

COR710

SPECIFICATION



CORMORANT
YACHTS

Introduction

This 70-foot Motor Yacht has been designed to spend time on the water in a big way. The main ideas during the design process were the highest possible functionality while maintaining classic timeless lines of the figure.



Its modernly designed semi-displacement hull with an adjustable part of the transom rafting has been designed for travelers between 10-15kts, which are most often used by 70-foot luxury Motor Yachts. Although not rushing, calm sailing is its the strongest point. It perfectly copes with speeds up to 35kts.

These main distinguishing features make it an ideal for coastal tourism, wandering from island to island of the Greek archipelago or the Caribbean Sea as well as for long passes. Its

strong construction and thoughtful hull design easily reach ocean class – A. This is especially important when sailing is in worsening weather. A highly raised bow also plays an important role.

Architecture of propulsion and mechanical systems based on full redundancy favors maritime safety. We can usually find it out in critical situations that should always be remembered.

Despite the limited space, the engine and electric engine room provides excellent service for daily activities and main repairs. Access to the room is through the door from the crew's cabin. To facilitate service there is a small and large hatch in the deck floor.



For those who do not intend to call often at the port or decide on long range cruising fuel tanks are foreseen. The total amount of fuel (5300L, 1400gal) allows to overcome 2700 NM at 7kts while maintaining 15% of the fuel reserve.

The arrangement of rooms and relaxation zones on board ensures perfect integrity of family or friends. A very large open day zone ensures perfect relaxation close to the water. The interior of this stylish yacht is full of high quality hand work and very high quality of finishing. The highest quality of materials, selected veneers and upholstery materials were used in the interior. The non-separate wheelhouse ensures constant contact of the captain with the rest of the family. There are two large bedrooms under the deck, a guest bedroom – each has its own bathroom with a full-size shower. There is a kitchenette a few stairs down from the living room and a living bathroom e.g. for guests whom you welcome in the marina.



Excellent maneuvering equipment, efficient hydraulic bow and aft thrusters, video camera system, remote control for docking make this 70-foot yacht family-friendly and requires no crew. The functional design a spacious cabin for a double crew, dimensions and quality of workmanship allow it to be shared with guests.

The garage for over 17-foot dingy or jetski is located at the stern. For those who like to take more toys with them, the lowered bathing platform allows you to locate jetski on it.



Main particulars

PROPERTIES	[m]	[ft]
LOA Length overall	21,88	71,77
BOA Beam overall	5,425	17,79
LWL Loaded waterline length	18,347	60,18
BWL Beam at the waterline	5,205	17,07
T draft	1,78	5,84
DA draft air	5,56	18,24
D(T) Loaded displacement	45,4 t	100.060 lbs
CE APPROVAL CATEGORY		A
Maximum capacity		14 people
Hull type	Semi-displacement with ETE (Extended Trailing Edge)	
Hull Material		GRP
Superstructures / Deck		GRP

The project team

POSITION	NAME
Naval architect	Grzegorz Władziński
Analysis CFD and improv.	Grzegorz Władziński
Conception designer	Damian Dymecki
Exterior designer	Adam Bućko
Interior designer	Cormornat Yachts Team
Construction designer	STRUCTeam Ltd UK

Tank capacity

PROPERTIES	[L]	[GAL]
Diesel total	5190	1371,20
Potable water tank	150	39,63
Fresh water tank	1000	264,20
Gray water tank	300	79,26
Black water tank	500	132,10

Layouts



Main deck type A No.1 with galley on the lower deck

The main sofa can be folded down with an additional curtain that can be completely removed.



