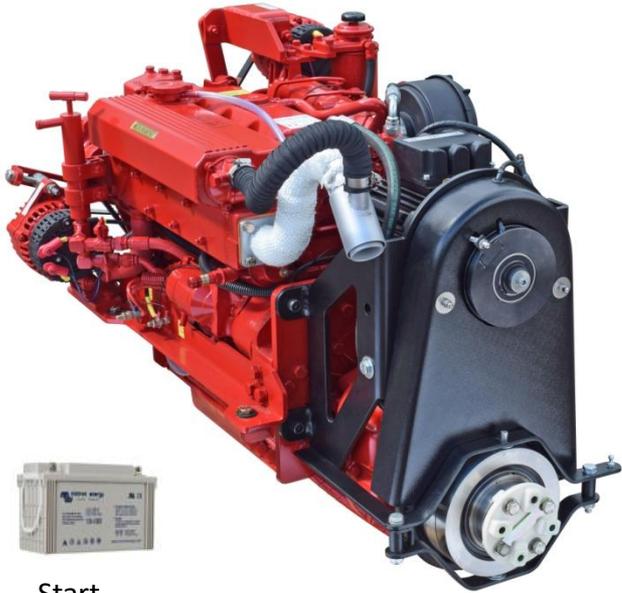


Catamaran (or twin shaft) Parallel / Serial Hybrid system

Port

Beta 20 to 105



Start Battery



Hybrid Controller



Optional shaft clutch



Washing machine,
dishwasher,
oven, airconditioning,
coffee maker etc)



Inverter/Charger

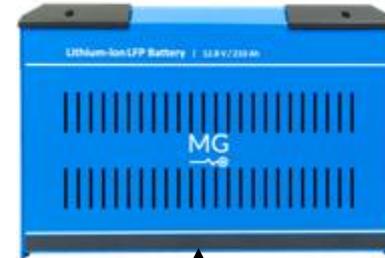
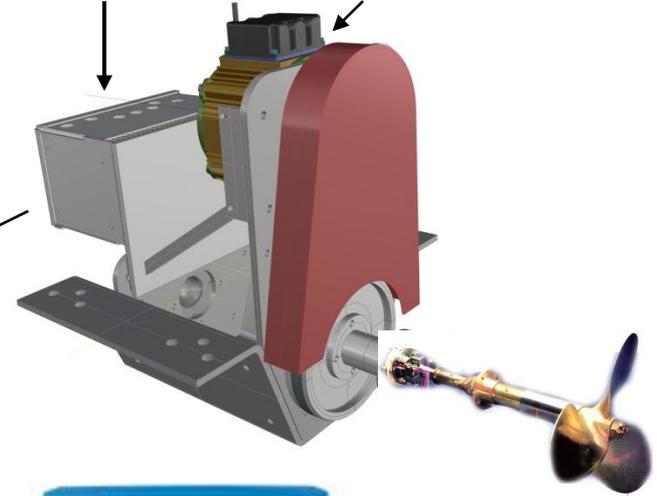
DC/DC
48/12V



Shore Power

Hybrid Controller

Motor /Generator



48V Bus

Battery bank

Catamaran (or twin shaft) Parallel / Serial Hybrid system

- Twin shaft hybrid system
- Provides propulsion on two shafts and a 5kW generator, all from **one** engine
- First hull has a reliable Parallel hybrid configuration (engine sized from 20hp to 60hp)
- Second hull has an electric motor driven from batteries and/or the Parallel hybrid.
- With the first hull under engine drive the parallel hybrid generates electric power that can be used to charge your batteries or drive the electric motor in the second hull.
- With charge in your batteries you can turn the engine off and use clean / quiet electric drive
- When under sail you can regenerate power from the spinning propellers.
- Solar panels and wind generator can help to charge the battery bank
- High capacity battery bank can be used, via an inverter, to power any mains appliances (air-conditioning, electric hobs , washing machines etc)
- Excellent manoeuvrability in harbour with the twin electric motors.
- Optional shaft clutch on Parallel hybrid to disconnect propeller and provide stand alone generator function when in harbour or at anchor.
- Replaces a typical installation of twin engines & generator with **one** engine.
- Parallel hybrid maintains a reliable direct mechanical connection to the shaft
- Multiple redundancy. If engine fails you can use electric drive in either hull, if electric's fail you still have direct drive from the engine to one propeller.

Replaces a typical installation of twin engines & generator with **one** engine at a **lower** cost !.