



SCS Directory

Accreditation number: SCS 0068

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

walter + bai ag
Calibration laboratory
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Initial accreditation: 19.10.1995
Current accreditation: 20.12.2020 to 19.12.2025
Scope of accreditation see: www.sas.admin.ch
(Accredited bodies)

Scope of accreditation as of 29.10.2024

Calibration laboratory for material testing machines (Measurand Force, Torque, Length, Angle, Impact, Pressure, Roughness and Hardness)

Calibration and Measurement Capability (CMC)

Measured Quantity / Instrument or Gauge	Measurement Range	Measurement Conditions	Best Measurement Uncertainty $\pm$ ¹⁾	Remarks
LOAD Tension and Compression	0.01 N ... < 2.00 N 2 N ... < 1000 N	With loading pieces	0.0002 N 0.0002 N	Calibration/Verification of Material testing machines according ISO 7500-1 / ASTM E4
	200 N ... 240 kN	With loadcell class 0.5 according EN ISO 376 and ASTM E74-00	0.06 %	
	20 N ... 200 N	With loadcell class 0.5 according EN ISO 376 and ASTM E74-00	0.12 %	



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Measured Quantity / Instrument or Gauge	Measurement Range	Measurement Conditions	Best Measurement Uncertainty $\pm$ ¹⁾	Remarks
Tension	20 kN ... 1500 kN >1500 kN ... 3 MN	With borrow equipment from SCS 0069	0.12 % 0.02 %	
Compression	400 kN ... 5 MN >5 MN ... 10 MN	With borrow equipment from SCS 0069	0.12 % 0.02%	
Bendingload	0.001 Nm...<0.8 Nm 0.25 Nm...<40 Nm	With loading pieces	0.00002 Nm 0.00002 Nm	Calibration/Verification of Rotary bending testing machines according ISO 1143 / DIN 50113
PRESSURE				
Static	0 bar ... 20 bar	DKD-R6-1 / ISO 7500-1 ASTM E4 / EN 837-1	0.3 %, but not smaller than 20 mbar	Pressure calibration of testing machines. Pressure sensors and Manometers
	20 bar ... < 500 bar		0.2 %	DKD-R6-1 / EN 837-1 or in dependence ISO 7500-1
	500 bar ... 5000 bar		0.3 %	DKD-R6-1 / EN 837-1 or in dependence ISO 7500-1
CALIBRATION OF IMPACT-TESTING-MACHINES				
	15 J ... 950 J	ISO 148-2 /ASTM E23-96	Limits of deviation according the standard of the procedure	Only calibration / Verification according ISO 148-2
LENGTH				
Extensometer	Till 50 mm	EN ISO 9513 and ASTM E83 18 °C < T < 28 °C		Clip-On or permanent installation
	Resolution 0.1 µm		0.6 µm + 1•10 ⁻⁴ •L	
	Resolution 0.2 µm		0.6 µm + 1•10 ⁻⁴ •L	
	Resolution 0.5 µm		0.8 µm + 1•10 ⁻⁴ •L	
	Resolution 1.0 µm		1.3 µm + 1•10 ⁻⁴ •L	



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Measured Quantity / Instrument or Gauge	Measurement Range	Measurement Conditions	Best Measurement Uncertainty $\pm$ ¹⁾	Remarks
Displacement transducer	Till 60 mm	Reference KMF1 and Measuringmachine		Plug free or spring loaded
	Resolution 1 μm		$1.3 \mu\text{m} + 1 \cdot 10^{-4} \cdot L$	ISO-9513,
	Resolution 2 μm		$2.4 \mu\text{m} + 1 \cdot 10^{-4} \cdot L$	ASTM E83
	Resolution 10 μm		$11.6 \mu\text{m} + 1 \cdot 10^{-4} \cdot L$	
Displacement transducer or Extensometer	Till 400 mm	$18^\circ\text{C} < T < 28^\circ\text{C}$		Plug free or spring loaded
	Resolution 0.1 μm		$0.7 \mu\text{m} + 7.1 \cdot 10^{-4} \cdot L$	
	Resolution 0.2 μm		$0.7 \mu\text{m} + 7.1 \cdot 10^{-4} \cdot L$	
	Resolution 0.5 μm		$0.9 \mu\text{m} + 7.1 \cdot 10^{-4} \cdot L$	
	Resolution 1 μm		$1.3 \mu\text{m} + 7.1 \cdot 10^{-4} \cdot L$	
Dial Gauge and Caliper	Till 50 mm	Reference KMF03		Plug free or spring loaded
	Resolution 1 μm		$2.2 \mu\text{m} + 1 \cdot 10^{-4} \cdot L$	
	Resolution 2 μm		$3.0 \mu\text{m} + 1 \cdot 10^{-4} \cdot L$	
	Resolution 10 μm		$11.7 \mu\text{m} + 1 \cdot 10^{-4} \cdot L$	
	Resolution 20 μm		$23.2 \mu\text{m} + 1 \cdot 10^{-4} \cdot L$	
Piston- and Cross-Head-Measuring System	0 ... 500 mm	Newall, incremental		Testing-Machines with installed displacement transducers
	Resolution 1 μm		$4.6 \mu\text{m} + 7 \cdot 10^{-4} \cdot L$	
	Resolution 2 μm		$7.3 \mu\text{m} + 7 \cdot 10^{-4} \cdot L$	
	Resolution 10 μm		$12.4 \mu\text{m} + 7 \cdot 10^{-4} \cdot L$	
Piston- and Cross-Head-Measuring System	Till 1000 mm	With steel-scale		Testing-Machines with installed displacement transducers
	Resolution 1 mm		$250 \mu\text{m} + L$	
TORSION	0.01 Nm ... 2.00 Nm	With weights and lever loading	0.3 %	Only for Torsion-Test-Machines
	2 Nm ... 1000 Nm			
	5 Nm ... 240 Nm	Static procedure	0.15 %	
	5 Nm ... 240 Nm	Pseudo-static procedure	0.3 %	

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Measured Quantity / Instrument or Gauge	Measurement Range	Measurement Conditions	Best Measurement Uncertainty $\pm$ ¹⁾	Remarks
ANGLE	>240 Nm ... 6 kNm	With borrow equipment from SCS0069	0.16%	Only for Torsion-Testing-Machines ISO-4287-T1 Only for testing of compression platen on testing machines according EN ISO 12390-4 Only for testing of compression platen on testing machines according EN ISO 12390-4
	0 Nm ... 100 kNm	With reference-load-cell and lever loading	0.3 %	
	0.001° ... 360°	18 °C < T < 28 °C	0.01 °	
ROUGHNESS RA	0.2 µm ... 12.5 µm		25 % According range	
HARDNESS	30 – 70 HRC		+/-2 HRC	

All of the calibrations also are possible on customer side.

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

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