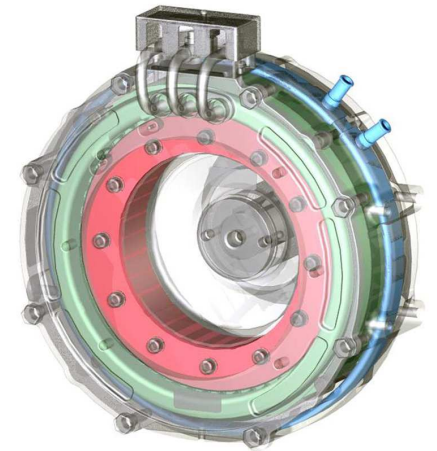
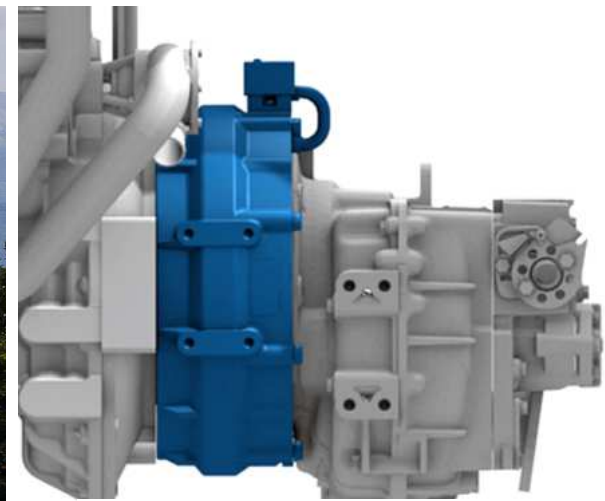
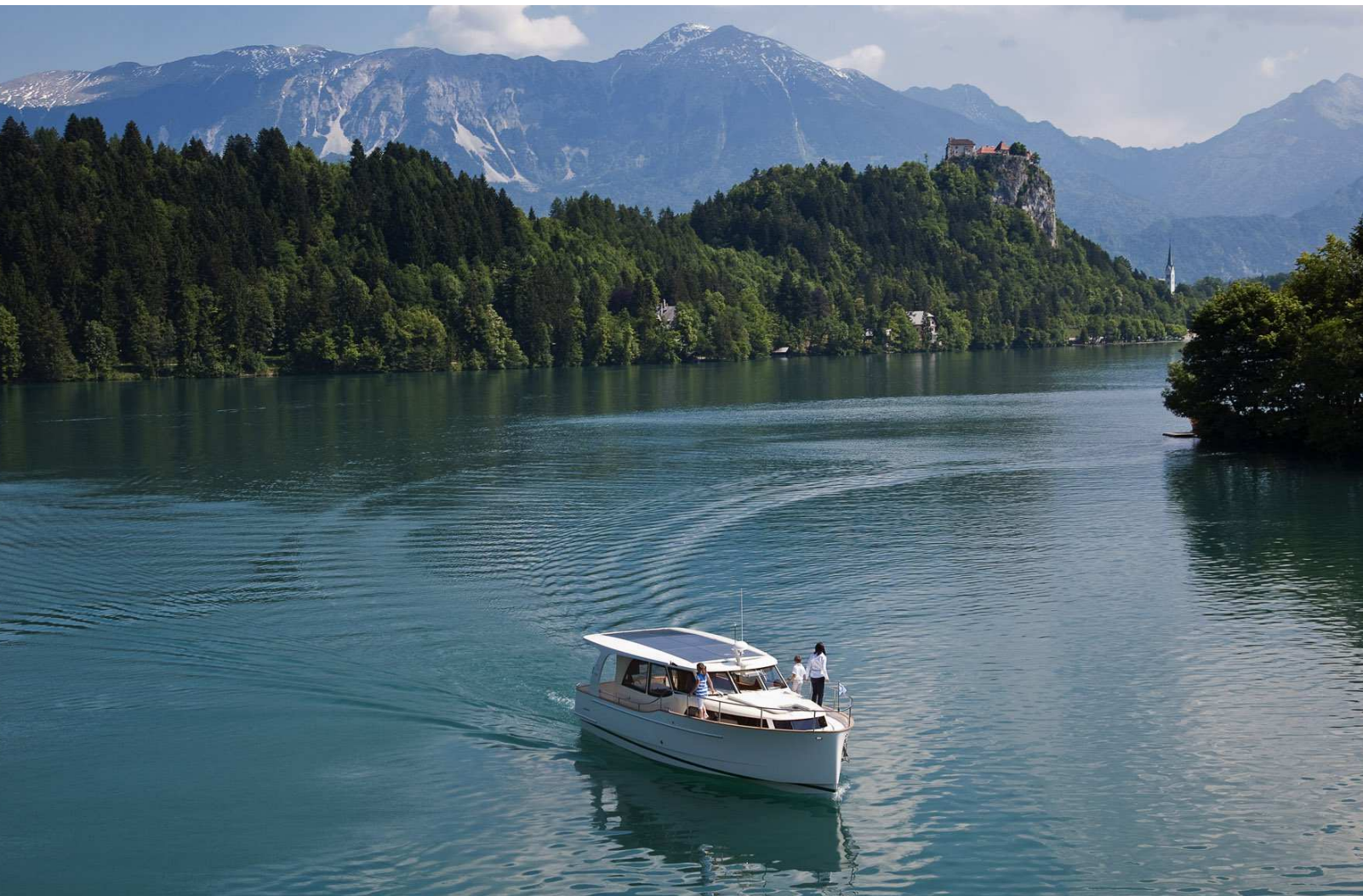


