



SILENT-YACHTS



welcome to the  
**new era of yachting**

We believe in a world where yachting works with nature, rather than against it. We pursue a vision of exploring the wide ocean blue while maintaining its purity. We know that yachting has the potential to reach unmatched levels of independence and luxury in a sustainable manner through innovative clean technology.



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**SILENT-YACHTS**

Therefore, SILENT-YACHTS are the first and only ocean-going production yachts in the world which are exclusively powered by solar energy.

This means nothing less than being fully solar sustainable while having the possibility of unlimited range with zero emissions.



# the **future** of yachting **is solar**



As true sailors we embrace the warming rays of the sun, preserve the purity of untouched ocean waters and cherish the sound of silence that surrounds us during our most memorable moments on deck.

The exceptionally relaxing ambience on board of a SILENT yacht is characterized by the absence of vibration, noise and smell. Instead, the seamless solar-electric drivetrain complements the luxurious amenities to offer its guests unprecedented levels of comfort and pleasure.



# **facts** can't be silenced

On every SILENT yacht, solar power is not only used for the propulsion of the vessel, but also for providing energy to all navigation-, comfort- and household appliances on board. No matter, if you are anchoring in a quiet bay while enjoying the air conditioning or cruising at sea while preparing a delicious meal for your loved ones - solar power has got you covered.

In February 2018, our technology broke all existing borders and expectations. As the very first - fully solar powered - production yacht in the history of nautical travel, the SILENT 64 yacht crossed the entire Atlantic Ocean. This extraordinary achievement proved the outstanding durability and efficiency of the SILENT solar-electric drivetrain even during unfavorable and rough weather conditions.

SILENT-YACHTS has been honored for its sustainable vision and groundbreaking innovations by various leading organizations within and beyond the nautical industry by receiving multiple awards (2013 Energy Globe Award, 2016 & 2017 I-NOVO Award, 2018 Global Warming Foundation Award, 2018 Multihull of the Year Award, 2019 Union Internationale Motonautique Award and 2019 Best of Boats Award).



**Dear future owner of a SILENT yacht,**

Thank you for your interest in SILENT-YACHTS and our story. As our hearts were longing for the open blue, we travelled the oceans of the world for over 23 years on conventionally powered sailboats and motorboats. The experiences we gathered at sea for more than two decades of our lives finally lead us to the conclusion that there had to be a more efficient way to supply yachts with energy. Therefore, during a period of five years from 2005 until 2010, we explored and tested alternative power sources on our private sailing catamaran. The focus was laid on electric propulsion in combination with a self-sufficient solar power supply.

Based on the results of those five years of testing and 15.000 nautical miles of sailing on a prototype catamaran, we initiated the design and construction of the SOLARWAVE 46. It was not only the world's premier purely solar powered yacht, but also the only fully self-sufficient blue water catamaran. The SOLARWAVE 46

It is important here to note that during this period of four years there were no maintenance or repair works required on the solar panels, the batteries or the electric engine. The generator, which has to be on board for safety reasons, was working for less than 50 hours during those 48 months – primarily to avoid becoming rusty. On the other hand, the electric motors were operating for more than 2000 hours for the same period of time with no maintenance needed.

After all those years of dedicated trials, this was the proof that the SILENT-Technology we had developed was the answer to the question we were asking ourselves during our ocean expeditions. The solar-electric drivetrain was the most effective, efficient and reliable choice for nautical propulsion and self-sufficient sailing. Over the past years the SOLARWAVE 46, SILENT 55 and SILENT 64 have received several awards honoring the research and development that was invested into this innovative technology.



SOLARWAVE 46



SOLARWAVE 46



# meet two of the most driven visionaries under the sun

was nothing less than the first ocean-going yacht which exclusively used solar energy not only for actual propulsion, but also to provide energy to all household appliances on board. This includes everything ranging from cooktops, stoves and the freezer to the air conditioning, washing-machine and water-maker. Even the dinghy motor and the electric scooter were solar charged.

