

# Deutsche Akkreditierungsstelle GmbH

## Annex to the Accreditation Certificate D-K-18994-01-00 according to DIN EN ISO/IEC 17025:2018

**Valid from: 31.01.2020**

Date of issue: 31.01.2020

Holder of certificate:

**E. Zoller GmbH & Co. KG Einstell- und Messgeräte  
Gottlieb-Daimler-Straße 19, 74385 Pleidelsheim**

Calibration in the fields:

**Dimensional quantities**

**Coordinate measuring technology**

– **Coordinate measuring machines <sup>a)</sup>**

<sup>a)</sup> On-Site Calibration

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-18994-01-00

**On-site Calibration**

Calibration and Measurement Capabilities (CMC)

Measurement quantity / Calibration item	Range	Measurement conditions / procedure	Expanded uncertainty of measurement <sup>1)</sup>	Remarks
<b>Coordinate measuring technology</b> Optical two-dimensional coordinate measuring machines, optical 2D-pre-setting tools and 2D-measuring machines	0 mm to 909 mm	Calibration of metrological characteristics according to guideline: DKD-R 4.3 part 18.1:2018, and the following standards and guidelines DIN EN ISO 10360 VDI/VDE 2617		Measuring equipment with opto-electronical edge detection (image processing)
		Determination of probing error $P_{FV2D}$ using a circle measurement standard according to DIN EN ISO 10360-7:2011	0,5 $\mu\text{m}$	
		Determination of length-measurement error $E_{UX}$ , $E_{UY}$ along the machine axes in X- and Y-direction using chrome-glass-panels according to DIN EN ISO 10360-7:2011	$0,5 \mu\text{m} + 1,0 \cdot 10^{-6} \cdot l$	
		Determination of length-measurement error $E_{UXY}$ using chrome-glass-panels according to DIN EN ISO 10360-7:2011	$0,5 \mu\text{m} + 1,0 \cdot 10^{-6} \cdot l$	
		Determination of angle-measurement error $A_{SV2D}$ using chrome-glass-panels	0,03 °	
		Determination of repeatability range of the length-measurement error $R_U$ according to DIN EN ISO 10360-7:2011	0,06 $\mu\text{m}$	

<sup>1)</sup> 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.

**Abbreviations used:**

CMC	Calibration and measurement capabilities (Kalibrier- und Messmöglichkeiten)
DIN	Deutsches Institut für Normung e.V.
DAkkS-DKD-R	Richtlinie der Deutschen Akkreditierungsstelle GmbH
DKD-R	Richtlinie des Deutschen Kalibrierdienstes (DKD), herausgegeben von der Physikalisch-Technischen Bundesanstalt
VDE	Verband der Elektrotechnik, Elektronik und Informationstechnik
VDI	Verein Deutscher Ingenieure

<sup>1)</sup> 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.