

Advance Yacht Hybrid Power

Seamless Efficient Power Generation and Management

Advance Yacht Systems have been supplying and installing Hybrid power generation and management systems for many years. Our own test boat has been demonstrating and proving the value of these hybrid systems for over 6 years.

What is a Hybrid system?

Hybrid systems are those that have more than one type of power generation and usually have a method of storing surplus energy. The primary generator output is mains (230VAC) and the stored energy is created by charging a battery bank (the domestic battery bank). The secondary power generation is usually DC power from the engine alternator and maybe renewables in the form of solar panels and/or a wind generator, charging the same battery bank.

The stored energy is used directly as DC power to power lights and pumps as normal, but also supplies the inverter to create 230VAC. Normally, this inverted 230VAC supply would only be available as an alternative source of 230VAC when the generator is not running. In our case the system has a special feature; the inverted 230VAC can be added to the generator 230VAC (or shore power) to create a supply larger than the generator or inverter alone. This is ideal for short periods of high demand which would normally require the use of a bigger generator. A big generator may not fit or would spend most of its life running at a low load which is not good, however more importantly, it would not be as efficient as a hybrid system.

The key component is the Studer Xtender charger/inverter, as it can parallel (join together) the output of the generator with the inverted output of the domestic batteries. As an example, on our boat, we have a Paguro 4000 working in combination with a Studer Xtender 3000 and a 400Ah AGM battery bank, giving us continuous 4kVA and temporary delivery of 7kVA.

The Advance Yacht Hybrid System

