



## GREENLINE 40 HYBRID

THE FUTURE IS NOW.





Greenline 40 Hybrid is a development of her smaller sister, the Greenline 33 Hybrid.

Introduced in September 2009 the Greenline 33 found over 200 owners throughout the world in the first eighteen months of production. She has won numerous awards, has been highly acclaimed by the boating community and professional press, and is the world's best seller in the 10 m size for two consecutive years.

Greenline 40 Hybrid was designed as a larger yacht with the same philosophy: A low-drag energy saving Superdisplacement® hull coupled with hybrid (diesel/electric) and solar technology brings unique efficiency in use of natural resources and your financial assets at purchase and during the use of this motoryacht.

With her great ease of handling, unmatched safety and seaworthiness this boat provides you with the comforts of your home for lasting well-being on board.



PROTECTING THE ENVIRONMENT - AND  
YOURSELF - SAILING WITHOUT SMOKE, NOISE OR  
WAVES IN THE ELECTRIC MODE AND DRASTICALLY  
REDUCING THE AMOUNT OF FOSSIL FUEL USED  
DURING A BOATING SEASON.



## GREENLINE HYBRID CONCEPT

Sustainable future is our common goal: Greenline was conceived to make a major step in that direction. At the same time the design objective was to offer more well-being, ease of handling and boating fun than any comparable boat.

To achieve that we had to come with important improvements and innovation in 3 areas:

- A new hull design with less resistance and better handling and sea-keeping abilities,
- New build technology which makes the yacht lighter and stronger to further increase energy efficiency and performance,
- New hybrid (diesel/electric) propulsion system and a sustainable provision of AC electric power on board.

Designed and built by people who arguably know more about design, engineering and manufacturing of production yachts than anybody else in the world, Greenline Hybrid was instantly recognized as the shape of things to come in powerboating.

The ability to cruise without exhaust fumes, noiselessly and with no wake will change the way boating is enjoyed by boaters, how it is perceived by the community and how boating affects the environment.

Greenline 40 Hybrid offers reduced running costs and a drastic reduction of the carbon emission footprint of a boating family.

## SUPERDISPLACEMENT HULL

Greenline's patented Superdisplacement® hull shape generates less drag, creates the ability to use less fuel, generates lower CO<sub>2</sub> emissions, and enables the use of (limited) electric power. This hull geometry produces less wake, offers better seaworthiness and easier handling than any comparable hull.

The hulls are outstandingly efficient throughout their speed range, bringing unbeatable mileage and range of over 500 nautical miles at a speed of 7 knots. This, combined with a top speed up to 22 knots, makes long day trips a breeze.

The reduced energy requirement means less running cost, less refueling stops and more time in your favorite anchorage or cruising archipelago.

The electric drive mode will not only allow for cruising in complete silence at speeds of up to 6 knots, but also offer a range of up to 20 nautical miles, before the diesel motor is required.

The revolutionary Superdisplacement® hull uses two sacrificial stabilizers to achieve unmatched anti-roll and tracking stability. It gives a comfortable and safe ride in all weather conditions and easily handles seas from all directions.

Greenline 40 Hybrid will take to the world's most attractive cruising areas – be it inland waterways, lakes, inshore waters or offshore islands – in comfort and safety.





## HYBRID TECHNOLOGY

Greenline 40 Hybrid can collect, store and use electrical energy from the sun, from the shore pick-up or from the main engine driven generator. With a solar array and a Hybrid drive electric unit the yacht is a mobile power station providing a constant supply of AC power (230 or 120V) on board.

The elements of the reliable, simple and user-friendly Greenline Hybrid system (patented) are:

- A single switch to choose between the 2 drive modes – Diesel and Electric
- A modern Cummins/MerCruiser diesel engine manufactured by Volkswagen
- A fully electronically managed and maintenance-free electric motor/generator (7 kW in drive mode and 5 kW in generator mode)
- A hydraulically operated clutch between the diesel engine and the electric motor/generator
- A 3 or 5 kW inverter/charger delivering AC 230 or 120V power at all times
- A 1,3 kW solar array delivering green electric power to the batteries during daytime. No cost and emission-free sailing is possible at low speed
- A Lithium battery array (same as the one driving your mobile phone or laptop computer) with a capacity of 23 kWh (double motorization). Lightweight and compact (seven times lighter

and one third of lead battery size) these batteries are rated at thousands of cycles. With a life expectancy of 10 years they represent the best choice for a hybrid boat.

