

# CERTIFICATE

## of Product Conformity (QAL1)

Certificate No: 0000050627\_03

**Certified AMS:** STACKFLOW 200 for waste gas velocity

**Manufacturer:** ENVEA UK Ltd. (PCME Ltd.)  
ENVEA House, Rose & Crown Road  
Swavesey / Cambridge CB24 4RB  
United Kingdom

**Test Institute:** TÜV Rheinland Energy & Environment GmbH

**This is to certify that the AMS has been tested  
and found to comply with the standards  
EN 15267-1 (2009), EN 15267-2 (2023), EN 15267-3 (2007),  
EN ISO 16911-2 (2013) as well as EN 14181 (2014).**

Certification is awarded in respect of the conditions stated in this certificate  
(this certificate contains 11 pages).  
The present certificate replaces certificate 0000050627\_02 dated 13 March 2021.



Suitability Tested  
EN 15267  
QAL1 Certified  
Regular  
Surveillance

www.tuv.com  
ID 0000050627

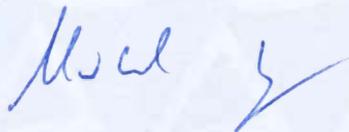
Publication in the German Federal Gazette  
(BAnz) of 15 March 2017

German Environment Agency

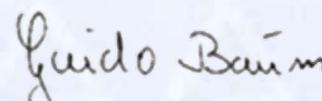
Dessau, 12 March 2026

This certificate will expire on:  
13 March 2031

TÜV Rheinland  
Energy & Environment GmbH  
Cologne, 10 March 2026



Dr. Marcel Langner  
Head of Section II 4



i.V. Guido Baum

[www.umwelt-tuv.eu](http://www.umwelt-tuv.eu)  
qal1-info@tuv.com  
Tel. + 49 221 806-5200

TÜV Rheinland Energy & Environment GmbH  
Am Grauen Stein  
51105 Köln

Test institute accredited to EN ISO/IEC 17025 by DAkkS (German Accreditation Body).  
This accreditation is limited to the accreditation scope defined in the enclosure to the certificate D-PL-11120-02-00.

<b>Test report:</b>	936/21228880/B dated 14 October 2016
<b>Initial certification:</b>	14 March 2016
<b>Expiry date:</b>	13 March 2031
<b>Certificate:</b>	Renewal (of previous certificate 0000050627_02 of 13 March 2021 valid until 13 March 2026)
<b>Publication:</b>	BAnz AT 15.03.2017 B6, chapter II No. 2.1

### Approved application

The tested AMS is suitable for use at plants according to Directive 2010/75/EC, chapter III (combustion plants / 13th BImSchV:2015), chapter IV (waste incineration plants / 17th BImSchV:2013), Directive 2015/2193/EC (44th BImSchV:2019), TA Luft:2002 and 30th BImSchV:2009. The measured ranges have been selected so as to ensure as broad a field of application as possible.

The suitability of the AMS for this application was assessed on the basis of a laboratory test and a twelve month field test at a waste incineration.

The AMS is approved for an ambient temperature range of -20 °C to +50 °C.

The notification of suitability of the AMS, performance testing and the uncertainty calculation have been effected on the basis of the regulations applicable at the time of testing. As changes in legal provisions are possible, any potential user should ensure that this AMS is suitable for monitoring the flue gas velocity relevant to the application.

Any potential user should ensure, in consultation with the manufacturer, that this AMS is suitable for the installation at which it will be installed.

### Note

The legal regulations mentioned correspond to the current state of legislation during certification. Each user should, if necessary, in consultation with the competent authority, ensure that this AMS meets the legal requirements for the intended use. In addition, it cannot be ruled out that legal regulations governing the use of a measuring device for emission monitoring may change during the lifetime of the certificate.

