

# PRODUCT CONFORMITY CERTIFICATE

This is to certify that the

## **PCME STACKFLOW 200**

Manufactured by:

### **ENVEA UK Ltd**

Rose and Crown Road  
Swavesey  
Cambridge  
CB24 4RB, UK

has been assessed by CSA Group  
and for the conditions stated on this certificate complies with:

### **Environment Agency Guidance “MCERTS for stack emissions monitoring equipment at industrial installations”**

**- Continuous emissions monitoring systems (CEMS)**

**Published 20 October 2020**

**EN 15267-1:2009, EN15267-2:2009, EN 15267-3:2007**

**& QAL 1 as defined in EN 14181: 2014**

Certification ranges:

Gas Velocity	2 to 30 m/s
	2 to 50 m/s

Project number:	80106183
Certificate number:	Sira MC160315/03
Initial certification:	30 November 2016
This certificate issued:	23 November 2021
Renewal date:	29 November 2026



Andrew Young  
Environmental Team Manager

MCERTS is operated on behalf of the Environment Agency by

## **CSA Group Testing UK Ltd**

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*The MCERTS certificate consists of this document in its entirety.*

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## Approved site application

*Any potential user should ensure, in consultation with the manufacturer, that the monitoring system is suitable for the intended application. For general guidance on monitoring techniques refer to the Environment Agency technical guidance on monitoring, available at [www.mcerts.net](http://www.mcerts.net)*

This instrument is considered suitable for use on waste incineration and large combustion plants. This CEMS has been proven suitable for its measuring task (parameter and composition of the flue gas) by use of the QAL 1 procedure specified in EN14181. The lowest certified range for each determinand shall not be more than 1.5 times the daily average emission limit value (ELV) for incineration plants, and not more than 2.5 times the ELV for other types of applications.

## Basis of certification

This certification is based on the following Test Report(s) and on Sira's assessment and ongoing surveillance of the product and the manufacturing process:

TÜV Report No: 936/21228880/A dated 12 October 2016

## Product certified

The measuring system consists of the following parts:

- Measuring probe, StackFlow 200
- netController, ProController, MultiController, Interface Module

This certificate applies to all instruments fitted with software version 2.4 (serial number 55132) onwards.

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## Certified performance

The instrument was evaluated for use under the following conditions:

Ambient Temperature Range: -20°C to +50°C  
Instrument IP rating: IP65

Note: If the instrument is supplied with an enclosure, then the ambient temperature shall be monitored inside the enclosure to ensure that it stays within the above ambient temperature range.

Results are expressed as error % of certification range, unless otherwise stated.

Test	Results expressed as % of the certification range				Other results	MCERTS specification
	<0.5	<1	<2	<5		
Response time						
2 to 30 m/s					15 seconds	<60 seconds
2 to 50 m/s					15 seconds	<60 seconds
Repeatability standard deviation at zero point	0.0					<2.0%
Repeatability standard deviation at reference point	0.1					<2.0%
Lack-of-fit						
2 to 30 m/s		-1.0				<3.0%
2 to 50 m/s		0.8				<3.0%
Influence of ambient temperature zero point (-20°C to +50°C)	0.3					<5.0%
Influence of ambient temperature reference point (-20°C to +50°C)	0.4					<5.0%
Influence of voltage variations (196V to 253V)	0.1					<2.0%
Influence of vibration (10 to 60Hz (±0.3mm), 60 to 160Hz at 1g)	0.3					<2.0%

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Test	Results expressed as % of the certification range				Other results	MCERTS specification
	<0.5	<1	<2	<5		
Measurement uncertainty				2.9%	Guidance - at least 25% below max permissible uncertainty (10%)	
Calibration function (field)					Note 1	>0.90
Response time (field)					15 seconds	<60 seconds
Lack of fit (field)		-1.0				<2.0%
Maintenance interval					4 weeks	>8 days
Zero and Span drift requirement	It is possible to record zero and span drift. This complies with the requirements of QAL3 according to EN 14181. The measuring system does not perform any tests or compensations.					Clause 6.13 & 10.13
Change in zero point over maintenance interval		0.7				<2.0%
Change in reference point over maintenance interval		0.9				<4.0%
Availability					99.7%	>95%
Reproducibility			1.6			<3.3%

Note 1: The determination coefficient  $R^2$  of the calibration function was not determined as the range of values was less than 15% of the certification range.

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## Description

The PCME STACKFLOW 200 Averaging Pitot Flow (APF) sensor combines with a control unit to form a compact system that continuously measures the velocity, temperature, and pressure of flue gas in stacks or ducts. The volumetric flow of the gas that the system determines from these measures is included in the measurement of pollutant mass quantities (dust, HCl, SO<sub>2</sub>, NO<sub>x</sub>).

The PCME STACKFLOW 200 sensor comprises a probe for measuring the gas velocity using PCME's ProPitot™ APF technology. The sensor is suitable for use in non-condensing conditions with high levels of humidity, condensing processes containing droplets (wet stack conditions), aggressive environments (up to 250°C/482°F), and can be deployed in high-temperature processes of up to 500°C (932°F).

## General Notes

1. This certificate is based upon the equipment tested. The Manufacturer is responsible for ensuring that on-going production complies with the standard(s) and performance criteria defined in this certificate. 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 system shall be subject to regular surveillance according to 'Regulations Applicable to the Holders of CSA Group Testing UK Ltd Certificates'.
2. The design of the product certified is held and maintained by TÜV Rheinland for certificate No. Sira MC160315/03.
3. If a certified product is found not to comply, CSA Group should be notified immediately at the address shown on this certificate.
4. The certification marks that can be applied to the product or used in publicity material are defined in 'Regulations Applicable to the Holders of CSA Group Testing UK Ltd Certificates'.
5. This document remains the property of CSA Group and shall be returned when requested by CSA Group.

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