

Components description for the New ECOgeo3000 EOBD

Reducers - Pressure Vaporizers

- **Type LPG100 injection** (single stage for LPG)

Homologation E20 67R01 0680

Feeds engines up to 135 kW.

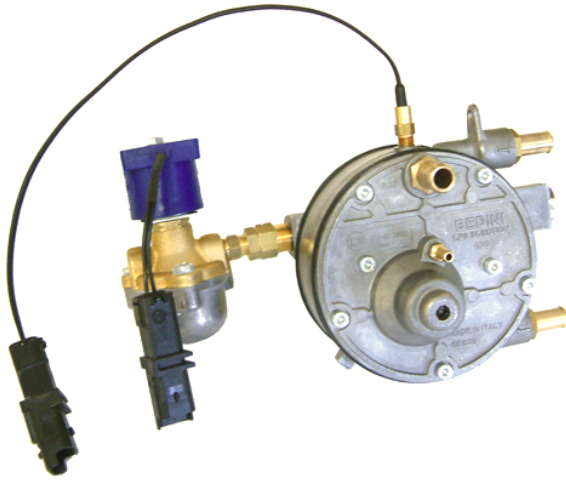
The outgoing Lpg Pressure is adjustable from 0,6 to 1,2 bar.

- **Type CNG100 injection** (two stages for CNG)

Homologation E20 110R 00017

Feeds engines up to 115

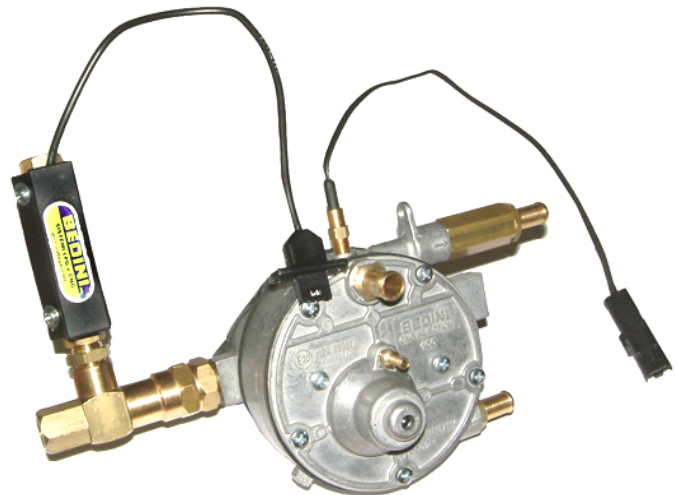
The outgoing CNG pressure is adjustable from 1,1 to 1,7 bar.



Both supplied with a water-gas heat exchanger diaphragm, they are realized in die cast aluminium, body diameter 100 mm. Being extremely compact, their installation inside small engine compartments is easy.

The LPG100 reducer is supplied with a safety solenoid valve to detect LPG. This valve is equipped with filter and with self cleaning system.

Homologation E13 67R01 0119 class 3



CNG SAFETY SOLENOID VALVE

- **Type CNG2** - Safety valves to detect CNG, equipped with an embedded filter and with two different openings . Brass body. Max Capacity 60 m3.

Homologation E20 110R 00003

MULTI-INJECTORS

- Type M44R (Matrix HD) Used in our LPG kits
 - Type M44 (Matrix XJ) Used in our CNG kits
- 4 outlets and 4 inlets . Equipped with an electromagnetic coil/shutter system, that allows the opening and closing of the nozzles in an extremely reduced time, that can be compared to that of the normal petrol injectors .
High working precision, extremely silent.
For every swept volume the gas nozzles with relevant calibrated section are available and supplied separately

Homologations : E13 67R-01 0167 Class 2
E13 110R-00 0020 Class 2



- Types IG1.RL3-RL4 (RAIL) - 3 or 4 outlets and inlets.
Used in our LPG and CNG Kits

Homologations: E8 67R-01 4303 Class 2
E8 110R-004304 Class 2



LPG FILTERS



Type V91 - Separate filter for LPG in its gaseous phase.

NOT INSPECTIONABLE

Body in zinc plated steel plate, clamping ring in stainless steel High filtering surface and low load loss. The filtering component is in 7 micron pleated paper.
An horizontal installation is strongly advisable

Homologation : E4 67R01 0105 class 2.

- Type XF - Filter with an interchangeable COALESCENCE cartridge

the gas, entering from the upper side, flows through the cylindrical interspace that also serves as an expansion tank. The filtering component holds the biggest impurity, whereas oils and gaseous residual deposit on the bottom of the cylindrical unit.

Max working pressure 4,5 bar - Filtering ratio 120 micron - Capacity 550 NI/min.

Homologation : E13 67R-01 0181 class 2



CENTRAL UNIT

ECOgeo3000 EOBD and Lambda versions (LPG-CNG) - Totally SELF ADAPTIVE

Built with an aluminium cover with a protective silicone treatment .



The processors is of latest generation - Automotive connector .

The electronic card is composed by a modern and updated automotive electronic, that allowed to minimize the dimensions :

- 8 independent inlets
- 8 independent outlets
- 1 pressure sensor inlet

- 1 temperature sensor inlet
- Embedded injectors emulator .

The ECOgeo3000 central unit works out in real time the data supplied by the original petrol ECU thanks to complex algorithms and gives the opening time and sequence of the gas injectors group.

The EOBD System version is used in phased sequential injection Euro 3 and Euro 4 vehicles, already equipped with EOBD .

The system collects the data coming from the petrol ECU and by the interfacing of the ECOgeo gas central unit and the OBD door, it fits in real time to the optimal carburetion conditions . This means that the gas system takes care of keeping the petrol ECU inside the parameters for a correct working, avoiding the drifts, that are the main cause of the lightning of the check engine pilot light.

The benefits of this application not only does reduce the central units errors, but also optimize the consumptions, reduce the engine wearing due to the driving at lean mix, that are harmful for the valves seats, and warrants lower emissions levels.

Various connecting loops are available for different protocols : EOBD Serial Line (KWP 2000-ISO 9141) - EOBD CAN Line (250k - 500k) - EOBD J1850 VPM e PWM.

The LAMBDA version is apt to be installed on vehicles not equipped with EOBD; that is, with a connection to the LAMBDA probe to keep the carburetion in the strict parameters for an optimal working. A direct intervention on the Closed loop and Open loop during the gas feeding is possible

Homologations: E3-67R01-9002-00
E3 110R00 4001 00

COMMUTATOR with acoustic signal



Modern and extraflat, this commutator is equipped with a PIC that is able to rule the vehicle commutations and the luminous indication of the gas that is still present in the tank.

Very small and anthracite coloured, it can be installed in all the dash boards of the existing vehicles, without causing problems or unwished anti-aesthetic effects. Petrol start and automatic gas commutation - Central button for the manual gas /petrol commutation

Preset for a forced gas fuelling if necessary, but only in extreme cases.

Automatic commutation at gas exhaustion

On top left a led shows the fuel By red light : petrol running. By green light : gas running

- n. 4 green leds to indicate the gas level.

PRESSURE SENSOR



Differential pressure sensor , in an aluminium cover.

It detects the :

- Positive pressure (Pressure inlet marked with "+"
Gas pressure in the injector)
- Negative pressure (pressure inlet marked with "-" -
Depression on the manifold)

The sensor sends to the ECOgeo3000 central unit the information on the gas physical state, for the necessary injection time variations

Homologation : E20 67R- 010624

E20 110R-000010