



New Instruments and Research for Analysis

# MERCURY 900 ARIES 1000

EMISSION MONITORING: DETERMINATION OF THE MASS CONCENTRATION OF TOTAL GASEOUS ORGANIC CARBON.

**MERCURY 900** (portable version) and **ARIES 1000** (fixed version) are the solution for the COV emission monitoring, in term of accuracy, simplicity and analytical stability.



**Mercury 900**



**Aries 1000**

### COMPACT AND COMPLETE

We made a gas chromatographic solution with:

- FID detector and pressure regulators monitored by software
- Industrial PC
- LCD color display and high resistant keyboard interfaces
- Analogical and digital interfaces
- Methane separation analytical kit
- Hydrogen metal hydride gas cylinder (for Mercury only)

All in one

### PC EMBEDDED TECHNOLOGY

The industrial PC housed in the analyzer, beside monitoring and controlling the Detector, the thermoregulation and every operation, has the task of Data logger, saving the analysis in Excel® compatible format files. The Windows Embedded® operating system with the advanced software, guide and support you at all times. Any fault is detected and stored.

### SAMPLING LOOP ANALYSIS

We use sampling valve with no mechanical moving parts, able to guarantee two exclusives advantages despite classical continue sample flows analytics through calibrated capillaries.

- Much more analytical stability in time
- Less maintenance frequency

### METHANE ANALYSIS

Performed via a catalytic converter directly housed into the instrument. Doesn't need any bulky and/or expensive accessory. The converter is automatically excluded in the event of an exceeding organic concentration that may overheat it. Carried out in accordance with European standard EN 25140:2010

### NORMATIVE REFERENCES

The analyzers were found compliant with the following normative:

- Developed and tested according to EN 12619: 2013 for the analysis of VOCs, EN 25140: 2010 for methane analysis
- Certified for EN 12619: 2002 for the analysis of VOCs, QAL1 and CE.

in accordance with EN 12619 - EN 14181 - EN 15267-3



## SAMPLE SUCTION SYSTEMS AND VACUUM SENSORS

**Mercury (portable system)** use a head heated suction pump to prevent any kind of condensation in the sample.

**Aries (Stationary system)** use an ejector system (no maintenance required).

Both analyzers are equipped with a vacuum sensor which generate an alarm if any leakage or filter clogging occur during the analysis.

### ACCESSORIES FOR ARIES (STATIONARY VERSION)

- **Rack assembly**, IP55 protection grade, equipped with air conditioning or heating system and an hydrogen leakage sensor interlocked with a safety valve.

- **Customizable data logger**, complete with software able to collect and elaborate data from different kind of monitors and plants.

- **Customized heated sampling line with double internal PTFE pipes** (one removable), power 90W/meter, powered and thermo-regulated from the rack.

- **Additional sampling line** to monitor the plant inlet COVs and calculate mass balances.

- **Filtering system** to use a company compressed air from network instead of pure air gas cylinders.

### ACCESSORIES FOR MERCURY (PORTABLE VERSION)

- **Customized heated sampling line with single or double internal PTFE pipes** (one removable), power 70W/meter, auto regulated.

- **Hydrogen metal hydride gas cylinder** (14,8 x 10,3 x 2,5) cm, mounted on the back of the instrument and able to feed it up to 24 continuous working hours.

- **Basket for gas cylinders**, steel made wheels with a maximum load of 20Kg each and black PVC coating. Housing for n°3 1L cylinder (Ø110mm max.) and n°1 5L (Ø150mm max.)

## TECHNICAL DATA

UTILISATION UNIT ALLOWED

OPERATIVE TEMPERATURE

STORAGE AND TRANSPORT TEMPERATURE

CALIBRATION DIAGRAM DURATION

MAINTENANCE INTERVAL

MEASUREMENT CYCLE DURATION

SPAN DRIFT (0-20mg/m<sup>3</sup>)

SPAN DRIFT (0-500mg/m<sup>3</sup>)

ZERO DRIFT

NOISE

MINIMUM DETECTABLE

MINIMUM DETECTABLE

ACCURACY

LINEARITY (0-20mg/m<sup>3</sup>)

LINEARITY (0-500mg/m<sup>3</sup>)

REPEATABILITY

DATA AVAILABILITY

ANALOGICAL OUTPUTS

CONNECTIONS

DISPLAY

POWER

SAMPLE SUCTION FLOW

HYDROGEN GAS REQUIREMENT

AIR GAS REQUIREMENT

SPAN GAS (PROPANE AIR)

HYDROGEN PRESSURE AND CONSUMPTION

AIR PRESSURE AND CONSUMPTION

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Aries: +5÷+40[°C]; Mercury: -20÷+50 [°C]

Aries:-20÷+50[°C]; Mercury:-20÷+50 [°C]

1 Year

6 Months

12[s]

<1.00%/week

<1.35%/week

<0.5%/week

<0,01 % F.S.

≤0.2 (scala 0-20) [mgC/Nm<sup>3</sup>]

≤1.1 (scala 0-500) [mgC/Nm<sup>3</sup>]

<0.1 % F.S.

<2,5 % F.S.

<5 % F.S.

Better than 1% F.S.

<1 Year

0÷10[Vdc]; 4÷20[mA] (Optional for Mercury)

2xUSB, Ethernet 10/100 (Optional)

LCD-TFT 6.5" resolution VGA 640x480

230Vdc; 110Vdc (Optional)

2500 [ml/min.]

For gas chromatography, [99.995%min]

For gas chromatography, [99.999%min]

Suggested concentration at 80% F.S.

>2 [bar]; 70ml/min.

>4.5 [bar]; 400ml/min.



NEW INSTRUMENTS and RESEARCH for ANALYSIS s.r.l.

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