TRM43'

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TRM43' Main Characteristics

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Hull Length [LOA]	13.08 m	Distance between Float Axes	6.0 m
Length At Waterline [LWL]	13.04 m	RM Max	25 T.m
DWL Displacement	7.26 T	Mast	16.35 m
Light Displacement	5.6 T	Air Draft	18.75 m
Max Displacement	7.5 T	Mainsail	55 m^2
Max Beam	7.92 m	Solent	34/42.5 m^2
Draught	2.5/1 m	Code 0	60 m^2
Forward Freeboard	1.80 m	Engine	2 x 30 hp
Middle Freeboard	1.75 m	Sail Drive with Flexofold 3 Folding Blades	
Nacelle Height [DWL]	0.85 m	Number of Berths	6 / 8

Despite the abundance of production catamarans on the market, there was one niche that remained desperately vacant: that of a **True blue-water yacht**, designed solely for the pleasure of long-distance sailing in the best conditions.

This is why the *TRM43'* was born – To be Fast, Reliable and Autonomous across the Oceans

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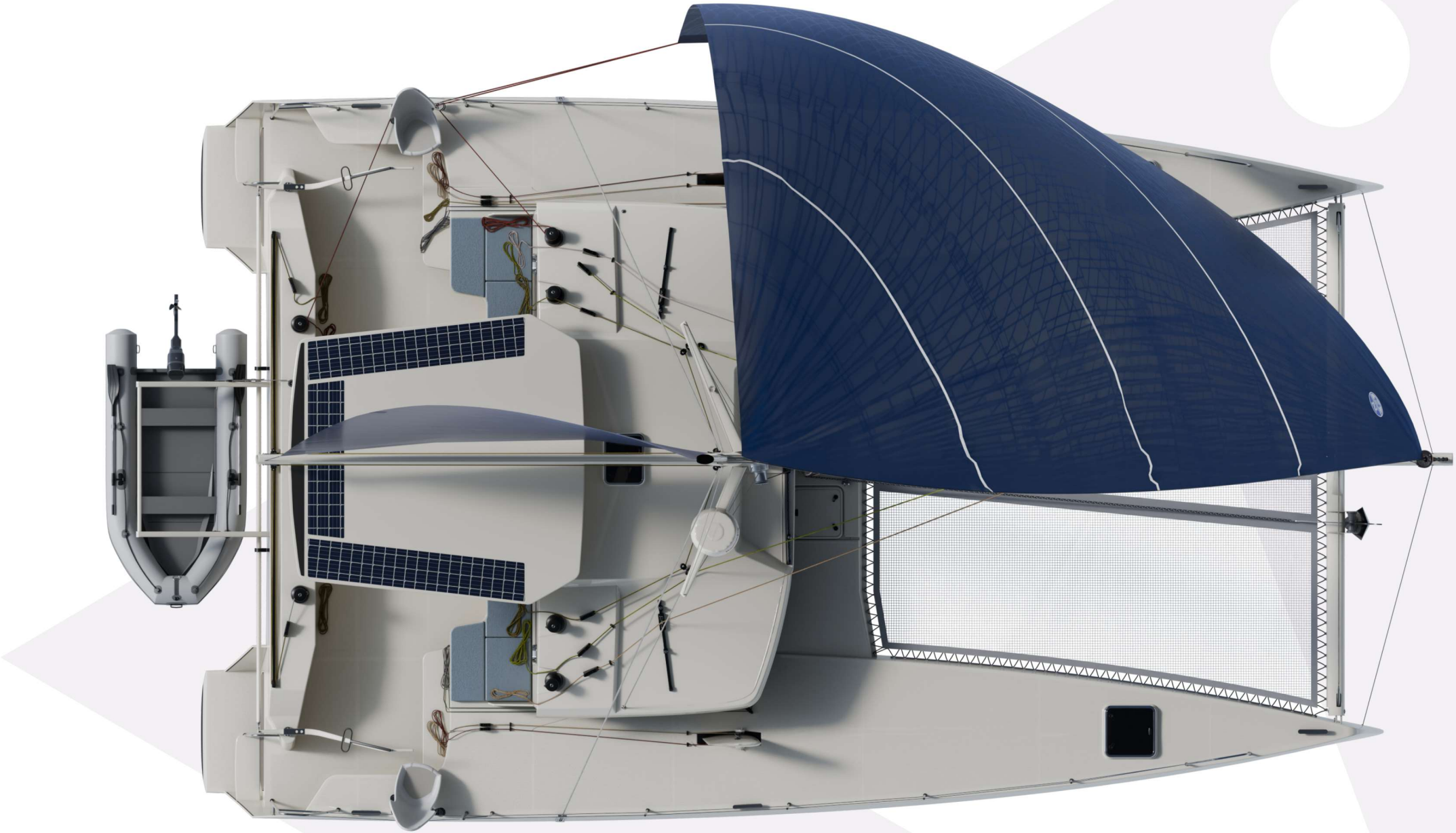

