



## SCS Directory

Accreditation number: SCS 0145

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

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Initial accreditation: 09.05.2016  
Current accreditation: 09.05.2021 to 08.05.2026  
Scope of accreditation see: [www.sas.admin.ch](http://www.sas.admin.ch)  
(Accredited bodies)

### Scope of accreditation as of 27.01.2023

#### Calibration laboratory for length, torque, mass (weights) and temperature

##### Calibration and Measurement Capability (CMC)

Measured Quantity / Instrument or Gauge	Measurement Range	Measurement Conditions	Best Measurement Uncertainty $\pm$ <sup>1)</sup>	Remarks
<b>LENGTH</b>				
<b>Plug gauge</b>				
- Steel and carbide	Ø 0.05 mm to 10 mm	Diameter	$0.25 \mu\text{m} + 1.7 \cdot 10^{-6} \cdot L$	Horizontal measuring bench
- Steel and carbide	Up to Ø 250 mm	Diameter	$0.5 \mu\text{m} + 5 \cdot 10^{-6} \cdot L$	
<b>Screw plug gauge</b>				
- NIHS	Ø 0.3 mm to 1.4 mm (Pitch 0.08mm to 0.25 mm)	Simple pitch diameter	1.9 $\mu\text{m}$	Horizontal measuring bench
- Steel and carbide	Ø 1 mm to 250 mm (Pitch 0.25 mm to 2.5 mm)		$1.7 \mu\text{m} + 3 \cdot 10^{-6} \cdot L$	



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<b>Radiated gauge / Spherical gauge</b> - Carbide	Ø 0.1 mm to 5 mm	Diameter	0.4 µm	Horizontal measuring bench
<b>Cylindrical ring gauge</b> - Steel	Ø 1 mm to 180 mm	Diameter	$0.6 \mu\text{m} + 4 \cdot 10^{-6} \cdot L$	Horizontal measuring bench
	Up to Ø 400 mm	Diameter	$0.9 \mu\text{m} + 4.5 \cdot 10^{-6} \cdot L$	
<b>Threaded ring gauge</b>	Ø 1.5 mm to 200 mm Pitch 0,30 mm to 6 mm	Diameter	$2.8 \mu\text{m} + 1.2 \cdot 10^{-6} \cdot L$	Horizontal measuring bench
<b>Gap gauges</b>	5 mm to 180 mm		$0.6 \mu\text{m} + 4 \cdot 10^{-6} \cdot L$	Horizontal measuring bench
<b>Probe indicator</b>		<b>Scale interval</b>		
- Dial	Up to 100 mm	0.001 mm	1.1 µm	Horizontal measuring bench
		0.010 mm	1.6 µm	
- Digital display	Up to 100 mm	0.001 mm	1.6 µm	Horizontal measuring bench
		0.010 mm	1.7 µm	
	Up to 150 mm	0.001 mm	1.9 µm	
		0.010 mm	2.0 µm	
<b>Test indicator</b>		<b>Scale interval</b>		
- Dial	Up to 4 mm	0.001 mm	0.8 µm	Horizontal measuring bench
		0.002 mm	0.8 µm	
		0.010 mm	2.5 µm	
- Digital display	Up to 4 mm	0.001 mm	0.8 µm	Horizontal measuring bench
		0.010 mm	2.5 µm	



