CERTIFICATE OF ACCREDITATION

This is to attest

S&Q MART KALITE GUVENLIK SAN. VE TIC. A.S.

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ISTANBUL 34854, TURKEY

Calibration Laboratory CL-179

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 September 1, 2026
Effective Date February 18, 2025

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S&Q MART KALITE GUVENLIK SAN. VE TIC. A.S.

www.sqmart.com

Contact Name Cemal SİLAN **Contact Phone** +90-216-5180202

Accredited to ISO/IEC 17025:2017 *Effective Date February 18, 2025*

CALIBRATION AND MEASUREMENT CAPABILITY (CMC)*

MEASURED QUANTITY or DEVICE TYPE CALIBRATED	RANGE	UNCERTAINTY[1,2] (±)	CALIBRATION METHOD OR PROCEDURE, STANDARD EQUIPMENT (OPTIONAL)
Dimensional			
Gauge Blocks (Up to Grade K)	0.5 mm to 50 mm 50 mm to 100 mm	0.3 µm 0.5 µm	Using Length Measuring Machine by Direct Method as per ISO 3650, VDI/VDE/DGQ 2618 Section 3.1
Long Gauge Blocks (Gr. 2)	100 mm to 600 mm	$(0.0004 + 10^{-5} \times L)$ mm Where L is in mm	Using Long Gauge Block and Length Measuring Machine by Comparison Method as per ISO 3650, VDI/VDE/DGQ 2618, Section 3.1
Caliper (Digital / Analog/ Dial) Parameter – External/Internal/ Depth	Up to 500 mm 500 mm to 1000 mm	(13 x L + 8.5) µm (17 x L + 6.6) µm Where L is in m	Using Gauge Block/ Long Gauge Block, Ring Gauge by Direct Method as per VDI/VDE/DGQ 2618 Section 9.1 / 9.2
Welding Gage	Up to 100 mm	0.03 mm	Using Caliper, Ruler, Gauge Blocks, Profile Projector by Direct Method
External Micrometer (Digital / Analog / Depth)	Up to 50 mm 50 mm to 500 mm	(12 x L + 1.4) µm (21 x L + 1) µm where L is in m	Using Gauge Block by Direct Method as per VDI/VDE/DGQ 2618, Section 10.3 / 10.1 / 6 / 10.7 / 10.5
Internal Micrometer (2 Point Digital / Analog / Dial Type)	Up to 300 mm	(23 x L + 2.5) µm where L is in m	Using Gauge Block and Gauge Block Accessories by Direct Method as per VDI/VDE/DGQ 2618 Section 14 / 10.7
Dial Gauge Plunger (Digital/Analog)	Up to 30 mm Up to 100 mm	0.8 µm 1.7 µm	Using Dial Calibration Tester by Direct Method as per VDI/VDE/DGQ 2618 Section 11.1 / 11.4

** 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)
Dial Gauge (Lever Type I)	Up to 2 mm	0.9 µm	Using Length Measuring Machine by Direct Method as per VDI/VDE/DGQ 2618 Section 11.1 / 11.4
Bore Gauge	Up to 100 mm	1.7 µm	Using Lenth Measuring Machine by Direct Method as per VDI/VDE/DGQ 2618, Section 13.2
Height Gauge (Digital / Analog)	Up to 300 mm 300 mm to 600 mm 600 mm to 1000 mm	7.3 µm 14 µm 22 µm	Using Gauge Block by Direct Method as per VDI/VDE/DGQ 2618 Section 9.3
Millimess	0.4 mm	0.9 µm	Using Length Measuring Machine by Direct Method as per VDI/VDE/DGQ 2618 Section 11.2
Dial Thickness Gauge	Up to 30 mm	1.7 µm	Using Gauge Block by Direct Method as per VDI/VDE/DGQ 2618 Section 12.1
Micrometer Setting Rods	Up to 600 mm	$(0.0004 + 10^{-5} \times L)$ mm Where L is in m	Using Gauge Block and Length Measuring Machine by Comparison Method as per DKD-R4-3, Section 4.4
Plug Gauge	Up to 100 mm Ø 100 mm to 300 mm Ø	(0.4 + 9 x L) µm (1.0 + 7 x L) µm Where L is in m	Using Gauge Block and Length Measuring Machine by Direct Method as per VDI/VDE/DGQ 2618, Section 4.1
Ring Gauge	Up to 25 mm Ø 25 mm to 100 mm Ø	0.7 µm 1.1 µm	Using Length Measuring Machine by Direct Method as per VDI/VDE/DGQ 2618 Section 4.1
Snap Gauge	Up to 25 mm Ø 25 mm to 100 mm Ø	0.7 µm 1.1 µm	Using Length Measuring Machine by Direct Method as per VDI/VDE/DGQ 2618 Section 4.1
Thread Plug Gauge (Only Pitch Ø)	Up to M25 Up to M100	3 µm 4.1 µm	Using Length Measuring Machine by Direct Method as per EURAMET /cg-10
Thread Ring Gauge	M6 to M25 M25 to M100	3.0 µm 3.5 µm	Using Length Measuring Machine by Direct Method as per EURAMET /cg-10

