



Recreation Solar Yachts

Silent 60 sea trial: quiet, spacious, self-charging

📅 August 7, 2022 👤 Jeff Butler 👁 60 Views 💬 0 Comments 🏷 Silent Yachts

The first impression on stepping aboard for our [Silent 60](#) sea trial is how light, airy and spacious everything feels – more like you’ve entered a large, luxe beach house rather than boarded a vessel that is going to take you out along the water.

The wrap around windows provide the panoramic view, and with the fore and aft sliding doors open a gentle breeze drifts through the main deck salon, completing the illusion that you are entirely out in the open air.

The temperature here in Fort Lauderdale is in the low 80s F (mid 20s C) and the clear blue sky is speckled with the kinds of clouds that inspired Joni Mitchell’s ‘ice cream castles in the air’ lyric.



The Silent 60 we will be taking out today is their recently launched front exit model. This vessel was built in the company’s Thailand shipyard ([they also have facilities in Austria, Italy and Turkey](#)) and will shortly be making her way up the US coastal waterways to her new home and owner in the New England area.

Captain Kyle Miller will be piloting that journey, but today he is taking 12 of us out for a cruise on the Intracoastal Waterway, accompanied by Silent Yachts in-house Designer Juliana Miguel and US Sales Director Philip Bell. They are all eager to show off what the Silent 60 can do. And we are all eager to experience it.

Solar electric yachts pioneer

[Silent Yachts](#) is a pioneer in solar electric boating. Founded in 2004 by expert sailors and avid environmentalists Heike and Michael Köhler, they spent the next five years measuring the production and consumption of energy on every trip – long or short – working out how to combine electric propulsion with a totally onboard energy supply.



After 15,000 nautical miles of research they were ready to build their first self-sufficient and purely solar powered bluewater catamaran, the Solarwave 46. Then it was time to test that boat for another five years, on the rivers of Europe, the Black Sea, Aegean and legendary Mediterranean.

Next came the challenge of how to add and service the energy load required to host 8 passengers with a water maker, electrically prepared meals and other amenities like ship-wide heating and cooling.

By 2016 they were ready with the Silent 64, the first serial production solar powered yacht in the world, and in 2018 the 64 crossed the Atlantic Ocean, travelling from Cap Verde to Barbados in 16 days, with an average speed of 6 knots.

The Silent 60 line we are on today was introduced in 2021 with more powerful electric motors, larger battery banks and the latest solar panel technology. She has won numerous awards, including the 2021 German Design Awards and [Gustave Trouvé Awards for Excellence in Electric Boats and Boating](#).

Twin 250 kW motors, 225 kWh battery storage

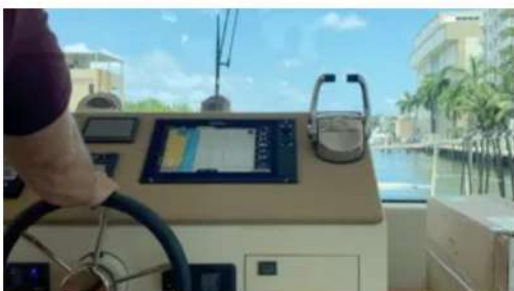
Captain Miller has helmed a few iterations of Silent-Yachts catamarans, the first in early 2019 when he sailed a Silent 64 from the Bahamas to Florida. His on-the-water experience helps guide the company's design advances.

"Every boat since that 64, you can just see and feel the improvements" he says. "In my opinion this is the best boat Silent-Yachts has built, certainly the best I have captained."

The big change, he says, is the higher power motors. The Silent 60 is available with a variety of motor and battery systems, today's boat has twin 250kW motors (≈ 340 HP each) and lithium ion battery packs with a combined 225 kiloWatt hours of electricity storage.

This gives the Silent 60 the ability to up its cruise speed from 6 to 8 knots, but Kyle says the increase in power is also appreciated when docking or in tight quarters.

"You have a lot more control" he says, proving his point by easing off a side slip in the narrow canal where the boat is moored, then executing a tight turn to get us out on to the Intracoastal.



