

# Mild Hybrid Minibus

5 tons version - 20 seats



Data Sheet

MAIN TECHNICAL FEATURES	
<b>Electric motor</b>	Brushless DC – 5 kW (rated power) 8 kW (max power) – 14 Nm (rated torque) – 24 Nm (max torque)
<b>Motor controller</b>	200 A (maximum current)
<b>Cooling system</b>	Air
<b>Batteries type</b>	Battery Pack LiFePO4
<b>Capacity and performance</b>	3/5 kWh

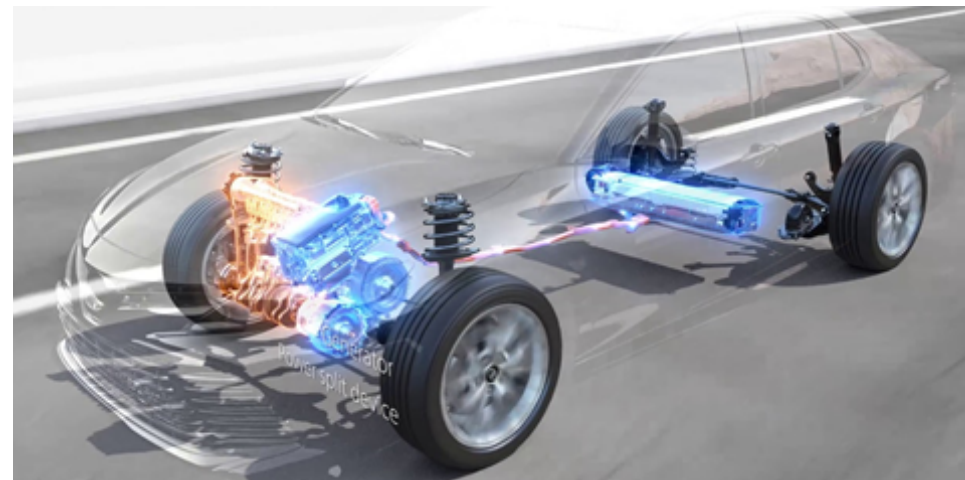
## **THE DRIVE SYSTEM**

The system consists of a few simple elements, which do not significantly and structurally alter the system that gives traction from the thermal engine, which, of course, every hybrid vehicle has.

In detail, a Mild Hybrid hybridization kit consists of the following components:

- Electric motor
- Inverter compliant with the engine
- Battery Pack
- Sensor for acceleration in electric traction
- Battery Management System (BMS)
- Control Unit
- Toothed belt and pulley
- Mechanical component (fixing plate, brackets e supporti)
- Electrical wiring
- Any other business

The most interesting feature of this electric traction system, as mentioned, is that it does not change the operation of the engine, but assists it. This makes the Mild Hybrid kit suitable for any type of vehicle and also perfect for installation at a later stage than the initial production phase, with an aim of hybridization after market. This means that any car can "transform" itself into its corresponding hybrid model, with both thermal and electrical power at the same time, thus taking advantage from the relative benefits: a decrease in consumption and carbon dioxide emissions of about 15-20% (variable as appropriate).



In general, the Mild Hybrid is the simplest technology with which a vehicle can be approved as a hybrid and thus obtain the typical benefits of this classification. Its peculiarity, for which it is called "light hybrid", is the presence of an electric motor that participates actively and constantly in the traction, despite being very small and is powered by a battery, equally small in size.

Like all hybrids, the electric motor also works as a generator; in the phases of deceleration and braking, in fact, it recovers the energy that would otherwise be lost, which is then stored by the battery, placed under the driver's seat and, finally, exploited during the acceleration phase.

When it acts as an electric motor, the Mild Hybrid system provides additional power to the thermal engine on startup, in the standing start or when there is a demand for more torque, or at the most challenging times from the point of view of consumption and emissions.

In acceleration it provides up to 8-12 kW of electric power and 150 Nm of additional torque.





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