

Accreditation



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

Kistler Remscheid GmbH
Kölner Straße 71, 42897 Remscheid

meets the requirements of DIN EN ISO/IEC 17025:2018 for the conformity assessment activities specified in the following partial accreditation certificates. This includes additional existing legal and normative requirements for the calibration laboratory, including those in relevant sectoral schemes, provided that these are explicitly confirmed in the annexes to the partial accreditation certificates listed below.

D-K-17572-01-01

D-K-17572-01-02

The management system requirements of DIN EN ISO/IEC 17025 are written in the language relevant to the operations of calibration laboratories and they conform to 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 consists of this cover sheet, the reverse side of the cover sheet and the following annex. It only applies in connection with the partial accreditation certificates listed above and the notices referred to there.

Registration number of the certificate: **D-K-17572-01-00**

Berlin, 26.09.2023

Dipl.-Ing. Gabriel Zrenner
Head of Department

Translation issued:
14.06.2024


Dipl.-Ing. Gabriel Zrenner
Head of Department

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

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

ILAC: www.ilac.org

IAF: www.iaf.nu

Deutsche Akkreditierungsstelle

Annex to the Accreditation Certificate D-K-17572-01-00 according to DIN EN ISO/IEC 17025:2018

Valid from: 26.09.2023

Date of issue: 26.09.2023

Holder of accreditation certificate:

Kistler Remscheid GmbH
Kölner Straße 71, 42897 Remscheid

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 in the annexes to the partial accreditation certificates listed below.

D-K-17572-01-01

D-K-17572-01-02

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

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>.

Accreditation



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

Kistler Remscheid GmbH
Kölner Straße 71, 42897 Remscheid

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 they conform to 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 partial accreditation certificate only applies in connection with the notice of 26.09.2023 with accreditation number D-K-17572-01.
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 partial accreditation certificate: **D-K-17572-01-01**
It is a part of the accreditation certificate: D-K-17572-01-00.

Berlin, 26.09.2023

Dipl.-Ing. Gabriel Zrenner
Head of Department

Translation issued:
14.06.2024


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Deutsche Akkreditierungsstelle

Annex to the Partial Accreditation Certificate D-K-17572-01-01 according to DIN EN ISO/IEC 17025:2018

Valid from: 26.09.2023

Date of issue: 26.09.2023

This annex is a part of the accreditation certificate D-K-17572-01-00.

Holder of partial accreditation certificate:

Kistler Remscheid GmbH
Kölner Straße 71, 42897 Remscheid

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 conform generally with the principles of DIN EN ISO 9001.

Calibrations in the fields:

Dimensional Quantities

Angle

- **Angle of Rotation^{a)}**

^{a)} also on-site calibrations

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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 Partial Accreditation Certificate D-K-17572-01-01

Within the scope of accreditation marked with *), 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.

Permanent Laboratory
Calibration and Measurement Capabilities (CMC)

Measurement quantity / Calibration item	Range	Measurement conditions / procedure	Expanded uncertainty of measurement ¹	Remarks
angle of rotation direct rotary encoders *	0° to 360°	VDI/VDE 2648 Blatt 1:2009	0.05° or 3'	Maximum rotation speed 1500 rpm
Indirect rotary encoder systems *	0° to 360°	VDI/VDE 2648 Blatt 2:2007	2,5°	Snug fit value: 5 N·m - 300 N·m Nominal torque: 25 N·m - 1.5 kN·m

On-site Calibration
Calibration and Measurement Capabilities (CMC)

Measurement quantity / Calibration item	Range	Measurement conditions / procedure	Expanded uncertainty of measurement ¹	Remarks
angle of rotation rotary encoders on torque transducers and tools *	0° to 360°	VDI/VDE 2648 Blatt 1:2009	0.05° or 3'	Maximum rotation speed 1500 rpm

Abbreviations used:

CMC	Calibration and measurement capabilities
DKD-R	Calibration Guideline of Deutscher Kalibrierdienst (DKD), published by Physikalisch-Technische Bundesanstalt (PTB)
VDE	Verband der Elektrotechnik, Elektronik und Informationstechnik e.V. (Association for Electrical, Electronic & Information Technologies)
VDI	Verein Deutscher Ingenieure e.V. (Association of German Engineers)

¹ Unless otherwise indicated, the unit for the variables corresponds to the unit for the measurement range.

Accreditation



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

Kistler Remscheid GmbH
Kölner Straße 71, 42897 Remscheid

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.