After a few minutes of cruising along the main waterway, it is apparent that Silent Yachts lives up to its name. At a leisurely 4 knots, you can barely notice a slight hum, and then only when listening intently. That hum suddenly stops though – but with no change in the boat's speed.

"That was the air conditioner" says Miller, "I turned off the blowers for the salon." Apparently that refreshing breeze we noticed earlier coming from the sliding door at the bow end of the salon has a very practical purpose.

Air conditioning is one of the major power loads on any yacht. The Köhlers knew that from their years and miles of research and have made sure that the units on all Silent-Yachts models are among the most efficient anywhere.

Still, they can draw as much as 8 kiloWatts of power when operating at full blast, and we can see from the easily understood screen of the energy monitors that is about the same draw as the motors at our current speed.

The company's first solar electric catamarans did not have the front exit option, but it's cooling effect is a big bonus. "If you can get comfortable without the air conditioning on, you can effectively double your range," says Miller.

The other benefit of the front exit is being able to easily access the sundecks at either end of the spacious salon. Both are ideal places to enjoy a cool drink of your choice, and have a quiet conversation without the rumble of motors beneath you.

Catamaran platform makes for giant open space



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The impression of airiness we got on first stepping aboard only gets stronger as we spend more time on the Silent 60. The catamaran format provides a huge platform for all of the living and relaxing areas, and even with 12 on board you could easily find your own little spot to curl up with a book or do whatever else you would like without running into the other guests.

The front lounge off the main salon has an L-shaped seating area on one side of the front exit door, a double size day bed on the other and a large deck with storage space and hatches.

The stern lounge is a multipurpose area where 6 guests could sprawl out on cushions or all could be accommodated for a meal at the dining table.



Stairways on either side lead down to swimming platforms and between them is the hydraulic platform/lift that can carry a 4 metre (13 ft) tender/dinghy or jetski (preferably electric). The draft of the 60 is under 1 metre (39") so it can access even the shallowest swimming areas and bays.

There is another sizeable lounge area on the flybridge (to enjoy the ocean breeze in all its glory) where 8 people can comfortably sit and chat and if you really want to be alone, there are always the cabins in the lower deck and pontoons. There are 4 in total, all with ensuite bathrooms: the full width master (20 Sq m) VIP cabin, and 2 generous guest cabins, 1 with a double bed, the other with 2 singles.

The air conditioning fans are on when we go in the sleeping areas, but it is striking how quiet everything is considering the motors are literally a couple of meters/yards away. Hard to imagine they would be this serene if it were 250 horsepower fossil fuel motors that close.

The main salon is the place where you can really feel the difference a catamaran makes to comfort and space. It is 50 square metres (550 sq ft), but figures don't do a very good job of conveying how big it feels, especially with the wraparound glass. The minimalist design and light colours also contribute to the open air ambience.

Green philosophy extends to materials

The cockpit is at the bow, with lounging space on one side, the dining area on the other and the open kitchen galley area.

The Silent 60 is obviously meant for entertaining and travelling with friends and family, so the kitchen/galley and how it fits into the flow of life on the water is essential to that experience.



The galley area is in a U-shape, the bottom of the U facing the side of the vessel and the counters – one with cooking appliances and the other for the sink – are islands where the 'chef' can easily chat with anyone either in the main salon or the outdoor stern lounge. Designer Juliana Miguel says there is an interesting difference between the company's European and American clients.

The Europeans prefer the 'cooking' island to face the interior salon while those in the US almost invariably choose the opposite so they can chat with guests in the open air lounge.

"The counters are exactly the same," she says "they are just switched for what the client prefers." She's happy to configure the set up either way, even happier to consult with clients on the materials used throughout the boat interior.

Juliana started with Silent Yachts in 2021, coming from a background in general interior design with an additional degree in yacht design. She previously worked with large cruise companies and is delighted to now be with a company that focuses on reducing the environmental impact of the whole vessel. That includes the materials throughout the interior.

"There are some incredible products out there, with more and more companies providing information on the impact of the whole manufacturing cycle," she says. "I am delighted – the clients are delighted, too – when we find the fabric, or table top or other material that has the exact look and feel they want and is also as environmentally friendly as possible."

