Swiss Sustainable Yachts

AQUON One Catamaran

Sustainable Yachting with Hydrogen Propulsion

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Who we are
Team of international experts

Please note: for organizational reasons, not all team members are represented with a picture yet
First-ever Recreational Hydrogen Yacht: AQUON One

The Energy System

**SOLAR ENERGY**
PV Panels
Photovoltaic panels convert sunlight into electricity

**HYDROGEN GENERATION**
Electrolyser + Compressor
Excess energy on board is used to convert pure water into hydrogen (H2 gas), which is then compressed

**HYDROGEN ENERGY STORAGE**
Carbon Tanks
The compressed hydrogen gas is filled in lightweight carbon tanks as long-term energy storage on board

**SHORT-TERM ENERGY STORAGE**
Li Ion Batteries
Short-term, electricity is stored in small batteries or used for propulsion and on-board energy usage

**BOAT PROPULSION**
Electric Engines

**ELECTRICITY PRODUCTION**
Fuel Cells
Fuel cells convert hydrogen back to electricity, which can in turn be used to power the electric engine or appliances. The only emissions are pure water and thermal heat used to cover on-board hot water supply and heating
Solar panels

Hydrogen energy storage

Automated shading of windows

Smart energy management system

Silent engine

Zero emission propulsion

Optimized hull

Sustainable materials

Smart energy management system

Sustainable materials
Benefits
Related to the Energy System

Independence
AQUON produces its own energy on board from sunlight and stores it as green hydrogen, gaining independence from shore and potential self-sufficiency.

Cruising Range
Hydrogen is lighter than fossil fuels or batteries and has a higher energy density, allowing for a longer cruising range at cruising speed of 8 knots.

Comfort & Time
There are no emissions, no vibrations and no noise caused by the electric propulsion, allowing a smoother cruising experience.

Optimum Cruising Speed
At 6 knots, AQUON One is going faster (and further) than pure battery-electric propelled ships of comparable size (~ 4 knots).

Synergies
Heat produced in fuel cell can be used for hot water on board.

Sustainability
Green H₂ is produced from sunlight. Its use in propulsion is zero-emissions, allowing for* carbon-neutral yachting and complying with any future Emission Control regulation.

Space
The energy system is compact, and the H₂-tanks are stored in-between the hulls, freeing up more space under deck.

Less Maintenance
With less components, the energy system allows for a comparably lower level of maintenance.

* Depends on user behavior: AQUON One is most efficient at a speed of 6-8 knots with the potential to complete self-sufficiency at zero-emissions. At faster speeds /longer cruising durations, the yacht may need to refuel hydrogen externally, or plug into land power to generate hydrogen itself.

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Questions?
Thank you!

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