### Basis of the certification

This certification is based on:

- Test report 936/21228880/B dated 14 October 2016 of TÜV Rheinland Energy GmbH
- Suitability announced by the German Federal Environment Agency (UBA) as the relevant body
- The ongoing surveillance of the product and the manufacturing process

Publication in the German Federal Gazette: BAnz AT 15.03.2017 B6, chapter II No. 2.1,  
Announcement by UBA dated 22 February 2017:

**AMS designation:**

STACKFLOW 200 for velocity

**Manufacturer:**

PCME Ltd., St. Ives, United Kingdom

**Field of application:**

For plants requiring official approval and for plants according to the 27th BImSchV

**Measuring ranges during the performance test:**

Component	Certification range	supplementary range	Unit
Velocity	3 – 30	3 – 50	m/s

**Software version:**

Sensor: 2.01  
Control units:  
Interface module: 8.41  
MultiController: 8.41  
ProController: 0.52  
PC-ME DUST TOOLS: 2.31

**Restrictions:** none

**Notes:**

1. The maintenance interval is six months.
2. For zero and reference point tests with the fitted adjustment module, an external, calibrated, portable measuring instrument for differential pressure is required in order to validate the rated value.
3. For the STACK FLOW 200 measuring system the measured values must be displayed via a laptop/PC, which is a component of the measuring system. As an alternative, the STACK FLOW 200 measuring system is also available with the Interface Module, MultiController or ProController control units. In that case, the product designation is as follows.

**Product name**

STACKFLOW 200 Standard  
STACKFLOW 200 Plus  
STACKFLOW 200 Pro

**Configuration:**

with interface module  
with MultiController  
with ProController

4. Supplementary testing (extension of the maintenance interval) as regards Federal Environment Agency (UBA) notices of 18 February 2016 (BAnz AT 14.03.2016, chapter II number 1.1).

**Test Institute:**

TÜV Rheinland Energy GmbH, Cologne

Report No.: 936/21228880/B dated 14 October 2016

Publication in the German Federal Gazette: BAnz AT 26.03.2018 B8, Chap. V notification 34,  
Announcement by UBA dated 21 February 2018:

**34 Notification as regards Federal Environment Agency (UBA) notice  
of 22 February 2017 (BAnz AT 15.03.2017 B6, chapter II number 2.1)**

The latest software version of the STACKFLOW 200 measuring system for velocity  
manufactured by PCME Ltd. is:

Sensor:	2.4
Control units:	
Interface Module:	9.03
MultiController:	9.03
ProController:	2.09

Statement issued by TÜV Rheinland Energy GmbH dated 18 August 2017

Publication in the German Federal Gazette: BAnz AT 26.03.2019 B7, Chap. IV  
notification 52, Announcement by UBA dated 27 February 2019:

**52 Notification as regards Federal Environment Agency (UBA) notices  
of 22 February 2017 (BAnz AT 15.03.2017 B6, chapter II number 2.1) and  
of 21 February 2018 (BAnz AT 26.03.2018 B8, chapter V notification 34)**

The latest software versions of the STACKFLOW 200 measuring system  
for velocity manufactured by PCME Ltd. are:

Sensor:	2.5
Control units:	
Interface Module:	9.04
MultiController:	9.04
ProController:	2.19

Statement issued by TÜV Rheinland Energy GmbH dated 2 October 2018

Publication in the German Federal Gazette: BAnz AT 24.03.2020 B7, Chap. IV notification 45, Announcement by UBA dated 24 February 2020:

**45 Notification as regards Federal Environment Agency (UBA) notices of 22 February 2017 (BAnz AT 15.03.2017 B6, chapter II number 2.1) and of 27 February 2019 (BAnz AT 26.03.2019 B7, chapter IV notification 52)**

The company name has changed from PCME Ltd. to ENVEA UK Ltd.

The name of the STACKFLØW 200 measuring system for velocity manufactured by ENVEA UK Ltd. was changed to PCME STACKFLOW 200.

The production site of the PCME STACKFLOW 200 measuring system for velocity ENVEA UK Ltd. has moved to:  
ENVEA UK Ltd.  
ENVEA House, Rose & Crown Road  
Swavesey, Cambridge CB24 4RB  
United Kingdom

The latest software versions of the PCME STACKFLOW 200 measuring system for velocity manufactured by ENVEA UK Ltd. are:

Sensor:	2.5
Control units:	
Interface module:	9.04
MultiController:	9.04
ProController:	2.26

Statement issued by TÜV Rheinland Energy GmbH dated 4 December 2019

Publication in the German Federal Gazette: BAnz AT 31.07.2020 B10, Chap. II notification 7, Announcement by UBA dated 27 May 2020:

**7 Notification as regards Federal Environment Agency (UBA) notices of 22 February 2017 (BAnz AT 15.03.2017 B6, chapter II number 2.1) and of 24 February 2020 (BAnz AT 24.03.2020 B7, chapter IV, notification 45)**

The PCME STACKFLOW 200 measuring system for Velocity manufactured by ENVEA UK Ltd. may now be operated with the optional netController control unit.

