SEC™ BOX

Stack gas sampling system

PROCESS & EMISSIONS MONITORING SYSTEMS

The dry extractive SEC™ system dries the gas sample at the sampling point, eliminating the necessity of an expensive heated sampling line.

It uses an exclusive high performance permeation technique, designed to meet almost all gas sample conditions. Ideal for highly soluble and corrosive gases. To be used with unheated analyzers such as MIR 9000, MIR 9000CLD, MIR 9000ASD.

CD

SPECIFIC FEATURES:

- Sampling probe equipped with double stage particulate filtration
- Large selection of probes available (depending on process conditions: stack diameter, gas temperature, water content, particulate concentration)
- Permeation-based drying system avoids loss of highly condensible gases (e.g. HCl, SO_2,NO_2 and HF). Residual due point < -20°C that allows sample transfer by non heated sampling line
- Direct Span/Zero gas injection to the probe for a complete system calibration
- Clean & dry sample transferred via unheated line (up to 100m distance) at ambient air temperature
- Automatic & periodic back-purge functionality for longer maintenance intervals (Remote and synchronized by ENVEA analyzers)
- Optional built-in temperature and velocity sensors or STACKFLOW 200 flow meter on the same flange

SPECIAL VERSION FOR PERIODIC CONTROLS:

- Primary filter
- Stainless steel sampling tube (unheated)
- 2.5 m heated flexible line

MAIN APPLICATIONS:

- Sludge Incineration
- Gas turbines
- Power Plants
- Boilers
- Paper Mills
- Cement
- Glass, Petrochemical & Chemical Industry
- Waste Incineration (Municipal Energy from Waste or Industrial)

COMPLIANCE WITH:

EU Regulation IED (WID / LCPD / MCPD directives) and US EPA (40 CFR 60 & 75)

TÜV CERTIFIED **EN 15267-3**

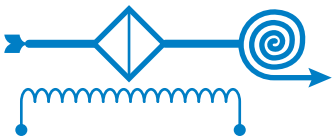
U.S. EPA APPROVED **40 CFR 60 ET 75**

MCERTs CERTIFIED **EN 15267-3**

Stack gas sampling system **SEC™**

PRINCIPLE OF OPERATION:

The SEC sampling system uses the Cold Dry Extractive method (Dry Basis Analysis). CD



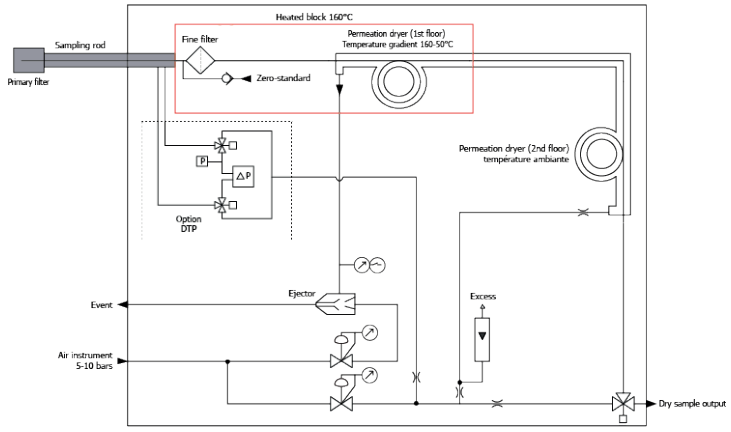
The gas sample is extracted through a double dust filtration and conditioned before transport, in order to have all moisture and condensible components removed prior to its analysis. With a due point below -20°C (<1000 ppm H_2O) the clean & dry sample is transferred to the analyzer via an unheated line.

Upon arrival to the analyzer, the sample is clean, dry, at ambient temperature & water interference-free.

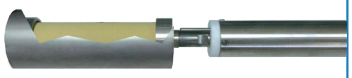
2 x built-in solenoid valves allows the back-flush of the sampling system as well as the span/zero gas injection at the sampling point (Programmable frequency / remote control by the analyzer)

The heated filtration block can be adjusted up to 190°C, to cover most of the applications.

The SEC box is the plug & play sampling solution ideal for unheated analyzers, allowing full remote functions.



SEC sampling system general layout

Type of probe	Model	Top of the probe
Wet processes T° max 140°C PTFE / Hastelloy	CA-PG-H-x	
Corrosive processes T° max 250°C Hastelloy	CA-PG-R-x	
High Temp. process T° max 550°C Stainless Steel	CA-PG-HT-x	

x = probe length
Available lengths: 0.5 / 0.7 / 1.0 / 1.5 m (others lenghts upon request)

TECHNICAL SPECIFICATIONS

Sample gas max. dew point	75°C (45% H_2O)
Primary filter (in the probe)	20 µm (depending on probe type)
Fine filter (in the box)	0.5 µm
Sample flow rate	20 to 40 l/h
Dimensions	400 x 600 x 200 mm (W x h x D)
Weight	15 kg (IP65 enclosure)
Power supply	230 V/50Hz or 110V/50-60Hz
Consumption	500 VA
Operating temperature	-10°C to + 40°C (up to 50°C with Vortex cooler option)
Flange	DN100/PN20 - 4"/150 lbs (others upon request)

MAIN OPTIONS:

- DTP: Pressure / Flow and Temperature measurement by embedded Pitot tube and T° sensor into the sampling system (Single flange requirement)
- NH_3 removal device (scrubber)
- Sliding flange for insertion optimization inside the stack/ duct
- Vortex cooler for high ambient temperatures
- Flexible probe extension (allow the installment of the box at a distance from the stack)

UTILITIES:

- Instrument air: 5 bar mini, 2 Nm^3/h, dew point < -40°c

envea KNOWLEDGE IN ACTION

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