

## Deutsche Akkreditierungsstelle GmbH

Entrusted according to Section 8 subsection 1 AkkStelleG in connection with Section 1 subsection 1 AkkStelleGBV

Signatory to the Multilateral Agreements of EA, ILAC and IAF for Mutual Recognition

# Accreditation



The Deutsche Akkreditierungsstelle GmbH attests that the calibration laboratory

**burster präzisionsmesstechnik gmbh & co kg**  
**Talstraße 1-5, D-76593 Gernsbach**

is competent under the terms of DIN EN ISO/IEC 17025:2005 to carry out calibrations in the following fields:

### Mechanical quantities:

- Force
- Pressure
- Torque

### Electrical quantities:

#### DC and low frequency quantities

- DC voltage
- DC current
- DC resistance

The accreditation certificate shall only apply in connection with the notice of accreditation of 06.05.2019 with the accreditation number D-K-15141-01 and is valid until 24.05.2021. It comprises the cover sheet, the reverse side of the cover sheet and the following annex with a total of 3 pages.

Registration number of the certificate: **D-K -15141-01-00**

Braunschweig,  
06.05.2019

Dr. Heike Manke  
Head of Division

Translation issued:  
06.05.2019

  
Head of Division

# Deutsche Akkreditierungsstelle GmbH

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The publication of extracts of the accreditation certificate is subject to the prior written approval by Deutsche Akkreditierungsstelle GmbH (DAkkS). Exempted is the unchanged form of separate disseminations of the cover sheet by the conformity assessment body mentioned overleaf.

No impression shall be made that the accreditation also extends to fields beyond the scope of accreditation attested by DAkkS.

The accreditation was granted pursuant to the Act on the Accreditation Body (AkkStelleG) of 31 July 2009 (Federal Law Gazette I p. 2625) and the Regulation (EC) No 765/2008 of the European Parliament and of the Council of 9 July 2008 setting out the requirements for accreditation and market surveillance relating to the marketing of products (Official Journal of the European Union L 218 of 9 July 2008, p. 30). 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 Cooperation (ILAC). The signatories to these agreements recognise each other's accreditations.

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 GmbH

### Annex to the Accreditation Certificate D-K-15141-01-00 according to DIN EN ISO/IEC 17025:2005

Period of validity: 06.05.2019 to 24.05.2021

Date of issue: 06.05.2019

Holder of certificate:

**burster präzisionsmesstechnik gmbh & co kg**  
**Talstraße 1-5, D-76593 Gernsbach**

Head :

Dipl.-Ing. Thomas Schreiweis

Deputy:

Daniel Horig

Accredited as calibration laboratory since: 10.06.1980

Calibration in the fields:

**Mechanical quantities:**

- Force
- Pressure
- Torque

**Electrical quantities:**

**DC and low frequency quantities**

- DC voltage
- DC current
- DC resistance

Abbreviations used: see last page

**Permanent Laboratory**

**Calibration and Measurement Capabilities (CMC)**

Measured quantity / Calibration item	Range	Measurement conditions / procedure	expanded uncertainty of measurement <sup>1)</sup>	Remarks
<b>DC voltage</b>	10 $\mu$ V to 200 V		$(5 + 0,2 V/U) \cdot 10^{-6}$	U = measurement value
	1 V		$2 \cdot 10^{-6}$	
	1,02 V		$2 \cdot 10^{-6}$	
	10 V		$2 \cdot 10^{-6}$	
<b>DC current</b>	1 $\mu$ A to 100 mA		$10 \cdot 10^{-6}$	over 30 A only calibrations of current sources, not measurement instruments for DC current
	>100 mA to 1 A		$20 \cdot 10^{-6}$	
	>1 A to 10 A		$50 \cdot 10^{-6}$	
	>10 A to 500 A		$10 \cdot 10^{-5}$	
<b>DC resistance</b>	0,1 m $\Omega$ to <1 m $\Omega$		$50 \cdot 10^{-6}$	
	1 m $\Omega$ to <10 $\Omega$		$10 \cdot 10^{-6}$	
	10 $\Omega$ to 100 k $\Omega$		$5 \cdot 10^{-6}$	
	>100 k $\Omega$ to 1 M $\Omega$		$10 \cdot 10^{-6}$	
<b>Force</b>	10 N to 20 N	DIN EN ISO 376:2011 DAKKS-DKD-R 3-3:2010	$2 \cdot 10^{-4}$	100-N-Force-Reference Calibration Machine (RCM), compressive force
	30 N to 100 N		$1 \cdot 10^{-4}$	
	20 N to 40 N		$2 \cdot 10^{-4}$	200-N-Force-RCM, compressive force
	60 N to 200 N		$1 \cdot 10^{-4}$	
	50 N to 100 N		$2 \cdot 10^{-4}$	500-N-Force-RCM, compressive force
	150 N to 500 N		$1 \cdot 10^{-4}$	
	100 N to 200 N		$1 \cdot 10^{-3}$	2-kN-Force-RCM, compressive force
	>200 N to 2 kN		$5 \cdot 10^{-4}$	
500 N to 1 kN	$1 \cdot 10^{-3}$	10-kN-Force-RCM, compressive force		
> 1 kN to 10 kN	$5 \cdot 10^{-4}$			
2 kN to 5 kN	$2 \cdot 10^{-3}$	50-kN-Force-RCM, compressive force		
> 5 kN to 50 kN	$1 \cdot 10^{-3}$			
<b>Torque</b>  Torque transducer, Torque measuring chains	0,005 N·m to <0,01 N·m	DIN 51309:2005-12 VDI/VDE 2646	$2 \cdot 10^{-3}$	240 Nm-Torque-RCM counterclockwise torque, clockwise torque
	0,01 N·m to <0,1 N·m		$4 \cdot 10^{-4}$	
	$\geq 0,1$ N·m to <1 N·m		$2 \cdot 10^{-4}$	
	$\geq 1$ N·m to 240 N·m		$1 \cdot 10^{-4}$	

<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 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.

**Permanent Laboratory**

**Calibration and Measurement Capabilities (CMC)**

Measured quantity / Calibration item	Range	Measurement conditions / procedure	expanded uncertainty of measurement <sup>1)</sup>	Remarks
<b>Pressure</b> Absolute pressure $p_{abs}$	0,1 bar to 35 bar	DIN EN 837:1997 DKD-R 6-1:2014	$8 \cdot 10^{-5} \cdot p_{abs}$ ; but not less than 0,5 mbar	Pressure medium: Gas
Gauge pressure $p_e$	0,0 bar to 34 bar	EURAMET cg-17 Version 2.0	$8 \cdot 10^{-5} \cdot p_{abs}$ ; but not less than 0,5 mbar	Pressure medium: Gas principle: $p_e = p_{abs} - p_{amb}$
	0,0 bar to 200 bar		$1,2 \cdot 10^{-4} \cdot p_{abs}$ ; but not less than 15 mbar	Pressure medium: HFE 7200
	> 200 bar to 1400 bar		$1,2 \cdot 10^{-4} \cdot p_{abs}$ ; but not less than 100 mbar	principle: $p_e = p_{abs} - p_{amb}$

**Abbreviations used:**

CMC	Calibration and measurement capabilities
DKD-R	Guideline of Deutscher Kalibrierdienst
VDE	Verband der Elektrotechnik, Elektronik und Informationstechnik
VDI	Verein Deutscher Ingenieure
EURAMET	European Association of National Metrology Institutes

<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 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.