## LIGHT, STRONG AND GREEN

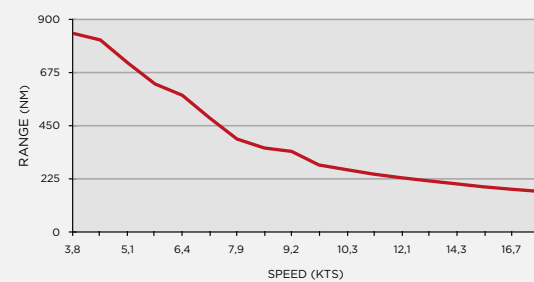
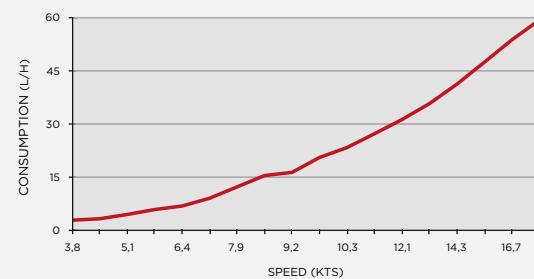
To make any moving object energy efficient the most advanced materials and technologies available must be used. To build the Greenline 40 Hybrid light and strong we use epoxy-based vinylester resin with biaxial and quadraxial fibers using a vacuum-infusion technique. 50% glass fiber content is achieved (with associated strength and lightness) and this method is fully enclosed, protecting workers and the environment from gaseous emissions.

No other production powerboat or yacht is built to this high technology specification and impeccable environmental standards. While tedious, time and money consuming, this is the only way to make the Greenline concept really shine.

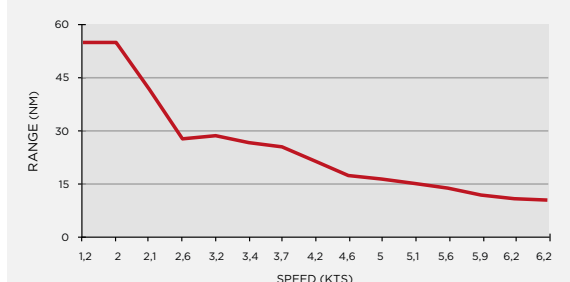
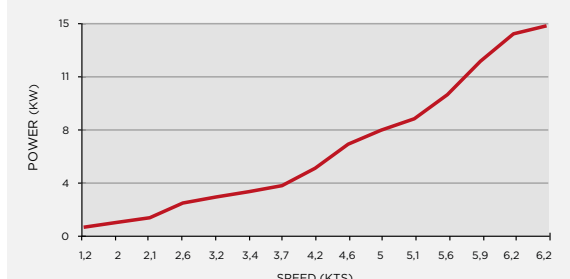
The stringers and liners are built in lightweight composite materials and chemically bonded to the hull and the deck. All composite parts come from computer-milled plugs and molds to ensure industry- best tolerances and build precision. Based on all-3D design and engineering using aerospace standard CATIA software Greenline 40 Hybrid is in her design, engineering and build technology probably the most advanced yacht in the industry.

This state-of-the-art product offers great performance, reliability and user friendliness at incredible value for money.

DIESEL 2 X 150 HP (2 X 111 KW)



ELECTRIC 2 X 7 KW





## HOME SWEET HOME

Greenline 40 Hybrid redefines boating. The level of well-being at anchor or at sea was brought to a new dimension. Comfort of moving around with ease, excellent visibility, ambient light and ample ventilation in all areas are well above expectations.

The vast cockpit, further enlarged by a remotely controlled opening transom platform is seamlessly connected to the salon area by an opening aft enclosure.

The galley is equipped with home appliances to domestic standards and can equally serve the salon or cockpit dining areas. Extended glass surfaces throughout bring panoramic vistas and connection to the outer world. At the same time the extended cabin roof gives full protection from the sun, rain or wind. An optional canvas cover enlarges the living space in colder seasons.

