

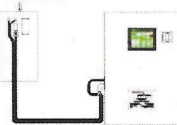
Genius5-Instruments

Sampling Systems
Source verification
Pollutant quantification
Emissions trading
to protect humans and nature

www.genius5-instruments.com

Yearly determination of
Biogen CO₂

ISO 13833



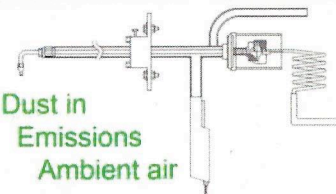
ratio of biogen/fossil
CO₂

24%

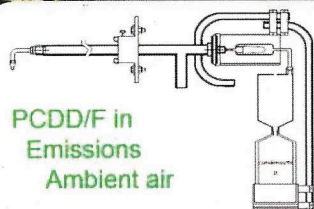
76%

■ % biogen
■ % fossil

Dust in
Emissions
Ambient air



PCDD/F in
Emissions
Ambient air



Windsector related cartridge switching

Use: Detection/Verification of polluting sources

- ✓ Dust, coarse dust, PM10, PM2,5, PM1
- ✓ metals
- ✓ Persistent organic pollutants, dioxins, ...
- ✓ Volatile organics
- ✓ Odor indicator components

Touchscreen controller

- ✓ Dependent on windspeed and direction
- ✓ Up to 4.3 m³/h

Sucking unit – medium volume flow typ

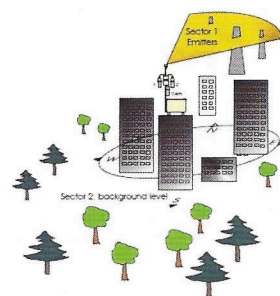
- ✓ Up to 4,3 m³/h, calibrated gasmeter

Sucking unit – low volume flow type

- ✓ 0,1 – 100 ml/min, mass flow controller

Aluminium Cartridge for medium flow

- ✓ PM10 separator, optional PM2,5, PM1
- ✓ 118 mm planar filter
- ✓ 200 ml chamber for solid adsorbents



Velocity proportional sampling system

Use: CO₂ - Emissions trading

Checking odor emissions

Sampling of mercury/mercury species

Genius 5® PmcTrace® for velocity prop. Sampling

- ✓ Biogen CO₂, mercury, odor
- ✓ Separate Extraction- and Sampling unit
- ✓ In stack emissions
- ✓ 1 - 150 ml/min, 2 hours – 1 month sampling



Isokinetic touchscreen controller Genius5

Use: Quantification of stack emissions

✓ Dust, dioxins, metals

Ambient air sampling function

✓ Particulate fractions, dioxins, metals

Genius 5® split version

- ✓ Box at stack: 6 kg weight
- ✓ Up to 40 m distance to sucking unit
- ✓ Separate control box and sucking unit
- ✓ In stack emissions as well in ambient air
- ✓ 0,6 - 3,6 m³/h, up to 48 h sampling time

Genius 5® compact versionn

- ✓ Touch screen controller in sucking unit
- ✓ In stack emissions as well in ambient air
- ✓ 0,5 - 2,3 m³/h, up to 48 h sampling time



Extracting Systems

A - Probe & Filterhousing combination with heater

Use: in combination with system B, B+C or D
for the isokinetic sampling of

- ✓ Dust with EN 13284
EPA method 5
- ✓ PCDD/F with EN 1948-1
EPA method 23
- ✓ Metals with EN 14385
EPA method 29

Design and features:

- ✓ Stainless steel
- ✓ Suitable for 8/6 mm and 10/7 mm Inner tube
Made of stainless steel, titanium or Duran glass
- ✓ External 350 W heater
- ✓ Low weight: 5 kg for l=1400 mm length

B - EN 13284 dust sampling system

Use: isokinetic sampling in 1,0 - 3,6 m³/h range
Typical sampling time 30 - 120 minutes

Design and features:

- ✓ Stainless steel filter for 47 mm planar filters
Optional filter material titanium
- ✓ Low weight Polycarbonat Condenser
- ✓ Optional metals sampling box (EN 14385)

C – Metals upgrade of part B

Use: Metals in 0,5 to 1,2 m³/h range

Design and features:

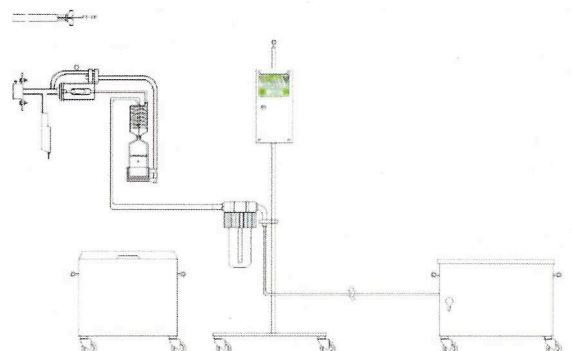
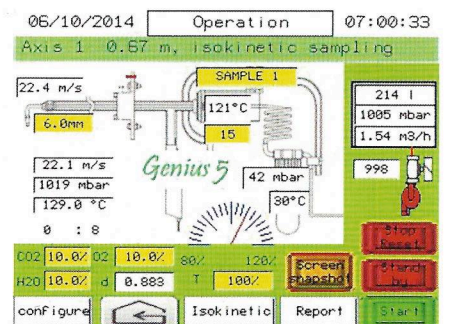
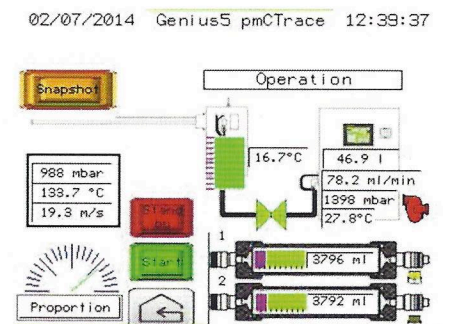
- ✓ Insulated box suitable for 6 impingers

D - EN 1948 part 1 sampling system

Use: Isokinetic sampling in 0,5 - 1,2 m³/h range
Typical sampling time 2 - 8 hours
Optional with drain bottle up to 48 hours

Design and features:

- ✓ Compact Duran® glass filter with
d=20mm/l=50 mm filter tube
- ✓ 1 liter condensing bottle – Duran® glass
- ✓ Adsorber integrated in the condenser
D=20mm/l=200 mm
- ✓ Insulation made of Neopren®
- ✓ L-Support holder with connector to Filterprobe
- ✓ Upgrade with Peltier cooling system



Contact

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