

# PRODUCT CONFORMITY CERTIFICATE

This is to certify that the

***iFiD Rack***

manufactured by:

***Testa GmbH***

Kathi-Kobus-Str. 15  
80797 Munich  
Germany

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

**“Performance standards and test procedures for continuous emission monitoring systems (CEMS) and transportable-CEMs (T-CEMS), Version 5, September 2020 EN15267-2:2007, EN15267-3:2007, & QAL 1 as defined in EN 14181: 2014**

Certification ranges:

Total organic carbon(TOC)	0 to 15mg/m <sup>3</sup>
	0 to 30mg/m <sup>3</sup>
	0 to 150mg/m <sup>3</sup>
	0 to 500mg/m <sup>3</sup>

Project number:	80056139
Certificate number:	Sira MC200361/00
Initial certification:	September 2020
This certificate issued:	September 2020
Renewal date:	September 2025



Andrew Young  
Environmental Team Manager

MCERTS is operated on behalf of the Environment Agency by

## **Sira Certification Service**

Unit 6, Hawarden Industrial Park  
Hawarden, Deeside, CH5 3US  
Tel: +44 (0)1244 670 900



*The MCERTS certificate consists of this document in its entirety.  
For conditions of use, please consider all the information within.  
This certificate may only be reproduced in its entirety and without change  
To authenticate the validity of this certificate please visit [www.csagroupuk.org/mcerts](http://www.csagroupuk.org/mcerts)*

**Certificate contents**

Approved site application ..... 2  
 Basis of certification ..... 2  
 Product certified..... 2  
 Certified performance..... 4  
 Description ..... 7  
 General notes ..... 7

**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 plant applications. 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 waste incineration plants, and not more than 2.5 times the ELV for other types of application.

The field test was performed over a period of more than 3 months(102 days) at a waste **combustion** plant.

**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:

Test Report: TÜV SÜD Industrie Service GmbH, Munich, report no. 3003564, 9<sup>th</sup> March 2020.

**Product certified**

The TESTA iFiD Rack measuring system consists of the following parts:

- iFiD Rack - the analyser with
- iFiD line - the heated sample gas line
- iFiD filter - the heated pre-filter
- iFiD sample gas probe - the sampling probe

1. Sample probe	2. Heated filter	3. Heated sample line	4. Analyser
Model: iFiD sample gas probe	Model: iFiD filter – heated titanium filter cartridge	Model: iFiD line – 10m heated to 180°C with Teflon hose	Model: iFiD Rack with Testa Operation and datalogging software

Certificate number : Sira MC200361/00  
 This certificate issued : September 2020

*This certificate may only be reproduced in its entirety and without change  
 To authenticate the validity of this certificate please visit [www.csagroupuk.org/mcerts](http://www.csagroupuk.org/mcerts)*

Allowable variations could include:

- A different brand or model of sampling system of the same type, provided that there is evidence the alternative system works with similar types of CEMS.
- Additional manifolds and heated valves used to allow more than one analyser to share a sampling system.

This certificate applies to all instruments fitted with software version: Testa CE 1.76, DGA 2.0, I/O 2.0 and QPC 2.0, and serial number - 1810017 onwards.

Certificate number : Sira MC200361/00  
This certificate issued : September 2020

*This certificate may only be reproduced in its entirety and without change  
To authenticate the validity of this certificate please visit [www.csagroupuk.org/mcerts](http://www.csagroupuk.org/mcerts)*

## Certified Performance

The instrument was evaluated for use under the following conditions:

Ambient temperature range: 5°C to +40°C  
Instrument IP rating: IP40

Note: The area of use is restricted to locations with protection from the temperatures within the tested temperature range (5-40°C). A roof over the point of assembly and protection from precipitation or spray are mandatory.

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						
TOC 0 to 15mg/m <sup>3</sup>					13s	<200s
0 to 30 mg/m <sup>3</sup>					13s	<200s
0 to 150mg/m <sup>3</sup>					15s	<200s
0 to 500mg/m <sup>3</sup>					19s	<200s
Repeatability standard deviation at zero point						
0-15mg/m <sup>3</sup>	0.05					<2.0%
Repeatability standard deviation at reference point						
0-15mg/m <sup>3</sup>	0.07					<2.0%
Lack-of-fit						
TOC 0 to 15mg/m <sup>3</sup>	0.4					<2.0%
0 to 30mg/m <sup>3</sup>		0.6				<2.0%
0 to 150mg/m <sup>3</sup>	-0.4					<2.0%
0 to 500mg/m <sup>3</sup>			-1.1			<2.0%
Influence of ambient temperature zero point (5°C to 40°C)						
0-15mg/m <sup>3</sup>				2.7		<5.0%
Influence of ambient temperature reference point (5°C to 40°C)						
0-15mg/m <sup>3</sup>		0.5				<5.0%

Certificate number : Sira MC200361/00  
This certificate issued : September 2020

*This certificate may only be reproduced in its entirety and without change  
To authenticate the validity of this certificate please visit [www.csagroupuk.org/mcerts](http://www.csagroupuk.org/mcerts)*