Wide sidedecks make moving around and maneuvering simple, safe and fast. The side door at the helm station enables good communication and fast access to the deck, as well as excellent additional ventilation.

The electrically operated sliding salon roof brings in sun, air and feeling of an open boat when needed. AC 230 or 120V power at all times enable extensive use of domestic appliances which can be brought from home, or bought/exchanged conveniently and affordably.





## BEDROOMS TWO STEPS AWAY

The owner's cabin forward offers space, storage and two very comfortable beds with household mattresses (80 x 200 cm). These can be separate with excellent side access, or repositioned in seconds to form a true double bed 160 x 200 cm. Ventilation and light comes from 3 opening hatches and portlights, one in the deck and two in the hulls. You can enjoy panoramic view, or use curtains for privacy. Direct access is provided to a washroom with a stand-up shower compartment.

The guest cabin to Port has standing headroom and beds of same size and configuration (2 singles or one double) as the owner's cabin. A comfortable lounging chair and hanging lockers make a longer stay on board a pleasure, while a hull window plus a ceiling sliding hatch (with the open sliding salon roof providing sky view from the beds in the guest cabin) make this cabin light, open and well aerated.

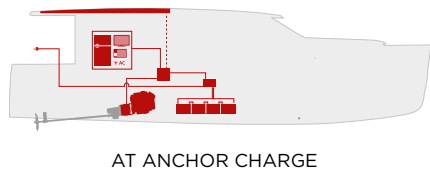
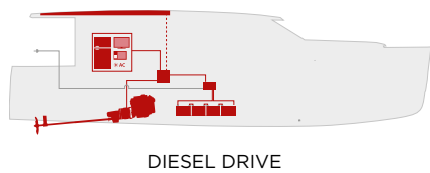
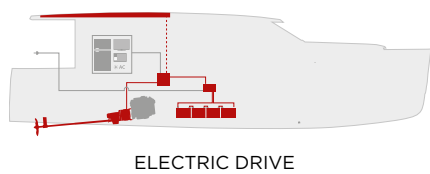
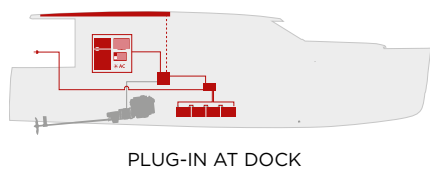
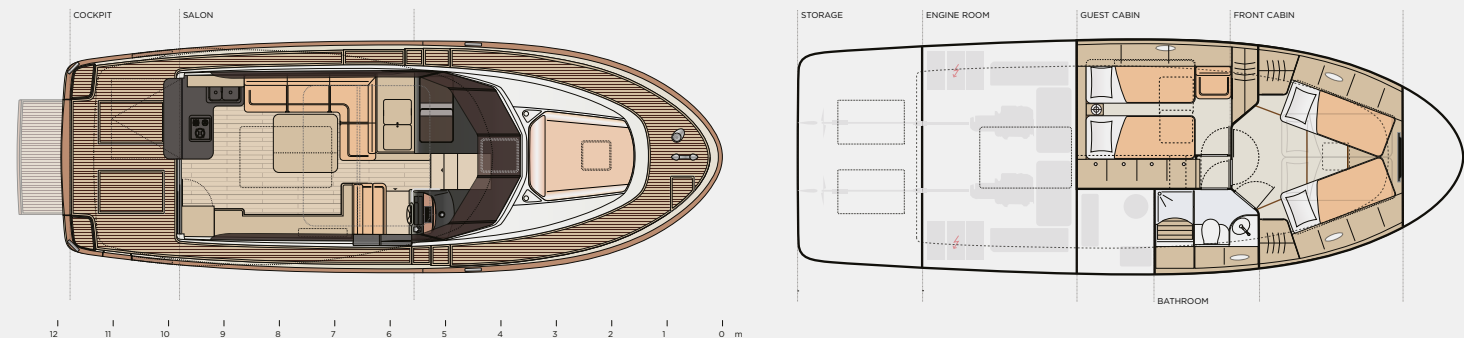
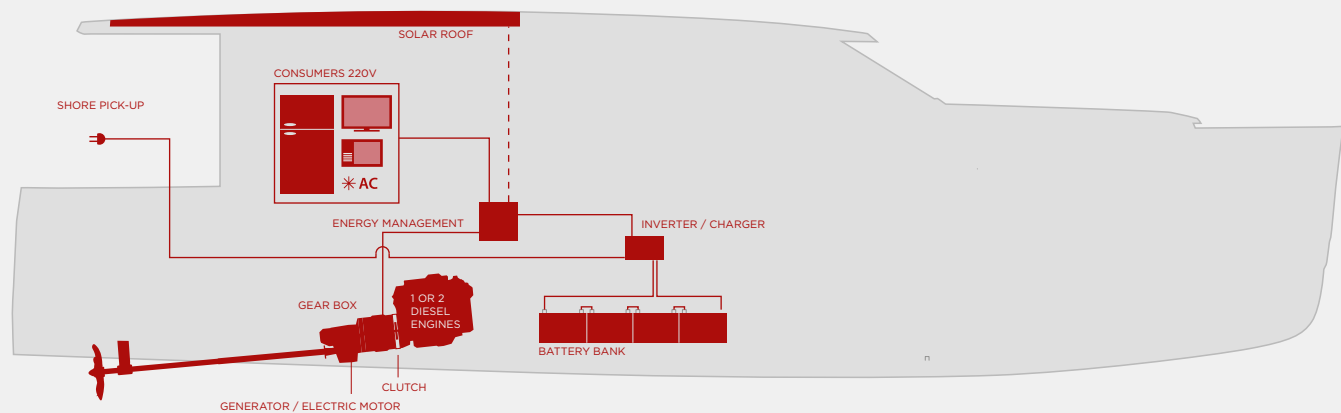
The AC power on board enables the use of a wide range of home appliances possible at all times, like entertainment, computers etc. The large battery bank provides enough stored energy to use the air conditioning units during the night in silence without the need to run the generator or the main engine.

