# **Schedule of Accreditation**

issued by

**United Kingdom Accreditation Service** 

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



### Locations covered by the organisation and their relevant activities

| Location details   |                  | Activity    | Location code |
|--|------------------|-------------|---------------|
| Michigan Drive<br>Tongwell,<br>Milton Keynes<br>MK15 8HT, UK | Victoria Allnutt | Dimensional | A             |
| Customers premises   | Victoria Allnutt | Dimensional | В             |

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|---|--|--|--|
|   | Hexagon Metrology Ltd  |  |  |
| 0239<br>Accredited to<br>ISO/IEC 17025-2017 | Issue No: 047 Issue date: 09 May 2025  |  |  |

| Measured Quantity<br>Instrument or Gauge  | Range   | Expanded<br>Measurement<br>Uncertainty ( <i>k</i> =2) | Remarks   | Location<br>Code |  |
|---|---|---|---|------------------|--|
| RANGE IN MILLIMETRES AND UNCERTAINTY IN MICROMETRES<br>UNLESS OTHERWISE STATED  |   |   |   |                  |  |
| MEASURING INSTRUMENTS<br>AND MACHINES   |   |   |   |                  |  |
| Performance verification of co-<br>ordinate measuring machines  | ISO 10360-2:2009 - CMM's<br>used for measuring linear<br>dimensions 0 to 1500 (longest<br>diagonal using end standards) | 0.20 + (0.40 x length in m)                           |   | В                |  |
|   | ISO 10360-5:2010 - single<br>stylus probing test<br>10 to 50 (test sphere diameter)                                     | 0.12  |   | В                |  |
|   | ISO 10360-5:2020 - Single<br>stylus probing test:<br>10 to 50 (test sphere diameter)                                    |   |   | В                |  |
|   | PForm.Sph.1×25:SS:Tact<br>PSize.Sph.1×25:SS:Tact  | 0.076<br>0.274<br>Test length uncertainties           |   |                  |  |
| Performance verification of   | ISO10360-12:2016  |   | Model Arm series RA8 (6   |                  |  |
| measuring machines  | EUNI - 1.2 m arms   | $U = \sqrt{2.1^2 + (3.4 \cdot L)^2} \mu m$            | a / axis)   |                  |  |
|   | 2.0 m to 4.5 m arms   | $U = \sqrt{3.9^2 + (3.4 \cdot L)^2} \mu m$            |   |                  |  |
|   |   | where L is the length in metres                       |   |                  |  |
|   | PFORM (10 to 51 mm diameter)  | 1.2   |   |                  |  |
|   | PSIZE (10 to 51 mm diameter)  | 1.7   |   |                  |  |
|   | LDIA ( to 51 mm diameter)   | 1.2   |   |                  |  |
| Performance verification of the<br>articulated location value of<br>optical distance sensors<br>attached to articulated arm<br>coordinate measuring<br>machines | LDIA (using a test sphere).   | 1.2   | Based on ISO10360-<br>8:2013 Annex D<br>RS5 or RS6 or AS1                                   | A                |  |
| Laser Tracker   | Spatial length to retro reflector   | 0.018 mm  | Procedure SP1-POR-PR-   | А                |  |
|   | Scale of absolute distance<br>meter (frequency) - 25 MHz  | 0.75 Hz   | Leica Laser Tracker<br>AT403, AT930 and<br>AT960 with SR, MR,LR &<br>XR ranges              |                  |  |
|   | ADM Zero Point Offset   | 0.007 mm  | Using a 2550 mm Invar<br>Scale Bar, Frequency<br>counter and Rubidium<br>frequency standard |                  |  |

## Calibration and Measurement Capability (CMC)

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|--|--|--|--|
|  | Hexagon Metrology Ltd  |  |  |
| Accredited to<br>ISO/IEC 17025:2017                                  | Issue No: 047 Issue date: 09 May 2025  |  |  |
| Calibration performed by the Organisation at the locations specified |  |  |  |

| Measured Quantity<br>Instrument or Gauge  | Range  | Expanded<br>Measurement<br>Uncertainty ( <i>k</i> =2) | Remarks  | Location<br>Code |  |
|---|--|---|--|------------------|--|
| MEASURING INSTRUMENTS<br>AND MACHINES (cont.)                                   |  |   |  |                  |  |
| Laser Tracker + T-Probe   | Spatial length with tactile probe<br>0 to 2000<br>2 000 to 6 000<br>6 000 to 10 000  | 0.016 mm<br>0.027 mm<br>0.037 mm                      | AT960 Leica Laser<br>Tracker<br>Using a 2550mm Invar<br>Scale Bar  | A                |  |
| Laser Tracker + T-Scan 5 or<br>LAS or LAX scanner                               | Spatial length with optical probe<br>(Scanning)<br>0 to 2 000<br>2 000 to 6 000<br>6 000 to 10 000                                 | 0.020 mm<br>0.020 mm<br>0.021 mm                      | AT960 Leica Laser<br>Tracker<br>Using a 2550 mm Invar<br>Scale Bar<br>White Scan Sphere for<br>LAS or . 100mm Sphere<br>for T-Scan 5 and LAS XL. | A                |  |
| Environmental monitoring<br>station in support of laser<br>tracker calibraitons | Ambient laboratory conditions.<br>(One discrete measurement at<br>current conditions)<br>• temperature<br>• pressure<br>• humidity | 0.06 °C<br>0.7 hPa<br>2.3 % r.H.                      | Meteo station for AT403,<br>AT930 & AT960 Leica<br>Laser Trackers<br>Procedure SP1-POR-PR-<br>003  | 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:  $Q[a, b] = [a^2 + b^2]^{1/2}$