

Deutsche Akkreditierungsstelle GmbH

Annex to the Accreditation Certificate D-K-19495-01-00 according to DIN EN ISO/IEC 17025:2018

Valid from: 20.01.2020

Date of issue: 20.01.2020

Holder of certificate:

Elster GmbH
Steinern Straße 19-21, 55252 Mainz-Kastel

Calibration in the fields:

Fluid quantities

- **Gas flow rate**
- **Volume conversion devices**

Abbreviations used: see last page

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Permanent Laboratory

Calibration and Measurement Capabilities (CMC)

Measured quantity / Calibration item	Range	Measurement conditions / procedure	Expanded uncertainty of measurement ¹⁾	Remarks
Gas flow rate Volume flow rate of flowing gases	0,5 m ³ /h to 4 m ³ /h	MHK Kap. 7.1.1, 08.10.2019	0,62 %	with atmospheric air, critical Venturi nozzle
	> 4 m ³ /h to 10 m ³ /h		0,33 %	
	> 10 m ³ /h to 250 m ³ /h		0,23 %	with atmospheric air, Turbine gas meter
	100 m ³ /h to 12000 m ³ /h		0,23 %	
Volume flow rate of flowing gases	65 m ³ /h to 100 m ³ /h	MHK Kap. 7.1.1, 08.10.2019	0,30 %	with atmospheric air, constant volume rotary gas meter
	> 100 m ³ /h to 1000 m ³ /h		0,23 %	
	Volume flow rate of flowing gases		5 m ³ /h to 10 m ³ /h	
> 10 m ³ /h to 100 m ³ /h		0,23%		
Volume flow rate of flowing gases	40 m ³ /h to 1800 m ³ /h	MHK Kap. 7.1.1, 08.10.2019	0,21 %	with air under pressure to 25 bar, turbine gas meter
	Volume conversion devices		0,7 to 101	MHK Kap. 7.1.2, 08.10.2019

Abbreviations used:

CMC Calibration and measurement capabilities
MHK Instruction Elster GmbH

¹⁾ 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.