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This partial accreditation certificate only applies in connection with the notice of 23.09.2023 with accreditation number D-K-17572-01.
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 partial accreditation certificate: **D-K-17572-01-02**
It is a part of the accreditation certificate: D-K-17572-01-00.

Berlin, 26.09.2023

Dipl.-Ing. Gabriel Zrenner
Head of Department

Translation issued:
14.06.2024

Dipl.-Ing. Gabriel Zrenner
Head of Department



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Deutsche Akkreditierungsstelle

Annex to the Partial Accreditation Certificate D-K-17572-01-02 according to DIN EN ISO/IEC 17025:2018

Valid from: 26.09.2023

Date of issue: 26.09.2023

This annex is a part of the accreditation certificate D-K-17572-01-00.

Holder of partial accreditation certificate:

Kistler Remscheid GmbH
Kölner Straße 71, 42897 Remscheid

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 conform generally with the principles of DIN EN ISO 9001.

Calibrations in the fields:

Mechanical quantities

- **Torque^{a)}**
- **Force**

^{a)} also on-site calibrations

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Abbreviations used: see last page

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Annex to the Partial Accreditation Certificate D-K-17572-01-02

Within the scope of accreditation marked with *), 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.

Permanent Laboratory

Calibration and Measurement Capabilities (CMC)

Measurement quantity / Calibration item	Range	Measurement conditions / procedure	Expanded uncertainty of measurement ¹	Remarks
Torque Torque transducers and torque measuring instruments *	0.01 N·m to < 0.1 N·m	DIN 51309:2022 DKD-R 10-5:2020	0.40 %	
	0.1 N·m to < 1 N·m		0.10 %	
	1 N·m to 1 kN·m		0.01 %	
	> 1 kN·m to 2 kN·m		0.10 %	
	> 2 kN·m to 20 kN·m		0.20 %	
Torque transfer wrenches *	0.1 N·m to < 1 N·m	DKD-R 3-7:2018	0.10 %	
	1 N·m to 1 kN·m		0.02 %	
Calibration devices for torque wrenches *	0.2 N·m to < 2 N·m	DKD-R 10-8:2020	0.20 %	
	2 N·m to 3 kN·m		0.10 %	
Hand-operated torque assembly tools *	0.01 N·m to < 1 N·m	DIN EN ISO 6789-2: 2017	0.50 %	
	1 N·m to < 5 N·m		0.40 %	
	5 N·m to 1.5 kN·m		0.20 %	
Force * Force transducers and force measuring instruments	2 kN to 500 kN	DKD-R 3-3:2018	0.2 %	only procedure A, only compressive force

On-site Calibration

Calibration and Measurement Capabilities (CMC)

Measurement quantity / Calibration item	Range	Measurement conditions / procedure	Expanded uncertainty of measurement ¹	Remarks
Torque Torque measuring instruments *	0.2 N·m to 1 kN·m	DIN 51309:2022 DKD-R 10-5:2020	0.2 %	using customer loading equipment
	200 N·m to 60 kN·m		0.5 %	
Calibration devices for torque wrenches *	0.2 N·m to < 2 N·m	DKD-R 10-8:2020	0.2 %	for any position on the measuring axis
	2 N·m to 3 kN·m		0.1 %	

¹ Unless otherwise indicated, the unit for the variables corresponds to the unit for the measurement range.

Annex to the Partial Accreditation Certificate D-K-17572-01-02

Abbreviations used:

CMC	Calibration and measurement capabilities
CD	internal calibration procedure of Kistler Remscheid GmbH
DIN	Deutsches Institut für Normung e.V. – German institute for standardization
DKD-R	Calibration Guideline of Deutscher Kalibrierdienst (DKD), published by Physikalisch-Technische Bundesanstalt (PTB)

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Valid from: 26.09.2023

Date of issue: 26.09.2023

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

List of flexible procedures in the accredited area

This list documents the currently used version of the calibration guidelines for the flexible accredited calibration procedures.

Laboratory: D-K-17572-01-00

Status: 10 December 2024

Measurement quantity	Procedure and Version
Torque (transducer and -measuring instruments)	DIN 51309:2022
Torque-transfer wrenches	DKD-R 10-5:2020
Calibration device for torque wrenches	DKD-R 3-7:2018
Hand-operated torque assembly tools	DKD-R 10-8:2020
	DIN EN ISO 6789-2:2017
Force (transducers and measuring instruments)	DKD-R 3-3:2024
	(only procedure A, only compressive force)
angle of rotation (direct rotary encoders)	VDI/VDE 2648 Blatt1:2024
angle of rotation (indirect rotary encoders)	VDI/VDE 2648 Blatt2:2024