



By Jeff Moser



The solar-powered Silent 64 is the first model to be built by Silent Yachts.

POWER & TECHNOLOGY

Silent Flight

One company proves solar-powered yachts are finally getting their time in the sun.

After sailing 60,000 nautical miles on the world's oceans, Michael Köhler knew what he liked, loathed, needed and could jettison while at sea. One factor especially determined the success of every voyage—the delicate balance between autonomy and luxury. Most pressing for him was the frequent need to run the engines when it wasn't possible to log miles under sail.

The traveler, he noted, is at the mercy of the vessel's fuel capacity. While the powerplant or generator is running, the fumes, constant noise and vibration can wear you down as much as sporty conditions and merciless sun. (And the need for maintenance increases.) Unlike other cruising yachtsmen, he decided to do something about it, and tied up his boat.

Köhler chose a fine time to do so, as significant technological advances in solar panels and energy storage were coming online, and systems were becoming available at greatly reduced costs. After outfitting a 46-foot custom yacht with enough solar panels to produce about 50-kW of power per day, he set out with his wife, Heike, a seasoned captain in her own right.

Talk about a shakedown cruise. Starting in 2010, the vessel Solarwave 46 logged more than 12,000 nautical miles in five years, exclusively under solar power. The cruise included the Black Sea, the Aegean and the Med, and all kinds of conditions, including sun, rain, snowfall and ice. Through it all, the solar technology held up. Said Köhler, "Spending less energy was a key factor, and by optimizing the hull to match our propulsion system, we saw [significantly] higher performance and less energy consumption."

Based upon what they learned on their several-year sojourn, the Köhlers realized the concept they had envisioned was plausible—one can cruise for thousands of miles on a well-equipped

vessel using solar power exclusively. So they decided to start a company and build the type of boat they like best.

When I spoke to Köhler, he was just returning from a visit to the boatbuilding facility in China to check on his new launches—the first two hulls of the 64-foot Silent-Solarwave series. Currently the company has six boats in production: two 64s, and two each of 55- and 75-foot models. All are bluewater catamarans equipped for serious cruising with home-style appliances that are also powered by solar. As these are semicustom builds, each is slightly different, depending on the owner's desires.

I was astonished to learn that Silent Yachts uses a proprietary propulsion system, considering the availability of reliable and proven all-electric systems. Dubbed Silent System, the electric motors allow an average cruise of 6 to 8 knots (and a top hop of about 10 knots), with a virtually unlimited range across the entire lineup.

Two factors make this possible, the first being Silent Yachts' constant upgrades to the latest-generation lithium batteries. Tesla Motors now supplies the company with high-energy density powerpacks. There's also a diesel genset aboard (Köhler calls it the Range Extender) that can charge the batteries and run systems during extended periods of foul weather.

For those who crave a higher top end, hybrid-powered versions with larger engines can be ordered, although that means significantly more fuel aboard and more complex systems, which require more maintenance. While some owners will likely choose this option, I hope they'll first take the opportunity to cruise for a spell off some deserted coast, where the only sounds they'll hear will be waves lapping against the hull. The sun will provide all the energy a crew will need for propulsion and every other system aboard. The sacrifice in speed may be worth it. □