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<b>Micrometric stop</b>		<b>Scale interval</b>		
- Vernier scale	Up to 50 mm	0.010 mm	$1.1 \mu\text{m} + 1.0 \cdot 10^{-6} \cdot L$	Horizontal measuring bench
- Digital display	Up to 50 mm	0.001 mm	$0.8 \mu\text{m} + 1.6 \cdot 10^{-6} \cdot L$	Horizontal measuring bench
		0.010 mm	$1.1 \mu\text{m} + 1.0 \cdot 10^{-6} \cdot L$	
<b>External micrometer Standard / Special</b>		<b>Scale interval</b>		
- Vernier scale	Up to 300 mm	0.001 mm	$1.3 \mu\text{m} + 23 \cdot 10^{-6} \cdot L$	
		0.002 mm	$2.0 \mu\text{m} + 22 \cdot 10^{-6} \cdot L$	
		0.005 mm	$3.0 \mu\text{m} + 19 \cdot 10^{-6} \cdot L$	
		0.010 mm	$4.5 \mu\text{m} + 17 \cdot 10^{-6} \cdot L$	
- Digital display	Up to 300 mm	0.001 mm	$2.0 \mu\text{m} + 21 \cdot 10^{-6} \cdot L$	
	Up to 30 mm	0.000 1 mm	$0.6 \mu\text{m} + 14 \cdot 10^{-6} \cdot L$	
<b>V-anvil micrometer</b>		<b>Scale interval</b>		
- Vernier scale	Up to 50 mm	0.001 mm	$3 \mu\text{m} + 7 \cdot 10^{-6} \cdot L$	
		0.002 mm	$3 \mu\text{m} + 7 \cdot 10^{-6} \cdot L$	
		0.005 mm	$4 \mu\text{m} + 5 \cdot 10^{-6} \cdot L$	
		0.010 mm	$5 \mu\text{m} + 4 \cdot 10^{-6} \cdot L$	
- Digital display	Up to 50 mm	0.001 mm	$3 \mu\text{m} + 6 \cdot 10^{-6} \cdot L$	
<b>Internal micrometer</b>		<b>Scale interval</b>		
- Vernier scale	2 mm to 150 mm	0.001 mm		
		0.002 mm	$4 \mu\text{m} + 13 \cdot 10^{-6} \cdot L$	
		0.005 mm	$4 \mu\text{m} + 13 \cdot 10^{-6} \cdot L$	
		0.010 mm	$4 \mu\text{m} + 13 \cdot 10^{-6} \cdot L$	
- Digital display	2 mm to 150 mm	0.001 mm	$4 \mu\text{m} + 13 \cdot 10^{-6} \cdot L$	



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<b>Caliper</b>		<b>Scale interval</b>		
- Dial	Up to 1000 mm	0.01 mm	$6 \mu\text{m} + q + 17 \cdot 10^{-6} \cdot L$	q = resolution
		0.02 mm	$6 \mu\text{m} + q + 17 \cdot 10^{-6} \cdot L$	
- Vernier scale	Up to 1000 mm	0.02 mm	$6 \mu\text{m} + q + 17 \cdot 10^{-6} \cdot L$	
		0.05 mm	$5 \mu\text{m} + q + 10 \cdot 10^{-6} \cdot L$	
- Digital display	Up to 1000 mm	0.01 mm	$5 \mu\text{m} + q + 17 \cdot 10^{-6} \cdot L$	
<b>Gauge blocks</b>	0.5 mm to 100 mm	<b>Material</b>	$0.06 \mu\text{m} + 1.2 \cdot 10^{-6} \cdot L$	Gauge blocks bench
Central length		Steel	$0.06 \mu\text{m} + 1.2 \cdot 10^{-6} \cdot L$	
		Ceramic	$0.06 \mu\text{m} + 1.3 \cdot 10^{-6} \cdot L$	
		Tungsten carbide	$0.04 \mu\text{m}$	
Variation in length V with fo and fu	Up to 200 mm	<b>Material</b>		Horizontal measuring bench
		Steel	$0.2 \mu\text{m} + 0.3 \cdot 10^{-6} \cdot L$	
		Ceramic	$0.2 \mu\text{m} + 0.3 \cdot 10^{-6} \cdot L$	
		Tungsten carbide	$0.2 \mu\text{m} + 0.3 \cdot 10^{-6} \cdot L$	
Variation in length V with fo and fu	200 mm to 500 mm		$0.2 \mu\text{m}$	Horizontal measuring bench
Central length			$0.3 \mu\text{m} + 1.8 \cdot 10^{-6} \cdot L$	
Variation in length V with fo and fu			$0.3 \mu\text{m}$	



