

Deutsche Akkreditierungsstelle GmbH

Annex to the Accreditation Certificate D-K-15140-01-00  
according to DIN EN ISO/IEC 17025:2018

**Valid from: 19.02.2020**

Date of issue: 19.02.2020

Holder of certificate:

**Deutsche WindGuard Wind Tunnel Services GmbH**  
**Oldenburger Str. 65, 26316 Varel**

Calibration in the fields:

**Fluid quantities**

- **Velocity of gases**

Abbreviations used: see last page

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**Permanent Laboratory**

**Calibration and Measurement Capabilities (CMC)**

Measurement quantity / Calibration item	Range	Measurement conditions / procedure	Expanded uncertainty of measurement <sup>1)</sup>	Remarks
<b>Velocity of gases (air)</b> Absolute value of flow vector Anemometer	0.5 m/s to 38 m/s	ISO 16622:2002 ISO 17713-1:2007 VA Anemometer Calibration (D5831 Version 14)	0.25 %, but not less than 0.025 m/s	Wind tunnel: Type Göttingen  Nozzle: 1.0 m x 1.0 m At the range up to 30 m/s additional nozzle: 1.2 m x 1.2 m
	4 m/s to 16 m/s	IEC 61400-12-1:2017		Anemometer inclination: 0°
	0.5 m/s to 38 m/s	ISO 16622:2002 ISO 17713-1:2007 VA Calibration of wind sensors at non-horizontal air flow flow (D5832 Version 3)	0.8 %, but not less than 0.025 m/s	Wind tunnel: Type Göttingen  Nozzle: 1.0 m x 1.0 m At the range up to 30 m/s additional nozzle: 1.2 m x 1.2 m
	4 m/s to 16 m/s	IEC 61400-12-1:2017		Anemometer inclination at non horizontal air flow: -31° to 31°
Direction of flow vector Anemometer, wind direction sensors	0° to 360°	IEC 61400-12-1:2017 ISO 16622:2002 ISO 17713-1:2007 VA Calibration of wind direction sensors (VA D5836 Version 4)	0.8°	Wind tunnel: Type Göttingen Nozzle: 1.0 m x 1.0 m

**Abbreviations used:**

CMC	Calibration and measurement capabilities (Kalibrier- und Messmöglichkeiten)
IEC	International Electrotechnical Commission
VA	Internal calibration instruction of the calibration laboratory

<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.