# System400CS



Continuous Emissions Monitoring • Cross-Stack



### System 400 Cross-Stack

System400CS is based on Opsis UV/FTIR DOAS system giving fast response and best possible performance for all gases.

The high resolution FTIR system is free from interference from all gases including water.

The UV measurements of NO, NO<sub>2</sub>, SO<sub>2</sub> and Hg gives outstanding performance.

The System400CS is based on a non-contact method, using an optical measurement path that operates across the duct.

One analyser cabinet can operate several measurement paths using an optical multiplexer.

A single System400CS will measure all relevant gases for CEM applications such as NO, NO<sub>2</sub>, SO<sub>2</sub>, NH<sub>3</sub>, CO, CO<sub>2</sub>, HCl, HF, N<sub>2</sub>O, CH<sub>4</sub>, H<sub>2</sub>O, O<sub>2</sub> and Hg.

The in situ method measures the gas component inside the stack without use of a sampling system. The in situ system is analysing several cubic metres of stack gas every minute, thus giving a fast and representative result.

The in situ system can be installed in all applications including high dust, high temperature and sticky gas conditions.

A built-in web interface and web logger allows the user to control the system via internet and to manage the measurement without loss of data.

#### Return of Investment

All plants that produce energy have to measure the emissions to the air. A single Opsis System400CS will measure all relevant gases, thus reducing maintanence and overall costs.

Increased cost reduction is possible if the System400 CS measures on more than one duct. Long unattended operation and long intervals between calibration is guaranteed by high quality end well proven technology.

#### **Approvals**

The Opsis system is approved according to EN 15267 by TÜV and MCERTS. The system meets and exceeds requirements from international organizations such as U.S. EPA and Chinese EPA.



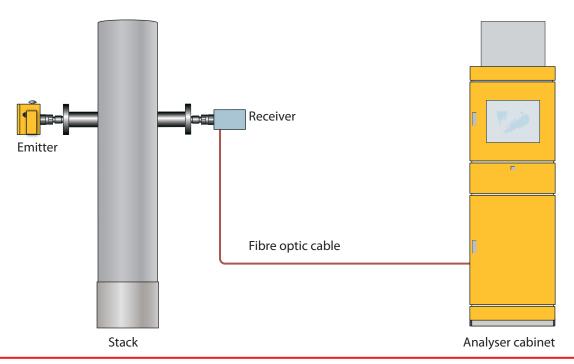
A cross-stack installation, showing the emitter and receiver

#### **Opsis Product Portfolio**

The product range includes CEM systems based on UV/FTIR DOAS applied In Situ, bypass or heated extractive. It also includes process analysers for raw gas measurements, TDL analysers for specific applications, compact analysers based on dilution extractive and oxygen analysers. Data management includes web loggers and reporting software.

#### Data Management Features

- All data stored in analysers.
- Automatic backup to the web logger.
- Automatic transfer of data to FTP site.
- Access to system and remote control via the Internet.
- Monitoring of all system and control parameters.
- Automatic alarms.
- Reporting software as an option.



A System400CS setup

#### System400CS

#### Standard

- Cabinet including air-condition
- Optical emitter and receiver
- Optical fibre (10 m)
- Modbus connectivity
- Web interface

#### **Options**

- Additional measurement path for simultaneous measurements of two ducts
- Automatic calibration
- Analog/digital inputs and outputs
- FID for measurement of TOC
- Reporting software
- Measurement of stack temperature and pressure

#### **Technical Specifications**

Dimension (W  $\times$  D  $\times$  L)  $600 \times 800 \times 2300$  mm

Weight (approx.) 250 kg Power consumption 1.5 kW

Parameter	Lowest measurement range according to EN15267
NO	0–150 mg/m <sup>3</sup>
NO <sub>2</sub>	0–20 mg/m <sup>3</sup>
5O <sub>2</sub>	0-80 mg/m <sup>3</sup>
NH₃	0–10 mg/m <sup>3</sup>
Hg <sup>0</sup>	$0-45 \mu g/m^3$
02	0-75 mg/m <sup>3</sup>
CO <sub>2</sub>	0-20% Vol.
H₂O	0-30% Vol.
CH₄	0-15 mg/m <sup>3</sup>
N <sub>2</sub> O	0-50 mg/m <sup>3</sup>
HCl	0–15 mg/m <sup>3</sup>
HF	0-5 mg/m <sup>3</sup>
$O_2$	0–25% Vol.

Please contact your Opsis supplier to discuss your particular system requirements, including the compounds you wish to monitor. Separate product and other industrial application sheets are available. Specifications subject to change without notice

## Why System400CS?

Outstanding performance using UV/FTIR DOAS

Cross-stack, non-contact method

Measures on two ducts (option)

Low energy consumption

Built-in web interface

EN15267, TÜV and MCERTS certified

Thousands of systems installed worldwide

Serviced by highly skilled service network



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