

Deutsche Akkreditierungsstelle GmbH

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

**Valid from: 25.06.2019**

Date of issue: 25.06.2019

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

**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 16 m/s	ISO 16622:2002 ISO 17713-1:2007 VA Anemometer Calibration (D5831 Version 13)	0.05 m/s	Wind tunnel: Type Göttingen  Nozzle: 1.0 m x 1.0 m
	> 16 m/s to 38 m/s	VA Calibration of wind sensors at non-horizontal air flow flow (D5832 Version 2)	0.1 m/s	At the range from 4 m/s 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	0.05 m/s	Anemometer inclination at non horizontal air flow: -32° to 32° (Nozzle: 1.0 m x 1.0 m)
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)
DIN	Deutsches Institut für Normung e.V.
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.