

Deutsche Akkreditierungsstelle GmbH

Annex to the Accreditation Certificate D-K-17567-01-00 according to DIN EN ISO/IEC 17025:2018

Valid from: 22.07.2020

Date of issue: 22.07.2020

Holder of certificate:

DECOM-UGK Werkzeugtechnik GmbH
Nürnberger Straße 96 – 100, 91207 Lauf a. d. Pegnitz

Calibration in the fields:

Dimensional quantities

Length

- Thread
- Length measuring instruments
- Diameter
- Form error

Abbreviations used: see last page

The certificate together with its annex reflects the status at the time of the date of issue. The current status of the scope of accreditation can be found in the database of accredited bodies of Deutsche Akkreditierungsstelle GmbH.
<https://www.dakks.de/en/content/accredited-bodies-dakks>

Annex to the accreditation certificate D-K-17567-01-00

Permanent Laboratory

Calibration and Measurement Capabilities (CMC)

Measurement quantity / Calibration item	Range	Measurement conditions / procedure	Expanded uncertainty of measurement ¹⁾	Remarks
Length				
Thread gauges (single-start and multi-start cylindrical external and internal threads with straight flanks, symmetrical and asymmetrical profile)				
External thread	Nominal diameter 1 mm to 300 mm	DKD-R 4-3 Sheet 4.8:2018 Three wire procedure (vertical to thread axis) and two wire procedure (slant to thread axis)	2,5 µm	
Simple pitch diameter				
Outside diameter				
Core diameter or recess diameter				
Lead or pitch				
Lead or pitch	0,2 mm to 12 mm		1 µm	
Thread angle	≥ 3°		(1,2 + 1 mm / l)', not less than 3'	l = length of flank
Internal thread	Nominal diameter 3 mm to 300 mm	DKD-R 4-3 Sheet 4.9:2018 Two ball procedure (vertical and slant to thread axis)	2,5 µm	
Simple pitch diameter				
Outside diameter or recess diameter				
Core diameter				
Lead or pitch				
Lead or pitch	0,5 mm to 12 mm		1 µm	
Thread angle	≥ 3°		(1,2 + 3 mm / l)', not less than 5'	
Dial gauges	up to 30 mm	DKD-R 4-3 Sheet 11.1:2018	3 µm + 10 · 10 ⁻⁶ · l	l = measured length
Dial indicators	up to 3 mm	DKD-R 4-3 Sheet 11.2:2018	0,9 µm	
Lever gauges	up to 1,6 mm	DKD-R 4-3 Sheet 11.3:2018	1,2 µm	
Micrometers (Micrometers for external dimensions)	0 mm to 100 mm	DKD-R 4-3 Sheet 10.1:2018	3 µm + 10 · 10 ⁻⁶ · l	100 mm = final value of the measuring range

¹⁾ The expanded uncertainties according to EA-4/02 M:2013 are part of CMC and are the best measurement uncertainties within accreditation. They have a coverage probability of approximately 95 % and have a coverage factor of $k = 2$ unless stated otherwise. Uncertainties without unit are relative uncertainties referring to the measurement value unless stated otherwise.

Annex to the accreditation certificate D-K-17567-01-00

Permanent Laboratory

Calibration and Measurement Capabilities (CMC)

Measurement quantity / Calibration item	Range	Measurement conditions / procedure	Expanded uncertainty of measurement ¹⁾	Remarks
Calipers for external, internal and depth dimensions	0 mm to 300 mm	DKD-R 4-3 Sheet 9.1:2018	$30 \mu\text{m} + 30 \cdot 10^{-6} \cdot l$	$l = \text{measured length}$
	> 300 mm to 1000 mm		$50 \mu\text{m} + 30 \cdot 10^{-6} \cdot l$	
Depth calipers	0 mm to 300 mm	DKD-R 4-3 Sheet 9.2:2018	$30 \mu\text{m} + 30 \cdot 10^{-6} \cdot l$	
	> 300 mm to 1000 mm		$50 \mu\text{m} + 30 \cdot 10^{-6} \cdot l$	
Cylindrical setting gauges		DKD-R 4-3 Sheet 4.1:2018		
Ring gauges Diameter	5 mm to 100 mm		0,6 μm	
Roundness deviation	up to 40 μm		0,2 μm	
Plug gauges Diameter	3 mm to 100 mm		0,6 μm	
Roundness deviation	up to 40 μm		0,2 μm	
Measuring pins Diameter	3 mm to 20 mm	DKD-R 4-3 Sheet 4.2:2018	0,6 μm	
Roundness deviation	up to 40 μm		0,2 μm	

Abbreviations used:

CMC Calibration and measurement capabilities
DIN Deutsches Institut für Normung e.V.
DKD-R Guideline of Deutscher Kalibrierdienst (DKD),
published by Physikalisch-Technische Bundesanstalt

¹⁾ The expanded uncertainties according to EA-4/02 M:2013 are part of CMC and are the best measurement uncertainties within accreditation. They have a coverage probability of approximately 95 % and have a coverage factor of $k = 2$ unless stated otherwise. Uncertainties without unit are relative uncertainties referring to the measurement value unless stated otherwise.