



Fixed system for dioxin sampling on stack emissions

DECS

Dioxin Emission Continuous Sampling



Main Characteristics

- Micropollutants 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 10mt;
- Fully automated sampling: no operator presence required;
- Automatic preparation and cleaning;
- Full remote control via Internet or Intranet;
- Easy upgrade using the heated probe without stack box for solid phase and side sampling for gas phase such as for Heavy Metals, Hg and HCL.

Decs is the solution offered by TCR Tecora for the continuous emission sampling of Dioxins, Furans (PCDD/PCDF), PCB and other POP's. According to EN1948 and USEPA M23, DECS adopts the filter condenser method with adsorbing trap on wet gas. The system is permanently installed on stack for continuous sampling from 8 hours up to 30 days.

DECS is composed by 2 units:

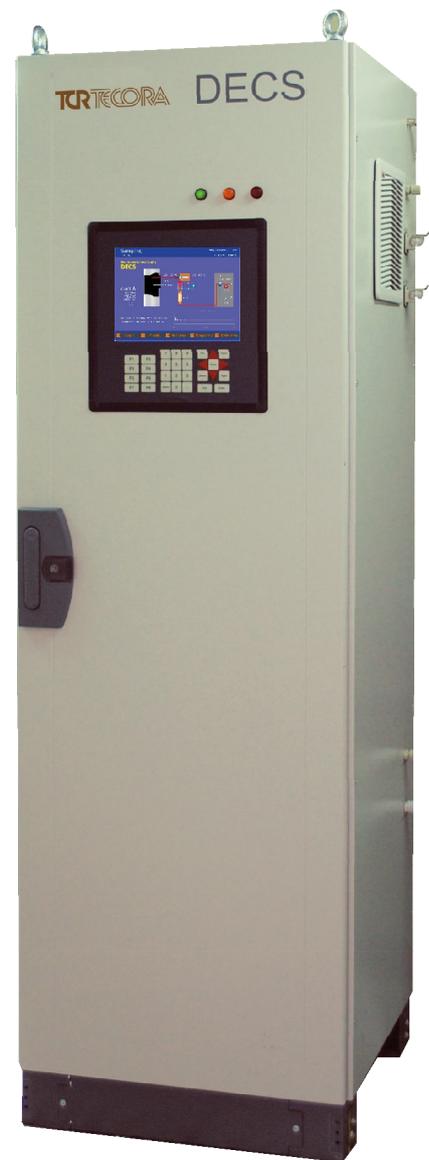
- **Sampling Unit**
- **Control Unit**

Sampling Unit

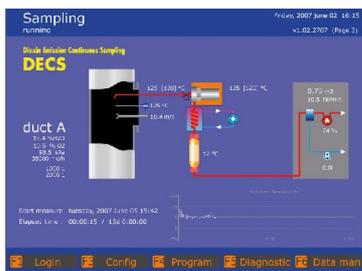
The Sampling Unit is the part to be mounted on the stack's sampling point and its aim is the collection of the sample in its 2 phases (particulate and gas), without modifying its composition. The Sampling Unit can be mounted outdoor and it can get started at any time with no need of long preparation time. 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 filterholder
- Condensing system
- Adsorbing trap for XAD-2
- Pitot tube



Control Unit



Display

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Product Data Emission Line 1.200.01 Ed. 5 05/11 - Technical specifications may change without previous warning



AZIENDA CON SISTEMA DI GESTIONE PER LA QUALITÀ CERTIFICATO DA DNV = UNI EN ISO 9001:2008 =

Emission Line 1.200.02

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 for each sampling
- Particulate collecting filter enclosed in an heated box
- Easy substitution of filterholder cartridge, adsorbing trap and collecting device
- Made of Glass or Titanium
- Designed for outdoor mounting
- Applicable with DN 150 (on request DN 100) sampling port
- Dimensions: 600x700x350 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 printer and a Internet/Ethernet connection.

The high automation of the system allows to begin the measurement through the START option, which can be activated via Internet or Intranet as well.

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 anomalous 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
- Graphic interface managed by a self-driven software
- Data logger
- Internet/Ethernet connection
- Four analog inputs
- 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: 140 Kg

Available accessories:

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



Sampling Unit installation



Filterholder carrying case