Umwelt Bundesamt

TÜVRheinland®
Precisely Right.

CERTIFICATE

of Product Conformity (QAL1)

Certificate No.: 0000090024_00

Certified AMS:	ATK/F-EUT for O_2
Manufacturer:	SETNAG 22-26 Rue John Maynard Keynes 13013 Marseille France
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 (2023) and EN 14181 (2014).

Certification is awarded in respect of the conditions stated in this certificate (this certificate contains 6 pages).

TÜVRheinland® CERTIFIED

Suitability Tested
EN 15267
QAL1 Certified
Regular Surveillance

www.tuv.com
ID 0000090024

Publication in the German Federal Gazette (BAnz) of 10 July 2026

This certificate will expire on: 9 July 2031

German Environment Agency
Dessau, 17 September 2026

TÜV Rheinland Energy & Environment GmbH
Cologne, 15 September 2026

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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.

Test report:	EuL/21263632/A dated 24 October 2025
Initial certification:	10 July 2026
Expiry date:	9 July 2031
Publication:	BAnz AT 10.07.2026 B5, chapter II number 1.1

Approved application

The tested AMS is suitable for use at plants according to Directive 2010/75/EU, chapter III (combustion plants / 13th BImSchV:2021), Directive 2010/75/EU, chapter IV (waste incineration plants / 17th BImSchV:2024), 30th BImSchV:2019, TA Luft:2021, Directive 2015/2193/EU (44th BImSchV:2022) and the 27th BImSchV:2013. 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 four-month field test at a waste incineration plant.

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 emission limit values and oxygen concentration relevant to the application.

Any potential user should ensure, in consultation with the manufacturer, that this AMS is suitable for the intended use.

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 EuL/21263632/A dated 24 October 2025 by TÜV Rheinland Energy & Environment 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 10.07.2026 B5, chapter II Number 1.1, UBA announcement dated 18 May 2026:

AMS designation:
ATK/F-EUT for O_2

Manufacturer:
SETNAG, Marseille, France

Field of application:
For installations requiring approval under the 13th BImSchV, the 17th BImSchV, the 30th BImSchV, the TA Luft as well as installations under the 27th BImSchV and the 44th BImSchV

Measuring ranges during the performance test:

Component	Certification range	Supplementary range	Unit
O_2	0 – 25	0 – 10	Vol.%

Software version:
0.34

Restrictions:
None

Notes:
1. The maintenance interval is four weeks.
2. The measuring device determines the gas concentration in wet flue gas.
3. The IP53 protection rating of the measuring device means it can only be installed indoors.

Test Report:
TÜV Rheinland Energy & Environment GmbH, Cologne
Report No.: EuL/21263632/A dated 24 October 2025

Certified product

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

The ATK/F-EUT measuring system is an oxygen measuring system designed for the continuous monitoring of the oxygen concentration in combustion gases. The measuring principle is based on a zirconium dioxide measuring element (MicroPoas sensor) with an internal metallic reference.

Zirconium dioxide (ZrO_2) is a solid electrolyte that becomes conductive to oxygen ions at high temperatures. In the sensor's design, the electrolyte separates two electrodes, each of which is in contact with gases of different oxygen partial pressures. This generates an electrochemical voltage which can be described according to the Nernst equation as a function of the ratio of the measured oxygen partial pressure to the reference partial pressure. This electrochemical measuring principle enables the continuous determination of the oxygen concentration in the exhaust gas.

The sensor essentially consists of a power supply unit, a cast aluminium housing, two tubes for gas circulation comprising an inner tube and a detachable outer tube, the MicroPoas sensor as a zirconium dioxide measuring element, a device for introducing the calibration gas, a heating furnace and a terminal block. The assembly is secured to the measurement port by a steel flange welded to the outer gas extraction tube. The exhaust gas enters the housing via the space between the outer and inner tubes and, after analysis by the MicroPoas sensor, is returned to the exhaust duct via the inner tube.