Test	Results expressed as % of the certification range				Other results	MCERTS specification
	<0.5	<1	<2	<5		
Influence of sample gas flow for extractive CEMS 0-15mg/m <sup>3</sup>		-0.96				<2.0%
Influence of voltage variations at zero (196V to 253V) 0-15mg/m <sup>3</sup>	-0.06					<2.0%
Influence of voltage variations at span (196V to 253V) 0-15mg/m <sup>3</sup>	0.13					<2.0%
Cross-sensitivity at zero with interferents: O <sub>2</sub> , H <sub>2</sub> O, CO, CO <sub>2</sub> , N <sub>2</sub> O, NO, NO <sub>2</sub> , NH <sub>3</sub> , SO <sub>2</sub> , HCl 0-15mg/m <sup>3</sup>				3.8		<4.0%
Cross-sensitivity at reference with interferents: O <sub>2</sub> , H <sub>2</sub> O, CO, CO <sub>2</sub> , N <sub>2</sub> O, NO, NO <sub>2</sub> , NH <sub>3</sub> , SO <sub>2</sub> , HCl 0-15mg/m <sup>3</sup>				3.9		<4.0%
Effect of oxygen for TOC CEMS			1.98			<2.0%
Response factors for TOC CEMS:  Methane Aliphatic hydrocarbons Aromatic hydrocarbons Dichloromethane Aliphatic alcohols Ester and ketones Organic acids					1.05 to 1.08 0.90 to 1.10 0.85 to 1.06 1.01 to 1.07 0.7 to 0.8 0.8 to 0.8 0.6 to 0.6	0.9 to 1.2 0.9 to 1.1 0.8 to 1.1 0.75 to 1.15 0.70 to 1.0 0.7 to 1.0 0.5 to 1.0
Measurement uncertainty 0-15mg/m <sup>3</sup>					Guidance - at least 25% below max permissible uncertainty 9.0	<22.5% (30%)

Certificate number : Sira MC200361/00  
 This certificate issued : September 2020

*This certificate may only be reproduced in its entirety and without change  
 To authenticate the validity of this certificate please visit [www.csagroupuk.org/mcerts](http://www.csagroupuk.org/mcerts)*

Test	Results expressed as % of the certification range				Other results	MCERTS specification
	<0.5	<1	<2	<5		
Calibration function (field) 0-15mg/m <sup>3</sup>					0.999	>0.90
Response time (field) 0-15mg/m <sup>3</sup>					23s	<200s
Lack of fit (field) 0-15mg/m <sup>3</sup>		-0.86				<2.0%
Maintenance interval					4 weeks	>8 days
Zero and span drift requirement	<p>All deviations at zero point were &lt; +/-3% from the certification range during the entire period of the field test. All deviations at the span point were &lt; +/-3% from the certification range during the entire period of the field test. These results demonstrated there were no deviations &gt;3% from the calibration range during the 102 days. The maintenance interval was set based on the drift behaviour during the field test suitability test. A maintenance interval of 4 weeks was therefore defined for checking alignment.</p> <p>The CEMS should be aligned at an interval of 24 hours using the automatic alignment function at zero and span point. Zero gas can be provided by connecting synthetic air or the prepared internal zero gas preparation.</p>					<p>Clause 6.13 &amp; 10.13</p> <p>Manufacturer shall provide a description of the technique to determine and compensate for zero and span drift.</p>
Change in zero point over maintenance interval 0-15mg/m <sup>3</sup>	-0.4					<3.0%
Change in reference point over maintenance interval 0-15mg/m <sup>3</sup>			1.9			<3.0%
Availability 0-15mg/m <sup>3</sup>					98.5	>95%
Reproducibility 0-15mg/m <sup>3</sup>		0.8				<3.3%

Certificate number : Sira MC200361/00  
 This certificate issued : September 2020

*This certificate may only be reproduced in its entirety and without change  
 To authenticate the validity of this certificate please visit [www.csagroupuk.org/mcerts](http://www.csagroupuk.org/mcerts)*

## Description

The TESTA **iFiD Rack** flame-ionization-detector uses a heated detector which measures continuously the total organic carbon concentration in the sample gas. For this purpose organic substances are ionized in a hydrogen flame. A current is produced by these ions, which is proportional to the organic carbon content. The analyser is heated up to a maximum of 300°C and can be directly connected to a heated sample-line or sample prefilter.

The TESTA **iFiD Rack** consists of:

- Testa iFiD Rack
- Testa Operation and Datalogging Software 2.0
- Testa iFiD Line 10m (Usually 1m to 30m long) with teflon hose
- Testa iFiD Filter

## 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'.
2. The design of the product certified is held and maintained by TUV Rheinland for certificate No. Sira MC200361/00
3. If a certified product is found not to comply, Sira 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 Sira certificates'.
5. This document remains the property of Sira and shall be returned if requested by Sira.

Certificate number : Sira MC200361/00  
This certificate issued : September 2020

*This certificate may only be reproduced in its entirety and without change  
To authenticate the validity of this certificate please visit [www.csagroupuk.org/mcerts](http://www.csagroupuk.org/mcerts)*