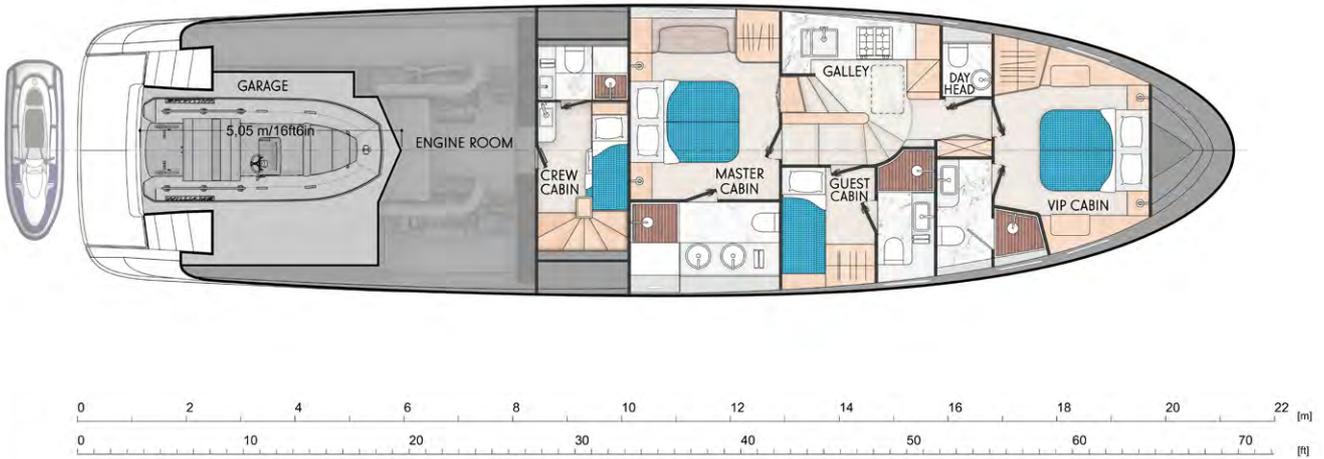
Main deck type A No.2 with galley on the lower deck

Additional seat next to captain. The main sofa can be folded down with an additional curtain that can be completely removed.



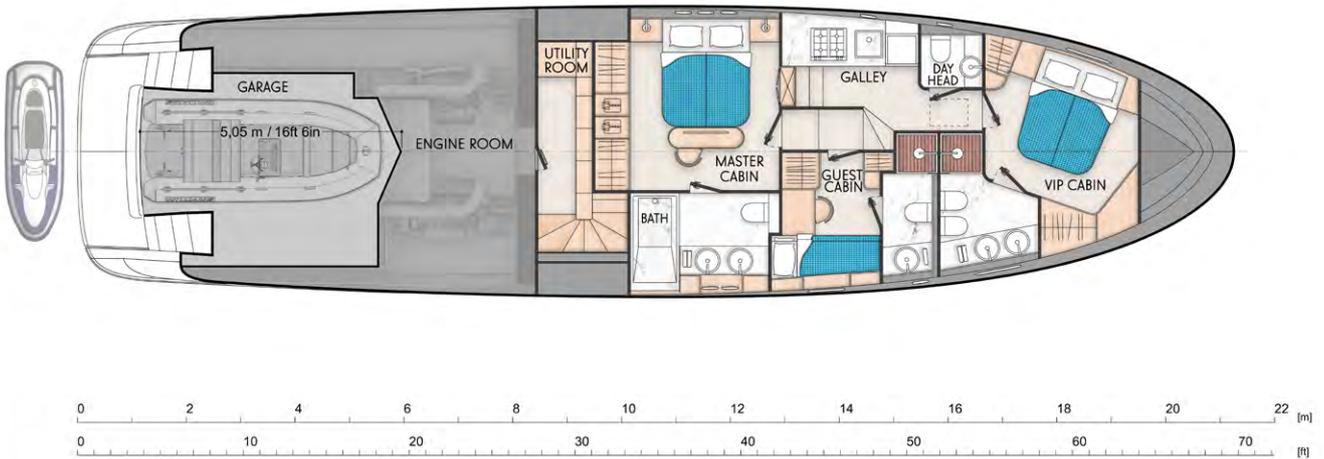
Main deck type A No.3 with galley on the lower deck

Additional seat next to captain. Additional sofa on the portside. The main sofa can be folded down with an additional curtain that can be completely removed.