The MicroPoas sensor operates with an internal metallic reference sealed inside the sensor. Together with a type S thermocouple, the sensor is embedded in an aluminium oxide tube to achieve greater mechanical strength. It is mounted on the measurement port via a mounting flange welded to the head.

The control unit essentially consists of an electronic circuit board with a touchscreen, a voltage converter for the furnace, a 24 V DC power supply, a circuit board with the user interface, and a USB port. The touch panel is used to display parameters such as measured values, furnace temperature, ambient temperature, alarms, sensor voltage and air pressure. In addition, the display is used to adjust and set the measurement range. The USB port enables software updates, configuration of the analyser, and the saving of measured values and events.

The certified measurement system includes the following components in particular:

Sensor: ATKFD230812/90 and /89

Control unit: ATKCU23082/84 and /99

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. Upon revocation of the publication the certificate loses its validity. After the expiration of the certificate and on request of TÜV Rheinland Energy & Environment GmbH this document shall be returned and the certificate mark must no longer be used.

The relevant version of this certificate and its expiration is also accessible on the internet: **qal1.de**.

Document history

Certification of the ATK/F-EUT measuring system is based on the documents listed below and the regular, continuous surveillance of the manufacturer's quality management system:

Initial certification according to EN 15267
Certificate no. 0000090024_00: 17 September 2026
Expiry date of the certificate: 9 July 2031
Test report: EuL/21263632/A dated 24 October 2025
TÜV Rheinland Energy & Environment GmbH
Publication: BAnz AT 10.07.2026 B5, chapter II number 1.1
UBA announcement dated 18 May 2026

Umwelt Bundesamt

Certificate:
0000090024_00 / 17 September 2026

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

Measuring system			
Manufacturer		SETNAG	
AMS designation		ATK/F-EUT	
Serial number of units under test		ATKCU2308284/ATKCU2308299	
Measuring principle		Zirkondioxid	
Test report		EuL/21263632/A	
Test laboratory		TÜV Rheinland	
Measured component			
Certification range		0 - 25	Vol.-%
Evaluation of the cross-sensitivity (CS)			
(system with largest CS)			
Sum of positive CS at zero point		0.03	Vol.-%
Sum of negative CS at zero point		0.00	Vol.-%
Sum of postive CS at span point		0.00	Vol.-%
Sum of negative CS at span point		0.00	Vol.-%
Maximum sum of cross-sensitivities		0.03	Vol.-%
Uncertainty of cross-sensitivity	u_i	0.016	Vol.-%

Calculation of the combined standard uncertainty

Tested parameter				u^2	
	u_D	0.064	Vol.-%	0.004	(Vol.-%)²
Lack of fit	u_{lof}	0.058	Vol.-%	0.003	(Vol.-%)²
Zero drift from field test	$u_{d,z}$	-0.069	Vol.-%	0.005	(Vol.-%)²
Span drift from field test	$u_{d,s}$	-0.098	Vol.-%	0.010	(Vol.-%)²
Influence of ambient temperature at span	u_t	0.116	Vol.-%	0.013	(Vol.-%)²
Influence of supply voltage	u_v	0.046	Vol.-%	0.002	(Vol.-%)²
Cross-sensitivity (interference)	u_i	0.016	Vol.-%	0.000	(Vol.-%)²
Influence of sample gas pressure	u_p	0.095	Vol.-%	0.009	(Vol.-%)²
Uncertainty of reference material at 70% of certification range	u_{rm}	0.202	Vol.-%	0.041	(Vol.-%)²

* 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)	$u_c = \sqrt{\sum (u_{max,j})^2}$	0.30	Vol.-%
Total expanded uncertainty	$U = u_c * k = u_c * 1.96$	0.58	Vol.-%

Relative total expanded uncertainty	**U in % of the range 25 Vol.-%**	**2.3**
Requirement of 2010/75/EU	**U in % of the range 25 Vol.-%**	**10.0 ****
Requirement of EN 15267-3	U in % of the range 25 Vol.-%	7.5

** The EU-directive 2010/75/EC on industrial emissions does not define requirements for this component.
A value of 10.0 % was used instead.