TRM43' Built To Cross Oceans

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Virtually all existing catamarans have been designed to meet the needs of the largest possible number of people, namely charter agencies and/or private individuals looking to travel with family or friends. The speci£cations for these boats are £rst and foremost to be able to accommodate as large a crew as possible, depending on the size of the boat, and with maximum comfort.

Alongside these considerations, the sheer pleasure of sailing takes a back seat. However, we can see that the vast majority of long-distance sailors today sail with a small crew, usually made up of 1 to 4 people maximum, and are looking above all for the sheer pleasure of sailing as much as possible ‘under sail’ on a simple, reliable, seaworthy boat.

To achieve this ambitious goal, we needed both an architect who really understood the difference between this type of boat and most mass-produced boats, and a shipyard with the technical skills and experience to build it.\

TRM43' Built To Cross Oceans

It was with this objective in mind that the naval architecture firm Christophe Barreau/Frédéric Neuman and the shipyard Trimarine Compósitos Lda. have joined forces.
Christophe Barreau and Frédéric Neuman have built up exceptional expertise over almost 30 years working with such prestigious shipyards as Catana, Outremer and Marsaudon Composites.

However, unlike their collaboration with these shipyards, for the TRM43' the architects did not have to comply with any preset “series” specifcations or any of the many usual commercial constraints imposed by the yards to be able to sell as many boats as possible afterwards.

In contrast, the TRM43' was developed in collaboration with a keen sailor who couldn't find a production boat that met his exact requirements. Based on his experience of a first successful round-the-world voyage, he sought to improve and optimize everything possible in relation to his first boat, with the aim of being able to set off on a second round-the-world voyage with the boat of his dreams.

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TRM43'

In A Nutshell

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Basic concept:

TRM43' was designed from the outset to be as light as possible to maximise cruising performance and is now practically the lightest boat in its class on the market.

Only a boat with these characteristics can offer the pleasure of sailing close to 95% of the time propelled solely by the force of the wind in its sails. The TRM43' only needs 2/3 knots of wind to be able to do without its engine and already sail at wind speed; it easily covers an average of more than 200 miles a day in total serenity and comfort, and often even exceeds 250 miles.

On the other hand, most production boats achieve the same performance under engine and in winds of more than 10 knots, rarely reaching distances of 200 miles per day.

Designed by and for enthusiasts, the TRM43' offers all the marine qualities required for a long-distance sailing programme: lightness, very good seakeeping, as well as simplicity and great reliability, guaranteeing quick and easy maintenance and lots of sailing pleasure.

TRM43'

In A Nutshell

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Why Trimarine:

Building a fast, lightweight boat requires a great deal of expertise and technical skill.
The kind of skill that can only be found in yards that specialize in building racing yachts.

Trimarine's unique expertise in this field has been recognised since the 90s, with projects spanning from America’s Cup Yachts, IRC Class, IMOCA60 and custom performance catamarans and sailboats.

TRM43'

In A Nutshell

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Epoxy construction:

Unlike most mass-produced boats, the TRM43' has a fiberglass/carbon/epoxy resin/Corecell™ composite hull.

The main structural elements, such as the reinforcements in the bulkheads and main beams, are made of carbon.
Epoxy resin is certainly more expensive than polyester or vinyl ester resins, but its advantages more than make up for the cost disadvantage.

The result is a lighter boat than in aluminium or GRP; epoxy is also very resistant and durable, which extends the life of the boat. Boats built using epoxy composite laminates also offer greater tensile, flexural and shear strength than those made using common polyester or vinyl ester resins; in addition, they also have the advantage of being virtually impervious to the risk of osmosis.