MEASURED QUANTITY or DEVICE TYPE CALIBRATED	RANGE	UNCERTAINTY[1,2] (±)	CALIBRATION METHOD OR PROCEDURE, STANDARD EQUIPMENT (OPTIONAL)
Steel Ruler	Up to 2000 mm	0.35 mm	Using Steel Ruler by Comparison Method as per OIML R 35
Measuring Tape	Up to 50000 mm	330 x √(L/1000) µm (L is in mm)	Using Steel Ruler by Comparison Method as per OIML R 35
Foils	5 µm to 1 mm 1 mm to 5 mm	2 µm 5 µm	Using Length Measuring Machine by Direct Method
Coating Thickness Gauge	Up to 1 mm	0.8 µm	Using Standard Foils by Direct Method
Feeler Gauge	Up to 2 mm	1 µm	Using Digital Micrometer by Direct Method as per DIN 2275
Radius Gauge	1 mm ≤ R ≤ 100 mm, where R = Radius	7 µm	Using Video Measuring Machine by Direct Method
Ultrasonic Thickness Gauge	Up to 100 mm	14 µm	Using Reference Block by Direct Method
Profile Projector	X Axes: 1 mm to 100 mm 101 mm to 200 mm Y Axes: 0 mm to 150 mm	 2.3 µm 4.5 µm 1.9 µm	Using Glass Graticule by Direct Method
Glass Graticule (Linear)	Up to 200 mm	5.5 µm	Using Profile Projector by Direct Method
One Axis Measurement Equipment (Can Seam Micrometer, Mechanical Single Rod Type Tubular Inside Micrometer)	Up to 300 mm	7.1 µm	Using Metroscope, Gauge Block by Direct Method
Ultrasonic Test Block (V1, V2, V3, IIWI, DC, DCS, DS, RC, SC, MAB, Phase Array Type A and B)	Up to 300 mm	0.077 mm	Using Video Measuring Machine by Direct Method
Ultrasonic Ladder Test Block - Step Test Block	Up to 25 mm 25 mm to 30 mm	0.02 mm 0.04 mm	Using Digital Micrometer by Direct Method

MEASURED QUANTITY or DEVICE TYPE CALIBRATED	RANGE	UNCERTAINTY[1,2] (±)	CALIBRATION METHOD OR PROCEDURE, STANDARD EQUIPMENT (OPTIONAL)
Mechanical			
Pressure: Hydraulic and Pneumatic (Pressure Calibrator, Digital/Analog Monometer, Pressure Transmitter/Transducer, Differential Pressure Meters, Pressure Switch, Pressure Gage, Pressure Vacuum)	-99 kPa ≤ P ≤ -4 kPa 643 Pa ≤ P ≤ 10kPa 1 kPa ≤ P ≤ 400 kPa 10 kPa ≤ P ≤ 4 MPa 1 MPa ≤ P ≤ 70 MPa	2.2×10^{-4} x p + 1 Pa 7×10^{-5} x p + 0.085 Pa 2.1×10^{-4} x p + 4 Pa 1.1×10^{-4} x p+ 9 Pa 2.5×10^{-4} x p + 60 Pa	Using Dead Weight Tester by Direct Method as per EURAMET /cg-17 DKD R6-1
Pressure: Hydraulic and Pneumatic[3] (Digital and Analog Manometer, Pressure Transmitter and Transducer, Differential Pressure Meters, Pressure Switch, Pressure Vacuum)	-7000 Pa to -500 Pa -500 Pa to -100 Pa -100 Pa to 100 Pa 100 Pa to 500 Pa 500 Pa to 7000 Pa 0.01 kPa to -95 kPa 0.01 kPa to 200 kPa 0.1 kPa to 2000 kPa 0.1 kPa to 3.5 MPa 1 kPa to 35 MPa 1 kPa to 70 MPa	1.6 Pa 1.2 Pa 0.36 Pa 1.2 Pa 1.6 Pa 0.12 kPa 0.13 kPa 0.28 kPa 1.2 kPa 11 kPa 20 kPa	Using Pressure Comparator by Comparison Method as per EURAMET /cg-17 DKD R6-1
Measuring Cylinder	Up to 5 mL 5 mL to 10 mL 10 mL to 25 mL 25 mL to 50 mL 50 mL to 100 mL 100 mL to 250 mL 250 mL to 500 mL 500 mL to 1000 mL 1000 mL to 2000 mL	35 µL 94 µL 0.24 mL 0.35 mL 0.35 mL 0.94 mL 2.4 mL 3.5 mL 9.4 mL	Using Gravimetric Method as per EURAMET /cg-19 TS ISO 4787 / TS EN ISO 4788
Volumetric Flask	1 mL to 25 mL 50 mL 100 mL 200 mL 250 mL 500 mL 1000 mL 2000 mL	9 µL 24 µL 36 µL 36 µL 68 µL 110 µL 0.20 mL 0.38 mL	Gravimetric Method as per EURAMET /cg-19 TS ISO 4787 / TS 1491 EN ISO1042 by
Burette	1 mL 2 mL 5 mL 10 mL 20 mL 25 mL 50 mL	3.7 µL 3.7 µL 3.8 µL 10 µL 24 µL 24 µL 36 µL	Gravimetric Method as per EURAMET /cg-19 TS ISO 4787 / TS EN ISO 385

