

**MATERIALS ENGINEERING DIRECTORATE**  
**LIST OF APPROVED INDEPENDENT CALIBRATION LABORATORIES**  
**as of 30<sup>th</sup> November 2022**

	Name of Laboratory	Approval Given for Calibration Services on	TCR No.	TCR Issue Date	Valid Until
1	Al Hoty Analytical Services – Calibration Department (Bahrain)	Dimensional – calipers, gauges, micrometers, dial indicators and test sieve Mechanical – pressure gauges, pressure switches, pressure valves, pressure transmitter, pressure calibrators, pressure relief valve, low pressure (pneumatic), absolute pressure (pneumatic), vacuum gauges, vacuum calibrators, vacuum switches, vacuum transmitters, weights, weighing balances, weighbridge, volume, torque wrench, torque screw driver, torque dial gauge, compression force, dynamometer, sound level meter, tachometer, and rotational speed Thermal – Measure (thermocouples and RTD), Generate (thermocouples and RTD), temperature indicator with sensor, temperature gauges, thermometer, temperature bath, dry block, thermal imager, pyrometer, chiller, autoclave, freezer, refrigerator, incubators, ovens, chamber, furnaces, and humidity measure Electrical – Measure (AC/DC voltage, AC/DC high voltage, AC/DC current, DC resistance, capacitance) and Generate (AC/DC voltage, AC/DC current, AC/DC power, DC resistance, capacitance, phase) Time and Frequency – Measure/Generate, Stop Watch Chemical – pH meter	4574/2022	08/02/2022	08/02/2023

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2	Al Hoty Calibration Services (Saudi Arabia)	<p>Acoustic – sound level meter and acoustic level calibrator</p> <p>Chemical – conductivity meter, TDS meter and pH meter</p> <p>Dimensional – micrometer (inside and outside), calipers (all types), setting rods, ring gauges, dial indicators, height gauge/vertical instrument/single axis dimensional measurements and caliper checker/dimensional instrument</p> <p>Electrical – DC voltage (generate and measure), high voltage measure, DC current (generate and measure), resistance (generate and measure), low resistance meter, shunt resistor/electrical continuity of resistance, AC voltage (generate and measure), AC current (generate and measure), electrical calibration of thermocouples and RTD (generate and measure)</p> <p>Fluid Quantities – anemometer/airflow meter, gas flow/LPG and gas regulators, kinematic &amp; dynamic viscosity oil std., volume measurements (gravimetric method), volume (liquid as medium), ultrasonic flow meter, flow meter (water as medium) and hydrometers</p> <p>Mechanical – pressure measuring instruments, pressure valves/hydrostatic pressure testing/LPG and gas regulators, pressure gauges/pressure measurements, tachometer (non-contact type)/RPM measurement, torque measuring instruments (clockwise and counter-clockwise), force universal testing machine (compression and tension), weights, scales and balances, weighing and plant scales (build up), and nuclear moisture/density gauge</p> <p>Thermodynamics – temperature measure equipment, temperature measure, humidity measuring instruments, humidity chamber, ovens (direct verification) and chiller and incubator (direct verification)</p> <p>Time and Frequency – frequency measure, frequency measuring equipment (voltage, edge, marker), timers and stopwatches</p> <p>Mechanical Tests – NEMA VE-1 or IEC 61537</p>	4978/2022	10/11/2022	10/11/2023

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3	CATIIS W.L.L. (Bahrain)	<p>Dimensional – Vernier caliper, micrometers, height gauge and dial indicators</p> <p>Mechanical – pressure and vacuum gauge/indicator, transmitter with or without indicator, recorder, switch, standard weights, weighing balance, compression testing machine, micropipette / syringes/ pipette and burette, glass wares-volumetric cylinder, beaker, flask, etc.</p> <p>Thermal – indicator of oven/incubator/water bath/ temperature sources &amp; calibrator /chiller/freezer, digital thermometers, temperature sensor, transmitter (RTD/thermocouple), relative humidity meter</p> <p>Electrical – Generate (AC/DC voltage, AC/DC current, DC resistance, capacitance, simulated temperature thermocouples) and Measure (AC/DC voltage, AC/DC current, DC resistance, simulated temperature thermocouples)</p> <p>Time and Frequency – frequency (Generate)</p> <p>Chemical – pH meter and conductivity meter</p>	4747/2022	15/06/2022	15/06/2023

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4	International Laboratories and Al Hoty Stanger W.L.L. (Bahrain)	<p>Dimensional – micrometers, calipers, height gauges, dial indicator / gauge, plain plug gauge, dial thickness gauge, bore gauge (mechanism check only), feeler gauge, pin gauge, bevel protector, combination set, dial calibration tester and test sieve</p> <p>Electrical – AC/DC voltage (source and measure), AC/DC current (source, simulate and measure), resistance (source and measure), capacitance (source and measure), and electrical temperature simulation (thermocouple and RTDs)</p> <p>Time and Frequency – frequency (source and measure), stopwatches and timers</p> <p>Amount of Substance – ph meters and conductivity meters (excluding probe)</p> <p>Temperature – thermocouples, digital thermometers, resistance thermometer, liquid in glass thermometers (partial immersion only), ovens, incubators, mechanical (dial) thermometers and muffle furnaces)</p> <p>Mass and Related Quantities – mass pieces, mass balances and scales, volumetric glassware, hydraulic pressure gauges and compression</p>	4855/2022	25/08/2022	25/08/2023

