

# Schedule of Accreditation

issued by

## United Kingdom Accreditation Service

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

 <b>UKAS</b> CALIBRATION  8672  Accredited to ISO/IEC 17025:2017	<b>Optimax Imaging, Inspection &amp; Measurement Ltd</b>  Issue No: 009    Issue date: 17 August 2021	
	<b>Michael Francis House</b> 3 Trimbush Way Market Harborough Leicestershire LE16 7XY United Kingdom	<b>Contact: Mr P Clements</b> Tel: +44 (0) 1858 436940 Fax: +44 (0) 1858 436941 E-Mail: support@optimaxonline.com Website: www.optimaxonline.com
Calibration performed by the Organisation at the locations specified		

Locations covered by the organisation and their relevant activities

Site activities performed away from the locations listed above:

Location details		Activity	Location code
<b>Address</b> At customers premises	<b>Local contact</b> Mr P Clements	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
MEASURING INSTRUMENTS AND MACHINES			All linear calibrations may be given in inch units.	
Toolmakers microscopes	0 to 750 mm x 750 mm x 300 mm	Angular: 3.0 minutes of arc Linear: 6.0 $\mu$ m	In house procedure TMP.1702002	B
Profile projectors	5 to 100 magnifications	Magnification: 125 $\mu$ m at the screen Angular: 3.0 minutes of arc Linear: 6.0 $\mu$ m	In house procedure TMP.1702001	B
Microscopes, (magnification only)	5 to 1000 magnifications	Magnification: 1.0% at the screen / eye piece	In house procedure TMP.1702003	B
Performance verification of co-ordinate measuring machines equipped with imaging probing systems using the component approach.	ISO 10360-7:2011 - CMM's  Length measurements over the following test lengths: $E_{BXY}$ 0 to 450 mm $E_{UZ}$ 0 to 217.5 mm $E_{BV}$ 2.75 mm to 15.00 mm  Probing performance: $P_{F2D}$ using 0.5 mm to 7.0 mm (test circle diameters) $P_{FV2D}$ using 0.5 mm to 7.0 mm (test circle diameters)  Squareness: $E_{SQ}$ 0 to 225 mm	  0.64 + (0.57 x length in m) $\mu$ m 0.41 + (1.26 x length in m) $\mu$ m 0.50 + (0.57 x length in m) $\mu$ m  0.37 $\mu$ m 0.37 $\mu$ m  3.3 $\mu$ m		B B
Video and digital microscopes with 2D field of view (FOV) measurement and XY measuring stage when fitted	Magnification 5 up to 500 Above 500 up to 1000  Linear - (FOV) 0 to 300 mm Linear - (mechanical displacement) 0 to 300 mm	  1.0 % 2.0 % at the screen / eye piece  0.50 +0.00050 L $\mu$ m L in mm  0.50 +0.00050 L $\mu$ m L in mm	In house procedures TMP.1702008 TMP.1702009	B
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:  $Q[a, b] = [a^2 + b^2]^{1/2}$