

# ANALYSERS AND OPACIMETERS



## TECNOMOTOR®

THE COMPLETE RANGE FOR THE ANALYSIS OF EMISSIONS



OPA 820  
OPA 840

GAS 810  
GAS 810 PFC  
GAS 830  
GAS 830 PFC

## GAS ANALYSERS

For the **Analysis of Exhaust Gases**.

The exhaust gas analyser modules of line 800 are designed to operate in harsh environments and ensure **high reliability and measuring accuracy**. These criteria have allowed to obtain the main international type-approvals, such as OIML Class 0 and MID 2014/32/EU (Compliant or certified version).

**The wide range of available options and accessories can meet any needs of PTI and workshops.**

In fact, autonomous modules (equipped with LCD, keyboard and printer) are available for testing operations, as well as measurement modules to be interfaced with PCs via cable or bluetooth (with transmission range in free space up to 300m).

It is also possible to integrate rechargeable batteries into the instrument in order to power it.

OIML Classe 0  
ISO 3930/OIML Classe 0

MID approval  
MID 2014/32/EU  
(Compliant or certified version)

## OPACIMETERS

For **Diesel Engine Opacity Measurement**.

The opacimeter chamber developed by Tecnomotor ensures reliability and measuring accuracy in harsh environments (such as heavy vehicles and agricultural vehicles) with compact dimensions and low energy consumption.

Moreover, **the integration of sophisticated electronics and special software algorithms allows to eliminate the need to calibrate internal** optical devices, so that it is only necessary to check the tools once a year.

As for the gas analysers, **a wide range of configurations is available to meet any need** like:

- Smoke extraction (for example by means of suitable probes for the high exhausts of buses).
- Battery power supply.

ISO 11614

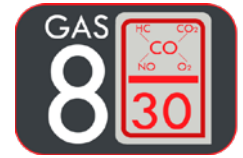


Made in Italy

Azienda con sistema di gestione per la qualità certificato da BV UNI EN ISO 9001:2008



# GAS ANALYSERS



## GAS 810 - GAS 810 PFC



**STANDALONE GAS ANALYSER** that can perform standard tests autonomously thanks to:

- 16-key multi-function keyboard
- 4x20 LCD, 9 mm digit height, backlit with white LEDs
- 24-column thermal printer

**The model 810 can be also connected to the PC via cable or bluetooth.**

## GAS 830 - GAS 830 PFC



**GAS EMISSION ANALYSER UNIT TO BE INTEGRATED WITH EXTERNAL** display unit

(PC, via cable or bluetooth) specific for PTI line/DIR/NETWORK module.

**GAS 810 PFC / GAS 830 PFC:** Same features as GAS810 and GAS830 models, but including automatic discharge of unburned hydrocarbons through filtering system and sampling probe.

## TECHNICAL FEATURES

- **Dimensions:** 23 x 34 x 22.5 cm
- **Power supply:** 220/110 V - 50/60 Hz 30 W
- **Operating temperature:** 5° ÷ 40 ° C
- **Storage temperature:** -20 ÷ 60 ° C
- **Pressure:** 850 hPa ÷ 1025 hPa
- **Humidity:** 0% RH ÷ 95 % RH
- **Maximum heating time:** 3 min.
- **Reset:** Electronic and automatic through solenoid valve
- **Oil Temperature:** 0 ÷ 150°C Res.1°C
- **CO measure:** 0 ÷ 10% Vol Res.0.01% Vol
- **CO2 measure:** 0 ÷ 20% Vol Res.0.1% Vol
- **HC measure:** 0 ÷ 20000ppm Vol(optional) Res.1 ppm Vol
- **O2 measure:** 0 ÷ 21%Vol Res.0.01% Vol
- **LAMBDA factor:** 0 ÷ 2 Res.0.001
- **NOx measure:** 0 ÷ 5000ppm Vol(optional) Res.1 ppm Vol
- **Weight** (with internal battery): lower than 15kg
- **Metrological approvals:** OIML Class 0, MID 2014/32/EU (Compliant or certified version)