The Greenline 40 Hybrid will take care of you during the extended cruising trips you have always wanted to do.



WITH ALL THE COMFORTS OF HOME AND THE SPACIOUSNESS YOU WOULD EXPECT OF A MUCH BIGGER BOAT, YOU WILL NEVER AGAIN HAVE TO LOOK FOR EXCUSES TO RETURN HOME EARLIER THAN PLANNED.





The protected hybrid system (patented) connects the 4 modes of operation with universality and simplicity. A control system simplifies the interface to the user via a (Diesel or Electric) switch.

## MODES OF OPERATION

- **When in dock (plug in at dock)**, the boat is plugged into the 230 V (120 V) AC shore power supply. The battery array is under charge and the inverter provides up to 5 kW of AC power to run home appliances like the fridge, TVs, etc.
- **In electric drive mode (electric drive)**, the boat is powered by two electric motors, which can produce up to 14 kW of electric power. This mode is used to sail in and out of a marina or anchorage with no noise, no smoke and an insignificant wake at speeds of up to 6 knots. At 4 knots a fully charged battery array provides a range of up to 20 miles.
- **In diesel drive mode (diesel drive)**, the diesel engine propels the boat and drives the generator, which recharges the battery array at an output of up to 2 x 5 kW.
- **At anchor (at anchor charge)** the solar roof array charges the batteries, which provide a 230 V (120 V) AC power supply to the appliances (via a 3 or 5 kW inverter). If the level of battery charge drops below a set value, the diesel engine is switched on in order to drive the generator and charge the battery array via two 5 kW generators. The propeller is disengaged (the gearbox is in neutral). This is the anchor charge mode.

