THE HASHEMITE KINGDOM OF JORDAN

Accreditation Unit

Jordanian Accreditation System
نظام الاعتماد الأردني
Accreditation Unit

Annex (1)

Updated on: 18-09-2025

To the Accreditation Certificate No. JAS Cal. - 010 Dated 26-12-2022

For The laboratory at Validation for Information Technology (Technival) / Amman

Scope of Accreditation

In the field of Temperature, Humidity, and Pressure Calibration (Permanent and onsite)

Measurand	***Measuring Range***	***Calibration and measurement Capability (CMC)*** [a]	***Calibration Methods/ Standards/ Remarks***
Thermocouples (Permanent and onsite)			
Thermocouples	≥ -40 to 0 ℃	0.19 ℃	SOP100 Tech QP-004 [Issue No. (1); Issue Date: 01/06/2021, Revision No. (4); Revision Date:11/10/2023] according to EURAMET cg-8 Version 3.1 (02/2020) - Calibration of Thermocouples
	> 0 to 100 ℃	0.23 ℃	
	> 100 to 400 ℃	1.3 ℃	
	> 400 to 650 ℃	5.1 ℃	
Temperature and Humidity Sensors (Permanent and onsite)			
Temperature and Humidity Sensors	≥ 0 to 60 ℃	0.60 ℃	SOP101 Tech QP-004 [Issue No. (1); Issue Date: 01/06/2021, Revision No. (5); Revision Date:11/10/2023] according to EURAMET cg-8 Version 3.1 (02/2020) - Calibration of Temperature Data Loggers

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Measurand	*Measuring Range*	*Calibration and measurement Capability (CMC)* [a]	*Calibration Methods/ Standards/ Remarks*
	≥ 5 % to 95 %	3.9 % RH	SOP102 Tech QP-004 [Issue No. (1); Issue Date: 01/06/2021, Revision No. (3); Revision Date:11/10/2023] according to DKD-R 5-8 Version: 10/2019 Revision: 0 - Calibration of Humidity Sensors and Data Loggers
Pressure Gauges (Permanent and onsite)			
Pressure Gauge-Pneumatic	-0.8 bar to 20 bar	0.02 bar	SOP103 Tech QP-004 [Issue No. (1); Issue Date: 01/06/2021, Revision No. (4) Revision Date:30/07/2025] according to DKD-R 6-1 Version 03/2014 Revision: 3 - Calibration of Pressure Indicators, Sequence "C" Only.
Pressure Gauge-Hydraulic	0 bar to 100 bar	0.50 bar	SOP103 Tech QP-004 [Issue No. (1); Issue Date: 01/06/2021, Revision No. (4) Revision Date:30/07/2025] according to DKD-R 6-1 Version 03/2014 Revision: 3 - Calibration of Pressure Indicators, Sequence "C" Only.

a) The reported CMCs are expressed at approximately the 95 % level of confidence, using a coverage factor of k = 2.

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The actual measurement uncertainty of a specific calibration performed by the laboratory may be greater than the CMC due to the behavior of the customer's device and to influences from the circumstances of the specific calibration.

List of employees in the laboratory who are technically responsible for issuing the calibration certificates in the scope of accreditation:

1. Malek Shamlawe: General Manager
2. Afnan Dawoud: Quality Manager

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Annex (2)
Issued on: 12/07/2026
To the Accreditation Certificate No. JAS Cal. - 010 Dated 12-07-2026
For The laboratory at Validation for Information Technology (Technival) / Amman
Scope of Accreditation
Calibration of Pressure, Temperature, Mass, Torque, Temperature and Humidity, Temperature Calibrator, Volume, Rotational Speed, Balances, Time, Dimension, Electrical Quantity (Permanent and On-Site)

