

Gas analyser GC866

Updated March 2012

# CHROMA DID-He

The continuous or discontinuous mode permanent gases monitor for **laboratory\*** or online

A highly automated system for routine measurement of permanent gases on the range: ppb or ppm



4 U rack for pneumatic part and gas analyzer



5U rack for computer/VISTACHROM and airmotec electronic:  
**\*Laboratory presentation soon with input sample in front panel**

**Process: H<sub>2</sub> /N<sub>2</sub> /O<sub>2</sub> /Ar /Kr /Xe**

**\*CO / CO<sub>2</sub> / CH<sub>4</sub>**

**Quality control in pure gas**

**Impurities in Hydrogen**

**Substance tracer**

**Gas input in tubing**

**NH<sub>3</sub> in ambient air**

**CO / \*CO<sub>2</sub> in ambient air**

**CO in \*C<sub>2</sub>H<sub>4</sub>**

**Impurities in CO<sub>2</sub>**



**\*Can be analysed by chroma CO ( FID methaniser )**

Chroma TCD is easy to use for ppm and % range (H<sub>2</sub>/He analysis also)

*Chromatotec is specialized in VOC, Sulfur and permanent gases analysis at trace and ultra trace levels ( ppm, ppb, ppt ; but also at % ).*

*Please visit our website for more details.*

**NH<sub>3</sub>**

**H<sub>2</sub>**

**CO**

**CH<sub>4</sub>**

**Ar**

**CO<sub>2</sub>**

**N<sub>2</sub>**

## Principle :

The **CHROMA DID** is an automatic industrial gas analyser. The sample comes through the sampling **loop**. Then the sample is injected into an analytical column for separation. The system can use packed column.

**Helium carrier gas purifier is delivered with connections to chroma DID and He cylinder**

The first column allows to separate composite peak (H<sub>2</sub>, O<sub>2</sub>, N<sub>2</sub>, CO), and the second column CH<sub>4</sub>, CO<sub>2</sub>.

If you need NH<sub>3</sub> analysis in air, this is an option

If you need O<sub>2</sub> / Ar analysis analysis, this is options

The temperature setting is **isothermal**. The automatic valve permits the sample's injection

Measuring principle of DID = **Discharge Ionisation Detector**. High voltage accelerates pure helium atoms (purity > 6.0). Ionised helium atoms are continuously produced. These helium ions are better described as photons. These photons ionize the gas molecules with an ionisation potential. The ion current is continuously collected at a polarised electrode and amplified similarly to the FID application process.

The Vistachrom software enables the user to visualize and store data on a supervisor. Furthermore it provides comfortable utilities to recalculate, calibrate and export data and to set-up measurement.

The airmoTREND software allows the calculation of retention time, area, and mass or concentration profiles.

**For calibration, we use automatic valve selection of Gas standard mixture delivered with C81022.**

**We can use the instrument in cyclic mode or in manual mode. In the two mode we can insert for next analysis method in memory (calibration, ZERO, samples from multi stream selector)**

## Options :

On-line results are transmitted via:

- MODBUS communication protocol : XXX001
- Modul 4 x Analog output 4-20 mA : XXX003.
- **Automatic validation**
- Multiple Stream selector (2 to 10)
- **NH<sub>3</sub> permeation tube and CALIB**
- **Modul for alarms : XXX005**
- **High purity pressure regulator for He cylinder**
- **High purity pressure regulator for standard mixture cylinder**

## Technical specifications products :

### **Permanent gas analysis: (He as carrier gas )**

H<sub>2</sub>, O<sub>2</sub>, N<sub>2</sub>, CO, CH<sub>4</sub>, CO<sub>2</sub>,

Options: NH<sub>3</sub>, Kr, Ar, Xe...

### **Detector**

Discharge Ionisation Detector (DID) Helium

### **Oven Temperature range:**

Ambient to 150°C

### **Detection limit: Special application**

< 10 ppb of CH<sub>4</sub>

ppb level for NH<sub>3</sub>, CO, H<sub>2</sub>, O<sub>2</sub>, N<sub>2</sub>, CO<sub>2</sub>,

### **Results:**

- Data storage
- 4-20 mA output (option)
- MODBUS communication Protocol (option).

### **Cycle time:**

10 minutes for NH<sub>3</sub> or CO

15 minutes for impurities in pure gas.

### **Connections: Tested & Delivered by Chromatotec**

### **Gas supply:**

Carrier gas : (6.0) Helium, 30ml/min

Discharge gas : (6.0) Helium, 30ml/min

### **Sample volume**

250µL, sample flow (20-30mL/min) or 500 or 1000 µl

### **Power supply:**

- main (230V / 115V 50 Hz/60Hz)

- battery 24V option

### **Electrical consumption:**

550 VA

### **Dimensions and weight :2 wooden boxes**

Rack : 19" (4U + 5U )

Height : 180 mm 4U and 220 mm for 5U

Width : 482 mm

Depth : 600 mm

Net weight : 17 Kg for 4U + 15 Kg for 5U +

## For ordering:

- chroma DID He (4U + 5U ) =C81022 + informations on application specifications

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