

# PRODUCT CONFORMITY CERTIFICATE

This is to certify that the

***Continuous Isokinetic Dioxin Sampling System  
DioxinMonitoringSystem® Model G.20 and G.21  
(standard and compact version)***

Manufactured by:

***Monitoring Systems GmbH***

3021 Preßbaum,  
Bartbergstrasse 5,  
Austria

has been assessed by Sira Certification Service  
And for the conditions stated on this certificate complies with:

**MCERTS Performance Standards and Test Procedures for Automatic  
Isokinetic Samplers Version 3 dated September 2016  
EN15267-1, EN15267-2:2009**

Certification Ranges :

Isokinetic sampling velocity 2 to 20 m/sec

Project No. : 674/0102/70191350  
Certificate No : Sira MC050065/13  
Initial Certification : 07 October 2005  
This Certificate issued : 07 December 2018  
Renewal Date : 06 October 2020

Emily Alexander  
Environmental Project Engineer

MCERTS is operated on behalf of the Environment Agency by

## **Sira Certification Service**

Unit 6, Hawarden Industrial Park  
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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 Monitoring Technical Guidance Notes available at [www.mcerts.net](http://www.mcerts.net)*

On the basis of the assessment and the ranges required for compliance with EU Directives this instrument is considered suitable for use on waste incineration and large coal-fired combustion plant applications. This CEM 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, for IED Chapter III and IED Chapter IV applications for the ranges specified. The lowest certified range for each determinand shall not be more than 1.5X the daily average emission limit value (ELV) for IED Chapter IV applications, and not more than 2.5X the ELV for IED Chapter III and other types of application.

## 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:

Environment Agency: Laboratory and Field Tests of Continuous Dioxin Sampling Systems, September 2005

## Product Certified

The G20 and G.21 system tested comprised:

- Stack mounted dual probe sampling unit
- Isokinetic control unit

This certificate applies to all instruments fitted with software version 3.2 onwards (i.e. serial number 790574-001 onwards) for both standard and compact version using double or single probe sampling units.

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## Field Test

The Model G.20 and G.21 sampling system was assessed on the basis of two three-month field trials mounted on both a waste incinerator and a cement plant.

The instrument was tested under the following conditions:

- Velocity range 15 to 21 m/s and 20 to 28m/s
- Stack temperature range 100°C to 110°C and 135°C to 137°C
- Ambient temperature range 15°C to 42°C and 10°C to 35°C
- Particulate concentration 1 to 5 mg/Nm<sup>3</sup> and 20 to 30 mg/Nm<sup>3</sup>

## Certified Performance

Performance values are expressed as a percentage of measured value.

Test	Results expressed as % of measured value				Other results	MCERTS* specification
	<0.5	<1	<2	<4		
Accuracy of isokinetic sampling rate response to changes in flue gas velocity			1.3%			±5%
Accuracy of determination of volume of gas sampled			1.3%			±2%
Linearity of isokinetic sampling rate				3.0%		±5%
Response time T <sub>90</sub> (seconds)					58-62 s	<100 s
Flow repeatability under laboratory conditions			1.5%			±5%
Minimum operational velocity					1.0 m/s	2 m/s
Short term drift		0.9%				±2%
Accuracy of the determination of volume of gas sampled calculated as an average of ten runs performed during the first and the last month of testing				3.1%		±5%
Flow reproducibility under field conditions calculated from ten independent measurement results at one fixed location within the duct				3.5%		±5%
Availability over three months continuous use					100%	>95%

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## Description

Automatic isokinetic sampler for long term measurement use in accordance to EN1948-1: dilution method for sampling of polychlorinated dibenzo-p-dioxins and –furans (PCDDs and PCDFs) and other persistent organic pollutants (POPs).

The system comprises:

- A stack mounted dual probe system conforming to EN1948-1: Dilution method – including automatic probe switching, blowback and cleaning – with PUF cartridge housing attached.
- A remote control unit for isokinetic sampling enabling automatic measurement control, remote control and data download, standby/restart and calibration. Measurement data per sample cartridge can be accessed after the sampling period.

The system can also be configured as a single probe device. The manufacturer states that both configurations can handle high dust loadings up to 150 mg/m<sup>3</sup> without change in performance and velocities up to 30m/s can be accommodated within the isokinetic control range of the overall system.

The system can be controlled and periodically checked using a LAN interface or remote access via the internet. Data can be downloaded via these links and remote services access implemented.

The manufacturer states that the system may be successfully configured to sample heavy metals.

## 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 Sira Certificates'. The design of the product certified is defined in the Sira Design Schedule V06 for certificate No. Sira MC050065/13
2. If certified product is found not to comply, Sira Certification Service should be notified immediately at the address shown on this certificate.
3. The Certification Marks that can be applied to the product or used in publicity material are defined in 'Regulations Applicable to the Holders of Sira Certificates'.
4. This document remains the property of Sira and shall be returned when requested by the company.

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