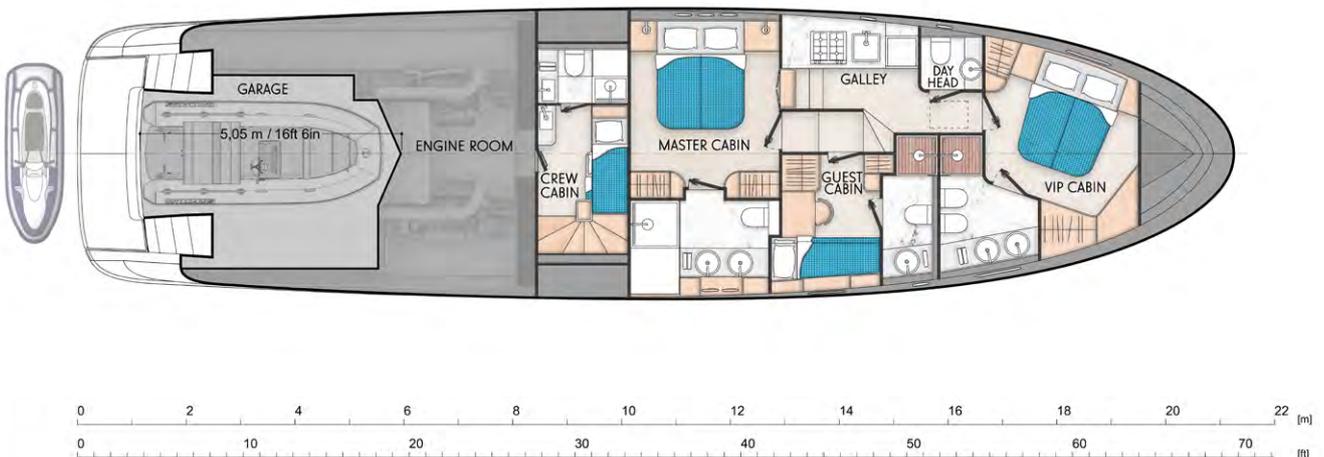
Lower deck type A No.1 with galley with full size fridge with freezer

Guest cabin could be with a bunk bed or one pullman bed and large desk to work. There is an independent washing machine and dryer opposite the door to the guest cabin under the stairs. Crew cabin/2nd guest could be replaced in the utility room.



Lower deck type A No.2 with smaller galley with bigger cabins

There is an independent washing machine and dryer opposite the door to the guest cabin under the stairs. The bathroom in the master cabin may have a bathtub. Big utility room.



