

PRODUCT INFORMATION SHEET
Hydrogen Range Extender

REXH₂

From 70 kW to 1 MW



THE ON-BOARD SOLUTION FOR
ZERO-EMISSION NAVIGATION

With the REXH₂ and its record
energy density, enjoy tomorrow's
technology now.

 EODDev

Ecological and Designed for the Planet

The solution providing you with emission-free onboard energy, both at sea and at anchor.

Optimized for your
Energy Needs



Proven technology

«Plug & Play» solution

Compact design and light weight

Complete modularity

Zero emissions

Quick refueling

No noise pollution

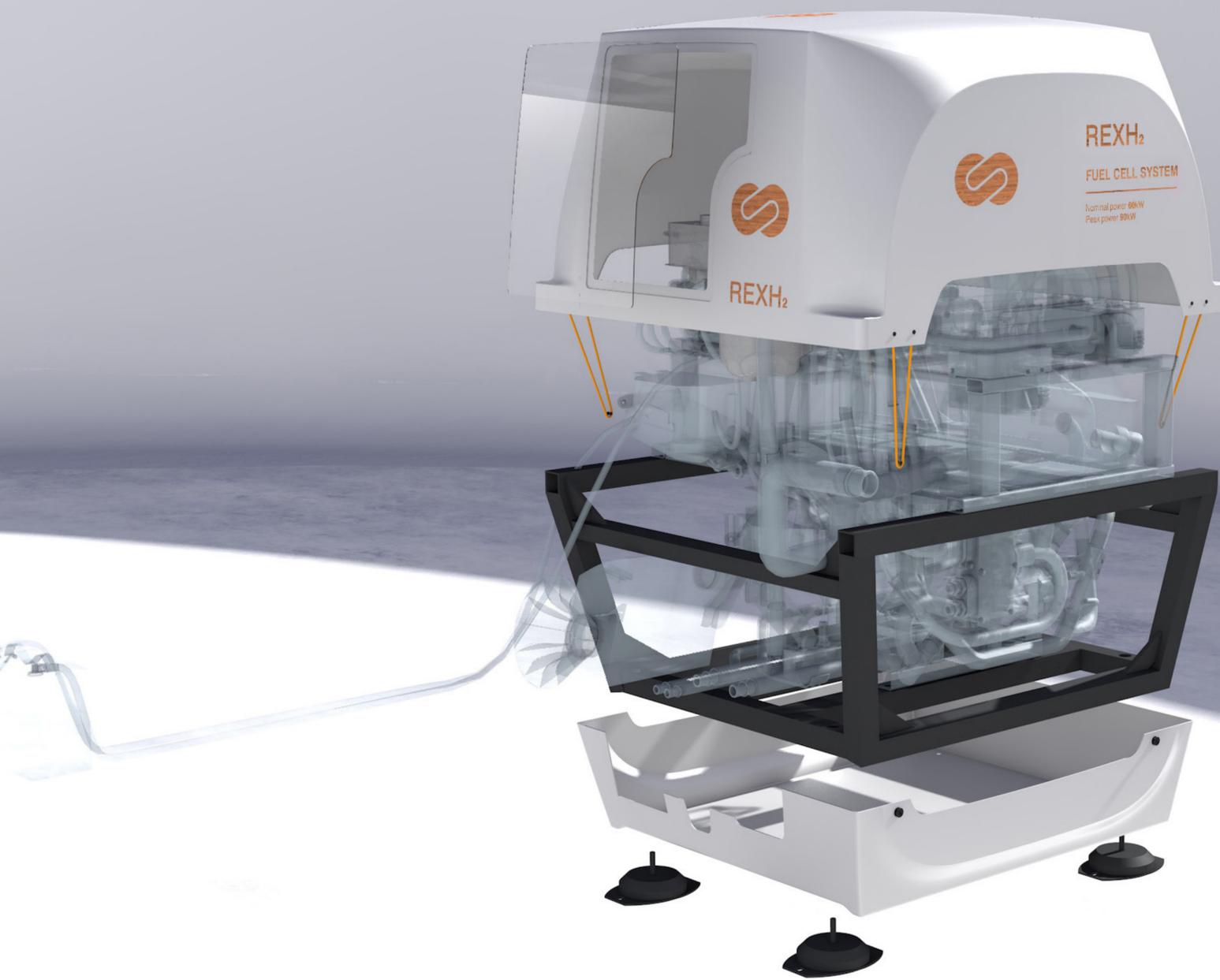
No minimum power required

Data monitoring

Instant start

Predictive and simplified maintenance

Optimized consumption and efficiency



REXH₂ Specifications

Performances

Power	From 80kW to 1MW
Life span	20 000 hours
Output voltage	± 600 V DC
Full power can be maintained over several hours	