In short, epoxy resins offer virtually nothing but advantages over polyester. It's for these reasons that they're much more commonly found on the highest performance racing boats.

TRM43' In A Nutshell

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Dimensions:

Many experienced sailors have now concluded that a boat of +/- 13 m (43 feet) is the optimum length for long-distance crossings with a crew of +/- 1 to 4 people.

This explains, among other things, the success of Class 40 boats. On the one hand, the reduced size and weight limit the effort required to steer the boat, and on the other, the length is sufficient to ensure easy and comfortable passage through even the roughest seas.

The TRM43' wide beam (almost 8m), long forward beam and reasonably sized rig give it a reserve of stability that makes it as safe as most cruising catamarans, but with far superior performance. What's more, thanks to its extremely slender hulls, the TRM43' cuts through waves with ease, heels very little, rolls smoothly and accelerates continuously without any of the limitations of more traditional displacement vessels.

TRM43'

In A Nutshell

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Autonomy:

The TRM43' has been optimised for maximum autonomy. All its electrical and electronic equipment has been chosen for its moderate power consumption.

The surface area of the solar panels has been calculated to ensure the greatest possible autonomy, both when sailing and at anchor. On the first boat, the decision was made to install 2 lithium batteries with a capacity of 2 x 460 Ah. With this capacity and a full charge, all current needs are covered for +/- 48 hours, even in continuous navigation configuration; at anchor, autonomy is virtually unlimited.

For water, the owner has chosen a watermaker that can produce 40 liters of water per hour on a single charge of the 12 V batteries, without having to run the engines. In addition, a rare but useful feature on a cruising boat, a rainwater collection system on the bimini allows the water to be collected either directly in jerrycans or in the boat's water tanks.

TRM43'

In A Nutshell

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Engine:

After extensive discussion on the subject, the owner decided not to opt for an electric motor, as the technology is still in its infancy – unreliability, limited range and price were the main factors influencing the decision, but above all, the total configuration with batteries is much heavier than that of a conventional internal combustion engine.

For a few years to come, the advantages of an internal combustion engine will more than make up for the disadvantages.

The choice for this boat fell on 2 Volvo D1-30s (30 HP) diesel engines with a sail drive base; these engines have more than enough power given the boat's low weight. The sail drive transmissions is more reliable than propeller shafts, and are much quieter, while consuming very little fuel.

They are fitted with a powerful 115 Ah alternator for rapid battery recharging and can easily produce hot water.

