Schedule of Accreditation

issued by

United Kingdom Accreditation Service

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

0333

Accredited to ISO/IEC 17025:2017

Eley Metrology Ltd

Issue No: 036 **Issue date**: 18 May 2023

Beaufort House
Beaufort Court
Mansfield Road
Derby
Derbyshire
DE21 4FS

Contact: Mr G Glynn
Tel: +44 (0)1332 367475
Fax: +44 (0)1332 371435
E-Mail: sales@eleymet.com
Website: https://eleymet.com

Calibration performed by the Organisations at the locations specified below

Locations covered by the organisation and their relevant activities

Laboratory locations:

Location details	Activity	Location code
Address Beaufort House Beaufort Court Mansfield Road Derby Derbyshire DE21 4FS **Local contact** Mr G Glynn	Dimensional	A

Site activities performed away from the locations listed above:

Location details	Activity	Location code
At customers premises	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				
LENGTH			NOTES	
Parallels	As BS 906:Parts 1 and 2:1972 5 to 50 x 100 x 400	Dependent on size and grade 1.5 to 5.0	1 Calibrations can also be given in inch units.	
ANGLE				
Block Squares	As BS 939:2007 50 to 750 See Note 3	2.0 on squareness See Note 2	2 The uncertainty quoted is for the departure from flatness, straightness, or squareness, ie the distance separating the two parallel planes which just enclose the surface under consideration.	A
Right angle and box angle plates	As BS 5535:1978 50 to 600	Squareness: 3.0 + (1.0 per 100 mm) Parallelism: 1.0 + (1.0 per 100 mm) See Notes 2		A
Sine bars and tables	As BS 3064:1978 0 to 500 length	Linear dimensions 1.0 + (10 x length in m) Overall performance: 3.0 seconds of arc	3. Reference squares calibrated by first principles.	A
Sine centres	As laboratory procedure: "SINE BARS & SINE TABLES" 0 to 300 length or between centres	Linear dimensions 1.0 + (10 x length in m) Overall performance 5.0 seconds of arc		A
Compound sine tables	As laboratory procedure: "SINE BARS & SINE TABLES With tables or equivalent of 100 to 500			A
FORM				
Surface Plates				A, B
Granite and Cast iron	As BS 817:2008 160 x 100 to 2500 x 1600			
	Flatness of working surface:	1.5 + (0.8 x diagonal in m) See Note 2		
	Local variation of working surface:	2.0		
Straightedges				A, B
Cast Iron Steel Granite	As BS 5204:Part 1:1975 300 to 5000 As BS 5204:Part 2:1977 300 to 2000	1.0 + (2.0 x length in m) See Note 2		

Eley Metrology Ltd

Issue No: 036 **Issue date:** 18 May 2023

0333
Accredited to
ISO/IEC 17025:2017

Calibration performed by the Organisation at the locations specified

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks	Location Code
MEASURING INSTRUMENTS AND MACHINES				
Electronic Digital Height Gauges (including setting masters)	As laboratory procedure: "PERFORMANCE VERIFICATION OF DIGITAL ELECTRONIC HEIGHT GAUGES" 0 to 1000	Length: 1.0 + (5.0 x length in m) Squareness: 2.0 + (10 x length in m) 1.2 (Setting masters)		A, B
Cartesian co-ordinate measuring machines (CMM)	Length measurement: E 0 to 2000 (longest diagonal)	1.2 + (1.4 x length in m)	As ISO 10360-2:2001 (Withdrawn) Using end standards	B
	Single stylus probing test: P	0.58	Using a 10 mm to 50 mm diameter test sphere	
Cartesian co-ordinate measuring machines (CMM)	Length measurement: E_L 0 mm to 2000 mm (longest diagonal)	1.2 + (1.4 x length in m)	As ISO 10360-2:2009 Using end standards	B
	Single stylus probing test: $P_{Form.Sph.1\times25:SS:Tact}$ $P_{Size.Sph.1\times25:SS:Tact}$	0.42 0.64	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}	0.58	As ISO 10360-5:2010 (Withdrawn) Using a 10 mm to 50 mm diameter test sphere.	

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