Special Features

- No clogging
- No moving parts
- Possibility to stack up to 10 units
- Integrated H₂ safety management
- Compact

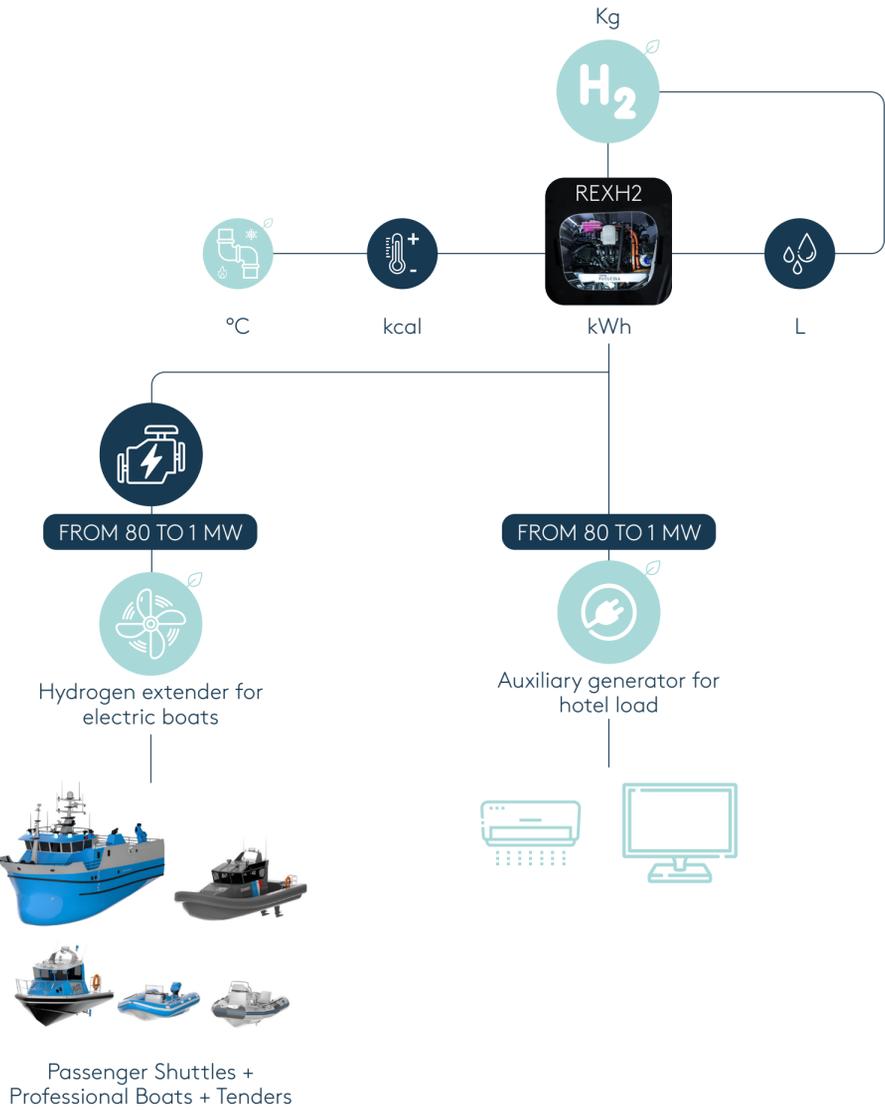
Integration

Complete ready-to-use system	
Size	100 cm x 100 cm x 100 cm
Weight	400 Kg (incl. Frame)
Power Management System included	

