

# ECOGAS100

GAS ANALYSER



ECOGAS100 is the new Gas analyser MULLER AUTOMOTIVE designed for the pollution of petrol, LPG and CNG vehicles. The 4-gas analyser (CO, CO<sub>2</sub>, HC, O<sub>2</sub>), which is also 5-gas compatible (with the addition of a NO<sub>x</sub> sensor), can be adapted to any type of environment and any type of legislation, whether for roadworthiness tests or garage diagnostics.

TECHNICAL DATA		ECOGAS100	
	MEASURING RANGE		RESOLUTION
CO	0 - 9,99 % vol		0,01
CO <sub>2</sub>	0 - 19,99 % vol		0,1
HC	0 - 9999 ppm vol		1
O <sub>2</sub>	0 - 25 % vol		0,01
NO <sub>x</sub>	0 - 5000 ppm vol		1
Lambda	0,5 - 5		0,001
RPM	300 - 9999 rpm		10
Oil temperature	20 - 150 °C		1

## 4 GAS ANALYSER

- MID type approval for Europe
- Power supply 230V 1ph
- Wired or Bluetooth connection (depending on configuration)
- 6 m sampling probe
- 5-gas compatible (addition of a cell for NO<sub>x</sub> measurement)
- Full accessibility to mesh and coalescing filters

## ACCESSORIES



See pages 16 to 17

## SOFTWARE



See page 20

# ECOOPA100

OPACIMETER



**ECOOPA100** est l'opacimètre MULLER AUTOMOTIVE **dernière génération**, conçu pour le contrôle pollution des fumées des véhicules diesel. Il peut être connecté indifféremment à un PC ou à une tablette grâce à sa transmission Bluetooth, et permet comme l'analyseur de gaz, de réaliser des mesures en contrôle technique ou des accélérations libres pour identifier les défauts.



## TECHNICAL DATA

## ECOOPA100

	MEASURING RANGE	RESOLUTION
Opacity	0 - 99,99 m <sup>-1</sup>	0,1
Absorption coefficient	0 - 9,99 % vol	0,01
Tachometer	0 - 9999 rpm	10
Oil temperature	20 - 150 °C	1
Smoke temperature	20 - 400 °C	1

## OPACIMÈTRE

- LNE approval for France and MID for Europe
- Power supply 230V 1ph
- Wireless Communication - Bluetooth
- Configurable with fix cabinet (VL version) or independent (PL version)
- Full accessibility to filters (magnetic plate)

## ACCESSORIES



See page 16 to 17

## SOFTWARE



See page 20



Heated probe 3,50 m



LV probe 1,50 m

# ECORPM100

RPM DEVICE WITH CHARGER AND CONNECTORS



ECORPM100 is the new latest-generation RPM reader manufactured by MULLER AUTOMOTIVE. Fully autonomous battery powered and communicating via Bluetooth), it features a large colour screen. A signal reception gauge makes it easy for the user to find the best place to pick up the necessary information.

## RPM DEVICE FUNCTIONS

This measurement device is distinguished by its ability to measure engine speed using several types of sensor :

- **Vibration sensor** : This sensor detects engine vibrations and converts them into engine speed data.
- **Induction clamp** (optional) : Used to measure the current induced by the motor, this clamp provides an accurate measurement of engine speed.
- **Battery clamps** : By connecting directly to the battery terminals, this clamp provides reliable engine speed measurement.

To measure the motor temperature, the device uses a wired temperature sensor that provides a direct, accurate measurement.

## ADVANTAGES OF THE RPM DEVICE

- **Large 3.5' colour screen** : The device is equipped with a 3.5" inch colour screen that displays measurements in real time, making it easy to read and interpret the data.
- **Signal level display** : In addition to engine speed and temperature readings, the device displays the signal level, enabling users to check the quality of the chosen location.
- **Bluetooth communication** : Thanks to Bluetooth connectivity, the device can communicate with a variety of interfaces, making it easy to transfer and analyse data.
- **Wireless and portable** : The absence of wires and the device's portability mean it can be moved around easily without the need for an external power supply.

