester Calibrator by Direct Method
Oscilloscope[5] Amplitude Time base Bandwidth	 AC: 5 mV to 105 V @ 1 MHz DC: 0 V to 33 V 2 ns to 5 s 50 kHz to 200 MHz	 4.1 % 0.66 % 4.8 %	Multi–Product calibrator by Direct Method
DC Voltage Measure[4]	1 mV to 1000 V	0.1 %	Reference multimeter by Direct method
DC Current Measure[4]	1 μA to 30 A	0.3 %	Reference multimeter by Direct method
AC Voltage Measure[4]	10 mV to 1000 V @ 10 Hz to 10 MHz	0.2 %	Reference multimeter by Direct method
AC Current Measure[4]	10 μA to 30 A @ 10 Hz to 100 kHz	0.34 %	Reference multimeter by Direct method
Resistance Measure[4] (4 Wire and 2 wire)	0.1 Ω to 10 GΩ	0.7 %	Reference multimeter by Direct method
Capacitance Measure[4]	0.1 nF to 100 mF	0.21 %	Reference multimeter by Direct method
RTD Measurement[4] (PT 385(100), PT 385(200), PT 385(500), PT 385(1000), PT 3916(100), PT 3926(100)) PRT)	-200 °C to 850 °C	0.22 °C	Reference multimeter by Direct method
Thermocouple Measurement[4] (K, S, J, E, B, R, T, N, L, C)	-210 °C to 2300 °C	1.9 °C	Reference multimeter by Direct method
Frequency Measure[4]	10 Hz to 10 MHz	0.06 %	Reference multimeter by Direct method
DC High Voltage Measure[4,5]	0 kV to 12 kV	5.4 %	Electrical Safety Tester Calibrator by Direct Method

[1]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.

[2]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.

[3]Capability is suitable for the calibration of measuring devices in the stated ranges.

[4]Capability is suitable for the calibration of devices intended to generate the indicated quantity in the stated ranges.

[5]Also available as site calibration. Note that actual measurement uncertainties achievable at a customer's site can normally be expected to be larger than the uncertainties listed on this Scope of Accreditation.