## THE SPECIFICATIONS

### ENGINES

- Single or double motorization, from 1 x 75 HP to 2 x 225 HP

### DECK

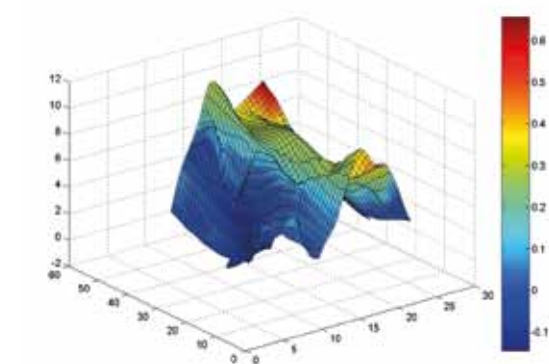
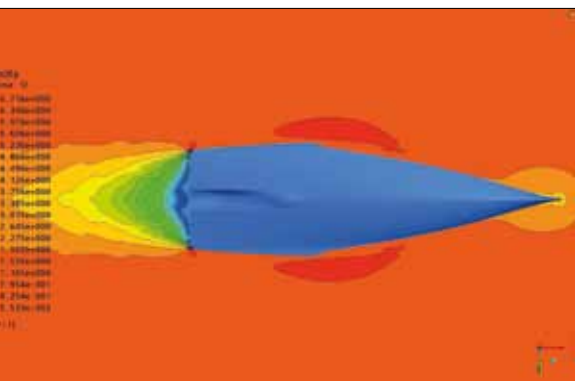
- Boarding and swimming access via a fold-out stern platform. Boarding on both sides through lateral cockpit door.
- Large sun and rain protected cockpit with storage under.
- Protected sidewalks.
- Sun bathing area on the front coachroof.
- Uncluttered bow area for easy anchoring and rope handling.

### INTERIOR

- Salon with a 360 degree vista.
- Salon fully connected to cockpit to form one area (fully opening aft salon glass enclosure).
- Galley to Port aft – serving also to the cockpit when enclosures open
- To Starboard a 270 l fridge with a deep freeze locker
- A large L-shaped dinette / sofa to port. It converts to a double bed, making it possible to sleep 2 persons
- A two-position driver/passenger double seat
- A sliding door to the Starboard side decks
- Washroom / toilet to starboard
- Separate shower compartment
- Owner cabin forward
- Two beds converting to a double
- 2 home-sized spring-mattresses (80 x 200 cm)
- Guest cabin to Port
- Two beds converting to a double
- 2 home-sized spring-mattresses (80 x 200 cm)
- A comfortable seat
- Natural ventilation to the hull side and to the salon

### PRELIMINARY STANDARD DIMENSIONS

|                                    |                                               |
|------------------------------------|-----------------------------------------------|
| LOA (hull)                         | 11.99 m                                       |
| Beam overall                       | 4.25 m                                        |
| Draft loaded                       | 0.85 m                                        |
| Cabins                             | 2 plus salon                                  |
| Berths                             | 4 + 2                                         |
| Toilets/Washrooms                  | 1                                             |
| DSPL light (ISO mLCC) Std. Version | 8000 kg                                       |
| Diesel Tank                        | 720 l                                         |
| Water Tank                         | 400 l                                         |
| Engine(s) diesel                   | from 1 x 55 kW (75 HP) to 2 x 165 kW (225 HP) |
| Max/Cruise Speed Diesel            | up to 22 kn/ 18 kn                            |
| Electric motor power               | 2 x 7 kW                                      |
| Max/Cruise Speed Electric Motor    | 6/5 kn                                        |
| Range Electric Drive @ 5 knots     | 16 nm                                         |
| Solar roof power max               | 1390 W                                        |
| Cat. CE                            | B                                             |
| Versions                           | Hybrid Ready<br>Hybrid Solar<br>Electric      |
| Design                             | J&J Design                                    |
| Builder                            | Seaway                                        |



## CREATORS AND BUILDERS

The concept of the Greenline range of yachts was developed by J&J Design at the end of 2007. After computer-based studies and simulations using CFD (computational fluid dynamics) and Velocity Prediction software, a full range of tank testing trials were performed. Based on the 4 geometries tested in the tank a full scale hull shape was developed and sea-trialed. Similar research effort was devoted to the development of the hybrid, battery and solar drive technology. Volkswagen Marine joined the project early in 2008 in order to help develop a new hybrid diesel-electric system was developed in partnership with Iskra (electric motor), Volkswagen (diesel engine), Bisol (solar roof) and Kokam (Lithium batteries). A fully functional prototype was built by Seaway and tested during nine months in a range of displacement, trim, propulsion variants and weather conditions.

