



Stack gas sampling system

SEC™



The dry permeation technique :
Designed to meet almost all gas sample condition using exclusive dry sampling method: ideal for sampling of corrosive gases



SEC sampling system on stack



Permeation dryer

The **SEC™ BOX** offers an exclusive sampling system with no loss of condensable gases.

EXCLUSIVE FEATURES:

- Sampling probe equipped with double stage particulate filtration
- Suitable for sampling of highly soluble gases
- Permeation-based drying system (no condenser), avoiding the loss of highly soluble gases such as HCl, SO₂ and NO₂
- Direct span gas injection to the probe for a complete system calibration
- Automatic backflush for reduced maintenance
- Clean and dry sample transferred via unheated line at ambient air temperature up to 100 m distance
- Large selection of probes available depending on the process conditions (stack diameter, gas temperature, water content, particulates concentration)
- Optional built-in temperature and velocity sensors (no additional flange)
- Heated probe with a choice of materials and lengths to suit the application

MAIN APPLICATIONS:

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



Stack gas sampling system **SEC™**

TECHNICAL SPECIFICATIONS:

- Sample gas max. dew point: 75°C (45% H₂O)
- Primary filter: 20 Qm (depending on probe type)
- Fine filter: 0.5 Qm
- Probe temperature: programmable from 100°C up to 250°C
- Sample flow rate: 20l/h
- Dimensions: 400 x 600 x 200 mm (W x h x D)
- Weight: 15 kg (IP55 enclosure)
- Power supply: 230 V/50Hz or 110V/50-60Hz
- Consumption: 500 VA
- Operating temperature: -10°C to + 45°C (up to 50°C with Vortex cooler option)
- Flange: DN100/PN20 or 4"/150 lbs or others on request

UTILITIES:

- Instrument air: 5 bar mini, 2 Nm³/h

MAIN OPTIONS:

- DTP: pressure, temperature and flow measurement of the gas stream
- NH₃ removal device (catalyst)
- Sliding flange
- Vortex cooler for high ambient temperatures
- Probe shutter

SPECIAL VERSION FOR PERIODICS CONTROLS:

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

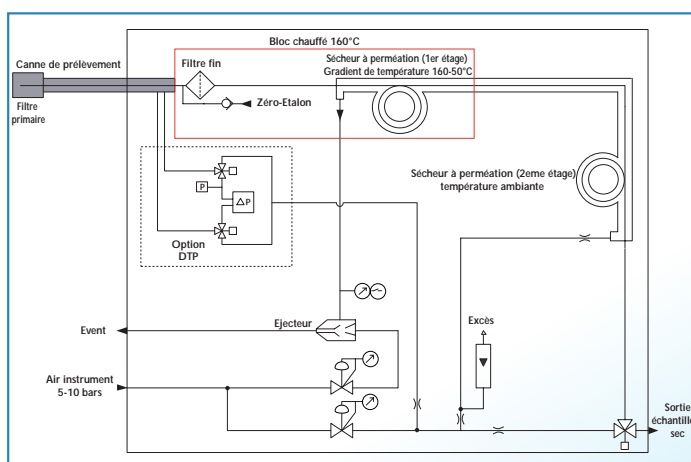


PRINCIPLE OF OPERATION:

The sample gas, sucked from the stack by means of an ejector, crosses a first primary particulate filter (20 µm), and is directed to the "SEC" box via a heated tube located inside of the sampling probe.

The sample gas then passes through a fine particulate filter (0.5 µm), and through a high performance double-stage permeation dryer. At the outlet of the SEC box, the clean and dried sample can be transported to the remote analyzer via an unheated sample line.

A solenoid valve allows the backflush of the sample line at regular frequency intervals.



SEC sampling system general layout

Type of probe	Model	Probe end
Wet process T° max 140°C PTFE	CA-PG-H-x	
Corrosive process T° max 250°C Hastelloy	CA-PG-R-x	
High Temp. T° max 550°C Stainless steel	CA-PG-HT-x	

x = probe length

Available lengths are 0.5, 0.7, 1.0, 1.5 m (others upon request)

Distributed by:



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