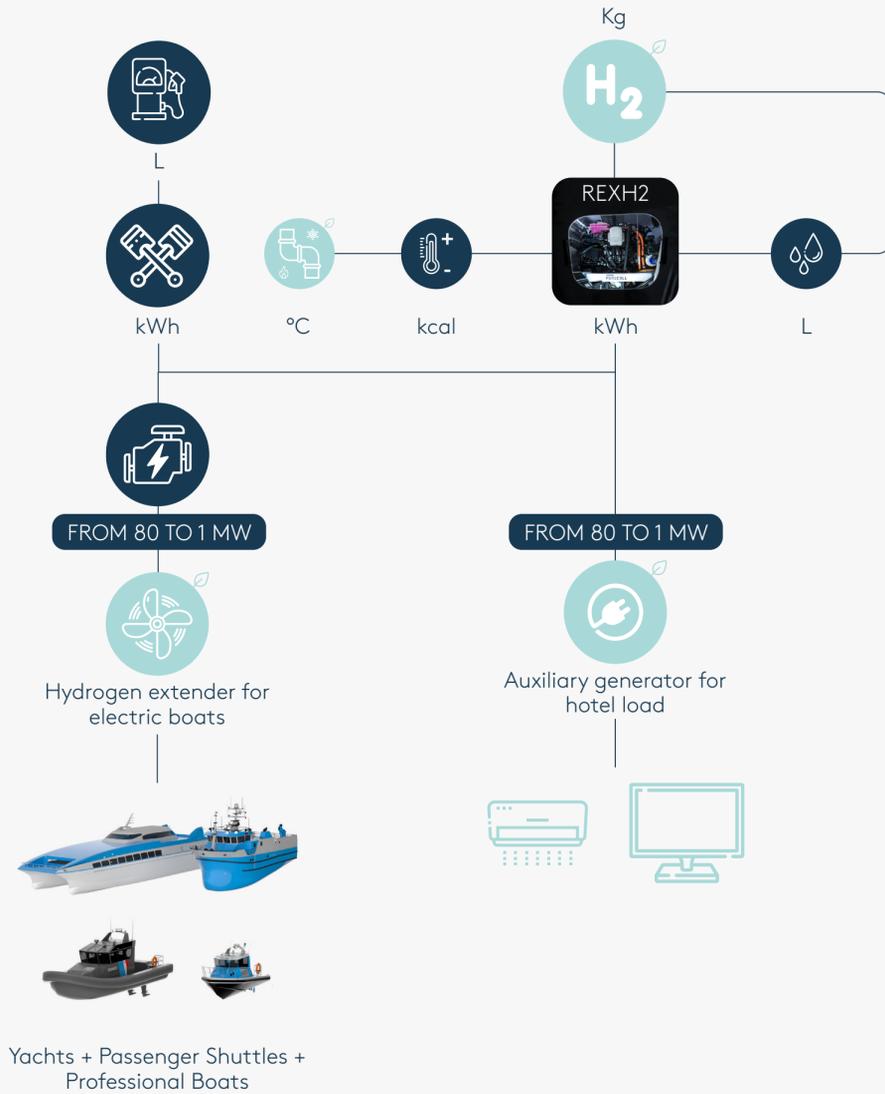


Custom-Made Solutions

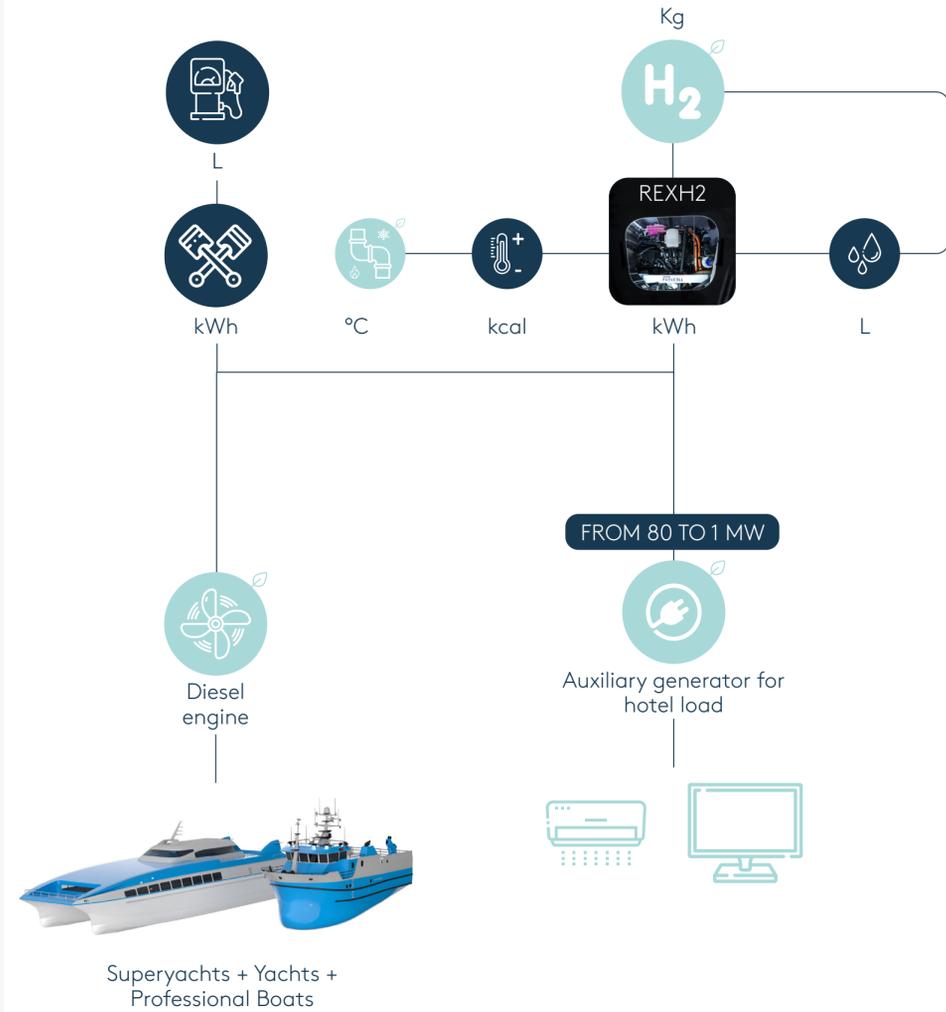
1 Hybridization H₂ - Electrical



2 Hybridization H₂ Diesel-Electrical



3 Hotel Load



Applications of the REXH₂

Yachting

Propulsion et Systems

Hotel load

All navigation zones

USER PROFILE

Medium to fast speeds

Short distances

Profile: Tenders, Day-Boats

CONFIGURATION

H₂ alone or coupled with photovoltaic panels

Pleasure Boating

Systems and hotel load

Port manoeuvres

Propulsion in protected areas

USER PROFILE

Slow to medium speed

Medium range

Yachts, Superyachts...