In 2010, we started a rigorous four-year sea trial in which we crossed the entire continent of Europe by river, sailed the dangerous Black Sea, the stormy Aegean as well as the vast Mediterranean Sea. Throughout our journey, the SOLARWAVE 46 did not only accommodate us with convenient amenities such as on-board water production, cooling and heating. It additionally accommodated eight guests on board with all the comfort needed for a total period of 120 weeks. Furthermore, it was able to power the engines every day under various circumstances such as rain, cloudy sky, sun, snowfall, ice and even storms of force 9.

However, what really makes the hearts and minds behind SILENT-YACHTS unique amongst others are three important things money can't buy: the love for your craft, the experiences you gathered firsthand and the story you wrote as a result.

Therefore, we sincerely hope you enjoyed reading about our journey. Nothing would provide us with more fulfillment than welcoming you aboard on our vision of efficient solar powered ocean travel. Let us shape the future of emission free, luxurious and silent yachting together.

Yours truly,

**Michael & Heike Köhler**



SOLARWAVE/SILENT 64



SOLARWAVE/SILENT 64



silent **60**



silent **55**



silent **80**



silent **80**  
3-deck

**more** than a model range

these are **gamechangers**



# silent 55

## The Award-Winning Traveler

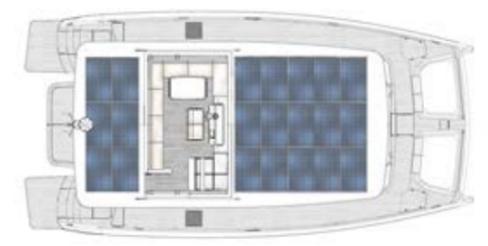
In November of 2019, the SILENT 55 won the "Best of Boats Award" in the category "Best for Travel". This specific category is defined as "suitable for long distance travels with all amenities to live on board permanently, adapted for both inland waters and the tough conditions at sea". Generally, she can easily be handled by two people, making the SILENT 55 ideal for families cruising with or without additional crew.





# specifications silent55

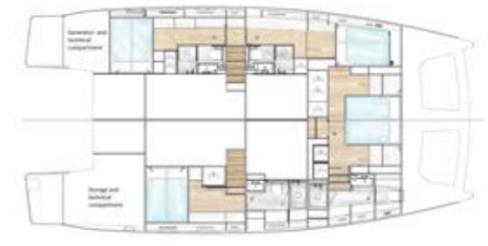
LENGTH OVERALL	16,70 m (54.8')
BEAM OVERALL	8,46 m (27.7')
DRAFT	1,20 m (3.9')
LIGHT DISPLACEMENT	19 tons
WATER	500 – 1000 L
WASTE-WATER	2 x 500 L
FUEL	500 – 1600
SOLAR PANELS	10 kWp
E-MOTORS	2 x 30 kW / 2 x 250 kW
GENERATOR	22 kW / 100 kW
BATTERY CAPACITY	140 kWh
CRUISING SPEED	6 – 8 kt / 12 – 15 kt
TOP SPEED	approx. 12 kt / 20 kt
CERTIFICATION	CE-A
RANGE	Trans-Ocean



Flybridge



Main Deck



Cabin Deck



# silent 60

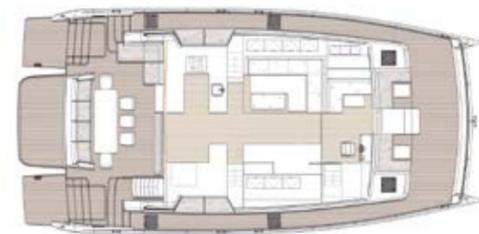
## The Iconic Original - Reinvented

The SILENT 60 embodies the next generation of the legendary SILENT 64, the first and only solar powered yacht to have ever crossed the Atlantic. She can be handled by two people with ease and has enough room for families and crew. The possibility to store a tender of 4m, two jet skis, several bikes and a motorbike crowns her the adventurer of the SILENT family.