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Conceptual Sketches

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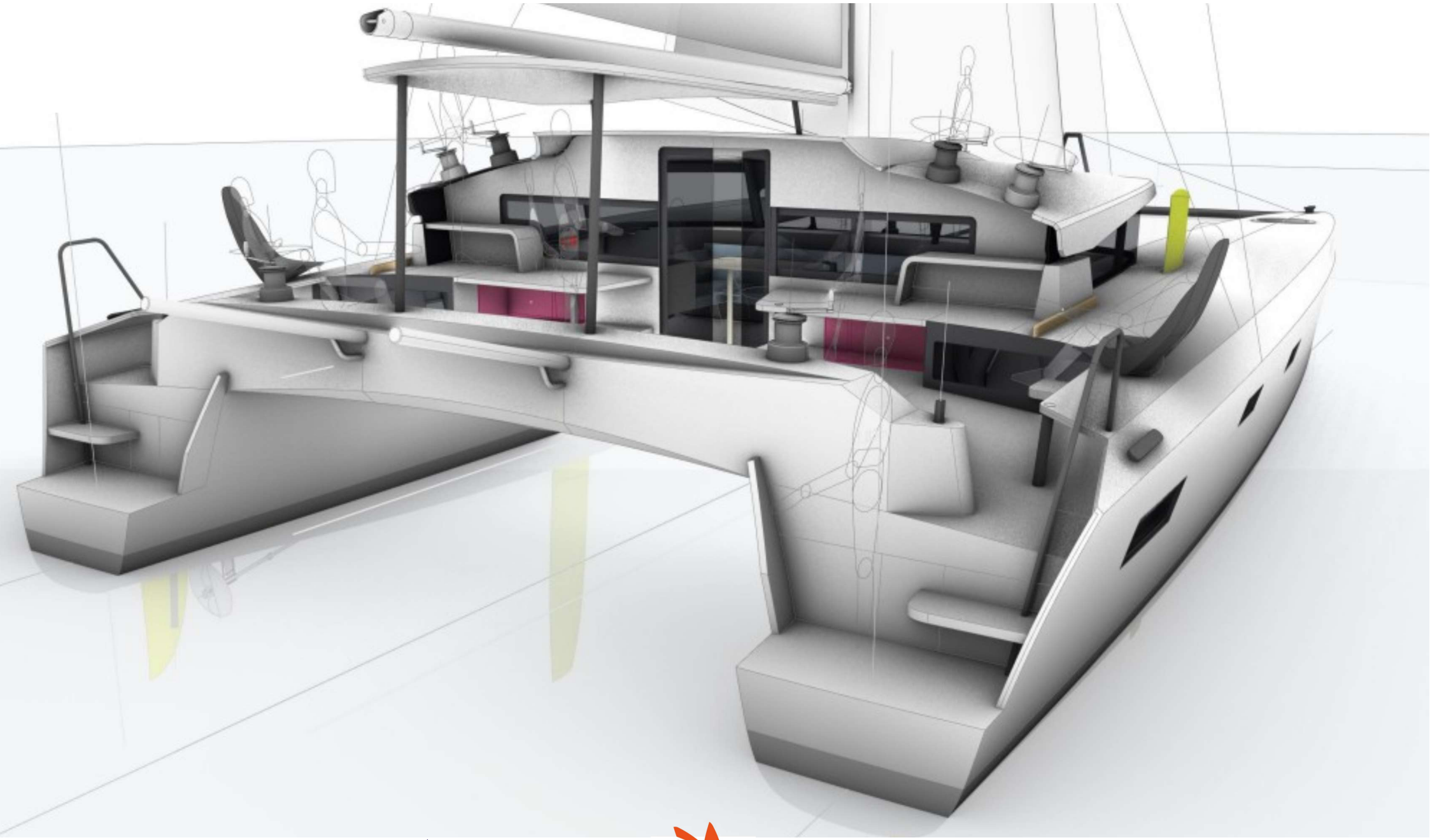

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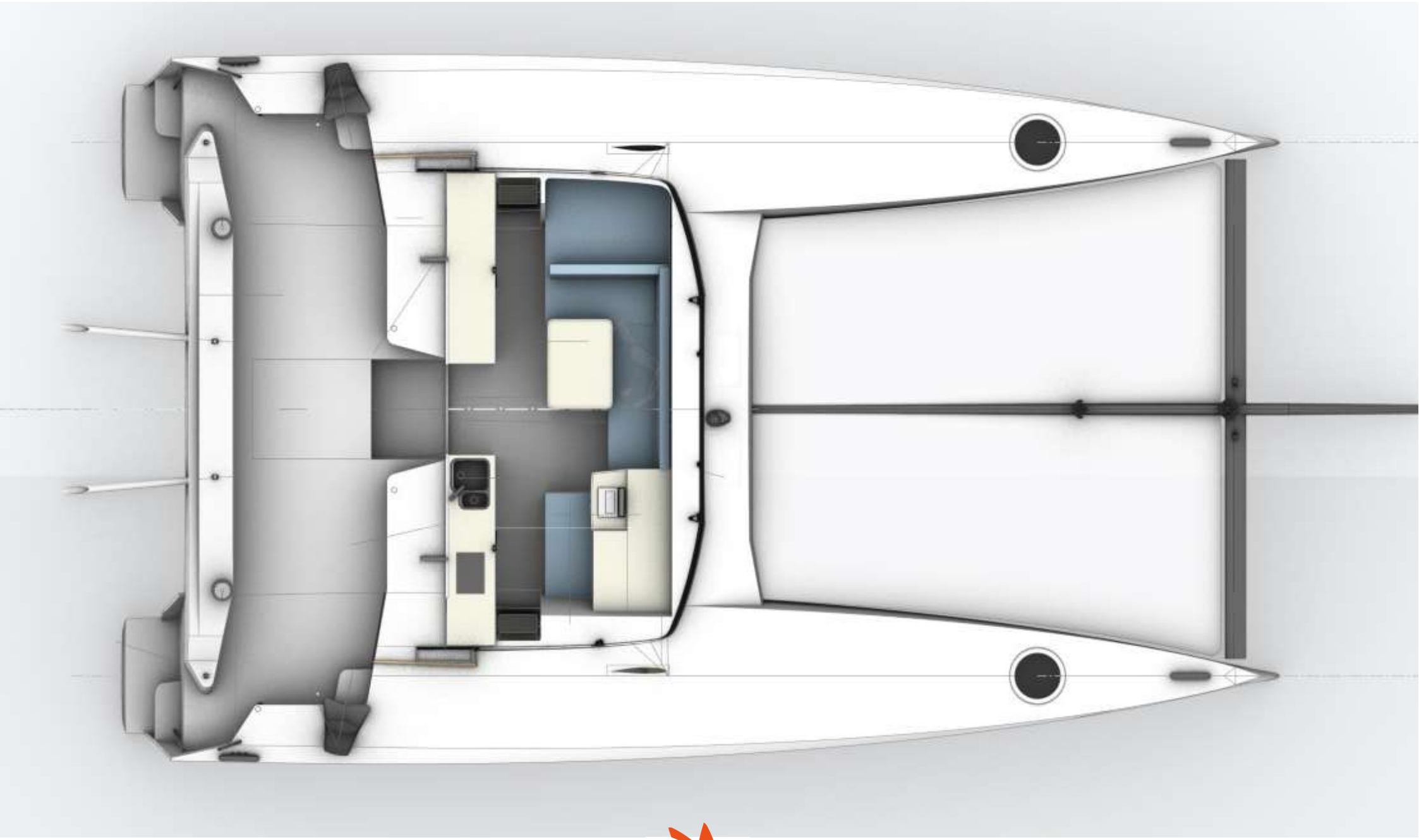