First model of the range, the Greenline 33 was launched in August 2009. A test fleet of 6 boats has been tested in a variety of conditions in several European countries, in the Mediterranean, on the North Sea, on large lakes and on the rivers and canals of Northern and Southern Europe.

This extensive automotive-style development and testing program, a first in the boating industry, has resulted in a reliable and user-friendly product in spite of the use of new technology.

Full volume production of the Greenline 33 started in January 2010. This compact yacht not only brought boating closer to the public in environmentally and economically challenging times but she also improved the general public's perception of boating as a sport and pastime. Greenline 33 was awarded 16 Boat of the year, environmental and design awards in 14 countries and instantly became the world's best selling yacht of her size.

The Greenline 70 Ocean Class was launched in April of 2011 and the Greenline 40 followed in August of the same year.

### J&J DESIGN

J&J Design was founded in 1983 by brothers Jernej and Japac Jakopin. They have designed more than 270 powerboats and sailboats for boat manufacturers worldwide. Based on their designs, nearly 60,000 boats and yachts have been built by 60 boatyards in 29 countries (Beneteau, Jeanneau, Bavaria, Windy, Askeladden, ETAP, Dufour and others). These designs have won 49 Boat of the Year awards in boating countries around the world.

### SEAWAY

Seaway, based in Slovenia and Italy ([www.seawaygroup.eu](http://www.seawaygroup.eu)), is the world's leading boat design and development company. The company, which employs a unique 250-strong team of talented engineers and boat builders from many different countries, has combined the power of an extensive range of the most up-to-date 3D design, engineering, CAD/CAM, 5-axis milling and boatbuilding software and hardware available with unmatched craftsmanship and a long tradition of manufacturing boats.

Seaway is also the world's largest builder of carbon sailing yachts and, beside Greenline, owns the Shipman ([www.shipman.dk](http://www.shipman.dk)) and Skagen ([www.skagenyachts.com](http://www.skagenyachts.com)) brands and manufactures the products produced under these brand names.

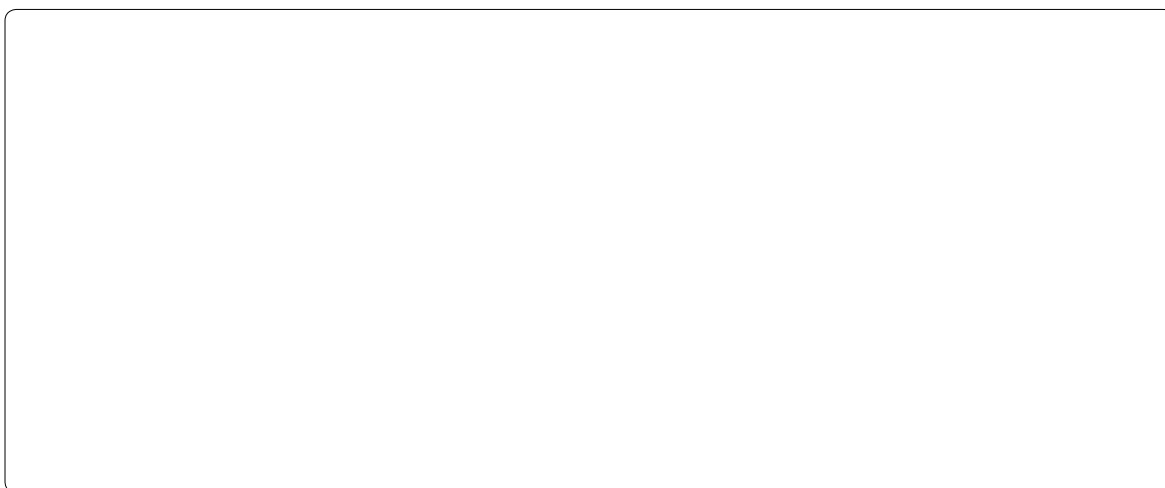


GREENLINE 33 HYBRID



GREENLINE 70 OCEAN CLASS





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The data presented in this document are based on field testing, tank testing and computer simulations and are preliminary and for information only.  
Description and photos may contain and/or show optional equipment.

Photo: Jurij Korenc (exteriors); Jože Maček (interiors)