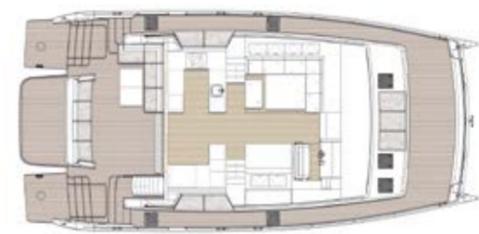


# specifications silent 60

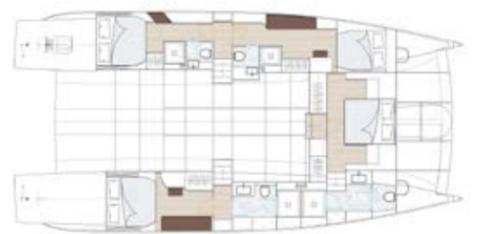
LENGTH OVERALL	17,99 m (59.0')
BEAM OVERALL	8,99 (29,5')
DRAFT	0,93 m (3.0')
LIGHT DISPLACEMENT	25 tons
WATER	1.000 L
WASTE-WATER	2 x 500 L
FUEL	600 – 1600 L
SOLAR PANELS	17 kWp
E-MOTORS	2 x 30 kW / 2 x 250 kW
GENERATOR	22 kW / 100 kW
BATTERY CAPACITY	70 – 210 kWh
CRUISING SPEED	6 – 8 kt / 12 – 15 kt
TOP SPEED	12 kt / 20 kt
CERTIFICATION	CE-A
RANGE	Trans-Ocean



Main Deck Open



Main Deck Closed



Cabin Deck



# silent 80

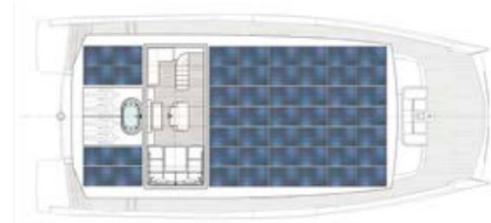
## True Flagship Qualities

The SILENT 80 represents the flagship of the SILENT fleet. Guests on board experience premium levels of comfort, refinement and luxury. Every journey on board transforms into a story of pleasure. The interior cabins are crafted to match nothing but the best. In combination with the elegant exterior, she embodies the essence of a flagship in every possible way.

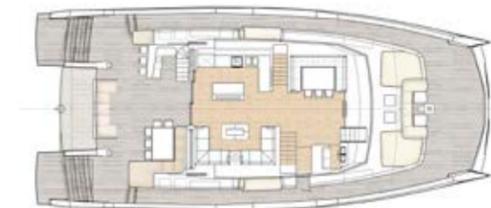


# specifications silent 80

LENGTH OVERALL	24,30 m (79.8')
BEAM OVERALL	10,95 m (35.8')
DRAFT	1,25 m (4.1')
LIGHT DISPLACEMENT	55 tons
WATER	1.000 L
WASTE-WATER	4 x 500 L
FUEL	3.000 L
SOLAR PANELS	26 kWp
E-MOTORS	2 x 135 kW / 2 x 250 kW
GENERATOR	100 kW / 2 x 130 kW
BATTERY CAPACITY	240 kW
CRUISING SPEED	6 – 8 kt / 12 – 14 kt
TOP SPEED	approx. 10 kt / 16 kt
CERTIFICATION	CE-A
RANGE	Trans-Ocean



Flybridge



Main Deck



Cabin Deck



# silent 80

## 3-deck

open version

### The Skylounge of the Seas

For those who believe that the sky is the limit, the SILENT 80 3-Deck Open Flybridge Version is the perfect match. This skylounge of the seas makes you feel at home wherever the sun accompanies you. On board, space is abundant and time regains its value. It is all about the moment. It is all about the attitude. It is all about you.