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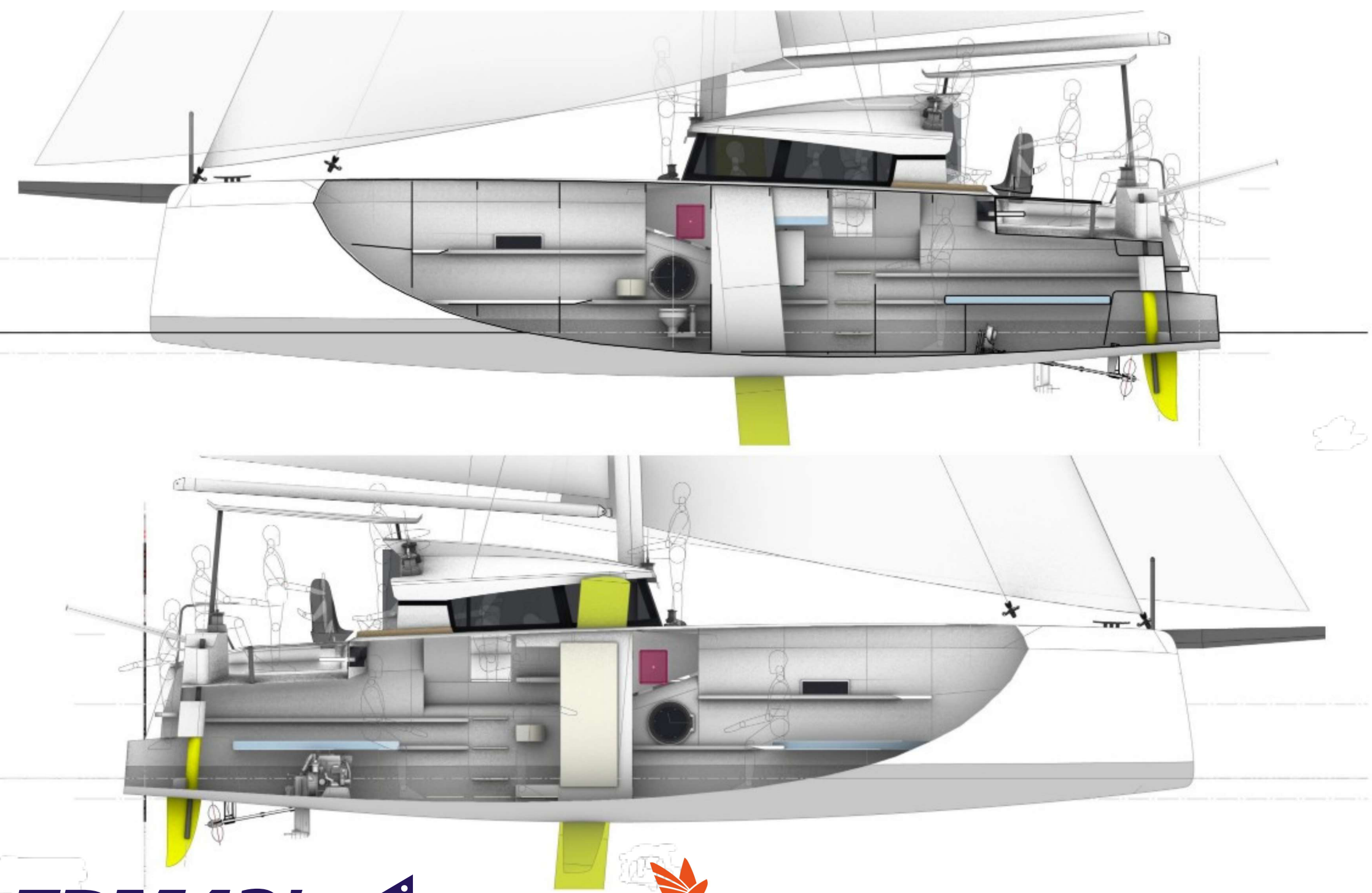