Measurand	*Measuring Range*	*Calibration and measurement Capability (CMC)* [a]	*Calibration Methods/ Standards/ Remarks*
Pressure (Calibration Location: TECHNIVAL Lab/Permanent & On-Site)			
Pressure gauge hydraulic and pneumatic	-0.8 bar to 20 bar	0.02 bar	SOP103 Tech QP-004 according to reference DKD-R 6-1 Version 03/2014 Revision:3
	20 bar to 1000 bars	0.50 bar	
Safety Valves	(1 to 20) bars	0.1 bar	SOP125-Tech QP-004 according to reference International Standard ISO 4126 revision 1 date 2014
	> (20 to 50) bars	0.4 bar	
Differential pressure gauge	-15000 pa to 15000 pa	8 pa	SOP119-Tech QP-004 according to reference DKD-R-6-1-2014
Temperature (Pressure (Calibration Location: TECHNIVAL Lab/Permanent & On-Site)			
RTD with Readout	-40℃ to 300℃ > 300℃ to 420 ℃	0.35 °C 1.0 °C	SOP100-Tech QP-004 according to reference EURAMET calibration guide Cg.8 Version 3.1 (02/2020)
Thermocouple with Readout	-40 °C to 300 °C > 300 °C to 660 °C	0.6 °C 1.0 °C	SOP100-Tech QP-004 according to reference EURAMET calibration guide Cg.8 Version 3.1 (02/2020)
Temperature block calibrator	-40 °C to 400 °C	0.40 °C	SOP127-Tech QP-004 according to reference EURAMET calibration guide NO.13 Version 4.0 (09/2017)
IR Thermometer	50 °C to 100 °C	3℃	SOP121-Tech QP-004 according to reference ASTM e2847-21
	100 °C to 500 °C	7℃	
Glass Thermometer	-30℃ to 110 ℃	2 ℃	SOP120-Tech QP-004 according to reference EURAMET Cg-20 V 4.0 date 09/2017
Mass (Calibration Location: TECHNIVA Lab/ Permanent & On-Site)			
Non-Automatic weighing instruments Using class F1 standard weights	0.001g to 80g	0.50 mg	SOP117-Tech QP-004 according to reference EURAMET calibration guide NO.18 Version 4.0 (11/2015)
	80g to 220g	1.0 mg	
	220g to 3000g	20.0 mg	
	3000g to 40 kg	500.0 mg	
	40 kg to 150 kg	50.0 g	

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Measurand	*Measuring Range*	*Calibration and measurement Capability (CMC)* [a]	*Calibration Methods/ Standards/ Remarks*
Non-Automatic weighing instruments Using class M1 standard weights	150 kg to 300 kg	100g	
Conventional Mass Class F1, & less Except 20 kg Class M3 and less	1mg	0.020 mg	SOP122-Tech QP-004 according to reference OIMLR111:2004 Weights using standard weights and digital balance 1 mg to 10 kg: F2 and Lower 20 kg: M3
	2 mg	0.020 mg	
	5 mg	0.020 mg	
	10 mg	0.03 mg	
	20 mg	0.03 mg	
	50 mg	0.04 mg	
	100 mg	0.05 mg	
	200 mg	0.06 mg	
	500 mg	0.08 mg	
	1 g	0.10 mg	
	2 g	0.12 mg	
	5 g	0.16 mg	
	10 g	0.20 mg	
	20 g	0.25 mg	
	50 g	0.30 mg	
	100 g	0.50 mg	
	200 g	1.0 mg	
	500 g	2.5 mg	
	1 kg	5 mg	
	2 kg	10 mg	
	5 kg	25 mg	
	10 kg	50 mg	
	20 kg	3 g	

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Measurand	*Measuring Range*	*Calibration and measurement Capability (CMC) [a]*	*Calibration Methods/ Standards/ Remarks*
Torque (TECHNIVAL Lab/Permanent)			
Torque measurement	2 N.m to 1000 N.m	3 % of Reading	SOP105-Tech QP-004 according to reference ISO 6789-1:2017
Volume (TECHNIVAL Lab/Permanent)			
Micropipette	10 µl to 100 µl	0.6 µL	SOP124-Tech QP-004 according to reference ISO8655- 6: 2022
	100 µl to 500 µl	1.3 µL	
	500 µl to 1 ml	1.8 µL	
Rotational Speed (Calibration Location: TECHNIVAL lab/ Permanent & On-Site)			
Rotational speed (RPM)	up to 100,000 rpm	7 RPM	SOP126-Tech QP-004
Time (Calibration Location: TECHNIVAL lab/ Permanent & On-Site)			
Stop watches and Timers	Up to 24 hours	4 s	SOP128-Tech QP-004 according to reference NIST Special Publication 960-12 - Stopwatch and Timer Calibration May 2004
Dimension (Calibration Location: TECHNIVAL lab/ Permanent)			
Caliper	Up to 300 mm	0.06 mm	SOP118-Tech QP-004 according to reference International (BS-EN – ISO 3611) and (ISO 2967 dated 1983)
Micrometer	Up to 25 mm	0.006 mm	SOP123-Tech QP-004 according to reference International (BS-EN – ISO 3611) and (ISO 2967 dated 1983
Humidity (Calibration Location: TECHNIVAL lab/ Permanent & On-Site)			
Thermohygrometers, data loggers & humidity meters	0 to 60 ℃	0.4 °C	SOP102 Tech QP-004 according to reference DKD-R 5-8 Version: 10/2019 Revision:0
	5 to 20 % RH	2 % RH	
	20 to 50 % RH	2.5 % RH	
	50 to 90 % RH	3 % RH	
	90 to 95 % RH	4% RH	
Electrical Quantity (Calibration of Multimeter & Clamp meter: Calibration Location: TECHNIVAL lab/ Permanent)			
DC Voltage-Measure	100 mV to 200 mV	0.17 mv	SOP129-Tech QP-004 according to reference EURAMET cg- 15 Guidelines on the Calibration of Digital Multimeters V3.0 (02/2015)
	200 mV to 400 mV	1.1 mv	
	0.4 V to 2 V	0.02 V	
	2 V to 20 V	0.02 V	