Flybridge



# silent 80

## 3-deck

closed version

### The Penthouse of the Seas

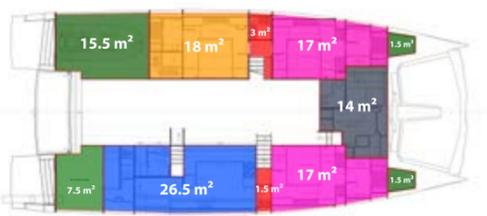
The Silent 80 Closed Flybridge Version offers you two exquisite choices. For those seeking a sense of privacy, option number one provides an owner's suite with an unprecedented 360° degree view and more than 30m<sup>2</sup> of private terrace in the aft. Those who particularly value sharing the experience on board with the people who really matter can opt for the lounge version instead. It features a dining area of almost 40m<sup>2</sup> in combination with a bar and galley, while still offering the terrace in the rear area.



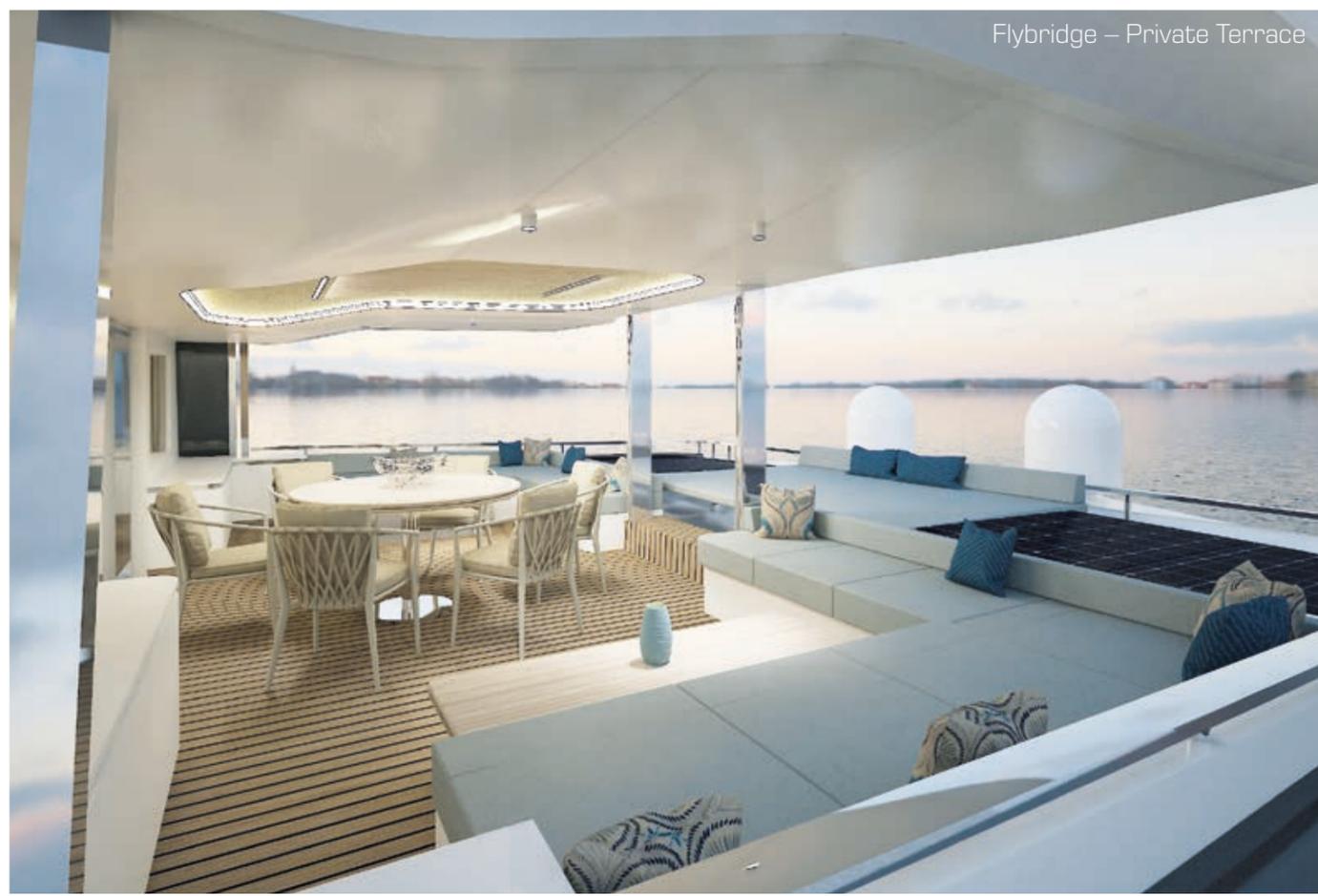
Flybridge



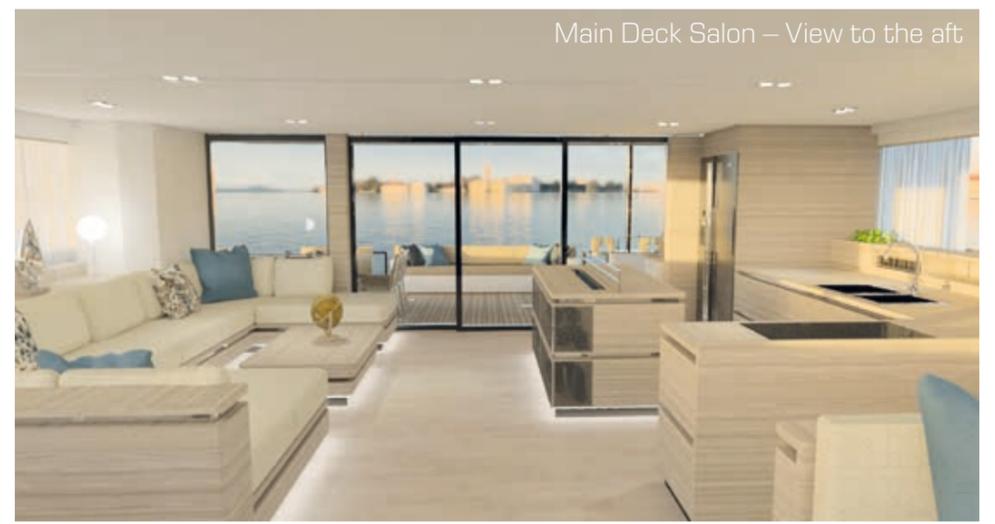
Main Deck



Cabin Deck



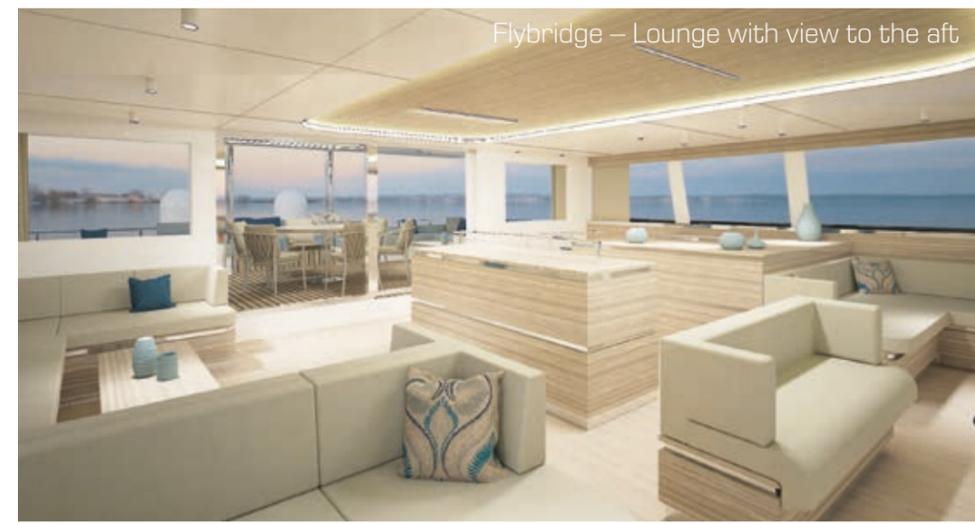
Flybridge – Private Terrace



Main Deck Salon – View to the aft



Flybridge – Private Terrace



Flybridge – Lounge with view to the aft

# radical innovation

**Autonomy |** SILENT yachts are true world cruisers with the possibility of unlimited range, even when the sun is not shining. In case of longer periods of bad weather, the range extender automatically starts to recharge the Lithium Batteries when they are low. Their capacity provides ample energy for propulsion as well as all household appliances including the air conditioning, ice-machine, water-maker or laptops (230 VAC / 110 VAC). There is no need to search for a marina in order to charge the batteries, get ice, refuel or to fill the water tanks. A SILENT yacht can virtually cruise for weeks without fuel or the need to start the generator.

