Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Confederation

Federal Department of Economic Affairs,
Education and Research EAER

State Secretariat for Economic Affairs SECO
Swiss Accreditation Service SAS

SCS Directory

Accreditation number: SCS 0006

International standard:	ISO/IEC 17025:2017
Swiss standard:	SN EN ISO/IEC 17025:2018

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Initial accreditation:	10.07.1987
Current accreditation:	15.12.2023 to 14.12.2028
Scope of accreditation see:	www.sas.admin.ch (Accredited bodies)

Scope of accreditation as of 28.08.2025

Calibration laboratory for length and angles

Calibration and Measurement Capability (CMC)

Measured Quantity / Instrument or Gauge	Measurement Range	Measurement Conditions	Best Measurement Capability ± [1)]	Remarks
LENGTH				
Machine tools	up to 40 m		0,5 µm + 3•10^{-6}•*L*	Positioning precision with laser interferometer On-site calibration
Length measuring instruments				
Horizontal instruments	up to 3 m		0,2 µm + 2•10^{-6}•*L*	Error of indication, with laser interferometer and gauge blocks
Height gauges	up to 1 m		0,2 µm + 2•10^{-6}•*L*	With step gauge
	up to 3 m			With laser interferometer Also on-site calibration

The given extended measurement uncertainty is the standard uncertainty of the measurement multiplied by an extension factor k = 2, which corresponds to a confidence level of about 95% for a normal distribution.

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Measured Quantity / Instrument or Gauge	**Measurement Range**	**Measurement Conditions**	**Best Measurement Capability ± [1)]**	**Remarks**
Electronic length indicator	up to 12 mm		0,3 µm + 2,5•10^{-6}•*L*	Comparison with reference length indicator
Setting gauge for probe constant	5 mm – 50 mm		0,4 µm 0,5 µm	Using coordinate measuring machine; Measurement uncertainty according to ISO 15530-3 On-site calibration
Distance gauge sphere to plane Distance Diameter Roundness	 0 mm – 100 mm up to 50 mm		 0,6 µm 0,6 µm 0,5 µm	Using coordinate measuring machine; Measurement uncertainty according to ISO 15530-3
Hole plate Distance Diameter	 up to 700 mm x 600 mm up to 50 mm		 1,0 µm + 1,5•10^{-6}•*L* 0,8 µm	Using coordinate measuring machine; Measurement uncertainty according to ISO 15530-3
Coordinate measuring machines	up to 1 m		Uncertainty of the standards used: Uncertainty of the standards used: Gauge blocks: 0,05 µm + 0,5•10^{-6}•*L* Reference sphere: 0,08 µm	Acceptance test using calibration artefacts according to ISO 10360-2 Also on-site calibration
Measuring microscopes and projectors 2-D position deviation	up to 200 mm x 300 mm Interval of division 10 mm		 1,2 µm + 5•10^{-6}•*L*	Calibration with photo mask Also on-site calibration
Gauge blocks Step gauges	up to 3000 mm up to 1200 mm		0,3 µm + 1,6•10^{-6}•*L* 0,3 µm + 1,6•10^{-6}•*L*	Length measuring machine with laser interferometer and mechanical probing

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Measured Quantity / Instrument or Gauge	**Measurement Range**	**Measurement Conditions**	**Best Measurement Capability ± [1)]**	**Remarks**
Ball Bars	100 mm – 3000 mm		$0{,}6\ \mu m + 0{,}5 \cdot 10^{-6} \cdot L$	
Line scales	Engineer scale up to 3000 mm		$3\ \mu m + 2 \cdot 10^{-6} \cdot L$	Length measuring machine with laser interferometer and optical probing
	Standard scale up to 3000 mm		$5\ \mu m + 0{,}8 \cdot 10^{-6} \cdot L$	Calibration rod with circular optical markers
	Glass scale up to 1000 mm		$0{,}5\ \mu m + 0{,}5 \cdot 10^{-6} \cdot L$	With graduation marks or circular structures
Guideways				on-site calibration
Straightness	$L \leq 3$ m		$0{,}1\ \mu m + 0{,}4 \cdot 10^{-6} \cdot L + 0{,}025 \cdot A$	With straightness interferometer
	$L \leq 30$ m		$0{,}5\ \mu m + 0{,}4 \cdot 10^{-6} \cdot L + 0{,}025 \cdot A$	L= measured length A = indicated value
	$L \leq 15$ m		$0{,}2\ \mu m + (0{,}15 + B/2000) \cdot 10^{-6} \cdot L$	With angle interferometer or electronic levels B = base length in mm
Straightness standards				
Straight edges	up to 3 m			STRAIGHT-line method
Straightness			$0{,}15\ \mu m + 0{,}15 \cdot 10^{-6} \cdot L + 0{,}02 \cdot A$	L= measured length A = indicated value
Parallelism			$0{,}2\ \mu m + 0{,}25 \cdot 10^{-6} \cdot L + 0{,}02 \cdot A$	
Squareness standards				
Squareness	up to 1400 mm		$0{,}5\ \mu m + 0{,}5 \cdot 10^{-6} \cdot L + 0{,}02 \cdot A$	STRAIGHT-line method (specimen reclining)
	up to 1000 mm		$0{,}2\ \mu m + 0{,}2 \cdot 10^{-6} \cdot L + 0{,}02 \cdot A$	SQUARE-master method (specimen upright)
	up to 500 mm		$0{,}2\ \mu m + 1{,}5 \cdot 10^{-6} \cdot L + 0{,}02 \cdot A$	With rotatory table and STRAIGHT-line

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Measured Quantity / Instrument or Gauge	Measurement Range	Measurement Conditions	Best Measurement Capability ± [1)]	Remarks
				L= length *A* = indicated value
Surface plates Flatness	Minimal size 0,2 m x 0,2 m		0,5 µm + 0,5•10^{-6}•*L*	Electronic levels *L*= length Also on-site calibration
Flatness artefacts Flatness and parallelism	Surface > 1 cm^2 up to 3000 mm		0,4 µm + 0,5•10^{-6}•*L*	TOPO-method *L*= measured length
ANGLE Angular deviation of guideways	up to 100"		0,2" + 2•10^{-3}•*A* + 0,05"•*L*	Angle interferometer *A* = value *L* = measured length in m Also on-site calibration
Dividing heads Rotary tables / Position error of rotary axes	Full circle 1° or arbitrary interval 10° interval		 1,2" 0,5"	 With rotary axis calibrator, or index table with angle interferometer or electronic level Optical polygon and autocollimator Also on-site calibration
Inclinometers	360° 1° interval		2,5"	With index table
Electronic levels / Bubble levels	± 1 ° arbitrary interval		0,2" + 2•10^{-3}•*A*	With inclination table and angle interferometer
Angle encoders	360° arbitrary interval		10"	With rotary table
Optical polygons	360° arbitrary interval		0,3"	With rotary table and autocollimator

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In case of contradictions in the language versions of the directories, the German version shall apply.

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