The netController software version is:  
1.04.

Statement issued by TÜV Rheinland Energy GmbH dated 11 March 2020

Publication in the German Federal Gazette: BAnz AT 03.05.2021 B9, Chap. III  
notification 26, Announcement by UBA dated 31 March 2021:

**26 Notification as regards Federal Environment Agency (UBA) notices of 22 February 2017 (BAnz AT 15.03.2017 B6, chapter II number 2.1) and of 27 May 2020 (BAnz AT 31.07.2020 B10, chapter II notification 7)**

The latest software version of the PCME STACKFLOW 200 dust monitor manufactured by ENVEA UK Ltd. is:

Sensor: 2.6,  
control units:  
Interface module: 9.04,  
MultiController: 9.04,  
ProController: 2.26.

Statement issued by TÜV Rheinland Energy GmbH dated 07 August 2020

Publication in the German Federal Gazette: BAnz AT 11.04.2022 B10, Chap. VI  
notification 35, Announcement by UBA dated 9 March 2022:

**35 Notification as regards Federal Environment Agency (UBA) notices of 22 February 2017 (BAnz AT 15.03.2017 B6, chapter II number 2.1) and of 31 March 2021 (BAnz AT 03.05.2021 B9, chapter III notification 26)**

In the "Calibration Unit" adjustment module of the PCME STACKFLOW 200 measuring device for exhaust gas velocity from ENVEA UK Ltd., valves from Parker can also be used.

Statement issued by TÜV Rheinland Energy GmbH dated 07 September 2021

Publication in the German Federal Gazette: BAnz AT 20.03.2023 B6, Chap. IV  
notification 22, Announcement by UBA dated 21 February 2023:

**22 Notification as regards Federal Environment Agency (UBA) notices of 22 February 2017 (BAnz AT 15.03.2017 B6, chapter II number 2.1) and of 9 March 2022 (BAnz AT 11.04.2022 B10, chapter VI notification 35)**

The current software versions of the PCME STACKFLOW 200 measuring system for waste gas velocity from the company ENVEA UK Ltd. are:

Sensor Software: 2.6  
Control units:  
Interface Module/MultiController: 9.04  
ProController: 2.27  
netController: 1.04

Statement issued by TÜV Rheinland Energy GmbH dated 16 September 2022

Publication in the German Federal Gazette: BAnz AT 10.05.2024 B7, Chap. V notification 15, Announcement by UBA dated 19 March 2024:

**15 Notification as regards Federal Environment Agency (UBA) notices of 22 February 2017 (BAnz AT 15.03.2017 B6, chapter II number 2.1) and of 21 February 2023 (BAnz AT 20.03.2023 B6, chapter IV notification 22)**

The PCME STACKFLOW 200 measuring system for waste gas velocity from ENVEA UK Ltd. can now also be equipped with a newly designed housing cover with embossed ENVEA design.

The optional control units, ProController and netController, for the measuring system can be fitted with an alternative Traco Power TPP 65-251 power supply unit.

To simplify the manufacturing process, the design of the backwash unit of the measuring system has been optimised with regard to transition pieces and hose material.

Statement issued by TÜV Rheinland Energy GmbH dated 15 December 2023

Publication in the German Federal Gazette: BAnz AT 19.05.2025 B3, Chap. IV notification 54, Announcement by UBA dated 2 April 2025:

**54 Notification as regards Federal Environment Agency (UBA) notices of 22 February 2017 (BAnz AT 15.03.2017 B6, chapter II number 2.1) and of 19 March 2024 (BAnz AT 10.05.2024 B7, chapter V notification 15)**

The PCME STACKFLOW 200 measuring device for exhaust gas velocity from ENVEA UK Ltd. now has the device name STACKFLOW 200.

The NetController control unit has a revised main board. The new software version for the NetController control unit of the STACKFLOW 200 measuring system is as follows:

Controller Software 1.09

The current version of the sensor software for the STACKFLOW 200 measuring system is Sensor: 3.4

Statement issued by TÜV Rheinland Energy & Environment GmbH dated 20 December 2024

### Certified product

This certificate applies to automated measurement systems conforming to the following description:

The PCME STACKFLOW 200 continuously measures velocity in flue gas ducts. As an in-situ measuring system, it determines measurement signals directly in the gas flow without extracting a sample.