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<b>Gauge blocks for micrometer</b>	Up to 500 mm	Tips Plans	$0.4 \mu\text{m} + 4.0 \cdot 10^{-6} \cdot L$	Horizontal measuring bench
<b>Form</b>				
Gauges / Ring gauges	$\varnothing_{\text{int}}$ 2 mm to 180 mm $\varnothing_{\text{ext}}$ 1 mm to 250 mm			Form machine
Circularity			0.15 $\mu\text{m}$	
Cylindricity			0.20 $\mu\text{m}$	
Straightness	Height < 100 mm		0.25 $\mu\text{m}$	
<b>Gauges and Reference Parts</b>	(400 x 400 x 200) mm	Optical and tactile measurement	Calculated for a feature dimension of 100 mm	Calibration on a 3D-coordinate measuring machine Uncertainty of measurement according to VDI 2617 sheet 11
<b>Dimensions</b>			Tactile   Optical	
- Diameter			1.1 $\mu\text{m}$   1.5 $\mu\text{m}$	EN ISO 14405
- Distance			1.2 $\mu\text{m}$   1.5 $\mu\text{m}$	EN ISO 14405
- Angle			0.0008°   0.0015°	EN ISO 14405
<b>Form</b>				
- Circularity			1.3 $\mu\text{m}$   2.0 $\mu\text{m}$	EN ISO 1101
- Cylindricity			1.6 $\mu\text{m}$   /	EN ISO 12181
- Straightness			1.0 $\mu\text{m}$   1.8 $\mu\text{m}$	EN ISO 12180
- Flatness			1.2 $\mu\text{m}$   1.4 $\mu\text{m}$	EN ISO 12780
<b>Orientation</b>				
- Perpendicularity			1.2 $\mu\text{m}$   1.5 $\mu\text{m}$	EN ISO 1101
- Parallelism			1.2 $\mu\text{m}$   1.0 $\mu\text{m}$	EN ISO 1101
- Tilt			1.2 $\mu\text{m}$   1.3 $\mu\text{m}$	EN ISO 1101



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<b>Position</b>				
- Location			1.1 $\mu$ m   1.6 $\mu$ m	ISO 1101/5458
- Coaxiality			1.1 $\mu$ m   1.2 $\mu$ m	ISO 1101
<b>Run-out</b>				
- Circular radial run-out			1.7 $\mu$ m   /	ISO 1101
- Circular axial run-out			1.3 $\mu$ m   /	ISO 1101
<b>TORQUE</b>				
<b>Torque wrenches</b>				
- Fixed and with indicator	1 N m to 1500 N m		0.6 %	In the laboratory and on-site
<b>Torque screwdriver</b>				
- Fixed and with indicator	0.02 N m to 10 N m	ISO 6789	1.3 %, but not less than 0,006 N	In the laboratory and on-site
<b>Torque transducers torque sensors and torque measuring devices</b>	0.005 N m to 1500 N m	With double levers horizontal and load weights	0.040 %	BS EN 7882 :2017
<b>Weighing instrument</b>				
Calibration electronic weighing	Up to 10.1 kg	Euramet CG 18 With standard weight E2	1.5 · 10 <sup>-6</sup> 8 · 10 <sup>-6</sup>	In the laboratory and on-site - with device internal adjustment - without a device internal adjustment
	Up to 75.1 kg	Euramet CG 18 With standard weight E2/F1	5 · 10 <sup>-6</sup> 10 · 10 <sup>-6</sup>	- with device internal adjustment - without a device internal adjustment



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<b>CONVENTIONAL MASS OF WEIGHTS</b>	Up to 300.1 kg	Euramet CG 18 With standard weight M1	$3.5 \cdot 10^{-5}$ $1.1 \cdot 10^{-4}$	- with device internal adjustment - without a device internal adjustment
	1 mg; 2mg; 5 mg	Substitution weighing	0.0020 mg	Accuracy classes OIML R111
	10 mg		0.0025 mg	
	20 mg; 50 mg		0.003 mg; 0.004 mg	
	100 mg; 200 mg		0.005 mg; 0.006 mg	
	500 mg		0.008 mg	
	1 g; 2 g		0.010 mg; 0.012 mg	
	5 g; 10 g		0.016 mg; 0.020 mg	
	20 g; 50 g		0.025 mg; 0.030 mg	
	100 g; 200 g		0.050 mg; 0.10 mg	
	500 g; 1 kg		0.25 mg; 0.50 mg	
	2 kg; 5 kg		1.0 mg; 2.5 mg	
10 kg; 20 kg	5.0 mg; 10 mg			
<b>Temperature</b>				
Climate chamber in ventilated temperature	-50 °C à 150 °C	Homogeneity measurement with PT100 probes	0.33 °C	on-site
Climatic chamber in static temperature	-50 °C à 150 °C	Homogeneity measurement with PT100 probes	0.50 °C	on-site

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

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