

PRODUCT CONFORMITY CERTIFICATE

This is to certify that the

iFiD Mobile

manufactured by:

Testa GmbH

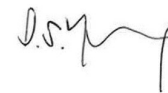
Kathi-Kobus-Str. 15
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Germany

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

Environment Agency Guidance
“MCERTS for stack emissions monitoring equipment at industrial installations”
- Transportable Continuous Emissions Monitoring Systems(T-CEMS)
Published 20 October 2020
EN 15267-1, EN15267-2, EN 15267-4
& QAL 1 as defined in EN 14181: 2014

	Certification range:	Supplementary ranges:
Total organic carbon(TOC)	0 - 15mg/m ³	0 - 30mg/m ³ 0 - 150mg/m ³ 0 - 500 mg/m ³

Project number: 80057472
Certificate number: Sira MC200364/00
Initial certification: 20 November 2020
This certificate issued: 20 November 2020
Renewal date: 19 November 2025



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MCERTS is operated on behalf of the Environment Agency by

Sira Certification Service



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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

On the basis of the assessment and the ranges required for compliance with EU Directives, this instrument is considered suitable for use with standard reference method and for verifying and calibrating installed CEMS, according to the requirements of EN 14181.

The field test was conducted at five different plants; Biomass thermal power station(Field Test 1), Waste incineration plant(Field Test 2), Solvent adsorbent plant(Field Test 3), Cement plant(Field Test 4) and an Asphalt mixing plant(Field Test 5).

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 Süd Industrie Service GmbH Munich, Report No. 3299856, dated 09.03.2020
TÜV Süd Industrie Service GmbH Munich, Report No. 3003564, dated 13.07.2020

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Product certified

The Testa iFiD Mobile measuring system consists of the following parts:

- iFiD Mobile - the analyser
- 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 Mobile with Testa Operation and datalogging software

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 – 18-12-011 onwards.

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Certified performance

The instrument was evaluated for use under the following conditions:

Ambient temperature range: +5°C to +40°C
 Instrument IP rating: IP42

Note: For outdoor installations the analyser needs to be mounted into an IP65 environment. The area of use is restricted to locations that are protected against precipitation (roof) but where precipitation can reach the system e.g. due to wind.

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		
Laboratory Testing - Response time						
TOC (0 - 15mg/m ³)					18s	<200s
TOC (0 - 30mg/m ³)					17s	<200s
TOC (0 - 150mg/m ³)					15s	<200s
TOC (0 - 500mg/m ³)					14s	<200s
Repeatability standard deviation at zero point						
TOC (0 - 15mg/m ³)	0.05					<2.0%
Repeatability standard deviation at span point						
TOC (0 - 15mg/m ³)	0.08					<2.0%
Lack of fit						
TOC (0 - 15mg/m ³)	-0.46					<2.0%
TOC (0 - 30mg/m ³)	-0.46					<2.0%
TOC (0 - 150mg/m ³)	0.20					<2.0%
TOC (0 - 500mg/m ³)	0.32					<2.0%
Influence of ambient temperature zero point (+5°C to +40°C)						
TOC (0 - 15mg/m ³)				-2.4		<5.0%
Influence of ambient temperature span point (+5°C to +40°C)						
TOC (0 - 15mg/m ³)				-2.7		<5.0%

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Test	Results expressed as % of the certification range				Other results	MCERTS specification
	<0.5	<1	<2	<5		
Short-term zero drift TOC (0 - 15mg/m ³)	-0.27					<2.0%
Short-term span drift TOC (0 - 15mg/m ³)	-0.47					<2.0%
Influence of sample gas flow for extractive CEMS TOC (0 - 15mg/m ³)	-0.42					<2.0%
Influence of voltage variations (196V to 253V) TOC (0 - 15mg/m ³)	-0.46					<2.0%
Influence of vibration (10 to 60Hz (±0.3mm), 60 to 150Hz at 19.6m/s ²) TOC (0 - 15mg/m ³)	-0.67					<2.0%
Cross-sensitivity at zero with interferents: O ₂ , H ₂ O, CO, CO ₂ , N ₂ O, NO, NO ₂ , NH ₃ , SO ₂ , HCl, TOC (0 - 15mg/m ³)				3.8		<4.0%
Cross-sensitivity at span with interferents: O ₂ , H ₂ O, CO, CO ₂ , N ₂ O, NO, NO ₂ , NH ₃ , SO ₂ , HCl, TOC (0 - 15mg/m ³)				3.9		<4.0%

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Test	Results expressed as % of the certification range				Other results	MCERTS specification
	<0.5	<1	<2	<5		
Effect of oxygen for TOC CEMS			1.98			<2.0%
Response factors for TOC CEMS:						
Methane					1.05 to 1.08	0.9 to 1.2
Aliphatic hydrocarbons					0.90 to 1.10	0.9 to 1.1
Aromatic hydrocarbons					0.85 to 1.06	0.8 to 1.1
Dichloromethane					1.01 to 1.07	0.75 to 1.15
Aliphatic alcohols					0.7 to 0.8	0.70 to 1.0
Ester and ketones					0.8 to 0.8	0.7 to 1.0
Organic acids					0.6 to 0.6	0.5 to 1.0
Field Testing - Calibration function (field) – equivalence with SRM						
Field Test 1					0.9994	>0.90
Field test 2					0.9986	>0.90
Field test 3					0.9926	>0.90
Field test 4					0.9955	>0.90
Field test 5					0.9836	>0.90
Response time (field)						
Field Test 1					11s	<200s
Field Test 2					10s	<200s
Field Test 3					38s	<200s
Field Test 4					12s	<200s
Field Test 5					13s	<200s

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Test	Results expressed as % of the certification range				Other results	MCERTS specification
	<0.5	<1	<2	<5		
Short term zero drift (field)						
Field Test 1		-0.5				<5.0%
Field Test 2	0.1					<5.0%
Field Test 3			-1.2			<5.0%
Field Test 4	-0.4					<5.0%
Field Test 5		0.7				<5.0%
Short term span drift (field)						
Field Test 1			-1.8			<5.0%
Field Test 2			1.6			<5.0%
Field Test 3			-1.7			<5.0%
Field Test 4			-1.0			<5.0%
Field Test 5			1.4			<5.0%
Reproducibility (field)		0.86				<3.3%
Field and Laboratory - Measurement uncertainty					Guidance - at least 25% below max permissible uncertainty	
0 - 15mg/m ³ (10mg/m ³ limit value)					14.1%	<22.5% (30%)

Note 1: Zero gas can be provided by connecting synthetic air or the prepared internal zero gas preparation.

Note 2: An external temperature regulator should be used from a heated pipe length of more than 10m.

Note 3: Monitoring and maintenance

- visual check of the entire measuring system including sampling system
- check of supply with combustion air, zero and test gas lines
- check of electric heating for pre-filter and heated sample gas line
- check of displayed status
- check of FID exhaust duct
- alignment of the T-CEMS by directly applying zero/test gas before measurement
- test of impermeability and cleanliness of the sample system by applying zero/test gas at the sampling tube
- test of alignment by applying zero/test gas after measurement

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Description

The TESTA **iFiD Mobile** 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 Mobile** consists of:

- Testa iFiD Mobile
- Testa Operation and Datalogging Software 2.1
- 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 TÜV SÜD Industrie Service GmbH for certificate No. Sira MC200364/00.
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.

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