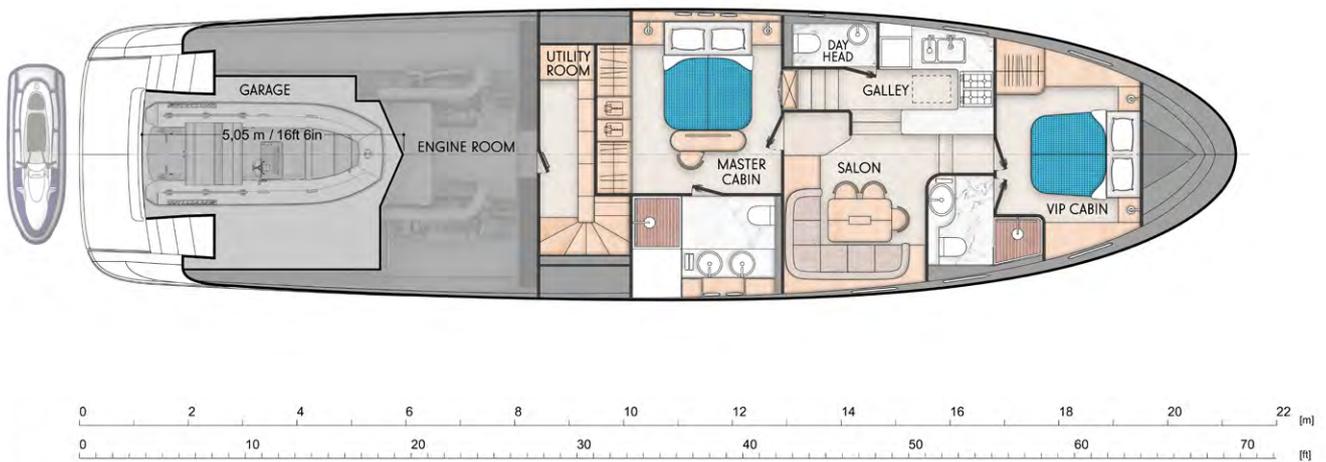
Lower deck type A No.3

Similar solution like Lowerdeck2 but with CrewCabin/2nd guest cabin for two persons.



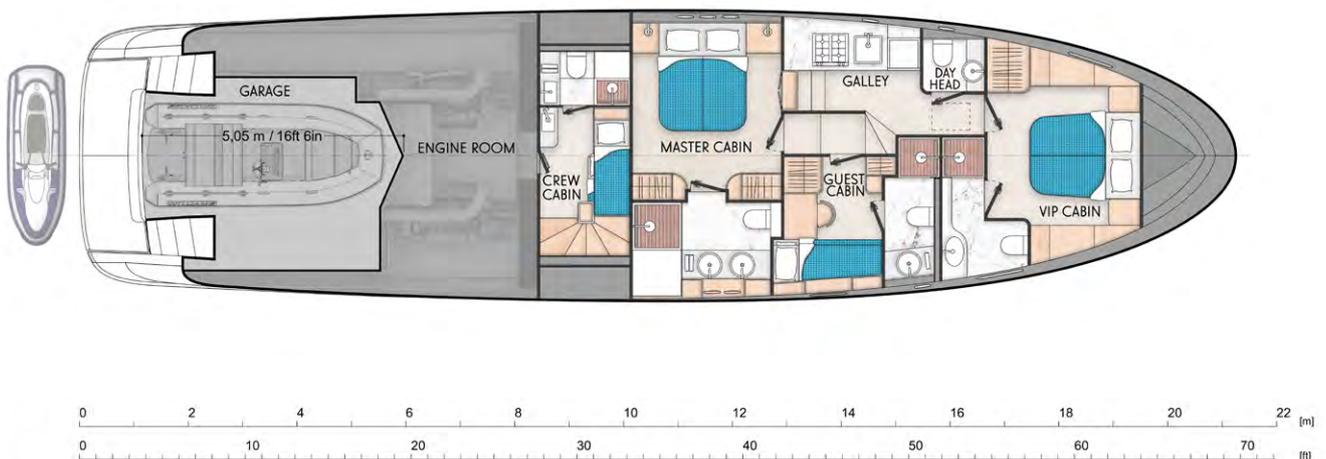
Lower deck type A No.4 with galley on the main deck

Cabin for babysitter. Utility room could be replaced for the crew cabin/2nd guest like in the Lowerdeck3 layout.



