

# Accreditation



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

**Diehl Metering GmbH**  
**Industriestraße 13, 91522 Ansbach**

meets the requirements according to DIN EN ISO/IEC 17025:2018 for the conformity assessment activities listed in the annex to this certificate. This includes additional existing legal and normative requirements for the calibration laboratory, including those in relevant sectoral schemes, provided they are explicitly confirmed in the annex to this certificate.

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 27.06.2023 with accreditation number D-K-19516-01.

It consists of this cover sheet, the reverse side of the cover sheet and the following annex with a total of 2 pages.

Registration number of the accreditation certificate: **D-K-19516-01-00**

Berlin, 27.06.2023

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

Translation issued:  
27.06.2023



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](http://www.dakks.de)).*

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

See notes overleaf

# Deutsche Akkreditierungsstelle GmbH

Office Berlin  
Spittelmarkt 10  
10117 Berlin

Office Frankfurt am Main  
Europa-Allee 52  
60327 Frankfurt am Main

Office Braunschweig  
Bundesallee 100  
38116 Braunschweig

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](http://www.european-accreditation.org)

ILAC: [www.ilac.org](http://www.ilac.org)

IAF: [www.iaf.nu](http://www.iaf.nu)

# Deutsche Akkreditierungsstelle

## Annex to the Accreditation Certificate D-K-19516-01-00 according to DIN EN ISO/IEC 17025:2018

**Valid from:** 27.06.2023

**Date of issue:** 27.06.2023

Holder of accreditation certificate:

**Diehl Metering GmbH**  
**Industriestraße 13, 91522 Ansbach**

The calibration laboratory meets the requirements of DIN EN ISO/IEC 17025:2018 to carry out the conformity assessment activities listed in this annex. The calibration laboratory meets additional legal and normative requirements, if applicable, including those in relevant sectoral schemes, provided that these are explicitly confirmed 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:

### **Mechanical Quantities**

#### **Fluid Quantities**

- **Volume of flowing liquids**

### **Thermodynamic Quantities**

#### **Thermal energy**

- **Heat meters**

*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

**Page 1 of 2**

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

**Annex to the Accreditation Certificate D-K-19516-01-00**

**Permanent Laboratory**

**Calibration and Measurement Capabilities (CMC)**

Measurement quantity / Calibration item	Range	Measurement conditions / procedure	Expanded uncertainty of measurement	Remarks		
<b>Volume of flowing liquids</b> Water meters and flow sensors for heat meters DN 15 – 40 mm	0.001 m <sup>3</sup> to 0.35 m <sup>3</sup>	V01-1 VA:2023-01, version 4  Static or dynamic weighing method Conversion via density in function of temperature	20 °C: 0.25 % 50 °C: 0.30 % 90 °C: 1.00 %	Temperature range: (20 °C, 50 °C resp. 90 °C) ± 5 °C Flow range: 0.006 m <sup>3</sup> /h to 20 m <sup>3</sup> /h		
	Water meters and flow sensors for heat meter DN 40 – 100 mm		0.001 m <sup>3</sup> to 6.0 m <sup>3</sup>		20 °C: 0.25 % 50 °C: 0.30 % 90 °C: 1.00 %	Temperature range: (20 °C, 50 °C resp. 90 °C) ± 5 °C Flow range: 0.04 m <sup>3</sup> /h to 180 m <sup>3</sup> /h
	Water meters and flow sensors for heat meter DN 50 – 200 mm		0.001 m <sup>3</sup> to 10.0 m <sup>3</sup>		20 °C: 0.35 % 50 °C: 0.40 %	Temperature range: (20 °C resp. 50 °C) ± 5 °C Flow range: 0.04 m <sup>3</sup> /h to 180 m <sup>3</sup> /h
<b>Heat meters</b> Energy meters	3 K	E01-1 VA:2021-07, version 3  Simulation of temperature difference and volume	0.30 %	Simulation of temperature difference with resistors Best measurement uncertainty given without contribution of EUT because of resistors used for temperature simulation Temperature range for determination of the thermal energy: 1 °C to 200 °C		
	10 K		0.16 %			
	50 K		0.11 %			
	> 100 K to 195 K		0.10 %			
Temperature sensors, absolute measurement	10 °C	T01-1 VA:2021-07, version 3  Measurement in thermostatic baths	14 mK	Calibration of single sensors  Combination of flow and return flow sensors  Best measurement uncertainty given without contribution of EUT because of the measuring system		
	40 °C		16 mK			
	80 °C		31 mK			
	120 °C		51 mK			
	150 °C		74 mK			
Temperature sensors, differential measurement	3 K	T01-1 VA:2021-07, version 3  Temperature difference	23 mK			
	50 K		35 mK			
	80 K		54 mK			

**Abbreviations used:**

CMC	Calibration and measurement capabilities (Kalibrier- und Messmöglichkeiten)
DIN	Deutsches Institut für Normung e.V.
DN	Nominal diameter
EUT	Equipment under Test
xxx-1 VA	internal calibration procedure of Diehl Metering GmbH

Valid from: 27.06.2023

Date of issue: 27.06.2023