

**NEW BOAT:
LEOPARD 43**

A LEOPARD CHANGES ITS SPOTS

**ELECTRIC TECHNOLOGY BRINGS THE
LEOPARD 43 CATAMARAN INTO THE FUTURE**



Overhead hatches and portholes provide great ventilation in the VIP cabin below ops-site. Soft overhead lighting on dimmer switches and cherry wood finishes contribute to the light, contemporary feeling of the saloon.



They say a leopard never changes its spots, but this cat has just turned bright green. The new Electric Leopard 43 catamaran from The Moorings offers an innovative, environmentally friendly electric propulsion system that doesn't rely on a large bank of batteries the way previous hybrid catamarans have. The impetus for this new "green" Leopard comes from a grassroots movement headed by one discerning sailor, Tony West, who once served as the chief technology officer in a major Silicon Valley computer company.

Five years ago, West went looking for a catamaran, but unable to find exactly what he was looking for—the perfect blend of style, efficiency and electric motor technology—he never quite "tied the knot" as he puts it. In the meantime, he did plenty of research and acquainted himself with current technology by chartering a catamaran that had a typical electric motor setup.

Tired of waiting for the right boat to come along, he took action. "I was intrigued by the opportunity to combine great next-generation technology with one of my passions—sailing," West says. "I really liked the designs from Roberston & Caine, as sold by The Moorings. In particular, the Leopard 43, which was a nice compromise between size and capability. On the one hand, it is large and roomy enough for 10 people; on the other hand, it was still a size that could be handled easily by one person. Most important, my wife concurred."

West approached The Moorings to inquire if either they or Robertson & Caine was working on an electric product. The Moorings referred him to the northern California-based power company Glacier Bay, Inc. "I spent a couple days with the [Glacier Bay] engineering team, and I really liked what I saw," West says. "I returned to The Moorings and asked if they would be willing to build me an R&C Leopard 43 equipped with Glacier Bay's OSSA Powerlite System."

Luckily for West, this turned out to be win-win proposal as The Moorings and Glacier Bay were considering building a prototype boat. West was willing to back this build and be the first Robertson & Caine electric boat owner, but he had a few conditions. Namely, he requested forming a project team of people from each company, including his own company, Electrosail LLC. "I didn't want to be just a boat buyer at arm's length," West says. "I wanted to be on the inside where I could contribute to the team."

The team's combined efforts produced the new eLeopard, as it is known, powered by an integrated OSSA Powerlite direct diesel-electric system from Glacier Bay consisting of a 25 kW Glacier Bay generator that drives twin 20-hp DC electric propulsion motors. All of the major components of the OSSA



system—including motors, air conditioners, water heater, and battery charger—draw power directly from a DC distribution box receiving up to 240 volts of DC power from the genset. West says the eLeopard's small bank of batteries for 12-volt needs is simple, cheap, easy to maintain, and doesn't create a recycling problem.

Though diesel-electric power is not new—it's been utilized in submarines since World War II and is common in cruise ships, tug boats and railway locomotives—West states that its application in this tier of recreational boating is new. Design advantages include decreased maintenance with only one diesel motor to maintain, better fuel economy, and greater ease in maneuverability as high torque is instantly available at a low RPM with electric motors. Quiet is key on any sailing vessel, and the generator is said to be extremely quiet while underway or at anchor when the a/c is running. The eLeopard boasts simplicity—to power the boat, simply start the generator by



Specifications

LOA: 42' 6"
Beam: 22' 9"
Draft: 4' 3"
Displacement: 19,030
Fuel: 95 U.S. gal.
Water: 206 U.S. gal.
Power: 1 x 25 kW generator powering 2 x 20 hp electric motors
Cruising Speed: 7 knots
Sail Area: 1,238 square feet

pushing the touch screen and power is available within seconds, and instead of forward/reverse gears and a gearbox, the direct drive shaft allows you to, "push the throttles forward or back and off you go," West says.

Microcontrollers in each of the Ossa Powerlite components allow the systems to communicate through a CANbus computer network. Because the Ossa components are designed to talk to one another, the generator receives power requests from the loads and speeds up or slows down as needed. "This load/speed management happens extremely quickly, many times per second," West says. "When the boat is going up a wave, the motors sense additional power is needed and tell the generator to 'beef it up.' The generator responds within milliseconds and increased power takes the boat up the wave. At the crest, the motors sense that less power is needed, so when the boat is 'surfing' down a wave, the generator throttles back and saves fuel."


Internally, the eLeopard is an entirely different breed from its diesel-powered predecessor, but you could never tell by just looking. Style-wise, the eLeopard 43 is almost identical to the original. "We wanted to change one thing at a time to minimize the risk to the project's success," West says. "So far, this has worked very well." Like the original Leopard, the new cat features a Simonis-Voogd design and is outfitted with high-quality materials and fittings.

Wide transom steps on either hull ease boarding and lead up to an integrated bathing platform that connects the transoms and provides the ideal platform for swimming or boarding a dinghy. Walk-through access leads to

the large cockpit featuring an L-shaped settee and table to port and additional seating and a raised helm to starboard. All navigation instruments are located at the steering console with its electronic touch screen helm. Winches for the main and starboard jib sheet are easily accessed from the helm. The standard hardtop provides protection to the cockpit, creating a perfect place to enjoy alfresco dining.

Entertaining indoors is effortless with the saloon featuring a V-shaped lounge and table that comfortably seats up to 10 adults. The table can convert to a coffee table or a double berth. Heat-resistant Corian countertops, a large stainless steel Seafrust refrigerator/freezer, gas stove with oven and broiler, and plenty of storage space make the ergonomically designed U-shaped galley a chef's dream.

The eLeopard sports a charter-friendly four-stateroom layout—the boat was introduced to The Moorings charter fleet in the British Virgin Islands and has been getting a very favorable response. Forward staterooms boast raised island berths and spacious cabins. All accommodations feature ensuite heads, large double berths, full-size hanging lockers with shelves, adjustable reading lamps, and large hatches and portholes.

The three-cabin owner's layout features a starboard sponson dedicated to the owner with a large private cabin, study area with desk, and separate head and shower. The Electric Leopard became available for private owners at the Strictly Sail Miami Boat Show in February, and it will be available for charter owners in 2008. 

Contact

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