

T-VOCS

NMTHC

CH4

C2H6

THC

Odor

CHROMA THC

Direct Methane and Non-Methane
Total Hydrocarbon (**NMTHC**) analysis by autoGC with Flame Ionisation
Detection (**FID**)



Model: C24000
Rack version



Model: C24000
Wall-mounted version

Main applications:

- Clean Air Room
- Ambient Air Monitoring
- Waste Water Treatment Plant
- Impurities in pure gas processing
- Emissions monitoring
- Filter integrity monitoring
- VOC/UHC monitoring (Industrial Hygiene) in option
- Fence Line monitoring
- Odor control monitoring

Standards:
HJ 604-2017



*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.*

Updated: January 2019

CHROMA THC



Direct Methane and Non-Methane

Total Hydrocarbon (**NMTHC**) analysis by autoGC with Flame Ionisation Detection (**FID**)

Description:

The **CHROMA THC** is an automated isothermal industrial gas chromatograph dedicated to the analysis of Volatile Organic Compounds (VOCs) in air (indoor, outdoor, combustion), industrial hygiene, pure gas like N₂/CO₂/O₂.

Principle:

- As a fully automatic instrument, the **CHROMA THC** 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 CH₄ and NMTHC is achieved using **columns with back flush**.

Key points:

- No matrix effects**: no interferences from oxygen concentration and variation on measurements thanks to full speciation between O₂ and CH₄.
- 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.

Dedicated configurations of chroma THC:

- 2MIN**: standard version for VOC monitoring in ambient air within 2 min (from 20 to 20000 ppb)
- 1 ppb**: for clean air room applications tot rack VOCs in ambient air.
- OCU**: solution for odor control unit manufacturers with analyzer, computer and gas generators in complete wall mounted box. SMS function available to inform when media support is saturated.

VISTACHROM® software:

Powerful VISTACHROM Chromatotec® software for:

- Remote monitoring & injection control
- Full traceability with on board archiving of results and chromatograms
- QC set up and control of threshold alarms
- Data export by MODBUS / 4-20mA / 0-10V
- Time stamp results

Options:

- Automatic validation**: CALIB with internal automatic calibration and data validation from permeation tube
- Automatic calibration from external cylinder
- Automatic data transfert through: Module for 4 outputs 4-20 mA / MODBUS TCP IP / MGS1
- Modeling software with weather station for live odor/chemical impact
- 24 V DC power supply
- Multiple stream selector (up to 16 streams with one analyser)
- Hydrogen and zero air generator
- Inbuilt heated line for industrial application or CEMS
- Vacuum sampling pump
- Calculation modules: Average / Statistics / Odor Index / Odor Unit ouE/m³ and more
- Liquid sampling module for TVOC in water or other liquid sample
- 3G Modem with automatic SMS alert
- CHROMA THC 5U**, reference C24022-OCU: all-in-one wall-mounted with internal computer, CALIB, H₂ and zero air generator included. Pressurized dry air requested (compressor in option).
- XXvalveHC** sampling system for high concentrations from 100 ppm to %

Note: one supervisor unit can control up to 3 Chromatotec® analyzers

Product technical specifications:

CH₄ and non-methanic compound analysis:

- CH₄ and NMHC with THC by sum
- THC = CH₄ + NMTHC

Detection limit:

- 20 ppb for methane and < 20 ppb on NMTHC eqC₃
- chroma THC-1 ppb: LDL < 1 ppb for TVOC

Detection range for CH₄ and NMTHC(eq. CH₄):

- chromaTHC-2 MIN:
 - 20 to 2000 ppb (ampli 3)
 - 0.2 to 20 ppm (ampli 2)
- chromaTHC-1 ppb:
 - 1 to 2000 ppb (ampli 3)

Relative Standard Deviation:

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

Cycle time:

- chroma THC-2 MIN:
 - 2 minutes** for 0-3 ppm in ambient air (standard)
 - 3 to 5 minutes or more for higher concentrations or process application (option)
- chromaTHC-1 ppb: 10 min

Supervisor:

- Embedded computer WindowsR based with LCD display
- 128 GB of hardware storage on SSD memory

Communication:

- Ethernet, remote control
- MODBUS RTU / MGS1 or JBUS

Gas supply:

- H₂ (FID and carrier gas): 30 mL/min (Inlet 2 bars; 1/16" double ferrule)
- Air (FID): 180 mL/min (inlet 3 bars; 1/8" double ferrule)
- Sample inlet (vacuum pump in option) 1/4" double ferrule 80 mL/min at ambient pressure
- Pneumatic valve 90 mL/min commutation

Sample volume:

- Injection loop with volume designed according applications

Power supply:

- Main: 230 V / 115 V or 50 / 60 Hz
- In case of power loss, the instrument will restart automatically

Electrical consumption:

- Mean: 150 VA

Operating temperature:

- Rack version: 20 to 35°C
- Wall-mounted version: 0 to 40°C

Dimensions and weight:

- | | |
|----------------------------------|--|
| Rack 19" (4U): | All-in-one wall-mounted cabinet: |
| • 180 x 482 x 606 mm (H x W x D) | • 1000 x 800 x 300 mm (H x W x D) |
| • Net weight: 17 kg | • Net weight: 55 kg (with 2 heated probes) |

To order:

chroma THC 4U (CH₄/NMTHC)
chroma THC 5U (CH₄/NMTHC)
(with inbuilt computer ref. XXX022)
chroma THC 5U (CH₄/NMTHC)
(in box with generators)

Model:

C24000 (2MIN/1ppb)
C24022 (2MIN/1ppb)
C24022-OCU (2MIN/1ppb)

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

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