Schedule of Accreditation

issued by

United Kingdom Accreditation Service

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

9817

Accredited to ISO/IEC 17025:2017

APEX Metrology Ltd

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Calibrations performed by the Organisation at the locations specified below

Locations covered by the organisation and their relevant activities

Laboratory locations:

Location details		Activity	Location code
Address Unit 3 The Enterprise Centre 1 Dryden Road Loanhead EH20 9LZ	**Local contact** Mr Ryan Graham	Dimensional	A

Site activities performed away from the locations listed above:

Location details		Activity	Location code
At customers premises	**Contact:** Mr Ryan Graham	Dimensional	B

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				
Cartesian co-ordinate measuring machines (CMM)	Length measurement: E_L 0 mm to 1500 mm (longest diagonal)	1.1 + (2.1 x length in m)	As ISO 10360-2:2009 Using end standards	A & B
	Single stylus probing test: $P_{Form.Sph.1\times25:SS:Tact}$ $P_{Size.Sph.1\times25:SS:Tact}$	0.60 0.60	As ISO 10360-5:2020 Using a 10 mm to 51 mm diameter test sphere. Test value uncertainties calculated in line with ISO/TS 17865:2016	
	Single stylus probing test: P_{FTU}	0.70	As ISO 10360-5:2010 (Withdrawn) Using a 10 mm to 50 mm diameter test sphere.	
Articulated arm co-ordinate measuring machines (CMM)	Length measurement: E_{Bi} E_{Uni} 0 mm to 909 mm (diameter)	3.8 + (2.1 x length in m) 3.8 + (2.1 x length in m)	As ISO 10360-12:2016 Using end standards	A & B
	Probing measurement: $P_{Size.SPH.1x25}$ $P_{Form.SPH.1x25}$	5.8 5.8	As ISO 10360-12:2016 Using a 10 mm to 51 mm diameter test sphere.	
	Articulated location measurement: $L_{Dia.5x5:Art}$	5.8		
Receiver and position gauges, jigs and fixtures	0 to 853 mm x 853 mm x 859 mm Angle: 0 ° to 360 °	5.6 + (9.7 x length in m) 0.050 º	Calibrations performed using a co-ordinate measuring machine.	A
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: $Q[a, b] = [a^2 + b^2]^{1/2}$