TECHNICAL DATA		ECORPM100	
	MEASURING RANGE		RESOLUTION
Tachometer	30 - 999 rpm		10
Temperature	20 - 200 °C		1

### STANDARD EQUIPMENT



Vibration sensor



Battery clamps



Temperature sensor

# ECOBD100

EOBD DEVICE



ECOBD100 is the new diagnostic device for the latest generation of on-board vehicle emission control systems manufactured by MULLER AUTOMOTIVE.

Like ECORPM100, the OBD reader is completely autonomous. It can be powered from the OBD socket or the cigarette lighter socket. It is fitted with an LED light to help you identify where to connect it.



## EOBD READER FUNCTIONS

This device stands out for its innovative features :

- Automatic detection of light and heavy vehicle protocols
- Automatic reading and transmission of engine speed
- Automatic reading and transmission of engine temperature
- Reading of ECU data and storage of fault codes.

## ADVANTAGES OF THE EOBD READER

- Easy to use: an integrated LED light makes it easy to locate the vehicle's OBD socket, even in low-light conditions
- Portability: the wireless OBD reader can be moved around easily without the need for an external power supply
- Bluetooth connectivity: Thanks to Bluetooth connectivity, the reader can communicate with a variety of interfaces, making it easier to transfer and analyse data

### STANDARD EQUIPMENT



Test cap



External power supply



Extension cable

### SOFTWARE



See page 20

# THE CABINET



ECOSHIELD is extending its range to suit all workshop configurations. A wide choice is available: Pre-equipped fixed cabinet or mobile solution with a trolley incorporating a tablet display and gas analyser, plus all related accessories.

## TROLLEY FOR OPACIMETER

### ROLLING CART

This new trolley is equipped with two large wheels, allowing the opacimeter to be easily moved on any type of surface, whether indoors or outdoors.

### ERGONOMIC

The trolley is ergonomically designed for easy handling and transport of the device. Users will appreciate the comfort and ease of use.

### POWER SUPPLY

The power supply of the opacimeter is hidden in a housing under the trolley, freeing up the maximum amount of space and making it as compact as possible.



## TROLLEY FOR GAS ANALYSER

### ROLLING CART

Whether or not it is equipped with a tray to accommodate a gas analyzer, this new trolley carries a tablet and its program, facilitating access to the data and functionalities of the measuring instruments.

### ERGONOMIC

The trolley is equipped with a gas analyzer sensor storage tube and a hooking system to receive the 6 meters of probe. 2 ears on the sides allow it to also receive the RPM and OBD player.

### POWER SUPPLY

The gas analyzer power supply is also hidden in a housing under the carriage, freeing up the maximum amount of space and making it as compact as possible.



## FIXED CABINET FOR GAS ANALYSER

### FIXED CABINET

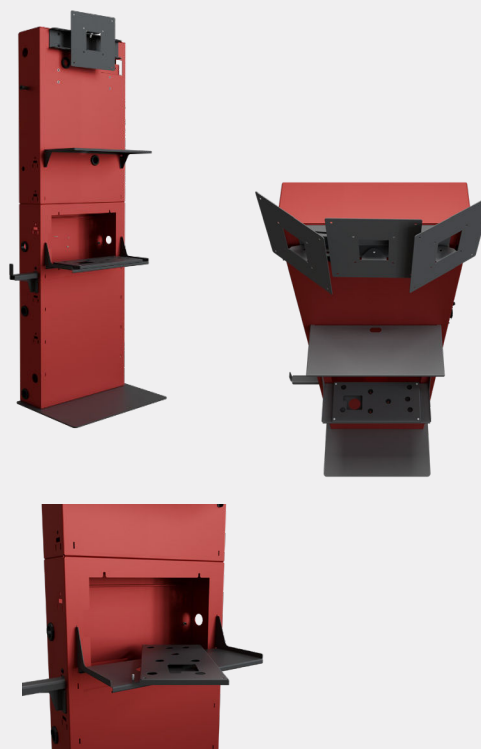
Fixed cabinet specially designed to accommodate the gas analyzer and all its accessories. This piece of furniture is scalable and will be able to accommodate the next evolutions of pollution measuring devices.

### SCREEN TILT

The cabinet offers 3 different screen inclinations, so it can be adapted to any workshop configuration. A rolling cart option is available to make the furniture mobile if required.

### GAS ANALYSER SHELF

A secure system allows the shelf supporting the gas analyzer to rotate so that all connections and filters are then fully accessible.