The PCME STACKFLOW 200 measuring system consists of the following components:

- Probe, software version: 2.01
- Measuring module with pressure sensors and electronic cards
- Calibration module (for AST and QAL3 tests)
- Software PCME-ME DUST TOOLS, version: 2.31
- 24 V voltage module
- **OPTIONAL:** Control units for parameter setting and visualization of measurement data: ProController, MultiController, Interface Module

The PCME STACKFLOW 200 measures exhaust gas velocity according to the principle of differential pressure. The sensor measures 3 main physical quantities:

- the difference between impact pressure and static pressure
- the absolute value of the static pressure
- the temperature captured by the PT100 sensor on the outer side of the tube.

Based on these 3 physical quantities, the PCME STACKFLOW 200 determines the velocity of the flue gas or the gas flow rate.

The basic version of the PCME STACKFLOW 200 only consists of the sensor (measurement probe, measuring module and adjustment module), as well as of a 24 V voltage module. Operation of the measuring system and the display requires an external computer.

The measurement probe consists of a stainless steel tube with several pressure ports, a temperature sensor and equipment access door for maintenance purposes.

The measuring module main elements are the pressure sensors and electronic cards. Each measurement point is fitted with a delimiter and a buffer volume used to stabilize the pressure detected by the sensors (time average).

Two magnet valves periodically trigger backwashing of the complete AMS including measurement probe and measuring module. This provides a clean and dry air buffer between the pressure sensors and the Pitot tube in order to protect the sensors from corrosive gases in the stack. Condensate formation and contamination of the tubes are prevented in the fluid circulation as well.

The adjustment module includes an adjustable generator of differential pressure (0 – 20 hPa) as well as three 3-way hand valves. Additionally, there are two pressure measurement connectors for the connection of reference differential pressure systems.

The differential pressure generator uses compressed air, metering orifices and a bypass to compensate pressure overload.

STACKFLOW 200 can optionally also be connected to a multichannel PCME ProController/ MultiController or a single channel PCME Interface Module. The operation units simplify the operation of the sensor. When operation units are connected to the system, the product name changes.

## General notes

This certificate is based upon the equipment tested. The manufacturer is responsible for ensuring that on-going production complies with the requirements of the EN 15267. The manufacturer is required to maintain an approved quality management system controlling the manufacture of the certified product. Both the product and the quality management systems shall be subject to regular surveillance.

If a product of the current production does not conform to the certified product, TÜV Rheinland Energy & Environment GmbH must be notified at the address given on page 1.

A certification mark with an ID-Number that is specific to the certified product is presented on page 1 of this certificate. This certification mark may be applied to the product or used in advertising materials for the certified product.

This document as well as the certification mark remains property of TÜV Rheinland Energy & Environment GmbH. With revocation of the publication the certificate loses its validity. After the expiration of the certificate and on requests of the TÜV Rheinland Energy & Environment GmbH this document shall be returned and the certificate mark must not be employed anymore.

The relevant version of this certificate and its expiration is also accessible on the internet: [gal1.de](http://gal1.de).

## History of documents

Certification of STACKFLOW 200 is based on the documents listed below and the regular, continuous monitoring of the Quality Management System of the manufacturer:

### Initial certification according to EN 15267

Certificate No. 0000050627\_00: 25 April 2016  
Expiry date of the certificate: 13 March 2021  
Test report: 936/21228880/A dated 12 October 2015  
TÜV Rheinland Energie und Umwelt GmbH  
Publication: BAnz AT 14.03.2016 B7, chapter II number 1.1  
UBA announcement dated 18 February 2016

### Supplementary testing according to EN 15267

Certificate No. 0000050627\_01: 25 April 2017  
Expiry date of the certificate: 13 March 2021  
Test report: 936/21228880/B dated 14 October 2016  
TÜV Rheinland Energy GmbH  
Publication: BAnz AT 15.03.2017 B6, chapter II number 2.1  
UBA announcement dated 22 February 2017

### Notifications in accordance with EN 15267

Statement issued by TÜV Rheinland Energy GmbH dated 18 August 2017  
Publication: BAnz AT 26.03.2018 B8, chapter V notification 34  
UBA announcement dated 21 February 2018  
(Software changes)

