Schedule of Accreditation

issued by

United Kingdom Accreditation Service

2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK



Locations covered by the organisation and their relevant activities

Laboratory locations:

Location details		Activity	Location code
Address Kyoto Close Moulton Park Industrial Park Northampton NN3 6FL	Local contact Mr T Lowe	Pressure Temperature Humidity Flow Electrical	Permanent

Site activities performed away from the locations listed above:

Location details	Activity	Location code
The customer's site or premises must be suitable for the nature of the particular calibrations undertaken and will be the subject of contract review arrangements between the laboratory and the customer	Pressure Temperature Humidity Electrical Force Speed	Site

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	HORIBA UK Ltd
0767	Issue No: 037 Issue date: 20 May 2025
Accredited to ISO/IEC 17025:2017	
	Calibration performed by the Organisation at the locations specified

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (<i>k</i> = 2)	Remarks	Location Code
PRESSURE			Methods consistent with EURAMET CG17	Perm and site
Gas Pressure Gauge Calibration of pressure indicating instruments and gauges	-95 kPa to 0 kPa 0 kPa to 500 kPa 500 kPa to 1 MPa 1 MPa to 2 MPa	Q [0.038 %, 89 Pa] Q [0.038 %, 97 Pa] Q [0.038 %, 151 Pa] Q [0.038 %, 210 Pa]		
Calibration of pressure indicating instruments and gauges	± 3 kPa ± (3 to 12) kPa ± 2 kPa ± (2 to 20) kPa	Q [0.30 %, 0.84 Pa] Q [0.30 %, 0.89 Pa] Q [0.48 %, 0.86 Pa] Q [0.44 %, 6.8 Pa]		
Gas Pressure Absolute Calibration of pressure indicating instruments and gauges	30 kPa to 200 kPa	82 Pa		
TEMPERATURE				
Temperature indicating instruments with resistance thermometer sensors	0 °C to 100 °C	0.11 °C	Direct comparison with a reference probe using a block bath calibrator	Perm
	0 °C to 100 °C	0.20 °C	Direct comparison with a reference probe using a block bath calibrator	Site
	1 °C to 60 °C	0.31 °C	Direct comparison with a reference probe performed in air	

Calibration and Measurement Capability (CMC)

E.

	Unite 2 Pine Trees,	Schedule of Accreditation issued by United Kingdom Accreditation Service 2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK			
UKAS CALIBRATION 0767 Accredited to ISO/IEC 17025:2017		HORIBA UK Ltd Issue No: 037 Issue date: 20 May 2025			
Calibration performed by the Organisation at the locations specified					
Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty $(k = 2)$	Remarks	Location Code	
HUMIDITY Relative humidity	1 °C to 10 °C	2.9 %rh	Direct comparison with a	Perm and	

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks	Location Code
HUMIDITY				
Relative humidity instruments	1 °C to 10 °C 5 %rh to 90 %rh	2.9 %rh	Direct comparison with a reference hygrometer	Perm and site
	10 °C to 17 °C 5 %rh to 95 %rh	2.9 %rh		
	17 °C to 23 °C 5 %rh to 95 %rh	1.8 %rh		
	23 °C to 50 °C 5 %rh to 95 %rh	2.9 %rh		
	50 °C to 60 °C 5 %rh to 90 %rh	2.9 %rh		
FORCE				Site
Dynamometer load cells in	500 N to 7500 N	7.0 N	Calibration using masses	
tension and compression.	1.5 kN to 20 kN	8.0 N		
SPEED				Site
Dynamometer speed	14 km/h to 200 km/h	0.21 km/h	Calibration by diameter and rotational speed	
FLOW Gas Flow – volume				Perm only
Calibration of Critical Flow Orifices	400 ml/min to 1.2 l/min	0.76 %	Calibration gas – propane (prover method)	
Calibration of gas dividers	5 ml/min to 50 ml/min 50 ml/min to 5 l/min	0.40 % 0.42 %	Calibration gas – nitrogen (mass flowmeter method)	
	5 l/min to 30 l/min 30 l/min to 60 l/min	0.56 % 1.03 %	Calibration gas – nitrogen (mass flowmeter method)	
Calibration of pitot tubes	100 l/min to 200 l/min 200 l/min to 1000 l/min 1000 l/min to 2000 l/min 2000 l/min to 10000 l/min 10000 l/min to 30000 l/min	2.8 % 2.8 % 2.8 % 2.8 % 2.8 %	Calibration gas – air (subsonic nozzle method)	

