



NO / NO₂ / NO_x

Heated Chemiluminescence Nitrogen Oxides Analyzer Model TOPAZE 32M



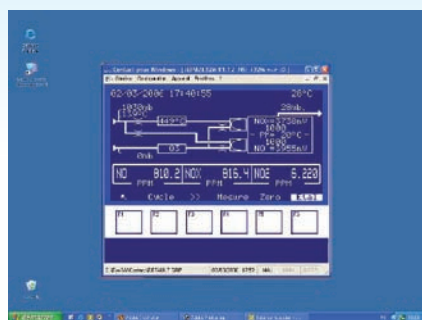
*2 different versions
to meet your
analytical requirements:*

TOPAZE 32M-S:

NO or NO_x monitoring

TOPAZE 32M-D:

NO-NO_x and NO₂
simultaneous monitoring



Remote control using CONTACT™ software

EXCLUSIVE FEATURES:

- Heated analyzer (temperature controlled up to 180°C)
- Proven EPA reference method
- Measuring chamber under vacuum
- Simultaneous 2-channel NO / NO_x monitoring
- Graphic Liquid Crystal Display (LCD)
- Interactive menu driven software with enhanced speed display
- Real time calibration graph
- User adjustable response time and averaging time
- Built-in storage of 2 months 1/4 h average data (up to 1 year with the optional memory extension)
- Internal zero and burner air scrubber
- Built-in double serial interface (RS 232 / RS 422) for remote control
- Fast response time (<2 sec)
- Communication by AK protocol (RS232 / RJ45)
- Ethernet connection

APPLICATIONS:

- Engine exhaust gas monitoring
- CEMS
- Combustion control
- Process monitoring (simultaneous inlet/outlet sampling)
- Laboratories and Research Centers



Heated Chemiluminescence Nitrogen Oxides Analyzer **TOPAZE 32M**

TECHNICAL SPECIFICATIONS:

- Ranges: 0-10/100/1 000/10 000 ppm
- Noise: < 1% F.S.
- Lower detection limit: 0.1 ppm on the lowest range
- Response time: < 2 sec (T₁₀₋₉₀)
- Zero drift: < 1% / 24 h
- Span drift: 1% / 24 h
- Linearity: 1% for a concentration between 15% and 100% of the full scale's range
- Sample flow rate: 0.7 to 1 l/min at 20 psi
- Capillary block temperature: heated up to 180°C
- Housing: Standard 19" – 3U rack
- Dimensions: 483 x 440 x 135 mm (L x W x H)
19 x 17.3 x 5.3 inches (L x W x H)
- Weight: 10 kg / 22 lbs
- Operating temperature: 5 – 45 °C
- Communication: RS 232 & TCP/IP, AK protocol
- Ethernet port

UTILITIES:

- Power supply:
 - 230 V, 50 Hz - 115 V, 60 Hz
 - consumption 350 VA
- O₂ 100% for the ozone generator

OPTIONS AND ACCESSORIES:

- Memory extension
- Internal heated-pump
- Heated line with SS 2µm built-in filter
- Ethernet network connection
- ESTEL electronic board (1 or 2) with :
 - 4 independent analog inputs
 - 4 independent analog outputs
 - 4 remote control inputs
 - 6 dry contacts outputs
- SOREL electronic board with :
 - 4 dry contacts outputs
 - 4 dry contacts inputs
- Special version without LCD screen for use in engine gas cabinet



PRINCIPLE OF OPERATION:

TOPAZE 32M analyzer uses the proven Chemiluminescence technique for the measurement of NO/NO_x.

In the NO mode, the technique relies on the chemiluminescent reaction between ozone (O₃) and nitric oxide (NO) yielding nitrogen dioxide (NO₂) and oxygen. This reaction produces light whose intensity is proportional to the quantity of NO being sampled.

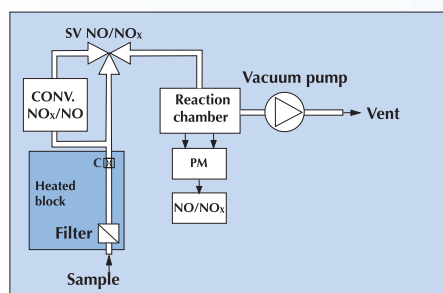
For total NO_x, the sample is first passed through the internal NO₂ to NO converter which converts the NO₂ in the sample to NO. The resulting reaction is directly proportional to the total concentration of NO_x.

DESCRIPTION:

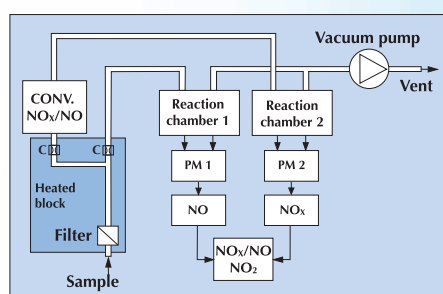
Topaze 32M analyzer is equipped with a heated inlet capillary block and measurement chamber, which maintains the sample above its dewpoint to prevent condensation inside the analyzer. The Topaze Series analyzers are microprocessor controlled, with complete gas data, internal diagnostics, alarms, and calibration settings available to the operator via the keypad or remotely using CONTACT™ Software via TCP/IP, RS-232C communications and discrete inputs.

Ranges can be user selectable, and accuracy can be maintained by the user entering new calibration curves when required. Auto-ranging can be selected via the keypad.

Automatic calibration may be programmed for preset intervals or initiated remotely.



TOPAZE 32M-S: Equipped with a single reaction chamber, Model **TOPAZE 32M-S** allows the monitoring of NO or NO_x (manual or remote-controlled selection).



TOPAZE 32M-D: Equipped with a dual reaction chamber and 2 PM tubes, Model **TOPAZE 32M-D** allows the simultaneous monitoring of NO-NO_x and NO₂.

Typical specifications subject to changes without prior notice.

ENV-EN-PSO - NOx - 32M