



SLOVENSKÁ NÁRODNÁ AKREDITAČNÁ SLUŽBA
Karloveská 63, 840 00 Bratislava 4, Slovenská republika

CERTIFICATE OF ACCREDITATION

No. K-068

**The Slovak National Accreditation Service based on the decision
No. 191/9441/2021/1 dated 27.10.2021 certifies that**

Pyrotherm, s.r.o. Calibration Laboratory

Považské Podhradie 168, 017 04 Považská Bystrica
ID Number: 36 350 800

is competent to carry out calibration of relative humidity measuring instruments, resistance thermometers and converters Pt 100, thermocouples and converters, liquid-in-glass thermometers, thermometers with indicator in °C, temperature strings, regulators and recording units, infrared thermometers and measurement of temperature and relative humidity within the accreditation scope delineated in annex to this certificate. The Annex is an integral part of Certificate of Accreditation.

*The accredited body gives evidence of competence to perform the accredited activity impartially and trustworthily by meeting the requirements of the **ISO/IEC 17025: 2017** Standard.*

Accreditation granted on 17.11.2021 is valid until 17.11.2026.

Bratislava 27.10.2021




Martin Senčák
director

Scope of accreditation

Name of accredited body:

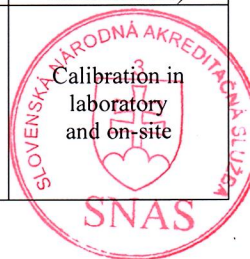
Pyrotherm, s.r.o.

Calibration laboratory

Považské Podhradie 168, 017 04 Považská Bystrica

Laboratory with fixed scope of accreditation.

Item	Kind of measuring instrument/ measurement means	Measuring range	Expanded uncertainty $U(k=2)$	Established methods		Other specifications
				Kind/ Principle	Identification	
HUMIDITY						
1.1	Measuring instruments of relative humidity	(10 to 70) %	1,6 %	Direct comparison with humidity standard in climate chamber	TNS-2010-VLHKOST (KP 7.2.1/03/09/N) *1)	Calibration in laboratory
		(70 to 95) %	2,3 %			
			(10 to 95) %	2,6 %	Direct comparison with humidity standard	
TEMPERATURE						
2.1	Resistance thermometers and converters Pt100 without indicator	(-200 to -40) °C	0,2 °C	Direct comparison with standard Pt100 in calibration equipment	STN EN 60751 (TNS-2010- OST)	Calibration in laboratory and on-site
		(-40 to 140) °C	0,1 °C			
		(140 to 660) °C	$(0,00058 \cdot t + 0,1192) \text{ °C}$			
2.2	Thermocouples and converters without indicator	(-200 to -40) °C	0,3 °C	Direct comparison with standard Pt100 in calibration equipment	STN EN 60581 (TNS-2010- TST)	Calibration in laboratory and on-site
		(-40 to 140) °C	0,2 °C			
		(140 to 600) °C	$(0,00043 \cdot t + 0,2391) \text{ °C}$	Direct comparison with standard PtRh10-Pt		
		(600 to 1350) °C	$(0,0016 \cdot t + 0,24) \text{ °C}$			
		(1200 to 1600) °C	2,8 °C	Direct comparison with standard PtRh30-Pt		Calibration on-site
2.3	Liquid-in-glass thermometers	(-80 to 360) °C	$(0,00091 \cdot t + 0,1727) \text{ °C}$	Direct comparison with standard Pt100 in calibration equipment	STN 99 3141 (TNS-2010- MT)	Calibration in laboratory and on-site (above 300 mm the calibration shall be performed at partial immersion of thermometers)
2.4	Thermometers with indicator in °C	(-200 to -40) °C	0,2 °C	Direct comparison with standard Pt100 or PtRh10-Pt in calibration equipment	STN EN 60581; STN EN 60751; STN 99 3141 (TNS-2010- MT)	Calibration in laboratory and on-site
		(-40 to 140) °C	0,1 °C			
		(140 to 600) °C	$(0,00065 \cdot t + 0,1087) \text{ °C}$			
		(600 to 1350) °C	$(0,0016 \cdot t + 0,24) \text{ °C}$			



Annex to the decision No. 191/9441/2021/1 and to the Certificate of accreditation No. K-068 dated 27.10.2021.

This annex is an integral part of the Certificate

Item	Kind of measuring instrument/measurement means	Measuring range	Expanded uncertainty $U (k=2)$	Established methods		Other specifications
				Kind/ Principle	Identification	
2.5	Temperature strings, regulators and recording units	Range of Pt100 (-190 to 850) °C	0,1 °C	Direct comparison with reference calibrator	STN EN 60581; STN EN 60751; STN 99 3141 (TNS-2010- MT)	Calibration in laboratory and on-site
		Range of thermocouples, type K: (-200 to 1300) °C	0,2 °C			
		S: (0 to 1750) °C	0,3 °C			
		B: (500 to 1800)°C	0,4 °C			
		N: (-200 to 1300) °C	0,2 °C			
2.6	Infrared thermometers	J: (-200 to 1200) °C	0,2 °C	Direct comparison with reference IR thermometer on IR calibration equipment	TNS-2010- MT (KP 3.2.3/01/04/N) *2)	Calibration in laboratory and on-site
		T: (-200 to 400) °C	0,2 °C			
		(-20 to 500) °C	$(0,00038 \cdot t + 1,9077) \text{ °C}$			
		(500 to 1200) °C	$(0,00129 \cdot t + 1,4571) \text{ °C}$			
		(1200 to 2000)°C	$(0,00625 \cdot t + 2,5) \text{ °C}$	Direct comparison with standard spectral pyrometer		Calibration on-site

MEASUREMENT:

Item	Measured quantity	Measurement range	Expanded uncertainty $U (k=2)$	Established methods		Other specifications
				Kind/ Principle	Identification	
1.	Temperature	(-200 to 2000) °C	0,2 °C *3)	Direct measurement with resistance temperature sensor, thermocouple, non-contact thermometer	STN EN 60581; STN EN 60751; STN 99 3141 3.2.3/01/04/N *2) (TNS – MT2013)	Measurement in laboratory or on-site
2.	Relative humidity	(10 to 95) %	2,6 %	Direct measurement with standard of relative humidity	TNS-2010-VLHKOST (KP 7.2.1/03/09/N) *1)	Measurement in laboratory or on-site

Notes:

t – measured value of temperature

*1) Publication digital hygrometer, Calibration procedure ČMS, Praha, 2009

*2) Publication Infrared thermometers, Calibration procedure ČMS, Praha, 2004

*3) in dependence of used measurement instrument