CONFIGURATION

Customized configuration

Professionals

Propulsion et Systems

Hotel load

All navigation zones

USER PROFILE

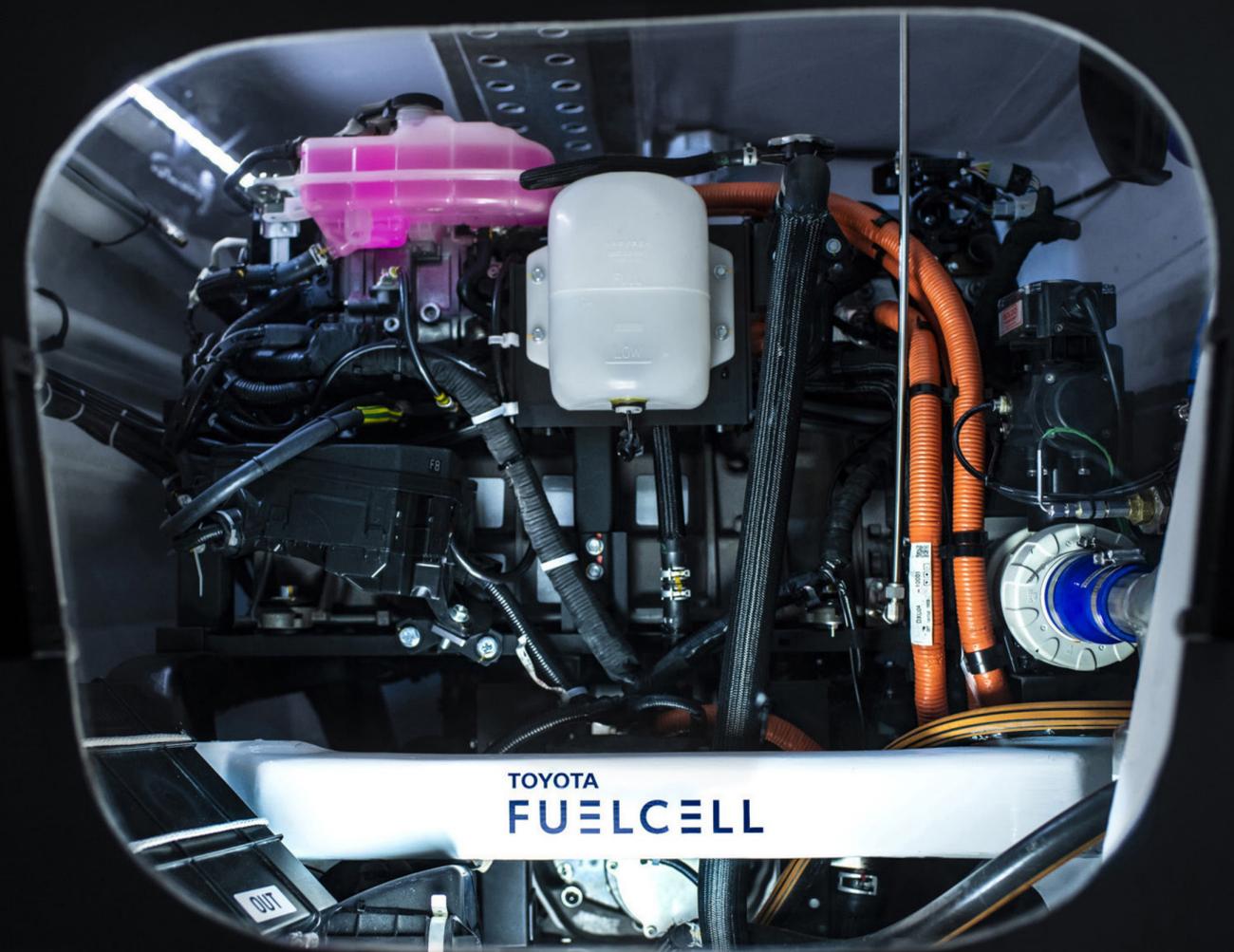
Slow speed

Regular/recurrent routes

Shuttles, Barge, Pilot boats...

CONFIGURATION

H₂ alone or coupled with solar panels/wind



Key Performance Indicators (KPIs)

100 kW 6 hours of navigation	Diesel	Electrical	Hydrogen
Environmental efficiency			
Emissions	CO ₂ NO _x		H ₂ O
Access to protected zones	No	Yes	Yes
Noise			
Recharging / Refueling time	10 min	15h (Fast recharging)	10 min
Consumption	200 L diesel	700 kWh electricity	40 kg hydrogen
Weight (engine + fuel / energy source)			
Total volume			
Implementation cost			
Energy cost			
Energy cost evolution			
Energy density	+++	+	++++