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Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (<i>k</i> = 2)	Remarks	Location Code
ELECTRICAL			Calibration of measuring devices by direct comparison with a	Perm and site
DC Voltage	0 V to 100 mV 100 mV to 200 mV 200 mV to 2 V 2 V to 20 V	17 μV Q [0.012 %, 30 μV] Q [0.011 %, 180 μV] Q [0.020 %, 1.6 mV]	reference meter.	
DC Current	0 A to 20 mA 20 mA to 55 mA	Q [0.014 %, 3.4 μA] Q [0.020 %, 8.6 μA]		
Resistance	0 Ω to 400 Ω 400 Ω to 4000 Ω	Q [0.010 %, 13 mΩ] Q [0.010 %, 140 mΩ]		
Frequency	40 mHz to 1 kHz 1 kHz to 50 kHz	40 mHz 290 mHz	Can also be reported as period or RPM	
Temperature simulation: Temperature simulators and indicators, calibration by electrical simulation				
Base metal thermocouple	- 100 °C to 1370 °C	0.60 °C	Including cold junction compensation	
PRT Simulation (PT 100)	- 200 °C to 800 °C	0.12 °C		
GAS CONCENTRATION			Blending of CRM gases with a nitrogen base gas using a Gas Divider Checker (GDC)	Perm and site
Carbon monoxide Carbon dioxide Nitric Oxide Propane Methane	Concentration (molar) 0.018% to 9% 0.038% to 19% 0.0006% to 0.3% 0.0006% to 0.33% 0.0019% to 0.95%	1.7 % of conc. 1.5 % of conc. 1.8% of conc. 1.8 % of conc. 1.8 % of conc.	MEXA and OBS analysers	
		END		

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Appendix - Calibration and Measurement Capabilities

Introduction

The definitive statement of the accreditation status of a calibration laboratory is the Accreditation Certificate and the associated Schedule of Accreditation. This Schedule of Accreditation is a critical document, as it defines the measurement capabilities, ranges and boundaries of the calibration activities for which the organisation holds accreditation.

Calibration and Measurement Capabilities (CMCs)

The capabilities provided by accredited calibration laboratories are described by the Calibration and Measurement Capability (CMC), which expresses the lowest measurement uncertainty that can be achieved during a calibration. If a particular device under calibration itself contributes significantly to the uncertainty (for example, if it has limited resolution or exhibits significant non-repeatability) then the uncertainty quoted on a calibration certificate will be increased to account for such factors.

The CMC is normally used to describe the uncertainty that appears in an accredited calibration laboratory's schedule of accreditation and is the uncertainty for which the laboratory has been accredited using the procedure that was the subject of assessment. The measurement uncertainty is calculated according to the procedures given in the GUM and is normally stated as an expanded uncertainty at a coverage probability of 95 %, which usually requires the use of a coverage factor of k = 2. An accredited laboratory is not permitted to quote an uncertainty that is smaller than the published measurement uncertainty in certificates issued under its accreditation.

Expression of CMCs - symbols and units

It should be noted that the percentage symbol (%) represents the number 0.01. In cases where the measurement uncertainty is stated as a percentage, this is to be interpreted as meaning percentage of the measurand. Thus, for example, a measurement uncertainty of 1.5 % means $1.5 \times 0.01 \times q$, where q is the quantity value.

The notation Q[a, b] stands for the root-sum-square of the terms between brackets: $Q[a, b] = [a^2 + b^2]^{1/2}$