**Luxury |** High levels of luxury require permanently available energy. On a SILENT yacht, you can watch TV, have the air conditioning running and produce up to 2000 liters of drinking water per day without starting the generator. The air conditioning cools down the boat quickly and efficiently whenever needed. This, of course, is also true for heating during cold weather.



Fully insulated hulls and salon

In order to save energy for heating and cooling the interior, salon and cabins are wrapped in thermal insulation. We design our yachts in a way that all windows are shaded by either the roof or the hull, thus lowering the energy consumption needed to keep the interior at comfortable temperature levels.

**Efficiency and Weight |** Underwater lines are optimized by Computational Fluid Dynamics (CFD) and towing-tank tests. The lightweight construction is a result of bionic design, the use of carbon fibers and high-quality resins. Interior furniture is made of stiff and lightweight composite plates with real wood-veneer.

This reduces the weight significantly to about half the weight of a conventionally constructed and powered yacht. Each kg / pound saved is equivalent to less wave drag and friction and therefore less energy required to move the boat. Overall, this leads to high levels of efficiency enabling fast and self-sustaining propulsion.



Deck lifted out of the mould

**Reliability |** All the electrical components are of high industrial quality and are being engineered / built in Europe and the USA. Motors, inverters and their cables are IP69 certified. This means that they even work when permanently submerged in highly pressurized water. In comparison to a conventional diesel powered propulsion system an electric motor is far more reliable as the only moving parts are the rotor and its two bearings. Fuel bases problems are an issue of the past as well.

All wirings are tin-coated and all plugs feature a custom design which prevents humidity and water from entering. Additionally, all parts exposed to the marine environment are made of corrosion resistant materials

**Redundancy & Safety |** All vital components are redundant to ensure double safety. The configuration of all components makes sure an overload is impossible, making the SILENT-System far safer than conventional propulsion systems. We are also proud to say that our catamarans were the first to be certified according to DIN EN ISO 16315 for the marine operations of electrically powered yachts.

# proven technology

**Warranty |** We grant lifetime warranty on the electric motors, 25 years on the solar panels and 8 years on the batteries. This is unprecedented in the marine industry.

**Maintenance |** There is no maintenance required for the solar panels or the batteries. The electric motors need a set of two new bearings after 50.000 hours of usage. In case your personal usage does not exceed 500 hours per year, these bearing replacements would only be needed every 100 years (!). Minor maintenance works are only required on the generator. These factors combined lead to much lower running costs in comparison to a conventionally powered yacht.

**Solar Panels |** The photovoltaic modules recharge the batteries and are the main power source of our yachts. We use the most efficient, most advanced

and highest quality modules currently available. Their arrangement, the positioning and the regulation of charge are some of the main secrets and reasons why our yachts are able to harvest that much energy from the sun – sufficient to power all household appliances, all devices that you need for your comfort and even the propulsion system.

