



Mobilität
clean. compact. silent.

The noiseless generator for houseboats and yachts.

The challenge

The power demand on board of boats and yachts is continuously increasing: cell phones, computers, refrigerators and even air conditioning systems – a multitude of electrical devices require a dependable power supply. In many cases, food is also prepared electrically to avoid the use of gas. All these factors push batteries on board to their limits. To become completely independent of shore-side electricity or a running engine, an independent source of energy is needed.

Previous solution

In most cases, a battery bank covers the day-to-day power demand on board. As soon as the batteries reach a critical level, they must be recharged. Particularly in sunny regions, solar panels can perform this task silently while requiring little maintenance. However, a significant amount of PV panels needs to be installed. To generate a noticeable energy output and performance is always dependent on the weather conditions. For this reason, a generator has become indispensable on most boats. But even with the best sound insulation, it causes noise and noticeable vibrations – disturbing the silence for hours. Depending on the wind direction, boat passengers are also confronted with unpleasant exhaust fumes.

Power consumption

Sample calculation to determine the daily energy demand on board of a small sailing yacht.

	Power [W]	Runtime [h/day]
Navigation	20	8
Communication	10	8
Fridge	50	8
Radio equipment	40	3
Nav. light	25	8
Interior lighting (6 x 20 W)	120	2
Other	200	3
Consumption per day (kWh)		1.8

replacing
diesel generators.
with SIQENS
fuel cells.

The SIQENS solution

The SIQENS Ecoport 800 is based on our patented fuel cell technology. As a fully automatic battery charger it can be easily integrated in mobile applications. Supply gaps from photovoltaic and wind systems can thus be covered reliably and batteries can be considerably reduced in size.

The hydrogen required for energy generation is obtained from liquid methanol: an energy carrier that is globally available at low cost – regardless of the expansion of the hydrogen infrastructure. You and your customers benefit from a clean, compact, and silent system – while making a decisive contribution to reducing global carbon emissions. In short: a sustainable and economical solution that meets the challenges of the 21st century.



clean.

Minimizes carbon emissions and eliminates toxic fumes



compact.

Reduces battery systems in size



silent.

Protects employees, residents and nature

SIQENS

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SIQENS Ecoport 800 to provide power on a sailing yacht

Daily power consumption of 1.8 kWh

Energy source	3 kW Generator	SIQENS Ecoport 800
Battery	4 kWh AGM	4 kWh AGM
Operating data		
Fuel	Diesel	Methanol
Runtime [per day]	2.9 h	4.5 h
Consumption [per day]	2.6 l	1.3 l
Autonomy*	< 10 days	> 19 days

*Time of autonomy with a 25 l fuel reservoir

>50%

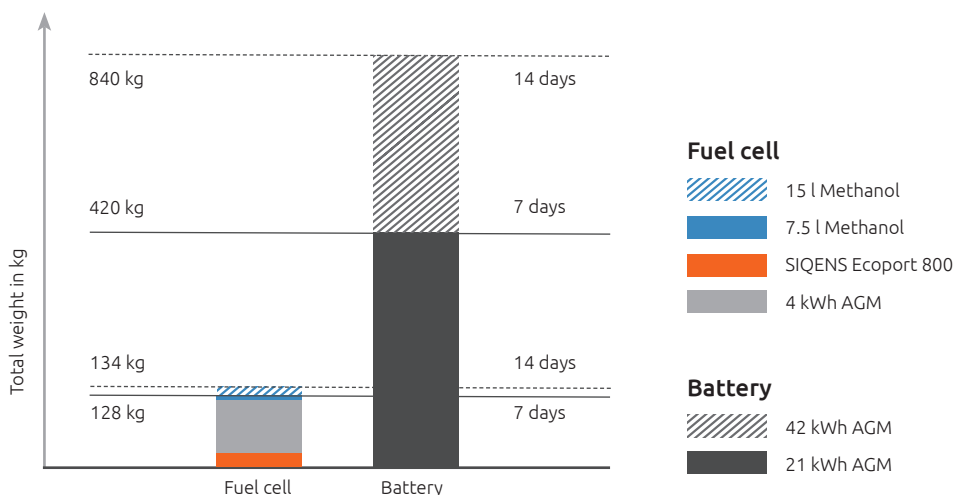
reduced fuel consumption doubles the time of autonomy

No

emission of toxic fumes and noise while reducing your carbon footprint

Total weight comparison

Fuel cell vs. complete battery solution at 7 days (14 days) time of autonomy



The SIQENS Ecoport 800 supplies batteries silently and automatically with power, eliminating toxic and odorous exhaust gases such as particulates and nitrogen oxides. Switch conditions can be configured individually to prioritize other sources of energy such as solar panels or the engine alternator.

Whether you are (re-) designing a boat or searching for low-emission alternatives to existing diesel generators as an integrator: simple installation and operation with liquid methanol make the system a user-friendly companion on board.

clean.
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