

## Deutsche Akkreditierungsstelle

### Annex to the Accreditation Certificate D-K-19566-01-00 according to DIN EN ISO/IEC 17025:2018

Valid from: 23.02.2023

Date of issue: 25.05.2023

Holder of accreditation certificate:

**CETA Testsysteme GmbH**  
**Marie-Curie-Straße 35-37, 40721 Hilden**

The calibration laboratory meets the requirements of DIN EN ISO/IEC 17025:2018 to carry out the conformity assessment activities listed in this annex. The calibration laboratory meets additional legal and normative requirements, if applicable, including those in relevant sectoral schemes, provided that these are explicitly confirmed 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.

#### **Mechanical quantities**

- Pressure <sup>a)</sup>

a) also on-site calibration

The calibration laboratory is permitted, without being required to inform and obtain prior approval from DAkkS, to use calibration standards or equivalent calibration procedures listed here with different issue dates.

The calibration laboratory maintains a current list of all calibration standards / equivalent calibration procedures within the flexible scope of accreditation.

*This certificate annex is only valid together with the written accreditation certificate and 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 at <https://www.dakks.de>.*

**Permanent Laboratory**

**Calibration and Measurement Capabilities (CMC)**

| Measurement quantity / Calibration item                       | Range                  | Measurement conditions / procedure                          | Expanded uncertainty of measurement                        | Remarks                 |
|---|------------------------|---|--|-------------------------|
| <b>Pressure</b><br>Negative and positive gauge pressure $p_e$ | -1 bar to -0,1 bar     | DKD-R 6-1: 2014<br>DIN EN 837-1: 1997<br>DIN EN 837-3: 1997 | $30 \cdot 10^{-2}$ mbar                                    | Pressure medium:<br>Gas |
|   | -0,1 bar to -0,07 bar  |   | $10 \cdot 10^{-2}$ mbar                                    |                         |
|   | -0,07 bar to -0,01 bar |   | $50 \cdot 10^{-3}$ mbar                                    |                         |
|   | -0,01 bar to 0,03 bar  |   | $3 \cdot 10^{-4} \cdot p_e$ but not lower than 3 $\mu$ bar |                         |
|   | > 0,03 bar to 0,07 bar |   | $50 \cdot 10^{-3}$ mbar                                    |                         |
|   | > 0,07 bar to 0,1 bar  |   | $10 \cdot 10^{-2}$ mbar                                    |                         |
|   | > 0,1 bar to 1,0 bar   |   | $20 \cdot 10^{-2}$ mbar                                    |                         |
|   | > 1,0 bar to 10 bar    |   | 2 mbar   |                         |
|   | > 10 bar to 17 bar     |   | 8 mbar   |                         |
|   | > 17 bar to 30 bar     |   | 20 mbar  |                         |
|   | > 30 bar to 60 bar     |   | 30 mbar  |                         |
| Absolute pressure $p_{abs}$                                   | 0,05 bar to 0,7 bar    |   | 2,5 mbar   |                         |
|   | 0,7 bar to 1,3 bar     |   | $20 \cdot 10^{-2}$ mbar                                    |                         |
|   | 1,3 bar to 10 bar      |   | 2,5 mbar   |                         |
|   | 10 bar to 40 bar       |   | 12 mbar  |                         |

**On-site Calibration**

**Calibration and Measurement Capabilities (CMC)**

| Measurement quantity / Calibration item                       | Range                   | Measurement conditions / procedure                          | Expanded uncertainty of measurement | Remarks                 |
|---|-------------------------|---|-------------------------------------|-------------------------|
| <b>Pressure</b><br>Negative and positive gauge pressure $p_e$ | -1 bar to -0,1 bar      | DKD-R 6-1: 2014<br>DIN EN 837-1: 1997<br>DIN EN 837-3: 1997 | $30 \cdot 10^{-2}$ mbar             | Pressure medium:<br>Gas |
|   | -0,1 bar to -0,07 bar   |   | $10 \cdot 10^{-2}$ mbar             |                         |
|   | -0,07 bar to -0,005 bar |   | $50 \cdot 10^{-3}$ mbar             |                         |
|   | -0,005 bar to 0,005 bar |   | $10 \cdot 10^{-3}$ mbar             |                         |
|   | > 0,005 bar to 0,07 bar |   | $50 \cdot 10^{-3}$ mbar             |                         |
|   | > 0,07 bar to 0,1 bar   |   | $10 \cdot 10^{-2}$ mbar             |                         |

**On-site Calibration**

| Calibration and Measurement Capabilities (CMC)         |                      |   |                                     |                         |
|--|----------------------|---|-------------------------------------|-------------------------|
| Measurement quantity / Calibration item                | Range                | Measurement conditions / procedure                          | Expanded uncertainty of measurement | Remarks                 |
| Pressure<br>Negative and positive gauge pressure $p_e$ | > 0,1 bar to 1,0 bar | DKD-R 6-1: 2014<br>DIN EN 837-1: 1997<br>DIN EN 837-3: 1997 | $20 \cdot 10^{-2}$ mbar             | Pressure medium:<br>Gas |
|  | > 1,0 bar to 10 bar  |   | 2,0 mbar                            |                         |
|  | > 10 bar to 17 bar   |   | 8,0 mbar                            |                         |
|  | > 17 bar to 30 bar   |   | 20 mbar                             |                         |
|  | > 30 bar to 60 bar   |   | 30 mbar                             |                         |
| Absolute pressure $p_{abs}$                            | 0,05 bar to 0,7 bar  |   | 2,5 mbar                            |                         |
|  | 0,7 bar to 1,3 bar   |   | $20 \cdot 10^{-2}$ mbar             |                         |
|  | 1,3 bar to 10 bar    |   | 2,5 mbar                            |                         |
|  | 10 bar to 40 bar     |   | 12 mbar                             |                         |

**Abbreviations used:**

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