

WATERFRONT

High Flyer

This company is committed to delivering innovation and efficiency, Swedish style.

Sweden is one of the most innovative countries on the planet. Dubbed the tech capital of Europe, Stockholm is second only to Silicon Valley in billion-dollar tech companies per capita, and we have Sweden to thank for Spotify, Skype and Candy Crush, to name just a few of their unicorns. There must be something in the cold Scandinavian air, because that same innovative thinking has expanded into the marine world.

Mantaray Hydrofoil Craft is one example. For the past 10 years, the company has been developing a hydrofoiling boat using their patented Dynamic Wing Technology, and after five prototypes, a finished product called one.fly is soon to hit the water. The 16-foot vessel will have room for four passengers and will soar about 8 inches above the water.

“Our foil is under the water, like a surfboard wing,” says Anton Simberg, CEO of Mantaray. “There is pressure on both top and bottom of the foil, so it’s more like flying. The boat acts more like an airplane [as opposed to] following the surface.” The Dynamic Wing system is mechanical and self-regulating, so one.fly doesn’t require electronic stabilization or hydraulics to keep the boat flying and in balance, which means fewer parts that can break. Though the company has tested multiple prototypes, the main hydrofoil system has not changed for the last eight years, and according to Simberg, it has only required about \$10 of maintenance during that time.

Unlike most hydrofoil boats, one.fly was not built for speed; it will cruise in the 25 to 27 knot range and should top off around 32 knots. Instead, Mantaray has prioritized efficiency. “We could make a faster boat, but we think 25 knots is a perfect average speed,” Simberg says. Simberg claims it to be the most environmentally friendly boat on the market: “That’s why we built it, for the environment.”

With its patented Dynamic Wing system, one.fly cruises 8 inches above the surface, its underwater foil making for a stable ride.



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The company decided to go with outboard propulsion, which makes it possible to switch over to electric power as that technology develops.



The result of 10 years of testing, one.fly's efficiency speaks for itself.

Power comes from a single outboard, either a 30-hp Honda or a 23-kw electric engine. The electric engine will provide a 40-nm range and two hours of “flying time” at 25 knots, and the gas engine will consume 0.2 liters per nautical mile at 24 knots. While most hydrofoil craft are not powered by outboard engines, the decision to put one on one.fly was calculated. “In some areas of Sweden and Europe, it’s forbidden to have normal fuel engines, so they have the infrastructure for electric boats,” Simberg says. “If you buy a boat with a fuel engine, you can just switch to electric when you have the infrastructure.” Ac-

ording to Simberg, one.fly is 75 percent more efficient than a normal boat at 25 knots with either engine configuration.

While the boat’s efficiency is impressive, Simberg is most excited about the passenger experience. “I don’t like to talk numbers. I like to talk ride, because that’s the most fun part,” he says. “It’s so soft, and even if you go with the fuel engine it’s quiet, because when you fly at 25 knots you only use about 34 percent of the engine’s range.”

Buyers can choose between a fiberglass or carbon-fiber hull, but Simberg predicts the company will use yet another material going forward that is more environmentally friendly than fiberglass. As the boat is very lightweight, approximately 838 pounds without the engine, it makes for an appealing yacht tender, but Simberg anticipates that most customers will have the craft just for pleasure. “We will probably get the price under 100,000 Euros,” he says. “We aim for a boat that can be bought by many people.”

One.fly is slated to launch in Sweden this coming September, and Simberg hopes it will make its U.S. debut at the Miami International Boat Show next year. The company is also developing a larger model, which will have room for 12 passengers and hit speeds up to 40 knots. As the marine industry collectively looks toward greener technologies, Mantaray’s innovations are a promising indication that sustainable solutions are achievable and accessible for many. Says Simberg: “It’s not about having the biggest engine on the back. It’s about having the smartest boat on the market.” —*Carly Sisson*