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5	RICI Co. W.L.L. (Bahrain)	Dimensional – calipers, plunger type indicators, outside micrometers, height gauges, depth gauges, snap gauges, thickness gauge, protractors and angle gauges Mechanical – compression, balances, pressure gauges, pressure transmitter, pressure chart recorder, vacuum gauges, safety relief valve, torque wrench and hardness testing machines Thermal – ovens, thermometers, RTD, water baths, furnaces, autoclaves, incubators, hot plates, freezers/refrigerators, temperature transmitter and temperature recorder Electrical – holiday detector, DC voltage, DC current, AC voltage, AC current, resistance, electrical calibration of thermocouples and RTD Acoustics & Vibrations – sound level meter and vibration meter Nuclear – nuclear density gauges Chemical – multi gas detectors	4607/2022	08/03/2022	08/03/2023
6	RICI Company Limited (Saudi Arabia)	Dimensional – calipers, plunger type indicators, inside micrometers, outside micrometers, coating thickness gauges, height gauges, snap gauges, depth gauges, measuring tapes, rulers/measuring scales, thickness gauge, sieves, bevel/digital protractors, angle gauges, profile projector/ measuring microscopes, bore gauges, dial gauge calibrator, slip gauges, plain snap/ gap gauge, plain plug gauge, ring gauge, thread plug gauge, thread ring gauge, gauge blocks, length bar, plain ring gauge, setting cylindrical master, measuring pins, plunger type dial gauge, lever type dial gauge, bore gauge, plain taper plug gauge, taper ring gauge, taper thread plug gauge, taper thread ring gauge and jigs and fixtures length measurement Mechanical – force (compression/tension), proving rings, balances, pressure gauges, pressure transmitter, pressure chart recorder, durometer, hardness testing machines, vacuum gages, safety relief valve, torque wrench, sound level meter @16 kHz, vibration meter,	4851/2022	24/08/2022	24/08/2023

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		<p>asphalt batch plant, concrete batch plant, volume, pipettes/ micropipettes, burettes, cylinders/ beakers, flasks, pycnometers, pressure calibrators / pumps, pressure (generate/measure), magnetometer/ gauss meters, mass (standard weights), hydrometers, anemometers/ air meters, densitometers, electromagnetic yoke, nuclear density gauges and hydraulic torque wrench</p> <p>Thermal – ovens, thermometers, RTD, water baths, furnaces, autoclaves, incubators, hot plates, freezers/ refrigerators, temperature transmitter/recorder, temperature – measure and infrared thermometers</p> <p>Electrical – Welding Machines, Holiday Detector, DC voltage (generate/measure), DC current (generate/measure), clamp meter, DC resistance (generate/measure), AC voltage (generate/measure), AC current (generate/measure), electrical simulation of thermocouples (generate/measure), electrical simulation of RTD (generate) and capacitance (generate/measure)</p> <p>Time and Frequency – stop watch and time measuring devices, non-contact tachometer and centrifuge</p> <p>Chemical - pH meters, conductivity meter, viscosity meter, spectrophotometers, dissolved oxygen meter and multi gas detectors</p>			

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7	Universal Inspection Company LTD (Bahrain)	Dimensional – Vernier caliper (digital, dial, analog), height gauge (digital, analog), external micrometers, plunger dial gauge and lever dial gauge (digital, analog) Mechanical – universal testing machine (compression only), compression machine, torque wrench, pressure gauge/pressure transmitter (hydraulic), pressure gauge (pneumatic), vacuum gauge, sound level meter (1 kHz) Thermal – infrared thermometer, thermocouple type K, resistance temperature detector (RTD), temperature controller/indicator with sensor, temperature recorder with sensor, digital data logger with sensor, thermometer with sensor, temperature transmitter, thermohygrometer, temperature bath, oven, furnace, temperature calibrator and electrical simulation of thermocouples Electrical – DC voltage (source/measure), DC current (source/measure), AC voltage 60 Hz (source/measure), AC current 60 Hz (source/measure), DC resistance (source/measure), holiday detector, pin hole detector, electric and diesel welding machine Time and Frequency – tachometer (contact)	4825/2022	04/08/2022	04/08/2023

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8	Universal Laboratories W.L.L - Calibration Section (Bahrain)	Dimensional – micrometers, Vernier calipers, height gauges and dial gauges Mechanical – mass - standard weights (classes F1, F2 and M), analytical balances, precision balances, digital balances, platform balances, pressure (gauges/indicators, switches, recorders, transmitters with or without indicator), vacuum (gauges/indicators, switches, recorders, transmitters with or without indicator), manometers, torque wrenches, force (compression machines and tensile machines), volume (micropipettes, syringes, pipettes, burettes), glass wares (volumetric cylinders, beakers, flasks), rotation (tachometer), centrifuge, stirrer, rotating equipment, sound level meter and spectrophotometer Thermal – thermometers (digital and glass type), temperature sensors, transmitters (RTD/thermocouple) with or without indicator, oven, incubator, water bath, temperature sources and calibrators, chiller, freezer, hotplate/thermo-cyclers and relative humidity (thermo-hygrometers) Electrical – DC voltage generate, DC current generate, DC resistance generate, AC voltage generate, AC current generate, capacitance generate, DC voltage measure, AC voltage measure, DC resistance measure, capacitance measure, DC current measure, AC current measure, RCD tester, high voltage measure (HV tester, cable test set), loop tester, insulation tester, simulated temperature (generate/measure) thermocouples and simulated temperature (generate/measure) RTD Pt-100 Chemical - conductivity meter, pH meter and TDS meter	5009/2022	28/11/2022	28/11/2023