

PRODUCT CONFORMITY CERTIFICATE

This is to certify that the

Emission Continuous Sampling (DECS) Isokinetic Dioxin Sampling System

Manufactured by:

CDL Tecora

ZA de la Prairie Bat 6
91140 Villebon sur Yvette
France

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

**MCERTS Performance standards and test procedures for automatic isokinetic samplers,
EA, version 3 dated September 2016 & EN 15267-1, EN15267-2 (QAL 1)**

Certification ranges:

Isokinetic sampling velocity 2 to 35 m/s

Project No.: 80179418
Certificate No: CSA MC 180344/03
Initial Certification: 25 September 2018
This Certificate issued: 26 September 2023
Renewal Date: 24 September 2028



Andrew Young
Environmental Team Manager

MCERTS is operated on behalf of the Environment Agency by

CSA Group Testing UK Ltd

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



0011

*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*

Certificate Contents

| | |
|--------------------------------|---|
| Approved Site Application..... | 2 |
| Basis of Certification | 2 |
| Product Certified..... | 2 |
| Certified Performance | 3 |
| Description..... | 4 |
| General Notes | 5 |

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

The automatic isokinetic sampler used in the DECS measuring system complies with the isokinetic sampling requirements specified in CEN TS 1948-5. It is applicable on any process where the stack conditions are within the performance of the certification range of the product.

Basis of Certification

This certification is based on the following test report(s) and on CSA Group's assessment and ongoing surveillance of the product and the manufacturing process:

| | |
|------|---|
| CESI | Report Number: A6032630, dated 11/12/06 |
| CESI | Report Number: 06002702, dated 22/05/06 |
| CESI | Report Number: 06007279, dated December 2006 |
| TÜV | Report Number: 936/21213377/A, Köln, 2011-01-25 |

Product Certified

The DECS measuring system consists of the following parts:

- Heated probe mounted in the stack (with a Pitot tube to measure the velocity of the flue gas)
- Sampling unit installed on a platform on the stack
- Control unit that is installed in control room

DECS measuring systems supplied by CDL Tecora direct to the customer will have a serial number:
CU 0.5.001 onwards for control unit (05=my, 001 = sequential number)
SU 05.001 onwards for sampling unit (05 = my, 001 = sequential number)

This certificate applies to all instruments fitted with software version 1.0.2 onwards (serial number 001 onwards).

Certificate No: CSA MC 180344/03
This certificate issued: 26 September 2023

*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*

Certified Performance

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

| Test | Results expressed as % of measured value | | | | Other results | MCERTS specification |
|--|--|-----|------|-----|---------------|----------------------|
| | <0.5 | <1 | <2 | <5 | | |
| Accuracy of isokinetic sampling rate response to changes in flue gas velocity | | | | 4.6 | | ±5% |
| Accuracy of determination of volume of gas sampled | | | 1.44 | | | ±2% |
| Linearity of isokinetic sampling rate | | | 1.5 | | | ±5% |
| Response time T ₉₀ (seconds) | | | | | 75 s | <100 s |
| Flow repeatability under laboratory conditions | | | | 4.5 | | ±5% |
| Minimum operational velocity | | | | | 1.97 m/s | 2 m/s |
| Short term drift | | | 1.7 | | | ±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 | | 1.0 | | | Note 1 | ±5% |
| Flow reproducibility under field conditions calculated from ten independent measurement results at one fixed location within the duct | 0.5 | | | | | ±5% |
| Availability over three months continuous use | | | | | 100% | >95% |

Note 1: The DECS system was assessed on the basis of three-month field trial mounted on a waste incinerator.

The instrument was tested under the following conditions:

- Approximately 8 tonne/h
- Abatement: denox with NH₃ + sleeve filter with injection of lime and carbon (dry system)
- Combustibles: RSU (Urban Waste)
- Stack Temperature: 150°C
- Stack volumetric flow rate: 300 kNm³/h
- Stack gas velocity: 12-15m/s
- Stack gas humidity: 11-12%vol
- Dust Emission level: under 5mg/m³

Certificate No: CSA MC 180344/03
This certificate issued: 26 September 2023

*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*

Description

The Dioxin Emission Continuous Sampler (DECS) is an emission sampling system which is based on the automatic isokinetically controlled sampling of the flue gas. The automatic isokinetic sampling system can be used for long term measurement of dioxins, furans, other POP's and other chemicals trapped in dust phase.

For measurement of dioxins the system uses the filter condenser method with adsorbing trap on the wet gas in accordance with CEN TS 1948-5.

The system is fully automated and can sample over a period of up to 6 weeks (and more).

The system consists of two main units:

- Sampling unit, with
 - heated probe,
 - Pitot tube to measure the stack gas velocity, and
 - Sampling trap (filter + adsorbing cartridge)

mounted on the stack at sampling point platform.

- Control unit with
 - Gas treatment (dryer)
 - Sampled volume and flow measurement
 - Pump
 - Control system (PLC + user interface)

that is installed at variable distance according to the plant accessibility (generally in clean room)

The two units are connected via a sampling line, power and data cables. Each control unit can manage up to 4 sampling units in sequential sampling mode.

The manufacturer states the temperature range for the equipment is as follows:

- Sampling unit located outside on stack platform: -10°C to +50°C (can be expanded to -20°C to +55°C with antifreeze/cooling option)
- In stack probe: up to 400°C
- Control unit: 0 to 40°C (can be expanded to -20°C to 55°C with antifreeze/air conditioner option)

The sampling unit extracts a sample from the flue gas stream under isokinetic conditions. Dioxins and furans are collected on a heated dust filter (thimble made in quartz fibre with a minimum filtration efficiency > 99,5%) and adsorbed on resin in the cartridge.

The automatic isokinetic sampler used in the DECS measuring system complies with the isokinetic sampling requirements of CEN TS 1948-5.

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 defined in the CSA Group design schedule V02 for certificate No. CSA MC180344/03.
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.

Certificate No: CSA MC 180344/03
This certificate issued: 26 September 2023

*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*