MEASURED QUANTITY or DEVICE TYPE CALIBRATED	RANGE	UNCERTAINTY[1,2] (±)	CALIBRATION METHOD OR PROCEDURE, STANDARD EQUIPMENT (OPTIONAL)
	100 mL	96 µL	
Burette (Piston Type)	1 mL 2 mL 5 mL 10 mL 20 mL 25 mL 50 mL 100 mL	1.8 µL 2.3 µL 4.3 µL 8 µL 16 µL 20 µL 40 µL 81 µL	Gravimetric Method as per ISO / TR 20461 TS EN ISO 8655-3, 8655-6
Pipette (Single Mark Type)	0.5 mL 1 mL 2 mL 5 mL 10 mL 20 mL 25 mL 50 mL 100 mL 200 mL	1.5 µL 2.0 µL 2.6 µL 3.3 µL 4.3 µL 6.6 µL 7.1 µL 11 µL 20 µL 36 µL	Gravimetric Method as per EURAMET /cg-19 TS ISO 4787 / TS 1489 ISO 648
Pipette (Piston Type)	100 µL 200 µL 500 µL 1 mL 2 mL 5 mL 10 mL 20 mL	1.7 µL 1.7 µL 1.7 µL 1.8 µL 2.3 µL 4 µL 8 µL 16 µL	Gravimetric Method as per ISO / TR 20461 TS EN ISO 8655-3, 8655-6
Pipette (With Graduations)	100 µL 200 µL 500 µL 1 mL 2 mL 5 mL 10 mL 20 mL 25 mL 50 mL	1.7 µL 1.7 µL 1.7 µL 1.7 µL 2.7 µL 12 µL 12 µL 36 µL 36 µL 0.24 mL	Gravimetric Method as per EURAMET /cg-19 TS ISO 4787 / TS EN ISO 835
Pyknometer	10 mL 25 mL 50 mL 100 mL	2.0 µL 4.3 µL 10 µL 17 µL	Gravimetric Method as per EURAMET /cg-19 TS ISO 3507 TS EN ISO 2811-1 using Digital Balance
Balance (Digital and Analog)[3]	1 mg to 11 kg (E2) 11 kg to 28 kg (F1) 28 kg to 800 kg (M1)	2.2 µg/g 10 µg/g 200 µg/g	Using E2, F1 & M1 Class Weights by Direct method as per EURAMET /cg-18