H₂ + Battery vs. Battery Alone



Twice as much energy storage capacity for the same volume

Potential of 10,000 cycles compared to 3,000 for a Li-ion battery

Hydrogen refueling time as fast as filling up a tank with traditional fuel

Mass : 7 times lighter

Price : 3 times less expensive

Price per kWh roughly equal to diesel price

Customized support for your projects

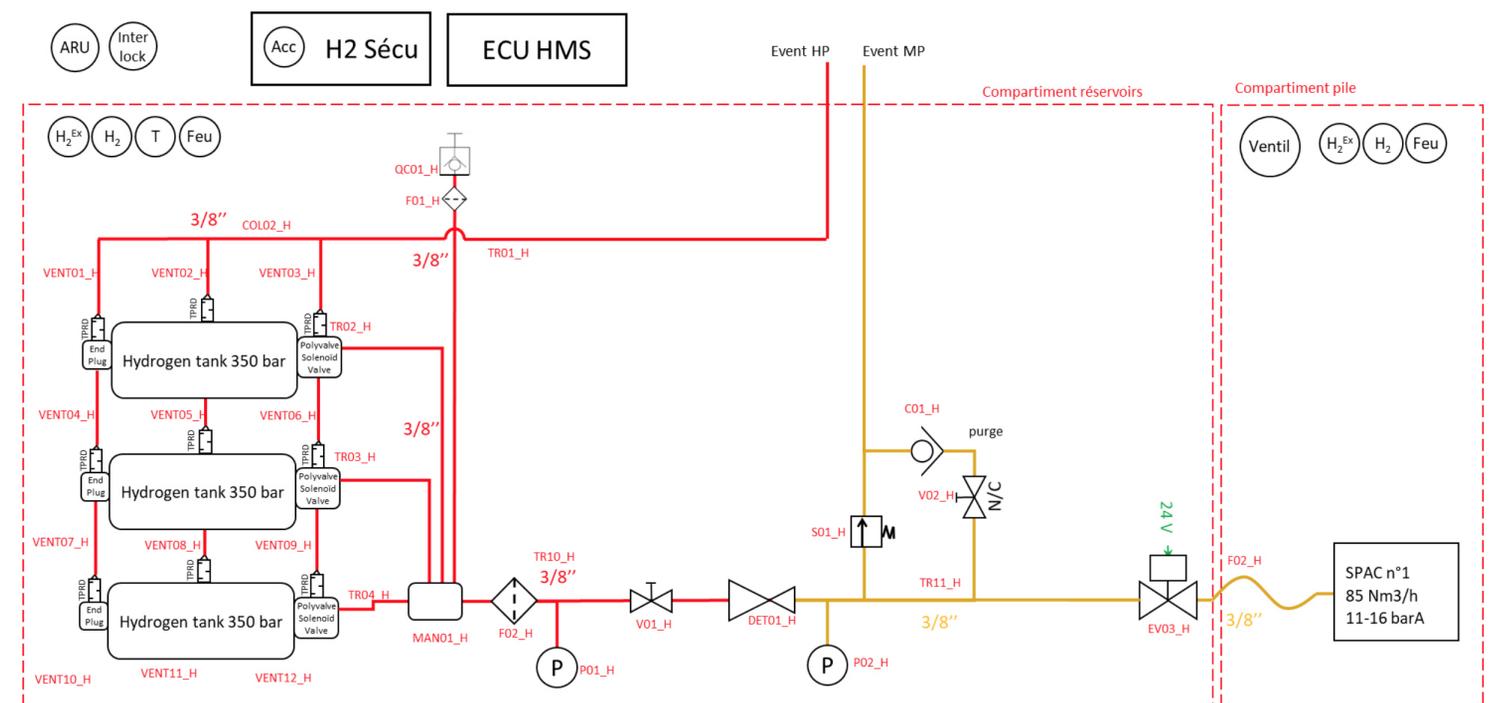
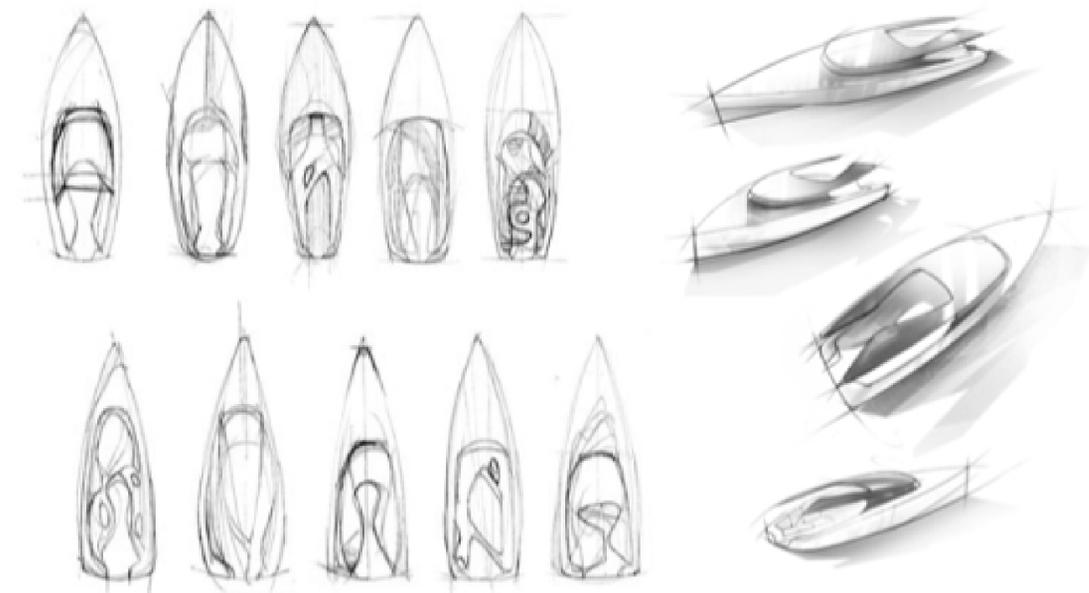
Thanks to Energy Designer, our energy consulting department, each specification is studied in details and tailor-made solutions are developed in close collaboration with you.