# OPACIMETERS



## OPA 820



**STANDALONE OPACIMETER** that can perform standard tests autonomously thanks to:

- 16-key multi-function keyboard
- 4x20 LCD, 9 mm digit height, backlit with white LEDs
- 24-column thermal printer

**The model 820 can be also connected to the PC via cable or bluetooth.**

## OPA 840



**GAS EMISSION ANALYSER UNIT TO BE INTEGRATED WITH EXTERNAL DISPLAY UNIT**(PC, via cable or bluetooth) specific for PTI line/DIR/NETWORK module.

\* NOT SUPPLIED

## TECHNICAL FEATURES

- **Dimensions:** 23 x 34 x 22.5 cm
- **Power supply:** 220/110 V - 50/60 Hz 30 W
- **Operating temperature:** 5° ÷ 40 ° C
- **Storage temperature:** -20 ÷ 60 ° C
- **Pressure:** 850 hPa ÷ 1025 hPa
- **Humidity:** 0% RH ÷ 95 % RH
- **Maximum heating time:** 5 min.
- **Reset:** Electronic and automatic through solenoid valve
- **Oil Temperature:** 0 ÷ 150°C Res.1°C
- **Absorption coefficient K (m-1):** 0 ÷ 9.99 m-1 Res 0.01 m-1
- **Absorption percentage N (%):** 0 ÷ 99.9 % Res 0.1%
- **Acceleration time:** 0 ÷ 5 s. Res 0.1s
- **Fume temperature:** 0 ÷ 150 °C. Res1°C
- **Effective chamber length:** 296 mm
- **Chamber temperature:** 75°C
- **Light source:** Green LED diode
- **Weight** (with internal battery): lower than 15kg
- **Metrological compliance:** ISO 11614

## “BRAVO” CONFIGURATION

Consisting of:

- Exhaust gas analyser, model 830 with trolley, internal battery and bluetooth.
- Opacimeter, model 810 with trolley, internal battery and bluetooth.
- Software to be installed on PC (\*not supplied).

To be integrated, depending on the application, with oil temperature probe and rev counter, to be chosen among accessories.

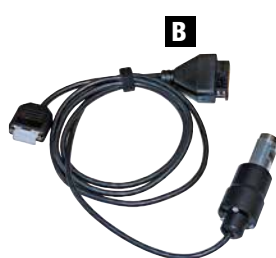


# ACCESSORIES

## REV COUNTER



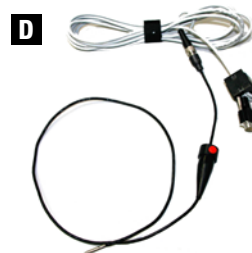
**A**



**B**



**C**



**D**

**A > 8-64503066**

Rev detector for detection through self-diagnosis socket (optional battery)

**B > 8-63500007**

Vibration sensor

**C > 8-64502016**

Rev detection cable

**D > 8-63500002**

Oil temperature probe

## TROLLEY AND OTHER ACCESSORIES



**E**



**G**



**H**



**I**



**L**



**M**

**E > 8-64200134**

2-Wheel trolley (for GAS/OPA)

**G > 8-63500011**

TRUCK probe (for OPA)

**H > 8-64200009**

Gas extraction kit for motorcycles (for GAS)

**I > 8-64500085**

WSC (Water System Cut) kit\*\* (for GAS)

**L > 8-64500003**

Kit for BlueTooth wireless communication (for GAS)

**L > 8-64500009**

Kit for BlueTooth wireless communication (for OPA)

**M > 8-64500001**

Battery to be inserted inside the gas analysers and opacimeters with battery life longer than 4h (for GAS/OPA)

\*\* Anti-flooding system with automatic block of measured gases when the condensate becomes excessive.