MEASURED QUANTITY or DEVICE TYPE CALIBRATED	RANGE	UNCERTAINTY[1,2] (±)	CALIBRATION METHOD OR PROCEDURE, STANDARD EQUIPMENT (OPTIONAL)
Thermal (In Lab and Onsite)			
Room Thermometers, Temperature Data Logger, Thermograph	-35 °C to -20 °C -21 °C to 0 °C 0.1 °C to 30 °C 31 °C to 40 °C 41 °C to 50 °C 51 °C to 60 °C 61 °C to 70 °C	0.50 °C 0.30 °C 0.20 °C 0.30 °C 0.40 °C 0.50 °C 0.60 °C	Using PT100 & Temperature Chamber by Comparison Method
Liquid in Glass Thermometer	0 °C (Ice Point) -40 °C to 150 °C 150 °C to 250 °C	0.02 °C 0.07 °C 0.13 °C	Using PT100 & Liquid Bath By Comparison Method
Analog and Digital Thermometers, Thermistors, Resistance Thermometers - Transducer	0 °C (Ice point) -40 °C to 250 °C 250 °C to 420 °C 420 °C to 600 °C 600 °C to 1000 °C 1000 °C to 1300 °C	0.02 °C 0.05 °C 0.19 °C 0.34 °C 2.1 °C 2.8 °C	Using PT100 & Thermocouple Liquid bath/ Dry Blocks By Comparison Method
Platinum Resistance Sensor (PRT)	0 °C (Ice Point) -40 °C to 150 °C 150 °C to 420 °C 420 °C to 600 °C	0.02 °C 0.15 °C 0.23 °C 0.49 °C	Using PT100, Liquid bath / Dry Blocks by Comparison Method
Thermocouples (R, S, T, E, K, N, J, B, U and L Types)	-40 °C to 250 °C 250 °C to 540 °C 540 °C to 1000 °C 1000 °C to 1300 °C	0.40 °C 0.50 °C 1.8 °C 3.3 °C	Reference R Type, Thermocouples & Fluke 8846A & Carbolite Furnace by Comparison Method as per EURAMET /cg-8
Ovens, Incubators, Temperature Chambers[3] - by using TC - by using PT100	 -40 °C to 100 °C 101 °C to 400 °C -40 °C to 150 °C	 0.55 °C 1.4 °C 0.25 °C	Using RTD & Thermocouple by Comparison using Multiple (9) Sensor method
Furnaces[3]	400 °C to 600 °C 601 °C to 1000 °C 1001 °C to 1200 °C	2.7 °C 3.5 °C 4.1 °C	Using K Type Thermocouple by Comparison Method using Single Sensor
Dry Block Calibrator[3]	-40 °C to 150 °C 151 °C to 250 °C 251 °C to 400 °C 401 °C to 600 °C 601 °C to 800 °C 801 °C to 1000 °C 1001 °C to 1200 °C	0.14 °C 0.17 °C 0.26 °C 0.40 °C 2.8 °C 4.0 °C 5.5 °C	Using PT100 and Thermocouple by Direct Method

MEASURED QUANTITY or DEVICE TYPE CALIBRATED	RANGE	UNCERTAINTY[1,2] (±)	CALIBRATION METHOD OR PROCEDURE, STANDARD EQUIPMENT (OPTIONAL)
Hygrometer, Palatine Humidity Meters (Capacitive Resistance, Mechanical, Digital) at 23 °C ± 3 °C	0 %RH to 40 %RH 40 %RH to 70 %RH 70 %RH to 95 %RH	2.4 %RH 2 %RH 3.3 %RH	Humidity Chamber, Rotronic Hygropalm 2 Temp/Humidity Data Logger by Comparison Method as per EURAMET cg20, TS EN 60068-3-6 TS EN 60068-3-11
Electrical – DC/LF			
DC Magnetic Flux Density	1005.41 G (Transverse & Axial) 3.5 G to 3500 G	7.4 G 5×10^{-3} + 0.60 G	Using Lake Shore MRT-062-1K by Comparison Method
DC Magnet Calibration	10 G to 14.550 G	0.3 % + 0.28 G	Using Lake Shore MRT-062-1K & Magnetic Sensor Probe by Direct Method as per BS EN ISO 9934-3
Hand Yoke Calibration (AC)	Up to 310 G	0.33 % + 0.16 G	Using Lake Shore MRT-062-1K & Magnetic Sensor Probe by Direct Method as per BS EN ISO 9934-3
Ultrasonic Flaw Detector On-Site Calibration			Using Frequency Generator, Oscilloscope & Frequency Counter by Direct Method as per ISO 22232-1
Amplifier Frequency Response	up to 15 MHz	3.8 %	
Display Jitter	up to 15 MHz	0.25 %	
Equivalent Input Noise	up to 15 MHz	2 %	
Ultrasonic Flaw Detector (After Warm up)	Up to 15 MHz		Using Frequency Generator, Oscilloscope & Frequency Counter by Direct Method as per ISO 22232-1
Stability		0.24 %	
Transmitter Pulse (V)		1.3 %	
Voltage Rise Time (s)		4.3 %	
Reverberation (V)		1.3 %	
Duration (s)		4.3 %	
Receiver Amplifier Frequency Response (Hz)		3.8 %	
Equivalent Input Noise		3 %	

