Schedule of Accreditation

issued by

United Kingdom Accreditation Service

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

0262

Accredited to ISO/IEC 17025:2017

Testing Calibration Services Limited

Issue No: 034 **Issue date**: 27 August 2021

Unit 5
Lincoln Business Park
Lincoln Close
Rochdale
Lancashire
OL11 1NR

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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 Unit 5 Lincoln Business Park Lincoln Close Rochdale Lancs OL11 1NR **Contact** Mr I C Clayton	Force	P

Site activities performed away from the locations listed above:

Location details	Activity	Location code
Any customers' sites or premises must be suitable for the nature of the particular calibrations undertaken and will be the subject of contract review arrangements between laboratory and the customer. **Contact** Mr I C Clayton	Force	S

Calibration and Measurement Capability (CMC)

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks	Location Code
FORCE				
UNIVERSAL MATERIALS TESTING MACHINES				S
Verification and calibration of the force measuring system by force proving instruments in Tension	0.05 kN to 500 kN for Class 0.5, 1, 2 and 3 machines to BS EN ISO7500-1:2018 and ASTM E4-20	0.22 %		
Verification and calibration of the force measuring system by force proving instruments in Compression	0.05 kN to 500 kN for Class 0.5, 1, 2 and 3 machines to BS EN ISO7500-1:2018 and ASTM E4-20	0.22 %		
Verification and calibration of the force measuring system by calibrated masses in Tension	0.001 N to 500 N for Class 0.5, 1, 2 and 3 machines to BS EN ISO7500-1:2018 and ASTM E4-20	0.10 %		
Verification and calibration of the force measuring system by calibrated masses in Compression	0.001 N to 500 N for Class 0.5, 1, 2 and 3 machines to BS EN ISO7500-1:2018 and ASTM E4-20	0.10 %		
FORCE MEASURING DEVICES				P
Calibration of push pull force measuring devices by force proving instruments and masses in tension and compression	0.001 N to 2 kN	0.10 %		
	From 0.001 N up to 2 kN From 0.05 kN up to 100 kN	0.10 % 0.41 %		
Calibration of force measuring devices (e.g. strain gauged load cells and load measuring rings) but excluding proving devices by force proving instruments and masses in tension	From 0.001 N up to 2 kN From 0.05 kN up to 180 kN	0.10% 0.41%		
Calibration of force measuring devices (e.g. strain gauged load cells and load measuring rings) but excluding proving devices by force proving instruments and masses in compression				

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Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks	Location Code
LENGTH				
Extensometer By comparison with reference devices	As BS EN ISO 9513:2012 for the following classes and gauge lengths: Class 0.5 from 10 mm Class 1 from 5 mm Class 2 from 5 mm Displacements 0.02 mm to 51 mm As ASTM E83-16 for the following classes and gauge lengths: B-1 from 20 mm B-2 from 10 mm C from 5 mm Displacements 0.02 mm to 51 mm As BS ISO 5893:2019+A1:2020 for classes C, D and E Displacements 0.50 mm to 50 mm 50 mm to 1200 mm	 1.1 μm + (0.37 μm per mm) 1.1 μm + (0.37 μm per mm) 0.0056 mm + (0.19 mm per m) 0.090 mm + (0.19 mm per m)		S
Testing machine crosshead displacement By comparison with reference devices	0.50 mm to 50 mm 50 mm to 1200 mm	0.0056 mm + (0.19 mm per m) 0.090 mm + (0.19 mm per m)		S
Time By comparison with reference device	30 seconds to 10 minutes	0.11 s		S
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: $Q[a, b] = [a^2 + b^2]^{1/2}$