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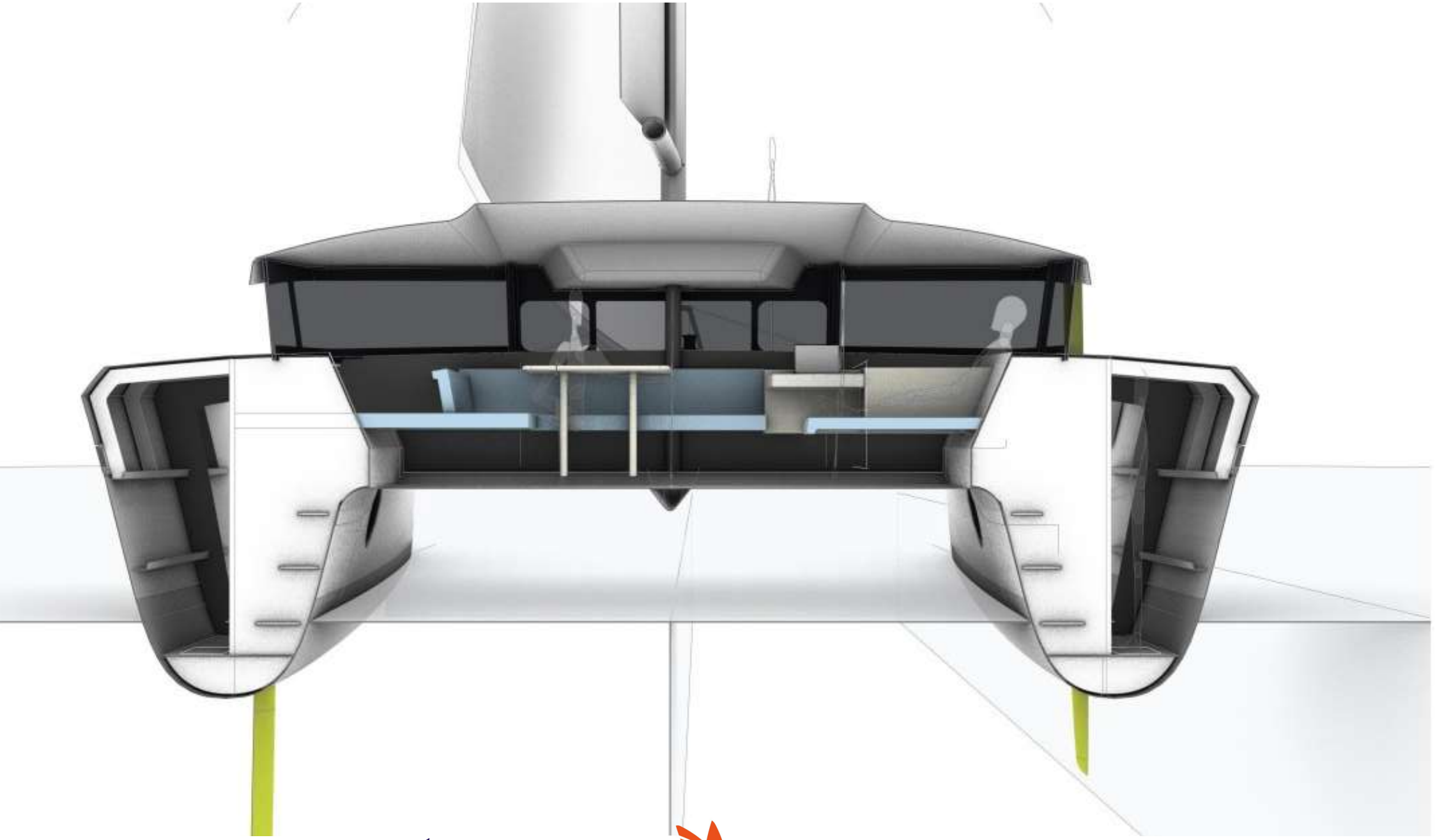

