

CALIBRATION OF MEASUREMENT SYSTEMS

Maximum reliability & International accreditation

As a manufacturer of sensors and measurement systems for sensor signal processing, burster präzisionsmesstechnik operates a DIN ISO 17025 accredited laboratory for the following mechanical measurement values.

The calibration laboratory is accredited by the DAkkS under D-K-15141-01-00.

Calibration is performed on the basis of recognized applicable standards. As a result, you receive an internationally recognized calibration certificate with an accreditation symbol that complies with the applicable regulations of DIN ISO 17025 and is therefore traceable to the International System of Units SI.

An accredited calibration of your measuring equipment guarantees you international comparability and a high level of acceptance on the market for your services and products. It forms the metrological basis for monitoring measuring and test equipment as part of quality assurance measures.

Force (compressive force DIN EN ISO 376)	Measuring range	Comment
Measuring range of the load cell:	5 N ... 50 N	with external partners
	100 N ... 50 kN	
	100 kN ... 1 MN	with external partners
Force (tensile force DIN EN ISO 376)		
Measuring range of the load cell:	5 N ... 1 MN	with external partners
Torque (DIN 51309)		
Measuring range of the torque sensor:	0.05 Nm ... 240 Nm	
	250 Nm ... 20 kNm	with external partners
Pressure (absolute pressure DKD-R 6-1)		
Measuring range of the pressure sensor:	1 kbar ... 35 bar	
	35 bar ... 5000 bar	with external partners
Pressure (gauge pressure DKD-R 6-1)		
Measuring range of the pressure sensor:	0 bar ... 1400 bar	
	1400 bar ... 5000 bar	with external partners

At burster, the following services are as part of the listed calibrations:

- 1. Checking your test or measuring equipment for calibration capability**
- 2. Performing a calibration**
- 3. Documentation of the calibration with a calibration certificate with accreditation symbol**
- 4. Labelling of the calibration items in accordance with ISO 17025 or 71 SD 0 025.**

If the calibration capability test reveals that an adjustment is required, we will carry this out in close consultation with you prior to calibration.

You can also contact us with tasks outside the above measurement areas, which we can then solve within our network of accredited laboratories.

Further information on our products and services and the complete accreditation certificate of our DAkkS laboratory can be found at **www.burster.com**.

You can also reach us by phone **+49-7224-645-53** or by **service@burster.de**

Measured quantity / Calibration item	Measuring range / Measuring scope	Measuring conditions / Procedure	Smallest readable uncertainty	Comment	
DC voltage	10 μ V to 200 V	QSH 7.1: Issue 2	$(5 + 0.2 V/U) \cdot 10^{-6}$	U = actual measurement value	
	1 V		$2 \cdot 10^{-6}$		
	1.02 V		$2 \cdot 10^{-6}$		
	10 V		$2 \cdot 10^{-6}$		
DC current	1 μ A to 100 mA	QSH 7.1: Issue 2	$10 \cdot 10^{-6}$	Above 30 A, only calibration of current sources, not of ammeters	
	>100 mA to 1 A		$20 \cdot 10^{-6}$		
	>1 A to 10 A		$50 \cdot 10^{-6}$		
	>10 A to 500 A		$10 \cdot 10^{-5}$		
DC resistance	0.1 m Ω to < 1 m Ω	QSH 7.1: Issue 2	$50 \cdot 10^{-6}$		
	1 m Ω to < 10 Ω		$10 \cdot 10^{-6}$		
	10 Ω to 100 k Ω		$5 \cdot 10^{-6}$		
	>100 k Ω to 1 M Ω		$10 \cdot 10^{-6}$		
Force	10 N to 20 N	DIN EN ISO 376:2011	$2 \cdot 10^{-4}$	100-N-K-BNME, compressive force	
	30 N to 100 N	DKD-R 3-3:2024	$1 \cdot 10^{-4}$		
	20 N to 40 N		$2 \cdot 10^{-4}$	200-N-K-BNME, compressive force	
	60 N to 200 N		$1 \cdot 10^{-4}$		
	50 N to 100 N		$2 \cdot 10^{-4}$	500-N-K-BNME, compressive force	
	150 N to 500 N		$1 \cdot 10^{-4}$		
	100 N to 200 N		$1 \cdot 10^{-3}$	2-kN-K-BNME, compressive force	
	> 200 N to 2 kN		$5 \cdot 10^{-4}$		
500 N to 2 kN	$1 \cdot 10^{-3}$	10-kN-K-BNME, compressive force			
> 2 kN to 10 kN	$5 \cdot 10^{-4}$				
2 kN to 5 kN	$2 \cdot 10^{-3}$		50-kN-K-BNME, compressive force		
> 5 kN to 50 kN	$1 \cdot 10^{-3}$				
Torque Torque transducers and torque measuring chains	0.005 N·m to < 0.01 N·m	DIN 51309:2022	$2 \cdot 10^{-3}$	240 Nm-Dm-BNME,	
	≥ 0.01 N·m to < 0.1 N·m	VDI/VDE 2646:2019	$4 \cdot 10^{-4}$	Counterclockwise torque,	
	≥ 0.1 N·m to < 1 N·m		$2 \cdot 10^{-4}$	Clockwise torque	
	≥ 1 N·m to 240 N·m		$1 \cdot 10^{-4}$		
Pressure Absolute pressure p_{abs}	0.1 bar to 35 bar	DKD-R 6-1:2014	$1.6 \cdot 10^{-4} \cdot p_{abs}$ but not < 0.8 mbar	Pressure medium: Gas	
	Gauge pressure p_e		0.0 bar to 34 bar	$1.6 \cdot 10^{-4} \cdot p_{abs}$ but not < 0.8 mbar	Pressure medium: Gas Principle: $p_e = p_{abs} - p_{amb}$
			0.0 bar to 200 bar	$2.4 \cdot 10^{-4} \cdot p_{abs}$ but not < 15 mbar	Pressure medium: HFE 7200 Principle: $p_e = p_{abs} - p_{amb}$
			> 200 bar to 1400 bar	$2.4 \cdot 10^{-4} \cdot p_{abs}$ but not < 100 mbar	

We already calibrate successfully for these customers in our DAkkS calibration laboratory:

- AUDI
- Automation & Software Günther Tausch
- Baumann
- Bosch Rexroth
- Bühler Motor
- Continental Automotive
- CSM
- DAIMLER
- Deutsche Edelstahlwerke
- Fette Compacting
- GNS
- Gustav Klein
- Hans Grohe
- Hella Hueck
- HIMA Paul Hildebrandt
- Korsch
- L.B. Bohle Maschinen + Verfahren
- Maschinenfabrik Reinhausen
- Merck
- Nabertherm
- PFW Aerospace
- Phoenix Contact Electronics
- Robert Bosch
- Roche Diagnostics Graz
- Schmiedewerke Gröditz
- Schunk Sonosystems
- Siemens
- teamtechnik Maschinen und Anlagen
- Telair International
- TRW Automotive