

POWER 80

HYBRID MODULE

DESCRIPTION

The hybrid module diesel - electric Power 80 is composed by a 55 kW, Stage V compliant, industrial diesel engine (FPT Industrial F34) and a 25 kW PMSM electric motor. This hybrid module can perform different modes of operation:

- **Full electric** - load is driven only by the electric motor, the diesel engine is uncoupled and switched off (zero emissions mode);
- **Recharging** - load is uncoupled, the diesel engine drives the electric motor, which, acting as an alternator, recharge the battery pack. The inverter makes also possible to plug AC loads (50 or 60 Hz);
- **Working & Recharging** - load is driven by the diesel engine, which also engages the coupled electric motor, this one, acting as an alternator, recharge the battery pack. The inverter makes also possible to plug AC loads (50 or 60 Hz);
- **Booster** - load is driven by the diesel engine and the electric motor simultaneously, achieving 480 Nm as total torque and 80 kW as total power on the shaft.

With the Power 80 it's possible to use the combustion engine without the SCR system, achieving 80 kW of total power and also having the possibility to work with zero emissions. SAE 3 11 " ½ interface allows the connection with the standard loads (oleodynamic pumps, clutches, etc.).

ELECTRIC MOTOR

Type: Permanent magnets, synchronous, 12 poles

Rated power: 25 [kW]

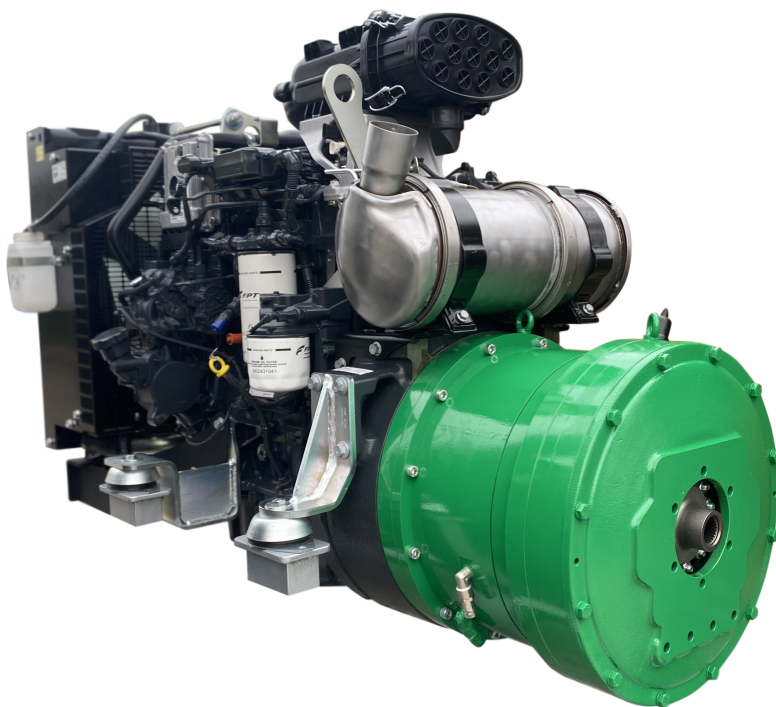
Rated torque: 160 [Nm]

Rated current: 255 [A]

Nominal speed: 1500 [RPM]

Ingress protection code: IP54

Cooling system: Liquid (min. 15L/min)



DIESEL ENGINE

Name: FPT Industrial F34 Stage V

Architecture: in-line 4 cylinder engine

Injection System: common rail 1600 [bar]

Air handling: wg

Valves per cylinder: 2

Displacement: 3.4 l

Bore per stroke: 99x110 mm

Max power: 55 kW [74 HP] @ 2200 rpm

Max torque: 318 Nm @ 1400 rpm

Dimensions L x W x H: 714 x 601 x 852 mm

Service interval: 6000 hours

ATS: ecEGR-DOC-DPF

BATTERY PACK

Type: LiNMC with BMS

Rated voltage (range): 100 V DC (76.8 – 100.8 V DC)

Capacity: 148 Ah (20 kWh)

Charging standard/fast: 100 A (0.5 C) / 200 A (1 C)

Discharging standard/fast/peak: 100 A (0.5 C) / 270 A (1.35 C) / 400 A (2 C)

Operating temperature -20 to 60 °C

Life cycles: > 2000 (80 % DOD)

Ingress protection code: IP64

Dimensions L x W x H: 1158 x 310 x 330 mm

Weight: 180 kg

