

# CHROMA<sup>UHP</sup>

Air monitoring and analysis of Methane and Non-Methane Total Hydrocarbons (**NMTHC**) by **flame ionisation detection**



Model: C24000

## Applications of the instrument include:

Pure gas

Total Hydrocarbons

Impurities in pure gas processing

Emissions monitoring

Filter integrity monitoring

*Chromatotec® is specialized in VOC, Sulfur and permanent gases analysis at trace and ultra trace levels (ppm, ppb, ppt). Please visit our website for more details.*

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VOC

NMTHC

CH<sub>4</sub>

C<sub>2</sub>H<sub>6</sub>

THC

## Monitoring and analysis of Methane and Non-Methane Total Hydrocarbons (NMTHC) by flame ionisation detection

### Principle:

The CHROMA<sup>UHP</sup> is an automated isothermal industrial gas chromatograph dedicated to the analysis of volatile organic compounds in air (indoor, outdoor, combustion), industrial hygiene, pure gas like N<sub>2</sub>/CO<sub>2</sub>/O<sub>2</sub>.

- As a fully automatic instrument, the CHROMA<sup>UHP</sup> allows **un-attended operation after commissioning 24/24**.
- The injection is made via a **loop** and **valve** installed in an **isothermal oven** at a standard 80°C.
- The separation between CH<sub>4</sub> and NMTHC is achieved using a **column with back flush**.

### Unlike other similar analysers, there is no interference from oxygen

To eliminate issues with flame fluctuation, a valve regulates hydrogen carrier gas.

The retention time drift is less than 0,3 %.

- The instrument has a flame ionization detector (FID) heated at 150°C with **auto ignition**.
- Valve for automatic calibration.

### VISTACHROM<sup>®</sup> software:

The software developed by Chromatotec<sup>®</sup> allows:

- Remote monitoring
- Full traceability through archiving of results and QC
- Set up and control of threshold alarms
- Export of data MODBUS / MGS1 / 4-20mA / 0-10V
- Sequence (air / calib / cylinder / zero / blank)

### Options:

- CALIB with permeation tube
- MODBUS / JBUS communication protocol
- 4-20 mA or 0-10 V analog output
- **Automatic validation**
- **Adaptation of a purified zero air generator (air without VOC)**
- 24 V power supply
- Pressurised housing **Exp** for area 1
- Multiple stream selector (2 to 6)
- Hydrogen and air generator
- Heated line for industrial application
- Vacuum pump option
- **CHROMA<sup>UHP</sup> 4U** – controlled by BTX analyzer with inbuilt computer
- **CHROMA<sup>UHP</sup> 4U** – controlled by wall mounted computer, reference XXX023
- **CHROMA<sup>UHP</sup> 5U**, reference C24022-UHP, with inbuilt computer

Note: one supervisor unit can control up to 3 Chromatotec<sup>®</sup> analyzers

### Product technical specifications:

#### CH<sub>4</sub> and non-methanic compound analysis:

- CH<sub>4</sub> and NMHC with THC by calculation

#### Lower Detection limit:

- 20 ppb methane
- NMHC 50 ppb as propane

#### CH<sub>4</sub> in ambient air = 1800 ppb

- Xylene < 10 ppb

#### Detection range:

- 20 to 2 000 ppb: NMTHC (equivalent CH<sub>4</sub>)
- CH<sub>4</sub> 20 to 2 000 ppb
- THC = CH<sub>4</sub> + NMTHC

#### Autocalibration:

- Automatic calibration and span gas

#### Relative Standard Deviation:

- < 0.3 % over 48 h (RT)
- < 2 % over 48 h (Span Concentration)

#### Results:

- Data storage for traceability
- 4-20 mA or 0/10 V output (options)
- MODBUS / JBUS or MGS1 communication protocol (option)
- **Ethernet connectivity for remote access**

#### Cycle time:

- **Response time 3, 5 or 7,5 min.**

#### Gas supply:

- H<sub>2</sub> (FID and carrier gas): 30 ml/min (Inlet 2 bars; 1/16" Swagelok)
- Air (FID): 180 ml/min (inlet 3 bars; 1/8" Swagelok)
- Sample inlet (vacuum pump in option) 1/4" Swagelok 80 ml/min at ambient pressure

#### Sample volume:

- Injection loop. **Range specific**

#### Power supply:

- Main: 230 V / 115 V or 50 / 60 Hz
- Battery: 24 V (option)

#### Electrical consumption:

- Mean: 150 VA

#### Dimensions and weight:

- Rack 19" (4U) - for C24000
- Height: 180 mm
- Width: 482 mm
- Depth: 600 mm
- Net weight: 17 kg

#### To order:

chromaUHP 4U (CH<sub>4</sub>/NMTHC)  
chromaUHP 5U (CH<sub>4</sub>/NMTHC)  
(with inbuilt computer ref. XXX022)

#### Model:

C24000-UHP  
C24022-UHP

Chromatotec<sup>®</sup> is continuously improving its products, therefore these specifications are subject to change without notice

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