

# Accreditation



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

**Klingelberg GmbH**  
**Peterstraße 45, 42449 Hückeswagen**

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 30.09.2022 with accreditation number D-K-21339-01.  
It consists of this cover sheet, the reverse side of the cover sheet and the following annex with a total of 4 pages.

Registration number of the accreditation certificate: **D-K-21339-01-00**

Berlin, 30.09.2022

Dr. Florian Witt  
Head of Technical Unit

Translation issued:  
26.10.2022

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-21339-01-00 according to DIN EN ISO/IEC 17025:2018

**Valid from:** 30.09.2022

**Date of issue:** 26.10.2022

Holder of accreditation certificate:

**Klingelberg GmbH**  
**Peterstraße 45, 42449 Hückeswagen**

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.

Calibrations in the fields:

### **Dimensional quantities**

#### **Length**

- **Gear quantities \***

**\* also on-site calibration**

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Abbreviations used: see last page

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**Annex to the Accreditation Certificate D-K-21339-01-00**

**permanent laboratory**

**Calibration- and measuring capabilities (CMC)**

Measurement quantity / Calibration item	Range	Measurement conditions / procedure	Expanded uncertainty of measurement	Remarks	
<b>Gear measurement technology</b> Coordinate and precision measuring machines with tactile probing for gearing and rotational - symmetrical test parts  Calibration software "Stylus-Manager" and evaluation software "GINA" from KlingelInberg GmbH	The proven classification applies only to the measuring range covered by the gear standard $\pm 20\%$	Calibration with tactile probing using gearing standards, classification of measuring systems (A, B, C, D) VDI/ VDE 2612 Bl.6:2022 VDI/ VDE 2612 Bl.1:2018			
	Reference diameter: $d = 100\text{ mm}$ face width: $b = 100\text{ mm}$ Helix angle: $\beta \leq 20^\circ$	Metrological traceability by gear standards $d = 100\text{ mm}$ $\beta = 0^\circ$ $\beta = 15^\circ\text{ r+l}$ $\beta = 20^\circ\text{ r+l}$ $b = 100\text{ mm}$			
			$f_{Ha}$	1,0 $\mu\text{m}$	The specified measurement uncertainties apply exemplary to the classification of measuring machine group A
			$f_{Ia}$	0,7 $\mu\text{m}$	
			$F_a$	1,2 $\mu\text{m}$	
			$f_{H\beta}$	1,1 $\mu\text{m}$	
			$f_{I\beta}$	0,8 $\mu\text{m}$	
	$F_\beta$	1,3 $\mu\text{m}$			
	Reference diameter: $d = 200\text{ mm}$ face width: $b = 100\text{ mm}$ Helix angle: $\beta \leq 20^\circ$	$d = 200\text{ mm}$ $\beta = 0^\circ$ $\beta = 15^\circ\text{ r+l}$ $\beta = 20^\circ\text{ r+l}$ $b = 100\text{ mm}$			
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			$f_{I\beta}$	0,8 $\mu\text{m}$	
$F_\beta$	1,3 $\mu\text{m}$				

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**On-site calibrations**

**Calibration- and measuring capabilities (CMC)**

Measurement quantity / Calibration item	Range	Measurement conditions / procedure	Expanded uncertainty of measurement	Remarks			
<p><b>Gear measurement technology</b> Coordinate and precision measuring machines with tactile probing for gearing and rotational - symmetrical test parts</p> <p>Calibration software "Stylus-Manager" and evaluation software "GINA" from KlingelInberg GmbH</p>	<p>The proven classification applies only to the measuring range covered by the gear standard <math>\pm 20\%</math></p>	<p>Calibration with tactile probing using gearing standards, classification of measuring systems (A, B, C, D) VDI/ VDE 2612 Bl.6:2022 VDI/ VDE 2612 Bl.1:2018</p>					
					<p>reference diameter: <math>d = 100\text{ mm}</math> face width: <math>b = 100\text{ mm}</math> Helix angle: <math>\beta \leq 20^\circ</math></p>	<p>Metrological traceability by gear standards <math>d = 100\text{ mm}</math> <math>\beta = 0^\circ</math> <math>\beta = 15^\circ\text{ r+l}</math> <math>\beta = 20^\circ\text{ r+l}</math> <math>b = 100\text{ mm}</math></p>	
	$f_{H\alpha}$	1,0 $\mu\text{m}$	<p>The specified measurement uncertainties apply exemplary to the classification of measuring machine group A</p>				
	$f_{i\alpha}$	0,7 $\mu\text{m}$					
	$F_\alpha$	1,2 $\mu\text{m}$					
	$f_{H\beta}$	1,1 $\mu\text{m}$					
	$f_{i\beta}$	0,8 $\mu\text{m}$					
	$F_\beta$	1,3 $\mu\text{m}$					
	<p>reference diameter: <math>d = 200\text{ mm}</math> face width: <math>b = 100\text{ mm}</math> Helix angle: <math>\beta \leq 20^\circ</math></p>	<p><math>d = 200\text{ mm}</math> <math>\beta = 0^\circ</math> <math>\beta = 15^\circ\text{ r+l}</math> <math>\beta = 20^\circ\text{ r+l}</math> <math>b = 100\text{ mm}</math></p>					
					$f_{H\alpha}$	1,1 $\mu\text{m}$	<p>The specified measurement uncertainties apply exemplary to the classification of measuring machine group A</p>
					$f_{i\alpha}$	0,7 $\mu\text{m}$	
					$F_\alpha$	1,3 $\mu\text{m}$	
					$f_{H\beta}$	1,1 $\mu\text{m}$	
$f_{i\beta}$					0,8 $\mu\text{m}$		
$F_\beta$	1,3 $\mu\text{m}$						

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**Annex to the Accreditation Certificate D-K-21339-01-00**

**Abbreviations used:**

CMC	Calibration and measurement capabilities
DIN	German Institute for Standardization e.V.
VDE	Association of Electrical Engineering, Electronics and Information Technology e.V.
VDI	Association of German Engineers e.V.

$\beta$	helix angle
$d$	reference diameter
$b$	face width
$F_{\alpha}$	profile total deviation
$f_{H\alpha}$	profile slope deviation
$f_{i\alpha}$	profile form deviation
$F_{\beta}$	helix total deviation
$f_{i\beta}$	helix form Deviation
$f_{H\beta}$	helix slope deviation
r+l	right hand and left hand helical gear

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