



DX100

for Long-term Sampling of Dioxins, Furans, and CO₂

OPSIS offers a system for long-term sampling of dioxins, furans, and CO₂. The system is based on a well-known adsorption method.

The comprehensive based measuring range for dioxins/furans concentrations range between 0.0001 and 10 ng/m³.

The system can be used in a range of applications, such as waste incinerators, power plants, cement industries, and pulp and paper industries.

The system is very suitable for demonstration of compliance with the European Union Best Available Techniques Conclusions for Waste Incineration (WI-BATC) requirements on emissions of polychlorinated dibenzo-p-dioxins and -furans (PCDD/F), and dioxin-like PCBs.

Long-term Sampling by OPSIS

- Complies with the requirements under the European EN 1948 standard for determination of the mass concentration of PCDDs/PCDFs and dioxin-like PCBs
- Optional sampling of CO₂ to determine the fossil fuel ratio
- Air cooled sampling system
- Air driven sampling pump
- Existing sensors for flow, temperature, and gas composition are used
- Reliable system based on proven technology

Technical Specification

Dimensions (L x W x H)	
Sorbent container	420 × 350 × 800 mm
Gas cooler	400 × 410 × 400 mm
Control cabinet	600 × 800 × 1900 mm
Air-condition unit	400 × 600 × 450 mm
Weight	
Sorbent container	26 kg incl. probe
Gas cooler	18 kg
Control cabinet	191 kg (240 kg with air con)
Power supply	
Sorbent container	230 V _{AC} , 400 W
Gas cooler	230 V _{AC} , 400 W
Control cabinet	230 V _{AC} , 1500 W
Measuring range (dioxins & furan)	0.0001-10 ng I-TEQ/m ³ (WHO-TEQ/m ³)
Sampling interval	from 6 hours up to 8 weeks
Flue gas temperature	up to 150 °C
Max. dust concentration in the flue gas	50 mg/m ³
Flue gas velocity	from 2 up to 30 m/s
Operating temperature (control cabinet)	+5 to +40 °C (optional air conditioner for temperatures over +40 °C)
Velocity measurement accuracy	±1 % of measuring range
Degree of protection	IP 55

Features

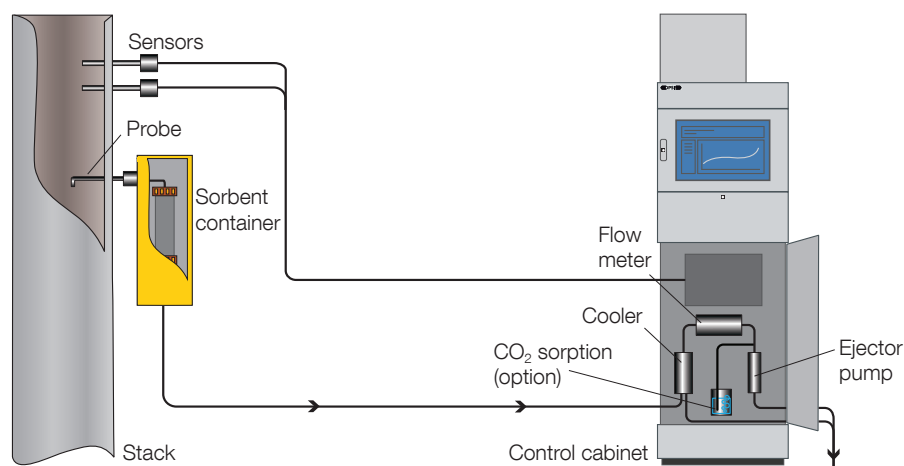
- Sampling of dioxins and furans
- Sampling of CO₂ to determine the ratio between fossil and non-fossil fuel
- Fully automatic isokinetic sampling from 6 hours up to 8 weeks
- Operates according to EN 1948 requirements
- Complies with requirements in WI-BATC for emissions monitoring of PCDD/F and dioxin-like PCBs
- 15267 Certified

DX100 - Standard

AC180-DX Control cabinet
incl. air-condition unit
SP100 Sample cabinet incl. probe,
sorbent container, and flange
Gas cooler
WT256 Web transfer and router
DIN-rail including:
3 × TM001 Temperature modules
4 × IM001 Input modules
2 × OM001 Output modules
1 × DM016 Digital module
1 × DM002 Digital module

Examples of Options

Additional sorbent container
CO₂ sampling
Heated sample line between SP100 and AC180-DX



A schematic of an OPSIS long-term sampling system for dioxins/furans/CO₂.

P85
2023 06

Please contact your OPSIS representative to discuss your particular system requirements, including the compounds you wish to monitor. Specifications subject to change without notice.

OPSIS AB

Box 244, SE-244 02 Furulund, Sweden

+46 46 72 25 00 • info@opsis.se • www.opsis.se