



## SCS Directory

Accreditation number: SCS 0066

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

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Initial accreditation: 19.10.1995  
Current accreditation: 25.02.2025 to 24.02.2030  
Scope of accreditation see: [www.sas.admin.ch](http://www.sas.admin.ch)  
(Accredited bodies)

### Scope of accreditation as of 25.02.2025

#### Calibration laboratory for temperature, humidity and pressure

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

Measured Quantity / Instrument or Gauge	Measurement Range	Measurement Conditions	Best Measurement Capability $\pm$ <sup>1)</sup>	Remarks
<b>TEMPERATURE</b> Contact thermometer with display, Resistance thermometer Pt25, Pt100, Pt1000 and transmitter	0.010°C	Water triple point cell	0.003°C	
	419.527°C	Fixed-Point cell zinc (zn)	0.005°C	
	660.323°C	Fixed-Point cell Aluminium (al)	0.008°C	
	-196°C	Liquid nitrogen (LN <sub>2</sub> )	0.02 °C	
	0.00°C	Ice-Point (H <sub>2</sub> O)	0.005 °C	
	-100°C ... 200°C	Calibration bath	0.02 °C	
	200°C ... 550°C	Calibration bath	0.03 °C	
	-40°C ... 100°C	Bloc calibrator	0.04°C	
50°C ... 600°C	Bloc calibrator	0.4°C		



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Measured Quantity / Instrument or Gauge	Measurement Range	Measurement Conditions	Best Measurement Capability $\pm$ <sup>1)</sup>	Remarks	
Thermocouples <b>with</b> own ice point place <b>without</b> display	100°C ... 600°C	Tube furnace	0.4°C	types R, S, B	
	600°C ... 1100°C	Tube furnace	0.7°C		
	1100°C ... 1200°C	Tube furnace	1.1°C		
	1100°C ... 1500°C	Tube furnace	1.7°C		
		-196°C	Liquid nitrogen (LN <sub>2</sub> )	0.06°C	Valid for thermocouples types <b>K, N, J, T, E</b>
		0.00°C	Ice-Point (H <sub>2</sub> O)	0.07°C	
	-100°C ... 550°C	Calibration bath	0.1°C		
	-40°C ... 100°C	Bloc calibrator	0.1°C		
	50°C ... 600°C	Bloc calibrator	0.4°C		
	100°C ... 600°C	Tube furnace	0.3°C		
	600°C ... 1100°C	Tube furnace	0.7°C		
	1100°C ... 1500°C	Tube furnace	1.7°C		
	-100 °C ... 550 °C	Calibration bath	0.1°C	Valid for thermocouples types <b>R, S, B</b>	
	100 °C ... 600 °C	Tube furnace	0.4°C		
600 °C ... 1100 °C	Tube furnace	0.8°C			
1100 °C ... 1200 °C	Tube furnace	1.1°C			
	1200 °C ... 1500 °C	Tube furnace	1.7°C		
Thermocouples <b>without</b> own ice point place <b>without</b> display		-196°C	Liquid nitrogen (LN <sub>2</sub> )	0.6°C	Valid for thermocouples types <b>K, N, J, T, E</b>
		0.00°C	Ice-Point (H <sub>2</sub> O)	0.1°C	
	-100°C ... 550°C	Calibration bath	0.2°C		
	-40°C ... 100°C	Bloc calibrator	0.2°C		
	50°C ... 600°C	Bloc calibrator	0.5°C		
	100°C ... 600°C	Tube furnace	0.3°C		
	600°C ... 1100°C	Tube furnace	0.8°C		
	1100°C ... 1500°C	Tube furnace	1.8°C		
	-100°C ... 550°C	Calibration bath	0.2°C		
	100°C ... 600°C	Tube furnace	0.5°C		



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Measured Quantity / Instrument or Gauge	Measurement Range	Measurement Conditions	Best Measurement Capability $\pm$ <sup>1)</sup>	Remarks
	600°C ... 1100°C	Tube furnace	1.0°C	Valid for thermocouples types <b>R, S, B</b>
	1100°C ... 1200°C	Tube furnace	1.1°C	
	1200°C ... 1500°C	Tube furnace	1.9°C	
Surface thermometer with direct display	20°C ... 200°C	Heating plate	0.7°C	
	200°C ... 300°C	Heating plate	1.2°C	
	300°C ... 400°C	Heating plate	1.5°C	
Calibration baths and bloc calibrators	-196°C ... 660°C	Comparison with Pt25	0.03°C	
Thermal systems	-90°C ... 150°C	With Pt100	$(0.25+0.0007 \cdot  t )$ °C	Calibration on site with extended measurement uncertainty
	-100°C ... 100°C	With thermocouples	1.0°C	
	100°C ... 1000°C	With thermocouples	$(0.9+0.0007 \cdot  t )$ °C	
	1000°C ... 1300°C	With thermocouples	$(0.6+0.0015 \cdot  t )$ °C	
Temperature systems	-40°C ... 100°C	Comparison with bloc calibrator	0.2°C	Calibration on site with extended measurement uncertainty
	50°C ... 600°C		0.4°C	
	-30°C ... 200°C	Comparison with calibration bath	0.3°C	
Measuring of thermocouples	-200°C ... 1300°C	Type K	0.15°C	
	-200°C ... 1300°C	Type N	0.15°C	
	-210°C ... 1200°C	Type J	0.20°C	
	-100°C ... 400°C	Type T	0.20°C	
	-200°C ... 1000°C	Type E	0.20°C	
	0°C ... 1767°C	Type R	0.20°C	
	0°C ... 1767°C	Type S	0.20°C	
	500°C ... 1800°C	Type B	0.35°C	