MEASURED QUANTITY or DEVICE TYPE CALIBRATED	RANGE	UNCERTAINTY[1,2] (±)	CALIBRATION METHOD OR PROCEDURE, STANDARD EQUIPMENT (OPTIONAL)
Ultrasonic Flaw Detector (After Warm up) (continued)			Using Frequency Generator, Oscilloscope & Frequency Counter by Direct Method as per ISO 22232-1
Accuracy of Calibrated Attenuator		0.3 dB	
Linearity of vertical display		0.35 %	
Linearity of time display		0.35 %	
Ultrasonic Flaw Detector Probe Calibration			Using Oscilloscope by Direct Method as per ISO 22232-1
Radio Frequency Pulse	Up to 10 Hz Up to 1000 Hz Up to 300 MHz	10 µHz/Hz + 15 µHz 12 µHz/Hz + 93 µHz 12 µHz/Hz + 2.2 µHz	
Pulse Spectrum and Bandwidth	Up to 10 Hz Up to 1000 Hz Up to 300 MHz	10 µHz/Hz + 15 µHz 12 µHz/Hz + 93 µHz 12 µHz/Hz + 2.2 µHz	
Relative Pulse-Echo Sensitivity	Up to 120 V	0.29 % + 99 µV	
Time	10 ns to 5 s	2.9×10^{-9} + 0.05 ns	
Phased Array Instrument Calibration			Using Frequency generator & Oscilloscope by Direct Method as per ISO 18563-1
Transmitter Pulse	Up to 15 MHz	1.7 %	
Frequency Response	Up to 15 MHz	3.8 %	
Channel Gain Variation	Up to 15 MHz	3.8 %	
Equivalent Input Noise	Up to 15 MHz	1.7 %	
Gain Linearity	0 dB to 10 dB 10 dB to 26 dB	0.4 % 0.7 %	
Linearity of Vertical Display	0 dB to 10 dB 10 dB to 26 dB	0.4 % 0.7 %	
Eddy Current Detector Calibration			Using Spectrum Analyzer, Frequency Generator, Frequency Counter,
Excitation Frequency	1 Hz to 10 Hz	10 µHz/Hz + 15 µHz	

MEASURED QUANTITY or DEVICE TYPE CALIBRATED	RANGE	UNCERTAINTY[1,2] (±)	CALIBRATION METHOD OR PROCEDURE, STANDARD EQUIPMENT (OPTIONAL)
	10 Hz to 1 kHz 1 kHz to 300 MHz	12 µHz/Hz + 93 µHz 12 µHz/Hz + 2.2 µHz	Oscilloscope and Fluke Multimeter 8846A By Direct Method as per ISO 15548-1
Source Impedance	0 mV to 100 mV 0.1 V to 1 V 1 V to 10 V 10 V to 100 V 100 V to 1000 V	67 µV/V + 10 µV 50 µV/V + 0.1 mV 13 µV/V + 0.22 mV 11 µV/V + 1.2 mV 40 µV/V + 21 mV	
Harmonic Distortion	Up to 15 MHz	4 Hz	
Maximum Output Voltage	0 mV to 100 mV 0.1 V to 1 V 1 V to 10 V 10 V to 100 V 100 V to 400 V	67 µV/V + 10 µV 50 µV/V + 0.1 mV 0.013 % + 0.22 mV 11 µV/V + 1.2 mV 40 µV/V + 21 mV	
Maximum Output Current	Up to 100 µA 0.1 mA to 1 mA 1 mA to 10 mA 10 mA to 100 mA 0.1 A to 1 A 1 A to 10 A	0.012 % + 90 nA 0.011 % + 0.69 µA 0.065 % + 2.6 µA 0.07 % + 7.6 µA 0.12 % + 0.3 mA 0.19 % + 1.5 mA	
Maximum Allowable Input Voltage (related to saturation and nonlinearity)	Up to 10 V 10 V to 120 V 120 V to 500 V	0.15 V 0.29 % + 99 µV 95 µV/V + 11 µV	
Input Impedance	Up to 400 Ω	0.17 % + 27 mΩ	
Residual Output Value at Balance	10 V 10 V to 120 V 120 V to 500 V	0.15 V 0.29 % + 99 µV 95 µV/V + 11 µV	
Maximum Compensat-able Input Voltage	Up to 10 V 10 V to 120 V 120 V to 500 V	0.15 V 0.29 % + 99 µV 95 µV/V + 11 µV	
Harmonic Attenuation	Up to 10 V 10 V to 120 V 120 V to 500 V	0.15 V 0.29 % + 99 µV 95 µV/V + 11 µV	
Frequency Response of the SP	Up to 15 MHz	30 nHz/Hz + 7 µHz	

