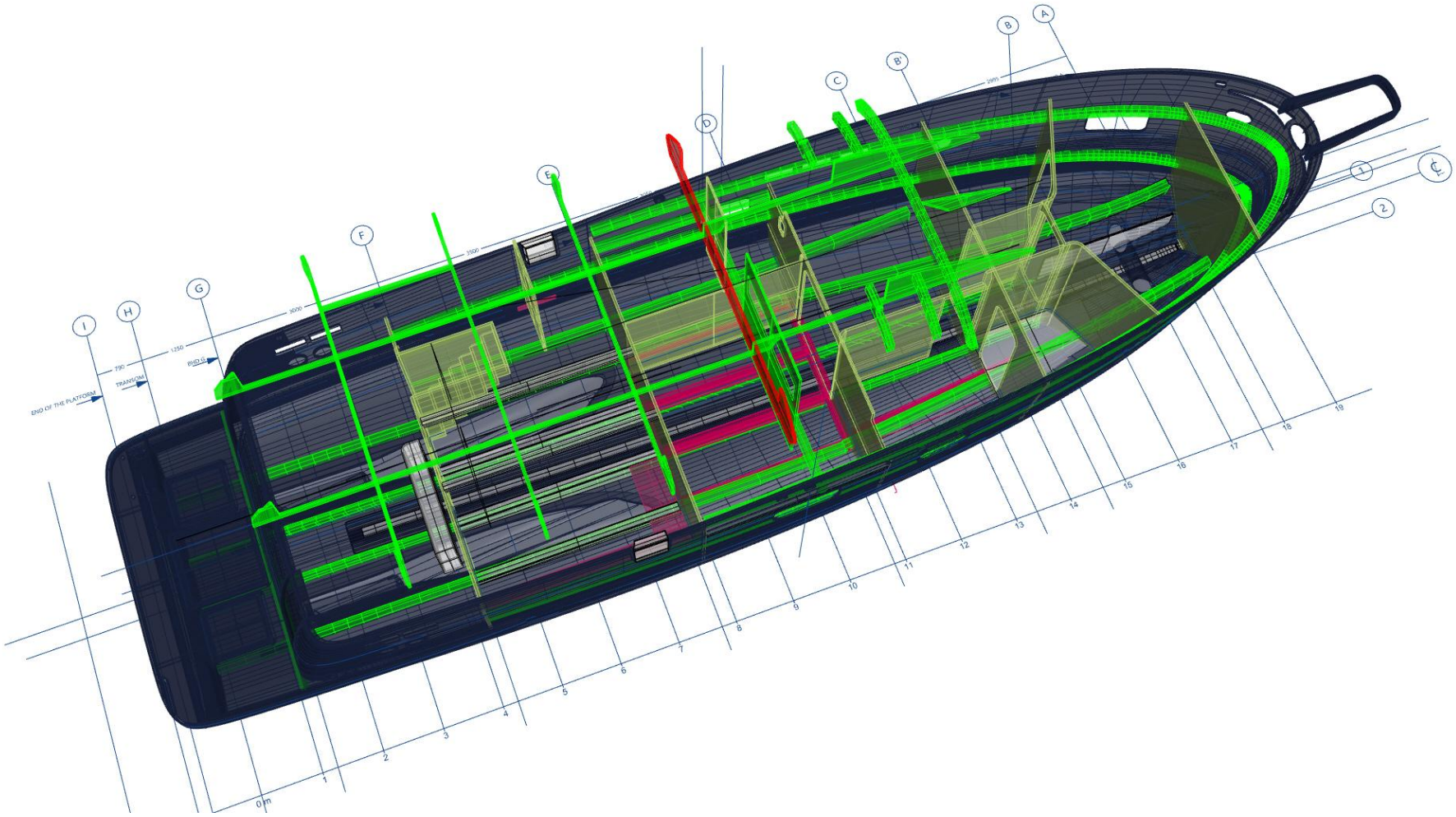
SECOND, CONSTRUCTION

Thanks to the excellent experience of the design office Structeam from the UK, the structure has been designed in a very thoughtful way. The weighted months are made of a very large amount of reinforcements and a significant thickness of the laminate. However, in places where the structure does not carry loads, it is lighter. Such a method is typical of sophisticated methods of designing advanced yachts and it boldly displaces methods in which heavy structures are installed without much justification. Instead of weight, we use sophisticated materials and infusion lamination. Weight is the basic parameter influencing the economy of swimming. Thus, this aspect contributes to the definition of our units as ecological.