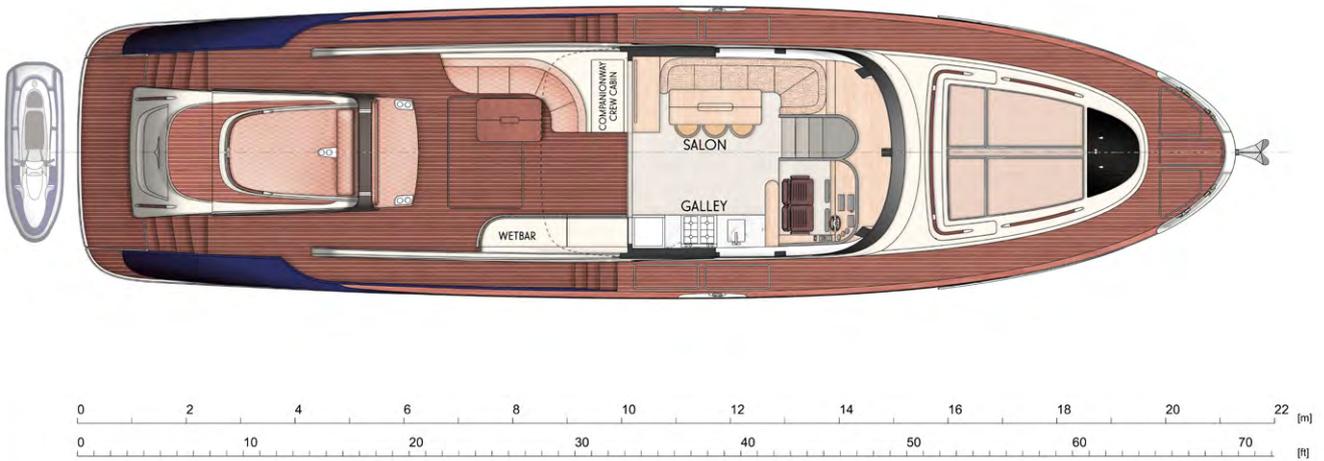
Lower deck type A No.5 with bigger galley with full size fridge with freezer

Salon with dining table. Sofas are good places for children to play. Sofas could be unfolding for sleeping with a sliding wall to separate this space.



Lower deck type A No.6

The same like Lower deck A No 3 but with different more classic arrangement in the VIP cabin.



Main deck type B No.1

with galley with full size fridge and refrigerator. Big sofas and dining tables. The galley was located close to the wet bar to maintain the functional line.



Main deck type B No.2

with a low-rise galley, which can be hidden under additional covers and become a piece of furniture in the living room.



Main deck type B No.3

with a low-rise galley, was located close to the wet bar to maintain the functional line. Window between the galley and wetbar can be raised, creating one functionally space. Two separate chairs are good places for reading books.



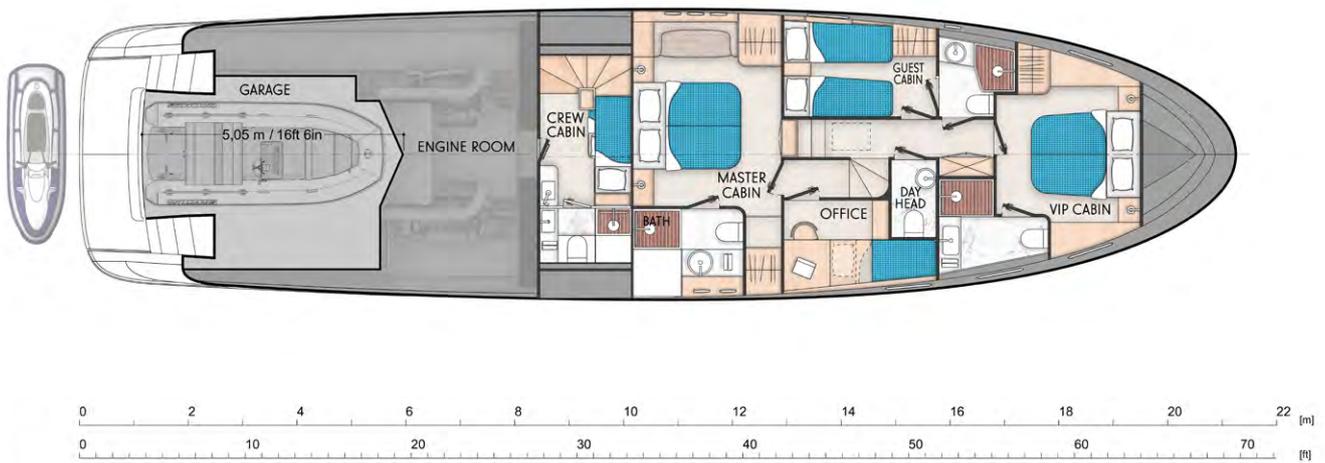
Main deck type B No.4
is similar to No.3 but with sofas instead of armchairs.