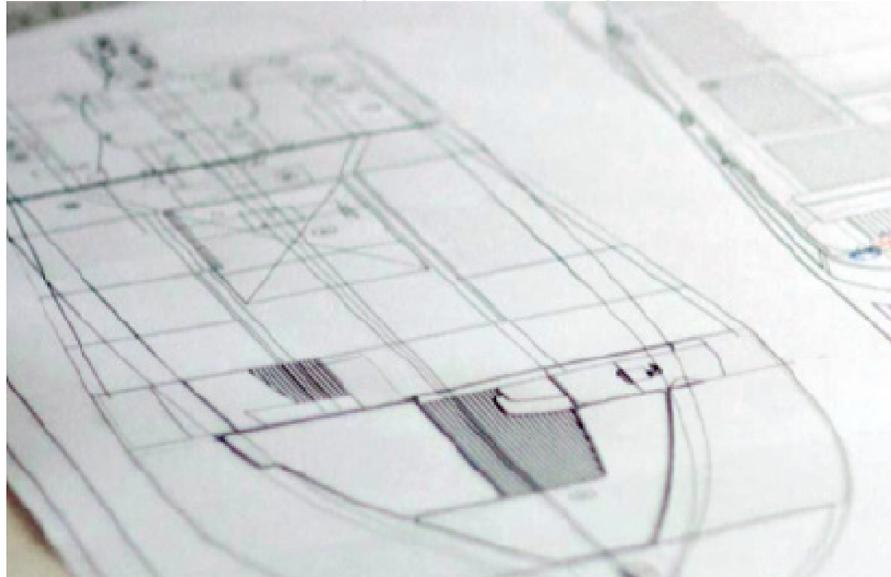
Feasibility studies

Recommendations according to use profile(s)

System sizing: Fuel cell (FC), tanks

Regulatory support and certification





1 By using it on a yacht, customers have the possibility to reach and stay in a zero-emission zone, without noise, without emissions, while enjoying the normal comfort of the boat in total respect for the environment. >>

TRUE

If you convert diesel engines to electric ones on large boats, they can be propelled by the use of solar panels, REXH₂(s), and batteries. As a result, there will be no noise, no emissions, and total environmental respect.

2 A hydrogen boat can function without hydrogen where it is needed. >>

TRUE

In the absence of hydrogen, the boat can indeed only run on batteries, both for propulsion and for hotel load. However, its autonomy will be limited depending on the possibilities of refueling hydrogen and/or recharging its batteries.

3 We offer a yacht capable of living emission-free when not in use: when only the crew is on board, in a port, thanks to the use of solar panels. No unnecessary pollution. >>

UNTRUE

If you install solar panels on the entire boat, their daily production will, on average, only cover about 20% of the crew's needs.