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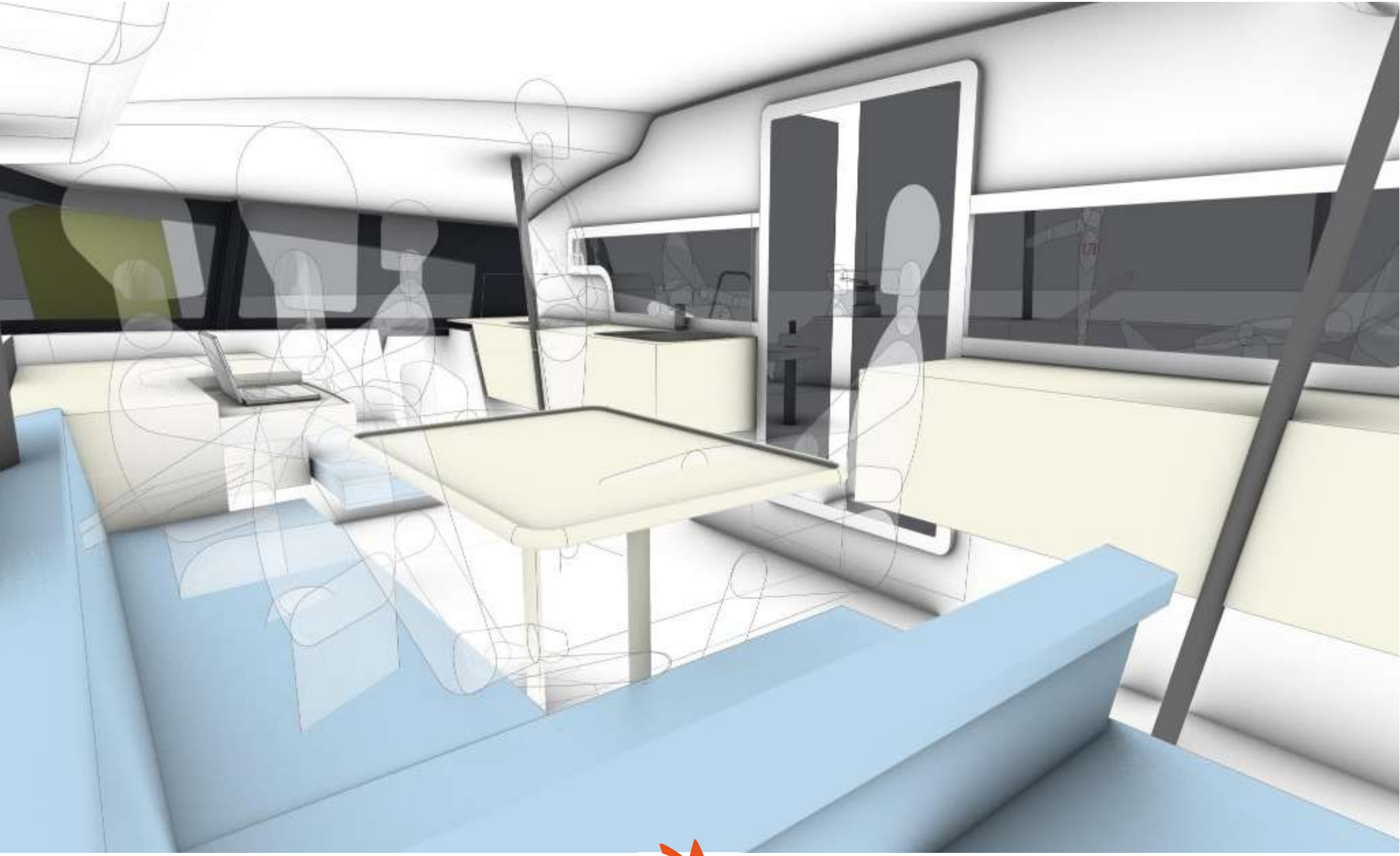

