

Schedule of Accreditation

issued by

United Kingdom Accreditation Service

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

 <p>UKAS CALIBRATION</p> <p>4699</p> <p>Accredited to ISO/IEC 17025:2017</p>	<p>The Original Gauge Company Ltd</p> <p>Issue No: 011 Issue date: 13 August 2021</p>	
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<p>Calibration performed at the above address only</p>		

Calibration and Measurement Capability (CMC)

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty ($k = 2$)	Remarks
LENGTH			
Plain plug gauges (parallel), cylindrical setting standards,	1 to 30 diameter 30 to 100 diameter 100 to 150 diameter	0.80 0.80 1.0	By comparison with reference standards By comparison with reference standards
Plain plug gauges (taper)			By comparison with reference standards
Taper parallel to 1 in 8 on diameter	3 to 50 diameter 50 to 100 diameter 100 to 150 diameter	2.0 3.0 4.0	
Taper 1 in 8 to 1 in 3 on diameter	3 to 50 diameter 50 to 100 diameter 100 to 150 diameter	4.0 5.0 6.0	
Plain ring gauges (parallel) and setting standards	1 to 6 diameter 6 to 25 diameter 25 to 50 diameter 50 to 150 diameter	1.5 2.0 2.0 2.0	
Plain ring gauges (taper) by check plug			By comparison with reference standards
Taper parallel to 1 in 8 on diameter	2 to 50 diameter 50 to 100 diameter 100 to 150 diameter	3.0 4.0 5.0	
Taper 1 in 8 to 1 in 3 on diameter	2 to 50 diameter 50 to 100 diameter 100 to 150 diameter	5.0 6.0 7.0	



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Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty ($k = 2$)	Remarks
Screw plug gauges (parallel) including check and setting plugs See Note 3	1 to 100 diameter 100 to 300 diameter	2.5 5.0	By comparison with reference standards
Screw plug gauges (taper) See Note 2	2 to 100 diameter 100 to 150 diameter	5.0 8.0	By comparison with reference standards
Screw ring gauges (parallel) See Notes 3 and 4	1 to 100 diameter 100 to 150 diameter	5.0 6.0	By comparison with reference standards
Screw ring gauges (taper) See Note 2	6 to 75 diameter	7.0	By comparison with reference standards
Scrw pitch Screw flank angle	0.2 to 8 0° to 52°	2.0 5.0 minutes of arc	By comparison with reference standards
Penetration needles and cones	Needles to BS 2000:Part 49:1993 Cones to BS 2000:Part 50:1993	3.0 on diameter Mass 5.0 mg	
Surface texture (in support of other accredited measurements)	BS 1134: part 1:1988 Ra 0.02µm to 80µm	11% of measured value	NOTES 1 The uncertainty quoted is for the departure from flatness, straightness, parallelism or squareness, i.e. the distance separating the two parallel planes which just enclose the surface under consideration. 2. Single start, symmetrical thread forms only. 3. Single and multi-start symmetrical and asymmetrical thread forms. 4. Includes use of check plugs for screw rings from 1 mm to 16 mm diameter. 5. Functional test of size using check plugs calibrated with a CMC of 2.5 µm
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: $Q[a, b] = [a^2 + b^2]^{1/2}$