Statement issued by TÜV Rheinland Energy GmbH dated 2 October 2018  
Publication: BAnz AT 26.03.2019 B7, chapter IV notification 52  
UBA announcement dated 27 February 2019  
(Software changes)

Statement issued by TÜV Rheinland Energy GmbH dated 4 December 2019  
Publication: BAnz AT 24.03.2020 B7, chapter IV notification 45  
UBA announcement dated 24 February 2020  
(Various changes)

Statement issued by TÜV Rheinland Energy GmbH dated 11 March 2020  
Publication: BAnz AT 31.07.2020 B10, chapter II notification 7  
UBA announcement dated 27 May 2020  
(Soft- and hardware changes)

**Renewal of certificates**

Certificate No. 0000050627\_02: 13 March 2021  
Expiry date of the certificate: 13 March 2026

**Notifications in accordance with EN 15267**

Statement issued by TÜV Rheinland Energy GmbH dated 7 August 2020  
Publication: BAnz AT 03.05.2021 B9, chapter III notification 26  
UBA announcement dated 31 March 2021  
(Software changes)

Statement issued by TÜV Rheinland Energy GmbH dated 7 September 2021  
Publication: BAnz AT 11.04.2022 B10, chapter VI notification 35  
UBA announcement dated 9 March 2022  
(Hardware changes)

Statement issued by TÜV Rheinland Energy GmbH dated 16 September 2022  
Publication: BAnz AT 20.03.2023 B6, chapter IV notification 22  
UBA announcement dated 21 February 2023  
(Software changes)

Statement issued by TÜV Rheinland Energy & Environment GmbH dated 15 December 2023  
Publication: BAnz AT 10.05.2024 B7, chapter V notification 15  
UBA announcement dated 19 March 2024  
(Hardware changes)

Statement issued by TÜV Rheinland Energy & Environment GmbH dated 20 December 2024  
Publication: BAnz AT 19.05.2025 B3, chapter IV notification 54  
UBA announcement dated 2 April 2025  
(Soft- and hardware changes and system name change)

**Renewal of certificates**

Certificate No. 0000050627\_03: 12 March 2026  
Expiry date of the certificate: 13 March 2031

**Calculation of overall uncertainty according to EN 14181 and EN 15267-3**

**Measuring system**

Manufacturer	PCME Ltd.
AMS designation	STACKFLOW 200
Serial number of units under test	TÜV 1 TÜV 2 / TÜV 3 TÜV 4
Measuring principle	Differential pressure

**Test report**

Test laboratory	936/21228880/B
Date of report	TÜV Rheinland
	2016-10-14

**Measured component**

Certification range	Velocity
	3 - 30 m/s

**Calculation of the combined standard uncertainty**

**Tested parameter**

			$u^2$
Standard deviation from paired measurements under field conditions *	$u_D$	0.252 m/s	0.064 (m/s) <sup>2</sup>
Lack of fit	$u_{lof}$	-0.173 m/s	0.030 (m/s) <sup>2</sup>
Zero drift from field test	$u_{d,z}$	0.121 m/s	0.015 (m/s) <sup>2</sup>
Span drift from field test	$u_{d,s}$	0.156 m/s	0.024 (m/s) <sup>2</sup>
Influence of ambient temperature at span	$u_t$	0.070 m/s	0.005 (m/s) <sup>2</sup>
Influence of supply voltage	$u_v$	0.023 m/s	0.001 (m/s) <sup>2</sup>
Uncertainty of reference material at 70% of certification range	$u_{rm}$	0.242 m/s	0.059 (m/s) <sup>2</sup>

\* The larger value is used :  
"Repeatability standard deviation at set point" or  
"Standard deviation from paired measurements under field conditions"

Combined standard uncertainty ( $u_c$ )	$u_c = \sqrt{\sum (u_{max,j})^2}$	0.44 m/s
Total expanded uncertainty	$U = u_c * k = u_c * 1.96$	0.87 m/s

**Relative total expanded uncertainty**

<b>Requirement of 2010/75/EU</b>	<b>U in % of the range 30 m/s</b>	<b>2.9</b>
Requirement of EN 15267-3	U in % of the range 30 m/s	10.0 **
	U in % of the range 30 m/s	7.5

\*\* The EU-directive 2010/75/EU on industrial emissions provides no requirements for this component.  
A value of 10.0 % was used for this.