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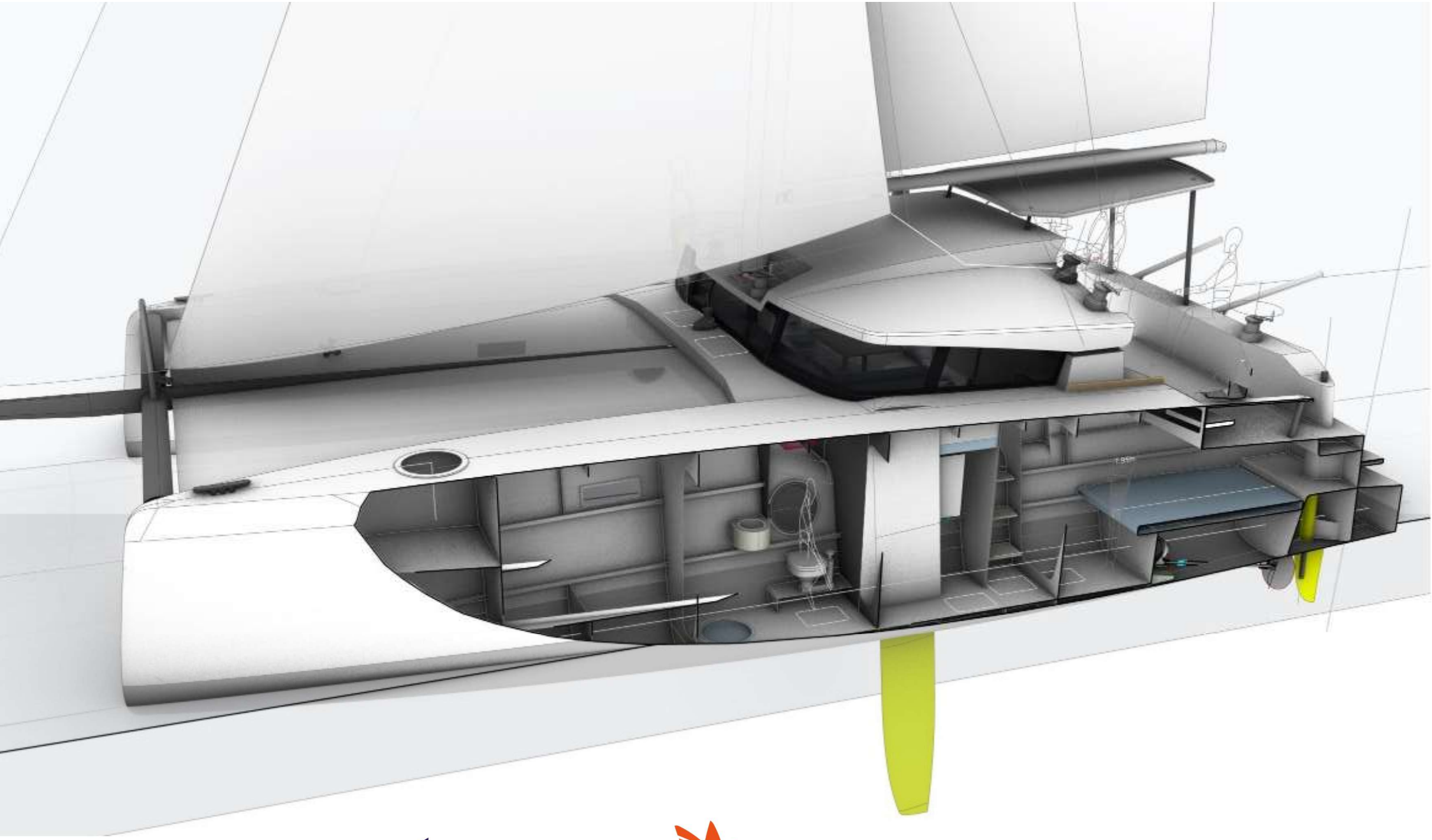

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