Solar panels can generate 17 kWp

Aside from the oodles of space for living quarters a catamaran allows, the hull format also provides a technical advantage for electric boats: oodles of surface area to place solar panels.



There are 42 panels on the roof and foredeck of the Silent 60, with a total electricity generation rating of 17kWp: kiloWatts peak, meaning 17 kiloWatts per hour can be generated under ideal conditions.

Today's conditions are pretty close to ideal – it's a clear day and we are out cruising in the afternoon when the sun is shining most directly on the panels.

All this means that, even as we cruise along, the boat is actually generating more electricity than we are using and putting the surplus into the battery. The motors are using 8-10 kW, and the air conditioner and other hotel load about 5 or 5 kW. It's like filling up your boat with fuel even as you cruise.

Not every afternoon is as perfect as this, but on the other hand, the solar panels are generating electricity all the time the boat is in the sun, whether it is moving or moored. It can also be charged with shore power, and the battery's 225 kiloWatt hours of electricity are available whenever demands requires.

We get an unexpected taste of how exactly that works when another boat comes unexpectedly close in the tight and often crowded waters of the intracoastal. Our blissful quiet was suddenly interrupted by the rumble and vibrations of the motors being thrust into reverse – hard.

The instant torque and response of the 250kW motors came in very handy in the situation, and while it is hard to gauge, I would estimate that we were able to come to a complete stop within less than the length of the catamaran.

Tested on the open seas

The episode did interrupt our tranquil cruise, but it also served as a reminder that water and weather conditions don't always cooperate. Which brings us to another benefit of catamarans – stability.



One of the guests asked how the Silent 60 performs in rough waters. "We were in one of the first 60s, towing a 24 foot dinghy behind us, going from Barcelona to Majorca," Kyle tells us. "It would have been about a 14 hour journey – until the mistral winds blew in from Africa and we were in the middle of 16 foot (5 metre) seas.

"There's no hiding in 16 foot seas," he said "and sitting on the floor back there you saw the tender go up and then drop down below the horizon, and we were like...OK...this is a pretty good sea trial, good test!"

"We ended up changing our direction just to make sure we didn't lose the tender, and the run turned into 28 hours instead of 14, but at the end of the day it was all good, no damage to either vessel and all ready to get back out there the next day."

One hopes that one isn't going to run into those kinds of conditions on a regular basis, but unexpected conditions are one of the reasons the solar electric catamaran has a diesel generator on board and can carry 1,000 litres of fuel.

The fuel is used to charge the battery, the motors continue to operate all-electric. The back-up is there for times when you are going to need power either for short term spurts or for maintaining higher speeds over a long period. It is also handy for extended open water cruising when the sun may not be cooperating or you may want to go at high speed to get out to a destination or back to shore.

Kyle says it is highly unlikely he will use any diesel whatsoever on the trip up to New England, and the new owner is looking to use the boat for relaxed daytime and overnight cruises with family and friends fairly close to the coast, not for going out on high speed runs.



The peace and quiet of the Silent 60 doesn't come cheap, with a starting point of about \$3 million (US) without any customization. Most of the new owners – and there are twenty Silent 60s being constructed right now – obviously think that is good value for the serenity of the on-water experience as well as knowing they are treating themselves and their friends to a luxury experience without increasing their carbon footprint. The price of diesel is also making solar electric propulsion attractive to a whole new type of client.

Silent 60 sea trial uses 7kWh

As we arrive back at our slip and softly sidle into place surrounded by dozens of fossil fuel yachts of similar length, one can't help but reflect on the difference in consumption. Before we disembark, I ask about the final tally on energy usage. We started out with a full battery – 207 kWh – and arrived back with 200 kWh.

Not bad for a one and a half hour cruise on a spacious catamaran with all the amenities one could want, a giant main salon, sun decks galore and all the while being able to appreciate the trip without any rumbling motors or exhaust fumes.

I take one look back at the Silent 60 before I go and there she is, sitting in the sun, her solar panels silently recharging her batteries – for free – and getting set for another great day tomorrow.