Schedule of Accreditation
issued by
United Kingdom Accreditation Service
2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK

0015 **Accredited to ISO/IEC 17025:2017**	**Spline Gauges Limited** **Issue No:** 025 **Issue date:** 06 March 2024	
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Calibration performed at the above address only

Calibration and Measurement Capability (CMC)

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks
RANGE IN MILLIMETRES AND UNCERTAINTY IN MICROMETRES UNLESS OTHERWISE STATED			
INVOLUTE GEARS, GEAR ARTEFACTS, SPLINE GAUGES (see notes 1 and 2) **External**			NOTES 1. Gears of the following capacities may be calibrated: Maximum diameter 150 mm, Maximum length 100 mm, Max Weight 30 kg 2. The uncertainties stated assume that journal diameters or reference surfaces have been used to define the measurement axis.
Profile Total deviation (F_{α}) Profile slope deviation ($f_{H\alpha}$) Profile form deviation ($f_{f\alpha}$)	0.15 to 25 Module	1.4 1.3 1.4	CNC gear measuring machine.
Helix (Alignment) Total deviation (F_{β}) Helix (alignment) slope deviation ($f_{H\beta}$) Helix (alignment) form deviation ($f_{\beta f}$)	Helix angle 0° to 45° 0.15 to 25 Module	1.6 1.5 1.6	
Single Pitch (f_p)	0.15 to 25 Module	1.8	
Pitch Difference (f_u)	0.15 to 25 Module	1.8	
Cumulative Pitch (F_p)	0.15 to 25 Module	2.7	.
Radial Runout of Tooth Space (F_r)	0.15 to 25 Module	3.3	
Normal Circular Tooth Thickness(S_n)	0.15 to 25 Module	1.6	Horizontal measuring machine and reference setting standards.
Dimension Over/Pins or Balls (Mdr or Mdk)	5 to 100 100 to 200 200 to 250 250 to 300	1.7 1.9 2.1 2.9	

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks
RANGE IN MILLIMETRES AND UNCERTAINTY IN MICROMETRES UNLESS OTHERWISE STATED			
INVOLUTE GEARS, GEAR ARTEFACTS, SPLINE GAUGES (see notes 1 and 2) (cont'd)			NOTES (cont'd)
Internal			
Profile Total deviation (F_{α}) Profile slope deviation ($f_{H\alpha}$) Profile form deviation ($f_{f\alpha}$)	0.15 to 25 Module	1.4 1.3 1.4	CNC gear measuring machine.
Helix (Alignment) Total deviation (F_{β}) Helix (alignment) slope deviation ($f_{H\beta}$) Helix (alignment) form deviation ($f_{\beta f}$)	Helix angle 0° to 45°	1.6 1.5 1.6	
Single Pitch (f_p)		1.8	
Pitch Difference (f_u)		1.8	
Cumulative Pitch (F_p)		2.7	
Radial Runout of Tooth Space (F_r)		3.3	
Normal Circular Tooth Thickness(S_n)		1.6	
Dimension Between Pins or Balls (Mdr or Mdk)	5 to 100 diameter	2.6	Horizontal measuring machine and reference setting standards.
	100 to 200 diameter	2.9	
STRAIGHT SIDED SERRATION GAUGES			
Plug			
Serration Angle Dimension Across Flats 90˚ Only.	0.15 to 25 Module	10 Minutes of Arc 1.6	CNC gear measuring machine or Con-tracer.
Single Pitch (f_p)		1.8	CNC gear measuring machine.
Pitch Difference (f_u)		1.8	
Cumulative Pitch (F_p)		2.7	
Dimension Over Pins or Balls (Mdr or Mdk)		1.7	Horizontal measuring machine and reference setting standards.
Straight Sided Plug Tooth Thickness		1.2	

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks
RANGE IN MILLIMETRES AND UNCERTAINTY IN MICROMETRES UNLESS OTHERWISE STATED			
STRAIGHT SIDED SERRATION GAUGES (cont'd)			
Ring			
Serration Angle		10 Minutes of Arc	CNC gear measuring machine or Contracer.
Dimension Across Flats 90˚ Only.	0.15 to 25 Module	1.6	
Single Pitch (f_p)	0.15 to 25 Module	1.8	CNC gear measuring machine.
Pitch Difference (f_u)	0.15 to 25 Module	1.8	
Cumulative Pitch (F_p)	0.15 to 25 Module	2.7	
Dimension Between Pins or Balls (Mdr or Mdk)	20 to 100 Diameter	2.6	Horizontal measuring machine and reference setting standards.
Straight Sided Internal Tooth Thickness		1.2	
GENERAL			
Bore Diameters	5 to 25 Diameter	1.0	Horizontal measuring machine and reference setting standards.
	25 to 50 Diameter	1.3	
	50 to 100 Diameter	1.9	
Major Diameter (Even Teeth)	5 to 100 Diameter	1.1	
	100 to 175 Diameter	1.5	
	175 to 250 Diameter	1.9	
	250 to 300 Diameter	2.3	
Major Diameter (Odd Teeth)	5 to 100 Diameter	1.7	
	100 to 175 Diameter	1.9	
	175 to 250 Diameter	2.2	
	250 to 300 Diameter	2.4	
Minor Diameter (Even Teeth)	10 to 100 Diameter	1.1	
	100 to 200 Diameter	1.9	
Minor Diameter (Odd Teeth)	10 to 100 Diameter	1.7	
	100 to 200 Diameter	2.2	

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks
RANGE IN MILLIMETRES AND UNCERTAINTY IN MICROMETRES UNLESS OTHERWISE STATED			
GENERAL (cont'd)			NOTES (cont'd)
Chamfer		12.7	Con-tracer.
Fillet radius		12.7	Con-tracer.
Radial and axial runout		2.5	CNC gear measuring machine
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 × 0.01 × *q*, where *q* is the quantity value.

The notation Q[a, b] stands for the root-sum-square of the terms between brackets: $Q[a, b] = [a^2 + b^2]^{1/2}$