Main deck type B No.5
with a big functionally galley can be connected with a wet bar thanks to a raised window between the galley and the wet bar.



Main deck type B No.6
with a functionally galley can be equipment for full size refrigerator and freezer. Two spaces for relaxing sofa and chairs.

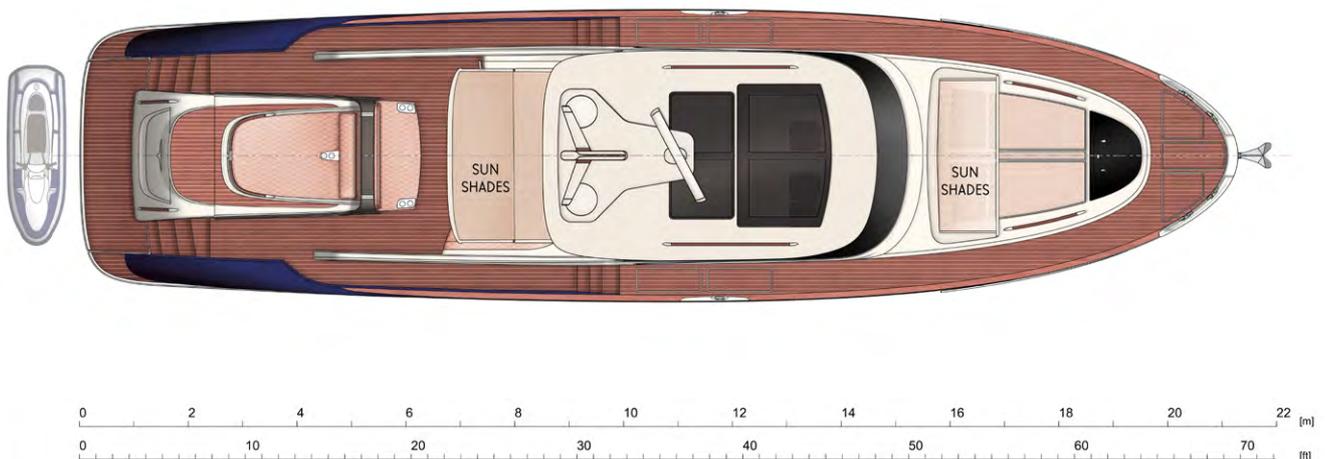


Lower deck type B No.1

Layout for big family or sailing with two friend families. There are three big cabins. In the guest cabin could be additionally one pullman bed on the port side. The Crew cabin can be used like a 2nd guest cabin. In this expanded layout there were place for enclosed quiet office for comfortable work. In the office cabin is a folding pullman bed on the starboard side. The good solution is to connect this layout with main deck type B No5.



One of the main minds within the design process was to closer people on this yacht to the water. Despite the roomy interior, the beautiful yacht has many relaxing spaces. Very large sofas on the aft deck. Big sunbed. Swimming platform. Wide half-decks that facilitate the walk to the bow deck. Where is the sunbed with a folding bimini.

