Schedule of Accreditation

issued by

United Kingdom Accreditation Service

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

4057

Accredited to ISO/IEC 17025:2017

Measurement Solutions Ltd

Issue No: 016 **Issue date:** 01 Spetember 2021

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Calibration performed by the Organisations at the locations specified below

Locations covered by the organisation and their relevant activities

Site activities performed away from the locations listed above:

Location details	Activity	Location code
Permanent laboratory	Dimensional	A
Customers premises	Dimensional	B

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Calibration and Measurement Capability (CMC)

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks	Location Code
RANGE IN MILLIMETRES AND UNCERTAINTY IN MICROMETRES UNLESS OTHERWISE STATED				
MEASURING INSTRUMENTS AND MACHINES				
Performance verification of co-ordinate measuring machines	As ISO 10360-2:2009 – CMM's for measuring linear dimensions 0 to 1500 1500 to 2743 (longest diagonal using end standards)	 1.9 + (1.4 x length in m) 5.9 + (1.4 x length in m)		B
	ISO 10360-5:2010 - Single stylus probing test - Form Using a 10 mm to 50 mm diameter test sphere	0.25		
Articulated Arm Coordinate measuring machines (CMM)	As ISO 10360-12:2016			A, B
	Length measurement - E_{Bi} E_{Uni} 0 to 2743 (diameter using end standards)	 30 + (2.6 x length in m) 30 + (2.6 x length in m)		
	Probing measurement - $P_{Size.SPH.1x25}$ $P_{Form.SPH.1x25}$ Using a 10 mm to 51 mm diameter test sphere	 6.8 6.1		
	Articulated location measurement - $L_{Dia.5x5:Art}$ Using a 10 mm to 51 mm diameter test sphere	 14		
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: $Q[a, b] = [a^2 + b^2]^{1/2}$