Schedule of Accreditation

issued by

United Kingdom Accreditation Service

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

4630

Accredited to ISO/IEC 17025:2017

K B Calibration Services Ltd

Issue No: 010 **Issue date:** 13 August 2021

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Calibration performed at the above address only

Calibration and Measurement Capability (CMC)

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks
RANGE IN MILLIMETRES AND UNCERTAINTY IN MICROMETRES UNLESS OTHERWISE STATED			
LENGTH			All linear calibrations may be given in inch units.
Plain plug gauges (parallel)	1 to 50 diameter 50 to 100 100 to 200	1.0 1.2 on diameter 2.0	Using length measuring machine and end standards.
Plain ring gauges (parallel)	2 to 100 diameter 100 to 150	2.0 3.0 on diameter	Using length measuring machine and end standards.
Length gauges, flat and spherical ended (excluding length bars)	25 to 300	1.0 + 8.0 x (length in m)	Using end standards
Screw plug gauges (parallel) including check and setting plugs	1 to 100 diameter	3.0 on pitch diameter	Single start, symmetrical thread forms only.
Screw ring gauges (parallel)	2 to 100 diameter	5.0 on pitch diameter	2 mm to 12 mm diameter range relates to functional test of size using check plugs.
Screw thread pitch	0.2 to 8	1.5	Using length measuring machine
Screw thread flank angles	0° to 52°	12 minutes of arc	Using a projector
MEASURING INSTRUMENTS			
Micrometers External	As BS 870:2008 0 to 200		
Internal	As BS 959:2008 0 to 200	Heads 2.0 between any two points. Setting and extension rods 1.0 + (8.0 x length in m)	
Depth	As BS 6468:2008 0 to 200		
Three point bore	12 to 225	Overall performance 5.0	Using setting rings

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Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks
RANGE IN MILLIMETRES AND UNCERTAINTY IN MICROMETRES UNLESS OTHERWISE STATED			
Caliper Gauges Vernier / Digital / Dial	As BS 887:2008 0 to 600	Overall performance 10 + (30 x length in m)	
Height Gauges Vernier / Digital / Dial	As ISO13225:2012 and BS 1643:2008 (withdrawn) 0 to 600	Overall performance 10 + (12 x length in m)	
Dial gauges and dial test indicators	As BS 907:2008 and BS 2795:1981 0 to 25	3.0	
END			

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: $Q[a, b] = [a^2 + b^2]^{1/2}$