

Accreditation



The Deutsche Akkreditierungsstelle attests with this **Accreditation Certificate** that the calibration laboratory

Weiss Technik GmbH
Greizer Straße 41-49, 35447 Reiskirchen

meets the minimum requirements according to DIN EN ISO/IEC 17025:2018 for the conformity assessment listed in the annex to this certificate. This includes additional existing legal and normative requirements, including those in relevant sectoral schemes.

The management system requirements of DIN EN ISO/IEC 17025 are written in the language relevant to the operations of calibration laboratories and confirm generally with the principles of DIN EN ISO 9001.

This accreditation was issued in accordance with Art. 5 Para. 1 Sentence 2 of Regulation (EC) 765/2008, after an accreditation procedure was carried out in compliance with the minimum requirements of DIN EN ISO/IEC 17011 and on the basis of a review and decision of the appointed accreditation committees.

This accreditation certificate only applies in connection with the notices of 23.11.2022 with accreditation number D-K-20681-01.

It consists of this cover sheet, the reverse side of the cover sheet and the following annex with a total of 3 pages.

Registration number of the accreditation certificate: **D-K-20681-01-00**

Berlin, 23.11.2022

Dipl.-Wirtsch.-Ing. (BA) Tim Harnisch
Head of Technical Unit

Translation issued:
23.11.2022



Dipl.-Wirtsch.-Ing. (BA) Tim Harnisch
Head of Technical Unit

The certificate together with the annex reflects the status as indicated by the date of issue. The current status of any given scope of accreditation can be found in the directory of accredited bodies maintained by Deutsche Akkreditierungsstelle GmbH (www.dakks.de).

This document is a translation. The definitive version is the original German accreditation certificate.

See notes overleaf

Deutsche Akkreditierungsstelle GmbH

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The Deutsche Akkreditierungsstelle GmbH (DAkKS) is the entrusted national accreditation body of the Federal Republic of Germany according to § 8 section 1 AkkStelleG in conjunction with § 1 section 1 AkkStelleGBV. DAkKS is designated as the national accreditation authority by Germany according to Art. 4 Para. 4 of Regulation (EC) 765/2008 and clause 4.7 of DIN EN ISO/IEC 17000.

Pursuant to Art. 11 section 2 of Regulation (EC) 765/2008, the accreditation certificate shall be recognised as equivalent by the national authorities within the scope of this Regulation as well as by the WTO member states that have committed themselves in bilateral or multilateral mutual agreements to recognise the certificates of accreditation bodies that are members of ILAC or IAF as equivalent.

DAkKS is a signatory to the multilateral agreements for mutual recognition of the European co-operation for Accreditation (EA), International Accreditation Forum (IAF) and International Laboratory Accreditation Co-operation (ILAC).

The up-to-date state of membership can be retrieved from the following websites:

EA: www.european-accreditation.org

ILAC: www.ilac.org

IAF: www.iaf.nu

Deutsche Akkreditierungsstelle

Annex to the Accreditation Certificate D-K-20681-01-00 according to DIN EN ISO/IEC 17025:2018

Valid from: 23.11.2022

Date of issue: 23.11.2022

Holder of accreditation certificate:

Weiss Technik GmbH
Greizer Straße 41-49, 35447 Reiskirchen

The calibration laboratory meets the minimal requirements of DIN EN ISO/IEC 17025:2018 and, if applicable, additional legal and normative requirements, including those in relevant sectoral schemes, in order to carry out the conformity assessment activities listed below.

The management system requirements of DIN EN ISO/IEC 17025 are written in the language relevant to the operations of calibration laboratories and confirm generally with the principles of DIN EN ISO 9001.

Calibration in the fields:

Thermodynamic quantities

Temperature quantities

- Climatic chambers (temperature) ^{a)}
- Direct reading thermometers ^{a)}

Humidity quantities

- Climatic chambers (humidity) ^{a)}
- Devices for relative humidity ^{a)}

^{a)} **only on-site calibration**

The calibration laboratory is permitted, without being required to inform and obtain prior approval from DAkkS, to use calibration standards or equivalent calibration procedures listed here with different issue dates.

The calibration laboratory maintains a current list of all calibration standards / equivalent calibration procedures within the flexible scope of accreditation.

This certificate annex is only valid together with the written accreditation certificate and reflects the status as indicated by the date of issue. The current status of any given scope of accreditation can be found in the directory of accredited bodies maintained by Deutsche Akkreditierungsstelle GmbH at <https://www.dakks.de>.

Abbreviations used: see last page

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This document is a translation. The definitive version is the original German annex to the accreditation certificate.

