

Schedule of Accreditation

issued by

United Kingdom Accreditation Service

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

 UKAS CALIBRATION 10741 Accredited to ISO/IEC 17025:2017	AVL United Kingdom Ltd	
	Issue No: 011 Issue date: 16 August 2024	
	Avon House Hartlebury Trading Estate Hartlebury DY10 4JB United Kingdom	Contact: Mr Nick Barker Tel: +44 (0) 1299 254600 E-Mail: nick.barker@avl.com Website: www.avl.com
Calibration performed by the Organisation at the locations specified		

Locations covered by the organisation and their relevant activities

Laboratory locations:

Location details	Activity	Location code
Unit 1 Viggen Way Ansty Business Park Coventry CV7 9RE	Local contact As above Pressure calibration Temperature calibration Humidity calibration Flow Calibration	P

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 calibration Temperature calibration Humidity calibration Flow Calibration	S



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Calibration and Measurement Capability (CMC)

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty ($k = 2$)	Remarks	Location Code
PRESSURE			Methods consistent with EURAMET CG17	
Calibration of differential pressure measuring instruments	0 kPa to ± 0.2 kPa (0.2 kPa to 2 kPa) (2 kPa to 20 kPa)	Q [0.77 %, 1.8 Pa) Q [0.38 %, 1.1 Pa) Q [0.35 %, 3.1 Pa)		P&S
Calibration of gauge pressure measuring instruments	-100 kPa to 0 kPa 0 kPa to 350 kPa	Q [0.078 %, 120 Pa) Q [0.039 %, 120 Pa)		P&S
	-100 kPa to 0 kPa 0 kPa to 1 MPa	Q [0.053 %, 58 Pa) Q [0.052 %, 140 Pa)		
	-100 kPa to 0 kPa 0 kPa to 2 MPa	Q [0.058 %, 92 Pa) Q [0.043 %, 361 Pa)		
Gas pressure absolute: Calibration of pressure indicating instruments and gauges by comparison	60 kPa to 120 kPa	42 Pa		P & S
FLOW				
Mass flow controller, air	20 L/min to 200 L/min	0.58 %		S
Critical flow venturi, air	1 m ³ /min to 30 m ³ /min	0.54 %	By comparison with a reference meter.	S
Gas divider flow nozzle at 3.2 bar using N ₂ gas	20 mL/min to 200 mL/min 100 mL/min to 1000 mL/min 1 L/min to 10 L/min	0.30 %		P
TEMPERATURE				
Rigid Bodied temperature sensor and indicator calibration	1 °C to 95 °C	0.20 °C	By comparison in a liquid bath	P & S
Electronic thermometers with indicators and data-loggers	5 °C to 40 °C	0.22 °C	By comparison in a dry block calibrator	P & S



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Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty ($k = 2$)	Remarks	Location Code
HUMIDITY Relative humidity	Performed at 20 °C 5 %rh to 10 %rh 10 %rh to 20 %rh 20 %rh to 30 %rh 30 %rh to 40 %rh 40 %rh to 50 %rh 50 %rh to 60 %rh 60 %rh to 80 %rh 80 %rh to 95 %rh	0.54 %rh to 0.72 %rh 0.72 %rh to 0.89 %rh 0.89 %rh to 0.93 %rh 0.93 %rh to 1.01 %rh 1.01 %rh to 1.09 %rh 1.09 %rh to 1.33 %rh 1.33 %rh to 1.76 %rh 1.76 %rh to 2.43 %rh	By comparison with a reference hygrometer in a portable chamber	P & S
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: $Q[a, b] = [a^2 + b^2]^{1/2}$