

# Continuous sampler for Dioxins in stack

## DECS Dioxin Emission Continuous Sampling



### Main Characteristics

Decs is the solution offered by CDL-Tecora for the continuous emission sampling of Dioxins, Furans (PCDD/PCDF), PCB and other POPs. According to En1948 and USEPA M23 standard, DECS adopts the filter/condenser method with adsorbing trap on wet gas.

The system is permanently installed on stack for continuous sampling from 6 hours up to 6 weeks.

- Micro pollutants sampler (PCDD/Fs, PCB, PAH) with Filter/Condenser method and adsorbing trap on wet gas in accordance with EN 1948 and USEPA M23 methods;
- Up to 4 Sampling Units can be managed by a single Control Unit
- Distance between Sampling and Control Units up to 100mt;
- Fully automated sampling: no operator presence required;
- Automatic preparation and cleaning;
- Easy upgrade using the heated probe with outstack box for solid phase and side sampling for gas phase such as for Heavy Metals, Hg and HCL.

DECS is composed of 2 units:

- **Sampling Unit**
- **Control Unit**

### Sampling Unit

The Sampling Unit is the part to be mounted on the stack's sampling port and its aim is the collection of the sample in its 2 phases (particulate and gas) without modifying its composition.

The Sampling Unit can be mounted outdoor and it can get started at any time with no need of long time preparation.

All the material to which the flow stream comes in contact are glass and titanium.

The Sampling Unit is composed by:

- Heated probe with interchangeable nozzle
- Heated box for filter holder
- Condensing system
- Adsorbing trap for XAD-2
- Pitot tube



Display



Control unit

Technical specifications may change without previous warning

The sampling unit has been designed according to the following requests:

- Ready to work at any time
- No need to put in or out the stack between each sampling
- Particulate collecting filter enclosed in an heated box
- Easy substitution of filter holder cartridge, adsorbing trap and collecting device
- Designed for outdoor mounting

Other informations :

- Applicable with DN 150 (on request DN 100) sampling port
- Dimensions: 540x804x360 mm (WxHxD)
- Weight: 37 Kg

## Control Unit

The Control Unit is the interface between the sampling unit and the operator who leads all the system functions.

It is generally placed in a safe area easily reachable.

Realized in an industrial cabinet, it is connected to the sampling unit through electrical and pneumatic connections.

Built-in measurement and control devices, useful to guarantee an automatic measurement execution according to official methods.

The available interfaces are a LCD 10"screen, a keyboard, a Modbus connection.

The high automation of the system allows to begin the measurement through the START option (Plant start/stop).

At the end of the measurement a summary report containing all necessary elements to calculate the concentrations and the subjective valuation of the measurement quality is produced. It is also available a continuous registration of the main parameters and abnormal situations.

The control unit is designed and built to satisfy the following specifications:

- Full automatic isokinetic control
- Automatic control of temperature and sample conditioning
- Automatic Leak Test
- Accurate sampled volume measurement



*Sampling unit installation*



*Sampling support carrying case*

- Graphic interface managed by a self-driven software
- Data logger
- Input signal concerning the process operation status
- Fault system status output signal
- Power supply: 220 V AC 50 Hz 16 A
- Air supply: 6 bar, oil free
- Dimensions: 600x1800x600 mm (WxHxD)
- Weight: <130 Kg

## Available accessories:

- Forced cooling system
- Filter device for low or high concentrations
- Spare XAD2 cartridge
- Stack velocity measurement