MEASURED QUANTITY or DEVICE TYPE CALIBRATED	RANGE	UNCERTAINTY[1,2] (±)	CALIBRATION METHOD OR PROCEDURE, STANDARD EQUIPMENT (OPTIONAL)
Eddy Current Detector Calibration (continued) Bandwidth Gain Setting Accuracy Phase Setting Accuracy Cross-Talk Maximum Instrument Noise	 Up to 10 V 10 V to 120 V 120 V to 500 V Up to 10 V 10 V to 120 V 120 V to 500 V Up to 500 V Up to 500 V Up to 110 dB	 0.15 V 0.29 % + 99 µV 95 µV/V + 11 µV 0.15 V 0.29 % + 99 µV 95 µV/V + 11 µV 0.29 % + 99 µV 0.29 % + 99 µV 1 dB	Using Spectrum Analyzer, Frequency Generator, Frequency Counter, Oscilloscope and Fluke Multimeter 8846A By Direct Method as per ISO 15548-1
Bond Testers Excitation Frequency Harmonic Distortion Maximum Output Voltage	 1 kHz to 500 kHz 1 kHz to 10 MHz 1 V to 140 V	 0.05 % 0.015 % 0.5 %	Using Spectrum Analyzer, Frequency Generator, Frequency Counter, Oscilloscope and Fluke Multimeter 8846A By Direct Method
RTD Simulators[3]	-100 °C to 600 °C	0.11 °C	Loop Calibrator by Direct method as per EURAMET /cg-8
Temperature Transmitters (Simulation)[3]	-100 °C to 100 °C 100 °C to 600 °C 600 °C to 1200 °C	0.01 °C 0.30 °C 0.56 °C	Using Loop Calibrator by Direct method
Thermocouple Indicator (Simulation)[3] J Type E Type K Type N Type R Type S Type B Type T Type	 -50 °C to 1200 °C -50 °C to 1000 °C -50 °C to 1300 °C -50 °C to 1300 °C 0 °C to 1750 °C 0 °C to 1750 °C 600 °C to 1800 °C -50 °C to 400 °C	 0.40 °C 0.39 °C 0.66 ˚C 0.42 °C 1.5 °C 1.3 °C 1.2 °C 0.44 °C	Using Loop Calibrator by Direct Method as per EURAMET /cg-8
Time and Frequency			
Stopwatch	Up to 86400 s (24 h)	0.12 s	Frequency timer & Frequency analyzer by Comparison Method

MEASURED QUANTITY or DEVICE TYPE CALIBRATED	RANGE	UNCERTAINTY[1,2] (±)	CALIBRATION METHOD OR PROCEDURE, STANDARD EQUIPMENT (OPTIONAL)
Stopwatch	0 s to 86400 s	0.02 s	Signal Generator and frequency analyzer by Comparison Method
Non-Contact Type Tachometer, Stroboscopes Centrifuge, Stirrers, Agitators, Contact Type Tachometer[3]	20 rpm to 100 rpm >100 rpm to 100000 rpm	0.01 rpm 1 rpm	Using Frequency Counter, Frequency Generator & Reference Tachometer by Comparison Method
Optical Radiation			
Luxmeter Calibration	50 Lux to 2000 Lux	1.2 %	Using Photo Radiometer by Comparison Method as per ISO/CIE-19476
UV Meter (UVA) Calibration	Up to 200 µW/cm^2 200 µW/cm^2 to 3000 µW/cm^2	8 % 1.2 %	Using Photo Radiometer & UV Sensor by Comparison Method ss per ISO/CIE-19476
Densitometer	Optical Density 0.15 to 4.78	0.02	Using reference Density Step Tablet with Film Viewer Box by Direct Method
Density Step Tablets	Optical Density 0.15 to 4.78	0.03	Reference Density Step Tablet, Densitometer & with Film Viewer Box by Comparison Method
Viewer (Light Box)	10 000 cd/m^{-2}	5.3 %	Using Density Step Tablet, Photo Radiometer 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]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.

NOTE: p is equal to the pressure reading