**Batteries |** The energy is stored in state-of-the-art lightweight Lithium batteries. Whenever the sun is not shining or more power is needed than the solarpanels produce at that time, they provide ample energy for the propulsion system as well as all household appliances. SILENT-YACHTS only installs batteries which provide top notch reliability, safety and performance.

**Range Extender |** During longer periods of unfavorable weather conditions or whenever higher

speeds are required for more than a couple of hours, a powerful diesel generator recharges the batteries. This gives you the confidence that you will never run out of power and makes sure you can sustain higher cruising speeds even in bad weather conditions for longer periods of time.

**Drivetrain efficiency |** While combustion engines have an energy efficiency of around 30%, electric motors feature an energy efficiency rate of more than 98%. This saves a lot of power and emits significantly less heat. For the same reasons, we use an induction cooktop and an electric stove in the kitchen. Therefore, no propane gas is needed on board. This reduces the risk of a fire hazard and creates less heat inside the boat.



Solar Panels



Batteries



Electric Motor

# quality management

In order to guarantee highest quality standards in combination with reliability and safety, we supervise and control the entire production process.

1. Designers and Naval Architects from Italy and Germany.
2. The design, brand and know-how are property of SILENT-YACHTS.
3. Shipyards: For decades our craftsmen have been well known for their high-quality standards and the durability of their products.



4. Controlling: We have established a three-level controlling system in order to ensure that the production process matches our requirements:
  - a) Experienced naval architects work full time on visiting the production facilities on a daily basis to assure that the highest quality standards are being met.
  - b) German technical surveyors control all steps of the production in close collaboration with the naval architects and visit the shipyard every second week.
  - c) An external marine surveyor monitors the accomplishment of all milestones and the compliance with CE and other regulations on behalf of SILENT-YACHTS and our customers.
5. Materials: All technical components are supplied from trusted European brands such as Bosch, Gianneschi and Miele with a worldwide service network.
6. All components of the powertrain as well as the energy production and storage systems are personally installed by our field technicians. The same team of engineers is available for worldwide service and warranty if required.
7. All vital components such as batteries, propulsion and power generators can be serviced remotely via the internet.

These seven key criteria assure that the quality, safety and longevity of any SILENT yacht meets the highest expectations of our customers. Hereby, no compromises are made in regards to financial efforts in order to achieve and surpass these expectations. As SILENT yachts require significantly less maintenance than comparable yachts with conventional drivetrains, these investments truly pay off.



Hull Mould of Silent 80

The picture above shows you the view from the rooftop of a finished SILENT yacht onto an open hull as well as a deck under construction.

We take pride in our work, seek perfection in execution and pay utmost attention to detail. Our artisans in Ancona, Italy, who give birth to the SILENT 80, often have generations of experience in the field of crafting vessels of impeccable quality. These valuable skills in combination with the SILENT quality management system make sure that every single customer experiences the satisfaction they deserve even long after first receiving their, very personal, SILENT yacht.

# propulsion options

## Cruiser

Motorized for a top speed of 10 - 12 knots and a cruising speed of 6 - 8 knots, this option is ideal for long term economic cruising.

## E-Power

It offers more powerful electric motors, a more powerful generator and a battery bank with increased capacity. These upgrades result in an increased top speed of up to 20 knots which can be sustained for a certain period of time. As a result, "E-Power" is a perfect blend of sustaining economic solar-powered cruising capabilities with higher performance reserves whenever needed.

## Kite Sail

As conventional sails create unfavorable shade on the solar panels and require a lot of maintenance, SILENT-YACHTS instead offers the option of a fully automatic towing kite. It flies at altitudes between 100m and 150m where winds are far stronger than at the level of the vessel. At those altitudes it has a dynamic flight pattern, which resembles the shape of a figure 8. For this reason, the kite generates up to 20 times more power per square meter compared to a conventional sail.



**kite** sail system option



SILENT-YACHTS



CUPRA

... more to come, stay tuned ...

# Multi-Award Winning Design & Engineering



**SILENT-YACHTS**

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