Annex to the Accreditation Certificate D-K-20681-01-00

On-site Calibration

Calibration and Measurement Capabilities (CMC)

Measurement quantity / Calibration item	Range	Measurement conditions / procedure	Expanded uncertainty of measurement	Remarks
Temperature Measuring locations in climatic chambers with air circulation	-80 °C to -40 °C	Measurement in air DKD-R 5-7:2018 method C	0,15 K	Comparison with reference thermometer
	> -40 °C to 0 °C		0,12 K	
	> 0 °C to 100 °C		0,08 K	
	> 100 °C to 150 °C		0,13 K	
	> 150 °C to 200 °C		0,20 K	
	> 200 °C to 300 °C		0,33 K	
Climatic chambers with air circulation	-80 °C to -40 °C	Measurement in air DKD-R 5-7:2018 method A and B	0,5 K	
	> -40 °C to 0 °C		0,4 K	
	> 0 °C to 100 °C		0,2 K	
	> 100 °C to 150 °C		0,4 K	
	> 150 °C to 200 °C		0,6 K	
	> 200 °C to 300 °C		1,7 K	
Measuring locations in climatic chambers without air circulation	-80 °C to -40 °C	Measurement in air DKD-R 5-7:2018 method C	0,5 K	
	> -40 °C to 0 °C		0,4 K	
	> 0 °C to 100 °C		0,3 K	
	> 100 °C to 150 °C		0,4 K	
	> 150 °C to 200 °C		0,5 K	
	> 200 °C to 300 °C		0,8 K	
Climatic chambers without air circulation	-80 °C to -40 °C	Measurement in air DKD-R 5-7:2018 method A and B	3,0 K	
	> -40 °C to 0 °C		2,0 K	
	> 0 °C to 100 °C		2,2 K	
	> 100 °C to 150 °C		3,0 K	
	> 150 °C to 200 °C		3,5 K	
	> 200 °C to 300 °C		5,0 K	
Direct-indicating thermometers with resistance sensor	-40 °C to 100 °C	in metal block calibrator DKD-R 5-1:2018	0,16 K	Comparison with standard resistance thermometer
	> 100 °C to 350 °C		0,25 K	
	-80 °C to 100 °C	in climatic chamber (measurement in air) DKD-R 5-1:2018	0,17 K	
	> 100 °C to 180 °C		0,32 K	
	5 °C to 60 °C	in mixed gas generator (measurement in air) DKD-R 5-1:2018	0,2 K	
Direct-indicating thermometers with base metal thermocouple sensor	-40 °C to 100 °C	in metal block calibrator DKD-R 5-3:2018	0,5 K	
	> 100 °C to 350 °C		0,9 K	
	-80 °C to 100 °C	in climatic chamber (measurement in air) DKD-R 5-3:2018	0,5 K	
	> 100 °C to 180 °C		0,7 K	

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On-site Calibration

Calibration and Measurement Capabilities (CMC)

Measurement quantity / Calibration item	Range	Measurement conditions / procedure	Expanded uncertainty of measurement	Remarks	
Humidity Measuring locations in climatic chambers with air circulation	5 % to 30 %	air temperature: 5 °C to 140 °C (max. 95 °C dew point temperature) DKD-R 5-7:2018 method C	0,4 %	The humidity reference is calculated from the dew point and air temperature, each measured with reference instruments.	
	> 30 % to 60 %		0,6 %		
	> 60 % to 98 %		0,8 %		
Climatic chambers with air circulation	5 % to 30 %	air temperature: 5 °C to 140 °C (max. 95 °C dew point temperature) DKD-R 5-7:2018 method A and B	0,8 %	The measurement uncertainty is an absolute value of relative humidity.	
	> 30 % to 60 %		1,2 %		
	> 60 % to 98 %		1,6 %		
Measuring locations in climatic chambers with air circulation	10 % to 30 %	air temperature: 10 °C to 95 °C DKD-R 5-7:2018 method C	1,0 %	Measurement with reference aspiration psychrometer. The measurement uncertainty is an absolute value of relative humidity.	
	> 30 % to 60 %		1,2 %		
	> 60 % to 98 %		1,4 %		
Climatic chambers with air circulation	10 % to 30 %	air temperature: 10 °C to 95 °C DKD-R 5-7:2018 method A and B	1,6 %		
	> 30 % to 60 %		2,0 %		
	> 60 % to 98 %		2,4 %		
Electrical hygrometric sensors, no psychrometers	5 % to 30 %	in climatic chamber air temperature: 5 °C to 98 °C (max. 95 °C dew point temperature) DKD-R 5-8:2019	0,6 %	Comparison with reference dew point hygrometer The humidity reference is calculated from the dew point and air temperature, each measured with reference instruments.	
	> 30 % to 60 %		0,9 %		
	> 60 % to 98 %		1,3 %		
	10 % to 30 %	in mixed gas generator air temperature: 5 °C to < 10 °C (min. -20 °C frost point temperature) DKD-R 5-8:2019		0,5 %	The measurement uncertainty is an absolute value of relative humidity.
	> 30 % to 60 %			0,8 %	
	> 60 % to 90 %			1,2 %	
	5 % to 30 %	in mixed gas generator air temperature: 10 °C to < 45 °C (min. -20 °C frost point temperature) DKD-R 5-8:2019		0,5 %	
	> 30 % to 60 %			0,7 %	
	> 60 % to 98 %			1,1 %	
	5 % to 30 %	in mixed gas generator air temperature: 45 °C to 60 °C DKD-R 5-8:2019		0,4 %	
	> 30 % to 60 %			0,7 %	
	> 60 % to 90 %			0,9 %	

Abbreviations used:

CMC Calibration and measurement capabilities (Kalibrier- und Messmöglichkeiten)
 DKD-R Calibration Guideline of Deutscher Kalibrierdienst (DKD), published by Physikalisch-Technische Bundesanstalt

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