Schedule of Accreditation
issued by
United Kingdom Accreditation Service
2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK

UKAS CALIBRATION **9152** **Accredited to ISO/IEC 17025:2017**	**S M Gauge Company Ltd**	
	Issue No: 015 **Issue date:** 22 August 2024	
	Unit 6 **Armstrong Business Park** **Yate Road** **Yate** **Bristol** **BS37 5AA** **United Kingdom**	**Contact: Mr Andrew White** **Tel: +44 (0)1179 654615** **E-Mail: andy@pressuregauge.co.uk** **Website: www.pressuregauge.co.uk**

Calibration performed at the above address only

Calibration and Measurement Capability (CMC)

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty ($k = 2$)	Remarks
PRESSURE			Calibration of instruments with an electrical output can also be undertaken Methods consistent with EURAMET CG17
Gas Pressure (Gauge)			
Calibration of pressure indicating instruments and gauges	-100 kPa to -40 kPa -40 kPa to -10 kPa -10 kPa to 10 kPa 10 kPa to 40 kPa 40 kPa to 100 kPa 100 kPa to 400 kPa 400 kPa to 1 MPa 1 MPa to 3.5 MPa 3.5 MPa to 7 MPa 7 MPa to 10 MPa 10 MPa to 16 MPa 16 MPa to 20 MPa	43 Pa 18 Pa 7.0 Pa 18 Pa 43 Pa 51 Pa 177 Pa 480 Pa 990 Pa 2.8 kPa 5.0 kPa 14 kPa	Calibration by comparison with indication from a reference instrument. Absolute pressure calibrations can be undertaken using associated barometric pressure measurement correction. The uncertainties quoted will be increased by 29 Pa
Hydraulic Pressure (Gauge)			
Calibration of pressure indicating instruments and gauges	0 kPa to 100 kPa 100 kPa to 250 kPa 250 kPa to 400 kPa 400 kPa to 700 kPa 700 kPa to 1 MPa 1 MPa to 1.6 MPa 1.6 MPa to 2.5 MPa 2.5 MPa to 10 MPa 10 MPa to 300 MPa 300 MPa to 500 MPa	65 Pa 140 Pa 132 Pa 350 Pa 369 Pa 465 Pa 784 Pa Q [0.059 %, 1.4 kPa] 0.026 % 0.036 %	Calibration by comparison with indication from a reference instrument up to 2.5 MPa. Above 2.5 MPa pressure is generated by dead weight tester.
Calibration of Oxygen-duty pressure instruments	0 Pa to 4 MPa 4 MPa to 16 MPa 16 MPa to 40 MPa 40 MPa to 70 MPa	8.0 kPa 12 kPa 26 kPa 44 kPa	
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: $Q[a, b] = [a^2 + b^2]^{1/2}$