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	20 V to 40 V	0.03 V	
	40 V to 100 V	0.07 V	
	100 V to 200 V	0.13 V	
	200 V to 400 V	0.26 V	
	400 V to 1000 V	0.86 V	
Multimeter AC voltage @ 50 Hz - Measure	100 mV to 200 mV	1.2 mV	SOP129-Tech QP-004 according to reference EURAMET cg- 15 Guidelines on the Calibration of Digital Multimeters V3.0 (02/2015)
	200 mV to 400 mV	2.4 mV	
	0.4 V to 2 V	0.02 V	
	2 V to 4 V	0.03 V	
	4V to 20 V	0.02 V	
	20 V to 50 V	0.04 V	
	50 V to 100 V	0.07 V	
	100 V to 200 V	0.13 V	
	200 V to 500 V	0.35 V	
	500 V to 1000 V	0.90 V	
Resistance four wire configuration Fixed Value- Measure	10 Ω	0.03 Ω	
	20 Ω	0.03 Ω	
	50 Ω	0.03 Ω	
	100 Ω	0.04 Ω	
	200 Ω	0.04 Ω	
	500 Ω	0.05 Ω	
	1 kΩ	0.22 Ω	
	2 kΩ	0.21 Ω	
	5 kΩ	0.22 Ω	
	10 kΩ	0.26 Ω	
	20 kΩ	0.46 Ω	
	50 kΩ	1.1 kΩ	
	100 kΩ	2.6 kΩ	
	200 kΩ	4.68 kΩ	
	500 kΩ	20.82 kΩ	

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	1 MΩ	42.01 kΩ	
	2 MΩ	82.61 kΩ	
	5 MΩ	0.14 MΩ	
	10 MΩ	0.28MΩ	
	20 MΩ	0.56 MΩ	
DC current-Measure	Up to 200 µA	0.12 µA	SOP129-Tech QP-004 according to reference EURAMET cg- 15 Guidelines on the Calibration of Digital Multimeters V3.0 (02/2015)
	200 µ A to 200 mA	0.02 A	
	200mA to 5 A	0.20 A	
	5A to 20 A	1.00A	
AC current @50Hz -Measure	Up to 40 mA	0.24 mA	
	40 mA to 500 mA	0.02A	
	500mA to 5 A	0.16 A	
	5A to 20 A	1.0 A	
DC current Clamp-Measure	40 A to 100A	1.5 A	
	100 to 300 A	3.0 A	
	300 A to 500 A	4.0 A	
	500 A to 1000 A	5.0 A	
AC current Clamp @ 50 Hz-Measure	40 A to 100 A	1.5 A	
	100 to 300 A	3.0 A	
	300 A to 500 A	4.0 A	
	500 A to 1000 A	5.0 A	

a) The reported CMCs are expressed at approximately the 95 % level of confidence, using a coverage factor of k = 2.
The actual measurement uncertainty of a specific calibration performed by the laboratory may be greater than the CMC due to the behavior of the customer's device and to influences from the circumstances of the specific calibration.

List of employees in the laboratory who are technically responsible for issuing the calibration certificates in the scope of accreditation:

1. **Malek Shamlawi: General Manager deputy Quality Manager.**
2. **Essa dakhel Allah: Executive Manager deputy laboratory Manager.**
3. **Qussai Talafha: Laboratory Manager**
4. **Afnan Dawoud: Quality Manager**
5. **Sahem Halalsheh: Calibration & Qualification Engineer**

6. **Mohammad Khawaldeh: Calibration & Qualification Engineer**
7. **Bahjat Abu Zaid: Calibration & Qualification Engineer**
8. **Adli Alwa: Calibration & Qualification Engineer**
9. **Qussai Abu Zaid: Calibration & Qualification Engineer .**