

Annex to declaration of accreditation (scope of accreditation)  
Normative document: EN ISO/IEC 17025:2017  
Registration number: **K 149**

of **TPF Control B.V.**

This annex is valid from: **24-04-2024** to **01-12-2025**

Replaces annex dated: **17-03-2022**

**Location(s) where activities are performed under accreditation**

**Head Office**

Van Heemstraweg 19  
6657 KD  
Boven-Leeuwen  
The Netherlands

Location	Abbreviation/ location code
Van Heemstraweg 19 6657 KD Boven-Leeuwen The Netherlands	BL
On site at the customer	CU

HCS code	Measured quantity, Instrument, Measure	Range	CMC <sup>1</sup>	Remarks	Location
FG 1 0	FLOW OF GAS				
FG 1 0	Gas flow rate	0.5 ml/min – 5 ml/min	0.60 %		BL
		5 ml/min – 100 l/min	0.18 %		
		0.5 m <sup>3</sup> /h – 2500 m <sup>3</sup> /h	0.25 %		
FG 1 0	Gas flow rate	5 ml/min – 50 l/min	0.27 %		CU
		0.8 m <sup>3</sup> /h – 1000 m <sup>3</sup> /h	0.35 %		

<sup>1</sup> Calibration and Measurement Capability (CMC): Demonstrated measurement uncertainty, with coverage probability of 95%, in a given measurement point or measurement range. Measurement uncertainty, *U*, is calculated according to EA-4/02 "Evaluation of the Uncertainty of Measurement in Calibration".

This annex has been approved by the Board of the  
Dutch Accreditation Council, on its behalf,

J.A.W.M. de Haas

of **TPF Control B.V.**

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HCS code	Measured quantity, Instrument, Measure	Range	CMC <sup>1</sup>	Remarks	Location
FG 1 1	Gas mass flow rate	0.5 ml <sub>n</sub> /min – 5 ml <sub>n</sub> /min	0.60 %		BL
		5 ml <sub>n</sub> /min – 50 l <sub>n</sub> /min	0.18 %		
		0.5 m <sup>3</sup> <sub>n</sub> /h – 2500 m <sup>3</sup> <sub>n</sub> /h	0.25 %		
FG 1 1	Gas mass flow rate	0.5 ml <sub>n</sub> /min – 50 ml <sub>n</sub> /min	0.12 %	Viscous seal piston provers	BL
		5 ml <sub>n</sub> /min – 100 l <sub>n</sub> /min	0.15 %		
FG 1 1	Gas mass flow rate	5 ml <sub>n</sub> /min – 50 l <sub>n</sub> /min	0.27 %		CU
		3 m <sup>3</sup> <sub>n</sub> /h – 1000 m <sup>3</sup> <sub>n</sub> /h	0.35 %		
TE 0 0	TEMPERATURE				
TE 4 0	Self-indicating thermometers	-80 °C – -40 °C	0.1 °C	Using dry block furnace	BL
		140 °C – 400 °C	0.2 °C	Using dry block furnace	
		-40 °C – 140 °C	0.015 °C	Using oil bath	
		0 °C – 50 °C	0.2 °C	In air	
RH 0 0	HUMIDITY				
RH 1 0	Hygrometers	10 %rh – 95 %rh	1.7 %rh	20 °C – 55 °C	BL
PV 0 0	PRESSURE AND VACUUM				
PV 1 0	GAS PRESSURE				
PV 1 1	Absolute pressure	0.2 kPa – 1000 kPa	$0.7 \cdot 10^{-3} \cdot p + 25 \text{ Pa}$		BL
PV 1 1	Absolute pressure	50 – 115 kPa	$1.7 \cdot 10^{-4} \cdot p$		BL
PV 1 2	Gauge pressure	-95 kPa – 1000 kPa	$0.7 \cdot 10^{-3} \cdot p_e + 25 \text{ Pa}$		BL

Remarks:

- Calibration and Measurement Capability (CMC): Demonstrated measurement uncertainty, with coverage probability of 95 %, in a given measurement point or measurement range
- Measurement uncertainty, U, is calculated according to EA-4/02 "Evaluation of the Uncertainty of Measurement in Calibration".
- The flow units ml<sub>n</sub>/min and m<sup>3</sup><sub>n</sub>/h refer to gases under normal (n) conditions of 1013.25 mbar and 0 °C.
- The flow units ml/min and m<sup>3</sup>/h refer to gases under actual (flowing or line) conditions.
- Fixed normal densities ρ<sub>n</sub> [kg/m<sup>3</sup>] are used to convert from the flow unit [l<sub>n</sub>/min] to the mass flow unit [g/h].
- Densities according to NEN-EN-ISO 6976:2016.