4 Diesel-electric propulsions allow a fuel consumption saving of roughly 30%. >>

UNTRUE

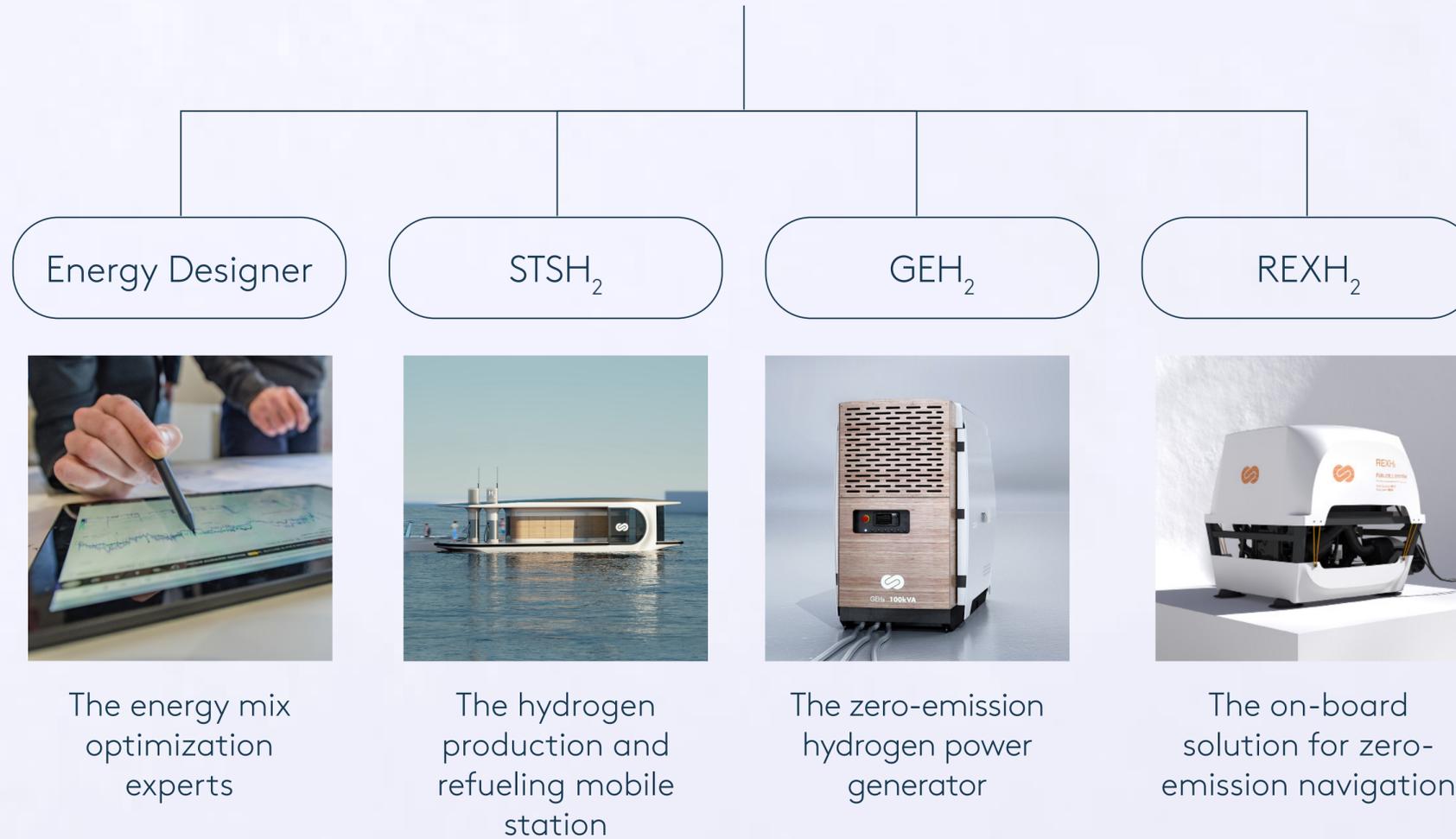
For equivalent performance, the gain in diesel fuel consumption in a diesel-electric system is actually quite limited - unless you optimize the use of an electric system by combining it with an H₂ system in order to drastically reduce its diesel fuel consumption.

5 A boat equipped with a H₂ system does not generate its own hydrogen. >>

UNTRUE

By taking an electrolyser on board and with an access to a source of electricity, for instance via a plug in a port, a boat can produce its own hydrogen. But it can also have its hydrogen delivered. H₂ stations are currently being deployed in several ports.

EODev



FOR MORE INFORMATION

www.eo.dev

business@eo.dev