Constructions Parameters:

Construction type: GRP – all parts manufactured in Vacuum Infusion Process
Primary materials :
-eg.DIPEX/ SAERTEX multiaxials fiberglass materials,
-eg.BUFA, Ashland, Scott Bader resin & gelcoat materials or better
Polyester or vinyloester resin for vacuum infused parts on demand.
Hull COR555/690 - The hull structure assumes a laminate with a foam CORE eg. Divinycell/Mycell 25mm-35mm H100/H130/H200. Except keel, bow, chine and shaft line housing that are made of SOLID laminate up to 19 800 grams per 1sq.m. The lamination process is performed using the vacuum infusion technology with first layers of vinyloester resin wet laminated skincoat.
SoricTF is used as printblocker on first layers for infusion on most crucial parts.
For supporters of a hull made of FULLY SOLID laminate, it is possible to make a structure in this technology.
Longitudinal Stringers – six full length girders on hull bottom plus two stringers on each side,
solid laminate manufactured in infusion on structural foam sections with capping up to 23 500 grams per 1sq.m. Additional beams and panels locally on hull, deck , flybridge and hardtop.

Bulkheads - infusion composite with Divinycell/Mycell CORE foam H80 30mm-35mm. Multiaxial fiberglass up to 8800 grams per 1sq.m.
Main Deck - infusion composite with Divinycell/Mycell CORE foam H80 20mm-25mm. Multiaxial fiberglass up to 16 200 grams per 1sq.m.
Deck / hull connection – with structural adhesive e.g. Crestomer 1152PA or simillar, solid without core, bonded connection and then laminated with multiaxial fiberglass tapes.
Superstructure, Pillars, Hardtop - sandwich infusion composite with Divinycell/Mycell CORE foam H80/H200 20mm-35mm. Multiaxial fiberglass up to 15 000 grams per 1sq.m.
Engine and thrust bearing foundation made of solid laminate with tight fitted washer metal plates without overlaminating them.
Finishing laminate BUFA, Ashland, Scott Bader, Stoppani

Windows in the superstructure:
We use two types of glass thickness in windows. Windows with higher aesthetics usually have a glass thickness of 6 to 8 mm.
Less aesthetic windows have glass with a thickness of 12 to 16 mm and are intended mainly for yachts built in the LRC configuration. Regardless of the method of use, all windows meet the stringent standards for CE A-ocean certification. Additionally, storm covers of LEXAN can be used.

The windows in the Hull:
Portholes: We use portholes with acrylic glass with a thickness of 10mm to 12mm.
Large side windows are made of glass from 12 to 16mm.
Smaller hull windows can be equipped with steel storm covers mounted from the inside.

Finishing laminate surfaces
As standard, the hull and superstructure are covered with white gelcoat
Additionally, at the customer's request, we can polish the hull and superstructure with a single-layer varnish or tri-coat pearl / metallic.

Buoyancy, seaworthiness

All the hulls we use have been designed directly for us by the office of engineer Grzegorz Władziński. In response to the high demands, hulls were created that combine the following features.

- Sharp bow on the waterline, squat where space is needed inside.
- The almost vertical bow not only introduces a professional character to the silhouette. It allows you to make better use of the space in the interior. A large usable space is created between the bow edge and the collision bulkhead.
- A high bow (over 3m / 10ft from the waterline) reduces soaking of the fore deck.
- Reduced resistance in the speed range of 7-10kts.
- The flattened stern allows a lot of carry when you need to go faster, such as when you want to get away from bad weather or reach anchorage before nighttime.
- The flattened hull at the stern, devoid of the classic V, effectively reduces side-to-side swaying.
- Wide on the waterline. Effectively contributes to increasing stability.
- All weights have been placed as low as possible. The drive engines are placed extremely low. It is also conducive to lowering the rocking arm. Increases comfort on board.
- The additional optional keel performs several functions. It adds buoyancy, allows you to add ballast, lower the center of gravity and increase the strength of the righting arm. Perfectly improves stability and prevents the hull from swinging. It protects the rudders and the screws at the sandbar passes, while the steel fittings of the trousers are secured by the laminate.
- The cutting beak of the pear is not a typical bulbous beak. It definitely does a different job in our hulls. The cutting bow pear perfectly cuts the water in front of the hull proper, causing the water to stick to the hull and hold it as far as possible to avoid creating energy-consuming vortices. In addition, the modeling of its bottom part perfectly affects the comfort of swimming in the undulating sea.
- On request, a stabilization system, active fins is available.
- Our bow thruster tunnels are always designed and then CFD tested. We do it because basic modeling is not enough to contain the water in the vicinity of the bow rudders. As a result of these actions, we know that the water will not flow into the tunnel creating undesirable vortices and resistance.
- We design the exits of our underwater exhausts using the same method.
- The drainage of decks during stormy weather is ensured by storm drains. We always design them and then test their effectiveness. Our drains have a reverse blocking function.