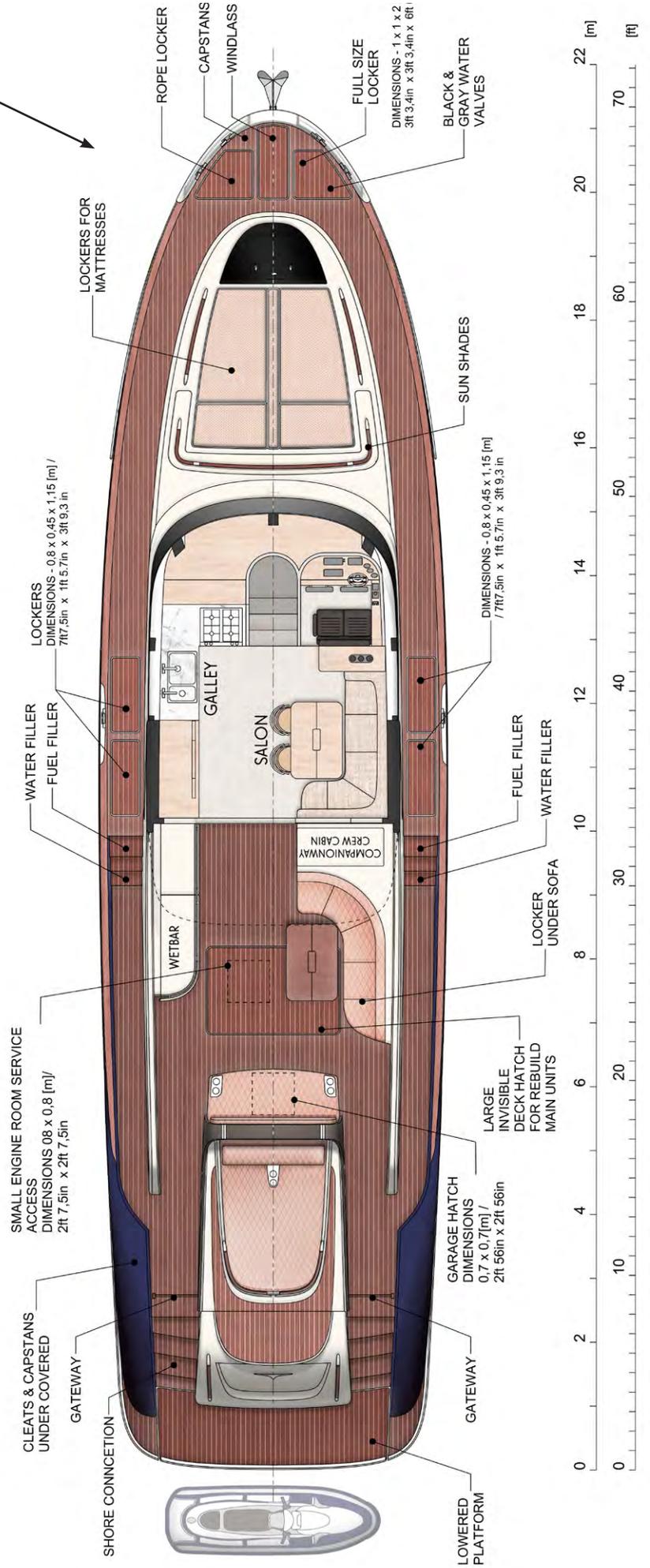


To protect against strong sunlight we design sun hades on the bow and on the aft deck. Additionally can be unfolding sunshade on the tubes.

Illustration shows general functional layout on the decks.