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Simulation of thermocouples	-200°C ... 1300°C	Type K	0.15°C	
	-200°C ... 200°C	Type N	0.35°C	
	200°C ... 1300°C	Type N	0.25°C	
	-210°C ... 1200°C	Type J	0.30°C	
	-100°C ... 400°C	Type T	0.30°C	
	-200°C ... 1000°C	Type E	0.30°C	
	0°C ... 250°C	Type R	0.35°C	
	250°C ... 1767°C	Type R	0.30°C	
	0°C ... 100°C	Type S	0.35°C	
	100°C ... 1767°C	Type S	0.30°C	
	500°C ... 1800°C	Type B	0.40°C	
Measuring of resistance thermometers	-200°C ... 800°C	Pt100	(0.27+0.00085• t ) °C	Calibration on site with extended measurement uncertainty
Simulation of resistance thermometers	-100°C ... 500°C	Pt100	0.35°C	Calibration on site with extended measurement uncertainty
Measuring and simulation of thermocouples	-200°C ... 1200°C	Type K	0.4°C	Calibration on site of thermal systems with extended measurement uncertainty
	-200°C ... -100°C	Type N	1.0°C	
	-100°C ... 1100°C	Type N	0.4°C	
	1100°C ... 1300°C	Type N	0.5°C	
	-210°C ... 1200°C	Type J	0.4°C	
	-100°C ... 400°C	Type T	0.3°C	
	-200°C ... 1000°C	Type E	0.3°C	
	0°C ... 100°C	Type R	0.6°C	
	100°C ... 1200°C	Type R	0.5°C	
	1200°C ... 1767°C	Type R	0.6°C	
	0°C ... 1200°C	Type S	0.5°C	
1200°C ... 1400°C	Type S	0.6°C		
1400°C ... 1767°C	Type S	0.7°C		
500°C ... 1820°C	Type B	0.6°C		



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Measuring of Resistance	0Ω ... 400Ω		0.0024Ω
	400Ω ... 1kΩ		0.008Ω
	1kΩ ... 10kΩ		0.08Ω
	10 kΩ ... 50kΩ		0.6Ω
	50kΩ ... 100kΩ		1.2Ω
	-200°C ... 1000°C	Pt100	0.001°C
Sending of Resistance	-200°C ... 1000°C	Pt1000	0.05°C
	4Ω ... 400Ω		0.03Ω
	400Ω ... 2kΩ		0.006% of value
	2kΩ ... 10kΩ		0.017% of value
	-200°C ... 200°C	Pt100	0.03°C
	200°C ... 500°C	Pt100	0.04°C
	500°C ... 850°C	Pt100	0.05°C
	-200°C ... 0°C	PT1000	0.04°C
	0°C ... 500°C	PT1000	0.20°C
	500°C ... 850°C	PT1000	0.25°C
Sending of direct current	0mA ... 20mA		0.001mA
Sending of direct voltage	0mV ... 100mV		0.01mV
	100mV ... 300mV		0.03mV
	0.3V ... 1V		0.07mV
	1V ... 3V		0.3mV
Measuring of direct current	0mA ... 20mA		0.005mA
Measuring of direct voltage	0mV ... 200mV		0.005mV
	0.2V ... 2V		0.02mV
	2V ... 10V		0.08mV



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<b>HUMIDITY</b>					
Humidity relative	10%rF ... 95%rF	-10°C ... 0°C	(0.3+0.01•hr)%hr		
	10%rF ... 95%rF	0°C ... 10°C	(0.2+0.008•hr)%hr		
	10%rF ... 95%rF	10°C ... 60 °C	(0.1+0.008•hr)%hr		
	10%rF ... 90%rF	60°C ... 90°C	(0.2+0.008•hr)%hr		
	10%rF ... 90%rF	10°C ... 90°C	(1.0+0.02•hr)%hr		Calibration on site with extended measurement uncertainty
	-30°C ... 70°C	Dew point temperature	0.1°C		Comparison with chilled mirror
	10%rF ... 90%rF	10°C ... 90°C	(0.5 + 0.02•hr)%hr		In climate chamber
	- 40°C ... 10°C	Temperature in climate chamber	0.3°C		
	10°C ... 150°C		0.2°C		
	-10°C ... 70°C	Temperature in humidity chamber	0.1°C		



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PRESSURE					
Absolute pressure	0bar ... 1bar			0.1mbar	Calibration on site with extended measurement uncertainty Calibration on site with extended measurement uncertainty
	1bar ... 2bar			0.2mbar	
	2bar ... 11bar			1.1mbar	
	0bar ... 14bar			0.01% of value + 0.6 mbar	
	0bar ... 1bar			0.5mbar	
	1bar ... 10bar			2.5mbar	
Excess pressure in fluids	-1bar ... 0bar			0.15mbar	
	0mbar ... 100mbar			0.07mbar	
	0.1bar ... 1bar			0.1mbar	
	1bar ... 2bar			0.2mbar	
	2bar ... 10bar			1.1mbar	
	-1bar ... 14bar			0.01% of value + 0.6 mbar	
	0.1bar ... 50bar	Piston pressure gauge		0.010 % of value, but $\geq 0.5$ mbar	
	50bar ... 1000bar	Piston pressure gauge		0.015 % of value	
Excess pressure in fluids	-1bar ... 0bar			0.3mbar	Calibration on site with extended measurement uncertainty
	0bar ... 250mbar			0.125mbar	
	0bar ... 1bar			0.25mbar	
	0bar ... 10bar			2.5mbar	
	0bar ... 40bar			10mbar	
	0bar ... 160bar			40mbar	
	0bar ... 1000bar			0.3bar	

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

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