

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-VLHKOSŤ (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		Calibration on-site
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	$(0,00043 \cdot t + 0,2391) \text{ °C}$			
		(600 to 1350) °C	$(0,0016 \cdot t + 0,24) \text{ °C}$	Direct comparison with standard PtRh10-Pt		
		(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 <i>(above 300 mm the calibration shall be performed at partial immersion of thermometers)</i>
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 S: (0 to 1750) °C B: (500 to 1800) °C N: (-200 to 1300) °C J: (-200 to 1200) °C T: (-200 to 400) °C	0,2 °C 0,3 °C 0,4 °C 0,2 °C 0,2 °C 0,2 °C			
2.6	Infrared thermometers	(-20 to 500) °C	$(0,00038 \cdot t + 1,9077) \text{ °C}$	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
		(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-VLHKOSTĚ (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