# THE SOFTWARE



ECOSHIELD has a new software to measure the different gas and fumes according to the different regulations :

- Technical inspection mode
- Free measurement mode

## ECOGAS100

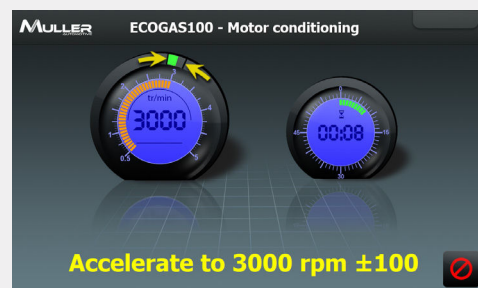
### ECOGAS100

This software allows you to follow a regulatory procedure as well as to perform free acceleration for a better diagnosis.



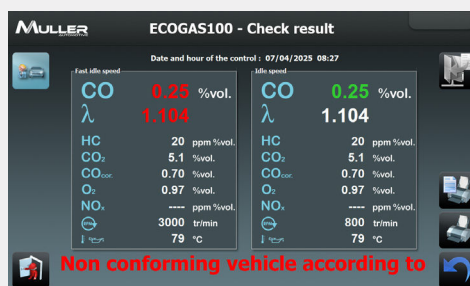
### MEASUREMENT SCREEN

After the installation of the measuring accessory (OBD reader or RPM vibration reader), the temperature and engine speed information is clearly displayed, allowing acceleration to begin.



### FINAL SCREEN

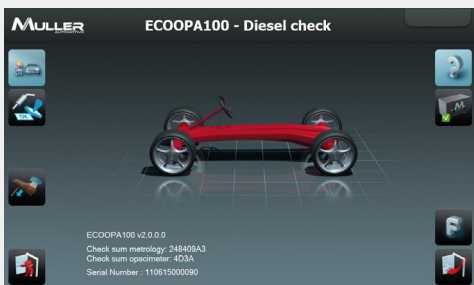
The final screen clearly displays all the data required by the various regulations before they are sent to the various authorities.



## ECOOPA100

### ECOOPA100

This software allows you to follow a regulatory procedure as well as to perform free acceleration for a better diagnosis.



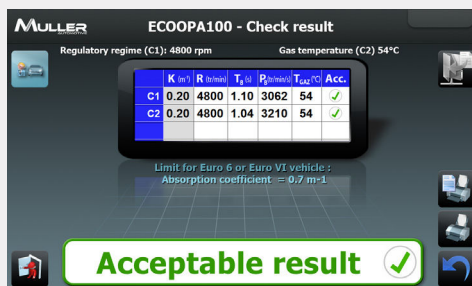
### MEASUREMENT SCREEN

After the installation of the measuring accessory (OBD reader or RPM vibration reader), the temperature and engine speed information is clearly displayed, allowing acceleration to begin.



### FINAL SCREEN

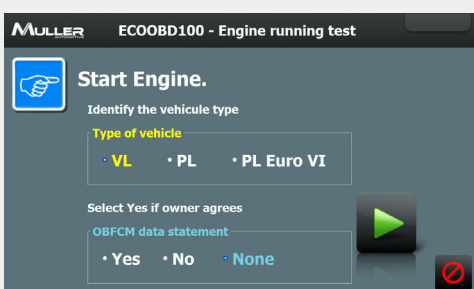
The final screen clearly displays all the data required by the various regulations before they are sent to the various authorities.



## ECOBD100

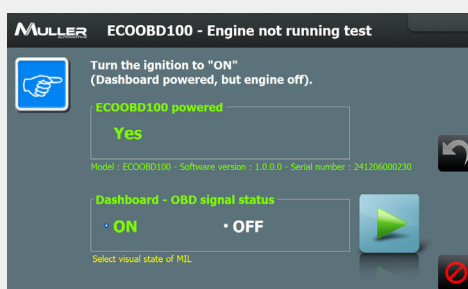
### ECOBD100

User-friendly and intuitive interface allowing the user to be guided throughout the procedure.



### MEASUREMENT SCREEN

Automatic recognition of the different LV and HGV protocols.



### FINAL SCREEN

The final screen clearly displays all the OBFCM data required by the various regulations before it is sent to the various authorities.