# Hybrid System

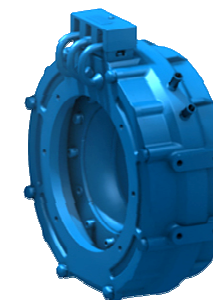


## The Nanni Hybrid System « The sound of silence »

### The ecological choice for a peaceful and respectful boating experience

Nanni has been developing and testing the Nanni Hybrid System for over three years. An innovation for which Nanni was granted the INPI innovation award. On the market since 2009, it is now used with OEM builders and now available with Nanni engines from 30hp to 200 hp and up to 350hp.

The application field has been broadened, allowing the repowering of older and traditional motor or sailing vessels with hybrid technology.



### The Nanni Hybrid System is easy to install:

The Power Unit, positioned between the engine and the gearbox or saildrive, is only 125 mm thick and weighs 35 kg.

The Control Unit is 58 cm long and can be attached near the engine room.

### The Nanni Hybrid System offers a large choice of applications:

- Navigation in restricted areas or natural parks
- Cruising with discretion allowing the safety and reliability of a diesel engine in case of strong wind or current, or for port manoeuvring
- Fast access to fishing areas in thermal mode and quiet trawling for fishing

## Main benefits

**Thermal propulsion mode**, when the diesel engine is running ; for high speed travel, safety when the sea conditions and wind are harsh and for longer journeys.

**Electric propulsion mode**, with a power up to 7 kW at 48 V DC provided by the energy stored in the batteries for navigating in silence with "zero emission".

## The Nanni hybrid system offers four different functions all controllable via a single panel.

**Generator mode**, when the diesel engine is running, this function can be selected independently of the thermal propulsion or concurrently. The batteries can also be charged via a shorepower plug for an all-electric-mode.

**Regenerating mode** for sailing yachts; under sails and with the pressure of the water, the propeller can drive the Electric Power Unit which then recharges the batteries while the engine is stopped and stays disconnected.



The Nanni solution is a parallel hybrid system (in line with the diesel engine) including

- The Electric Power Unit, the system's "muscle" : The electric motor, reversible into a generator, intercalated between the diesel engine flywheel and the transmission(gearbox or saildrive).
- The Hybrid Control Unit, the "brain" of the system: for both propulsion and battery charging management.



## A well thought out technology



Emphasis has been placed on simplicity and safety of use.

Acceleration control and switching between electric and thermal propulsion is simplified through a single lever control unit.

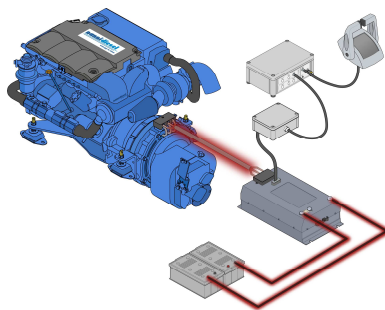
In electric mode, onboard energy consumption can be followed in real time thanks to a meter integrated in the control panel.

The Nanni Hybrid System is a unique way to experience a new sailing lifestyle. Comfort and safety are guaranteed by the conventional engine, always available as a backup.

With the Nanni Hybrid System you will be saving costs, energy as well as the environment. While navigating at lower speeds, the Nanni Hybrid System has a surprising autonomy, even with only a moderately sized battery bank installed.

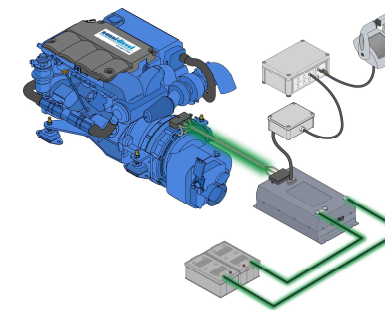
### In thermal propulsion mode

The thermal engine drives the propeller and the generator to recharge the batteries.



### In electric propulsion mode

The thermal engine is stopped, the vessel's propulsion is provided by the Electric Power Unit using the energy stored in the batteries.





Rediscover the sea, reach a feeling of calmness and freedom yet inexperienced





## A Vision, *Energy in Blue*

The Lady of the Sea, the One who accompanies sailors,  
inspires the *Energy in Blue*, blue like the sea, the sky,  
and our Blue Planet.

This Energy drives Nanni to excel in providing the best  
and purest solutions for marine propulsion, out of the  
most advanced automotive and industrial technologies.



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