



energyMEDOR

The energyMEDOR analyzer has been developed specifically to address the challenges of online, continuous Natural Gas (NG) monitoring. The MEDORs are fully automated, rugged, industrial analyzers that provide an ideal solution for companies and operators seeking to increase data capture and maximize efficiency. This integrated solution provides unsurpassed separation of sulfur compounds and exceptional stability of results, combined with the ease of an automatic platform. The MEDORs perform in the most stringent applications with the lowest cost of ownership on the market. Our partners globally have validated the energyMEDOR as the most accurate and reliable analyzer in the industry for measurement of sulfur compounds for odorization of natural gas and pipeline integrity monitoring.

The energyMEDOR is a robust, automatic gas chromatograph dedicated to sulfur compounds analysis (H₂S, mercaptans, and sulfides) in different matrices. Two versions of the instrument exist: the energyMEDOR ppm which measures at ppm levels and the energyMEDOR ppb which measures at ppb levels. Reduced sulfur compounds analysis is accomplished through loop injection via automatic valve onto chromatographic columns heated in an isothermal oven. Electrochemical detection is achieved by a gas-liquid reaction, a proven gas chromatography technique for excellent separation of chemical species. This sulfur specific detector allows no interference from other compounds. Speciation and/or Total Sulfur results are validated automatically by an internal permeation standard to ensure repeatability and accuracy.

All MEDORs offer an advanced color display, intuitive user interface, flexible I/O, and built-in data acquisition. All instrument set up, control, and access to stored data and diagnostic information are available through the front panel, or via RS232, Ethernet, or USB com ports either locally or by remote connection using the included VISTACHROM® software. High and low threshold alarms for odorizing processes are user adjustable. Proprietary VISTACHROM® software enables remote monitoring and injection control as well as full traceability with onboard archiving of results.

- **ASTM D7493-08: Standard test method for online measurement of sulfur compounds in natural gas and gaseous fuels by gas chromatograph and electrochemical detection**
- **Ranges: ppb, ppm, %**
- **Serial com ports**
- **Four front panel USB ports for peripheral devices**
- **Comprehensive internal data logging with 40GB storage**
- **Hard drive storage of date and time stamped chromatograms**
- **Full traceability through archiving of results and QC**
- **Ethernet connectivity for remote access and monitoring**
- **Online, continuous sampling**
- **Low maintenance**
- **Automatic validation of results by Internal Permeation Tube**
- **Large, vivid, and durable color graphics display with user-friendly interface**

General Specifications

Compound(s) Analyzed:

H₂S, mercaptans, and sulfides

Detection Range(s):

0 to 10 ppm, 0 to 100 ppm, or 0 to 1000 ppm

Lower Detectable Limit(s):

energyMEDOR ppm: H₂S: 0.1 ppm

energyMEDOR ppb: H₂S: 5 ppb

DMS: 2 ppb

Relative Standard Deviation:

Concentration: RSD <3% over 48 h

Retention time: RSD <0.6% over 48 h

Cycle time(s):

H₂S/MeSH: 90 s

THT: 180 s (if THT only)

H₂S, mercaptans: 300 s

Total reduced sulfur: 120 s

H₂S, mercaptans, THT: 1200 s

Internal Calibration Flow Rate:

50 ml/min

Sample Inlet Pressure and Flow Rate:

1 bar; 10 l/h

Carrier Gas Pressure and Flow Rate:

UHP N₂ (3 bars); 12 ml/min

Electrical Specifications

Power Requirements:

120V/230V, 50/60 Hz

Consumption:

Average 150 VA, Peak 360 VA

Communication Specifications

Included I/O:

MODBUS/JBUS or MGS1 (RTU or ASCII)

RS232

RS485

Ethernet

4 USB com ports

Optional I/O:

4-20mA output

0-10V output

Certifications

ASTM D7493-08
ISO 6326/2 norm



DIN 51855/7
EN ISO 19739

Physical Specifications

Operating Temperature Range:

18 to 25 °C, no more than ±1 °C change per hour

Dimensions (H x W x D):

8.7" x 19" x 23.6" (22.2cm x 48.2cm x 60cm)

Net Weight:

48.5 lbs (22 kg)

Options

Calibration Options:

Automatic validation and calibration

Internal Permeation Tube system (CALIBRATION-system; standard for ppb model)

Multiple stream analysis with Multiplexer (2 to 6 streams)

Calculation Module (Average)

User definable alarm thresholds

Mounting Options:

Rack mount brackets with chassis slides

Rack mount brackets with stationary shelf

Enclosed instrument rack with HVAC

Other Options:

24V power for transportable analysis

Explosion proof Exp box - Ex Specification

Class 1 Div 2, Groups B,C,& D

Maintenance kit

UPS (Uninterrupted Power Supply)

Climate-control

Applications

Natural gas:

Odorization monitoring

Gas quality analysis: mercaptans, H₂S, THT

Sulfides

Butane/Propane:

ppb level control

Catalyzer protection

Propellant gases

Process:

Petrochemical

Ethylene quality control

Quality control

Co₂ purity control

Contact Information

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