

# H2S MEDOR®

A Online analysis and monitoring of H2S



Model: M51022



Model: M51022 - ATEX

H2S

## Main applications:

Trace and ultra trace detection in Natural Gas / LPG / Gaseous Fuels  
 H2S in crude oil / Diesel / Fuel oil / Condensates / water  
 Deodorisation/Desulfurisation control ppb  
 Catalyzer protection  
 H2S in pure gas : H2 with special application

## Targetted compounds:

H2S  
 In option: other sulfur compounds and total sulfur with other MEDOR version

## Main markets:

H2S  
 Refineries / Petrochemical  
 Gas transportation  
 Process  
 Sales metering station  
 Emissions



## Standard:

ASTM D7493-14, ISO 19739:2004, DIN 51855/7

## Certifications:

GOST, ATEX, IECEx, CSA, CSA international



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: February 2021

## Description:

The H2S MEDOR® is an autoGC-ED (MEDOR® Electrochemical wet cell Detector) for the analysis and monitoring of H2S in natural gas and gaseous fuels.

Three versions exist:

- H2S MEDOR® ppb for 0 - 1 ppm
- H2S MEDOR® ppm for 0-10 / 0-50 / 0-100 ppm
- H2S MEDOR® % for 0-10 %

## Principle:

- Automatic sampling using a loop
- Automatic loop injection on column
- Isothermal gas chromatograph
- Detection of H2S eluting from the column performed by MEDOR® Detector: Electrochemical wet cell Detector which is SSD Sulfur Specific Detector.
- Signal provided by electrochemical reaction between the wet cell electrolyte and the sulfur compounds

## Key points:

Fully compliant with ASTM D 7493-14 : Standard Test Method for Online Measurement of Sulfur Compounds in Natural Gas and Gaseous Fuels by Gas Chromatograph and Electrochemical Detection.

Continuous monitoring with automatic online sampling.

Analytical performances:

- Specific, linear and very sensitive to H2S
- Results validation by automatic standard injection
- Extremely low maintenance
- Very long life time detector with electrolyte, up to 10 years
- Low gas consumption, can be reduced in option
- More than 10 years data storage : full chromatogram
- No cylinders required thanks to internal calibration tube and gas generators
- Automatic control with process device
- Intelligence system with tunable and interactive alarms levels

## Powerfull VISTACHROM Chromatotec® software:

- 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
- Time stamp results

## Options:

- Multiple stream selector (up to 16 streams with one analyser)
- Modeling software with weather station for live odor/chemical impact
- Explosion proof version Exp or Exd for ATEX, IECEx zone 1 and 2 and also for CSA C1D2 group B , C & D T4
- Calculation modules (Average / Statistics / Odor unit OU e/m3 and more)
- Automatic data transfert through: Module for 4 outputs 4-20 mA (with 0 mA for instrument default) / 0 - 10 V / MODBUS RTU or TCPI IP or MGS1
- Nitrogen or air generator for safe and hazardous area
- 24 V DC power supply
- Electric selection valve to reduce air consumption
- Wall mounted box XXX934
- Liquid injection valve for LPG analysis
- Touch screen on the front panel for Exp version (only ATEX)
- External cylinder inlet for automatic calibration from external cylinder
- MFC for multipoint calibration from internal CALIB and/or from cylinder
- Zero method

## Technical specifications:

### Detection Limit:

- H2S MEDOR® ppm :
- H2S : 0.1 ppm (0.1417 mg/m3)
- H2S MEDOR® ppb :
- H2S : 1 ppb (1.39 µg/m3)

### Range (adjustable depending on application):

- 0/10 or 0/100 or 0/1000 (ppb or ppm)

### Relative Standard Deviation:

- RSD < 3 % on concentration over 48H
- RSD < 0.5% on retention time over 48H

### Cycle Time:

- H2S 120 s for 0 - 3 ppm range
- H2S 300 s for higher range

### Supervisor:

- Embedded computer Windows® based with LCD display
- 128 GB of Hardware storage on SSD memory

### Linearity:

- > 0.995

### Communication:

- MODBUS RTU included in standard
- Ethernet, remote control

### Gas supply:

- Carrier: Dry air or N2 (3 bar): < 4 ml/min
- Internal calibration: 50 ml/min for ppm range
- Sample inlet 1 bar and 160 ml/min sample flow
- Pneumatic valve 90 ml/commutation

### Power supply:

- Main: 230 V / 115 V or 50/60 Hz
- Power: 24V (optional)

### Electrical consumption:

- Average: 150 VA

### Dimensions and weight:

- |                     |                                   |
|---------------------|-----------------------------------|
| • Rack: 19" (5U)    | <b>Wall mounted Exp version :</b> |
| • Height: 222 mm    | • Height: 800 mm                  |
| • Width: 482mm      | • Width: 600mm                    |
| • Depth: 600 mm     | • Depth: 300 mm                   |
| • Net weight: 22 Kg | • Net weight: 40 Kg               |

### To order:

H2S MEDOR® inbuilt computer 5U with CALIB	M51022
H2S MEDOR® Ex px certified ATEX zone 2	M51022 -ATEX-Z2
H2S MEDOR® Ex px certified ATEX zone 1	M51022 -ATEX-Z1
H2S MEDOR® Exd ATEX zone 1	M51022 -ATEX-Z1-Exd
H2S MEDOR® Ex px certified IECEx zone 1	M51022 -IECEx-Z1
H2S MEDOR® Exd IECEx zone 1	M51022 -IECEx-Z1-Exd
H2S MEDOR® Ex px CSA C1D2	M51022 -CSA-C1D2
H2S MEDOR® Exd CSA C1D2	M51022 -CSA-Z1-Exd

### Model:

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

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