Illustration shows two large utility rooms



General construction

Hull and seakeeping specification

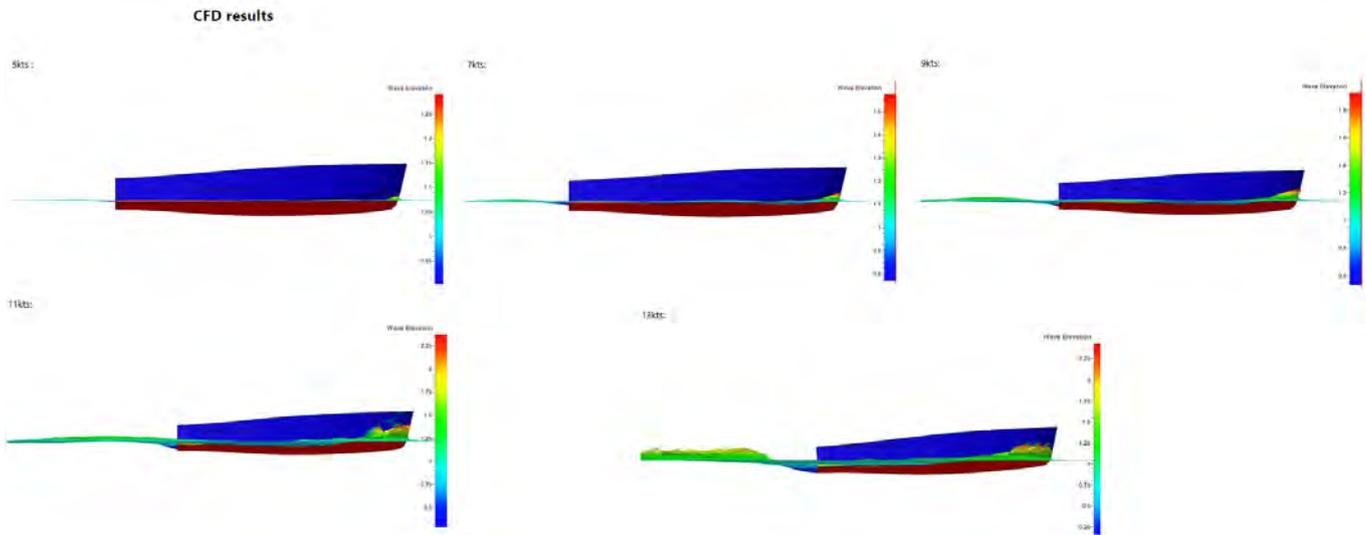
Customer requirements, assumptions, design, execution

For many years, before the start of design work, we have been looking at market trends and the way yachts are used by our potential customers. The observations clearly showed that the clients who we want to build yachts are satisfied families who want to spend a lot of time on the water, for whom the priorities are sea bravery, safety, reliability, comfort of rooms with comfortable bathrooms, good allowing good equipment. While speed is not an important determinant the possibility of periodically developing higher speed is vital.

Most of our potential customers dream about long journeys, but their yachts do not meet the criteria, and this is because they did not want to use trawler yachts, even though they are wonderful units. So they buy vessels usually with a planning hull to swim 8-12kts voluntarily.

Having this data, we turned to the renowned Naval Architect Grzegorz Władziński, presenting him the following assumptions, which were included in our project.





1. Sea bravery allows easily obtain the strict CE-A ocean category.
2. Good stability, comfortable, gentle behavior when leaning.
3. Gentle behavior of the yacht in the wavy sea, no hitting against the wave as in the case of planning hulls.
4. Careful selection of the water line with the determination of the own wave generated by the hull.
5. Low hull resistance for speeds up to 10kts, makes the range long, but not as slow as the hull is fully displacement.
6. Large hull volume, for large functional spaces, both cabins and utility rooms.
7. The vertical fore section showing sea prowess and giving a large space inside already in the first meters of the vessel.
8. The possibility of installing a proven, traditional propulsion and improving it with the possibilities of today's technology.
9. The ease and pleasure of driving the yacht by yourself without the need to hire an external crew.
10. An elegant silhouette, in which we can see the genes of a luxury yacht lobster.

Based on these assumptions, the hull for the 710 and 760 models were created. Generation sixties ft.

Semi-displacement, combining the features of a full-displacement hull, with the possibility of faster movement due to e.g. bad weather. a hull that wears less at 10kts than a capable full displacement hull and a planing hull.

The aspect of raising the possibility of faster arrival turned out to be crucial, some users do not want to be in the marina after dark.

Despite its volume and almost vertical bow line, the hull, 60 cm above the waterline, which has a sharp bow, which contributes to the perfect cutting of waves. Clear keel positions improve exchange rate stability. The rounded bottom with a small angle of inclination ensures comfort during tilts, making them gentle. The lateral flattening of the stern increases the efficiency of the screw operation. Wipers for the drive shaft housing precisely direct the water jet onto the propeller blades. Another significant improvement to our hull is the ETE (Extended Trailing Edge) through precise yaw, the water jet is better controlled, reducing drag at higher speeds.

Production

In order to maintain the precision of the shape, our hulls are made using the classical method,

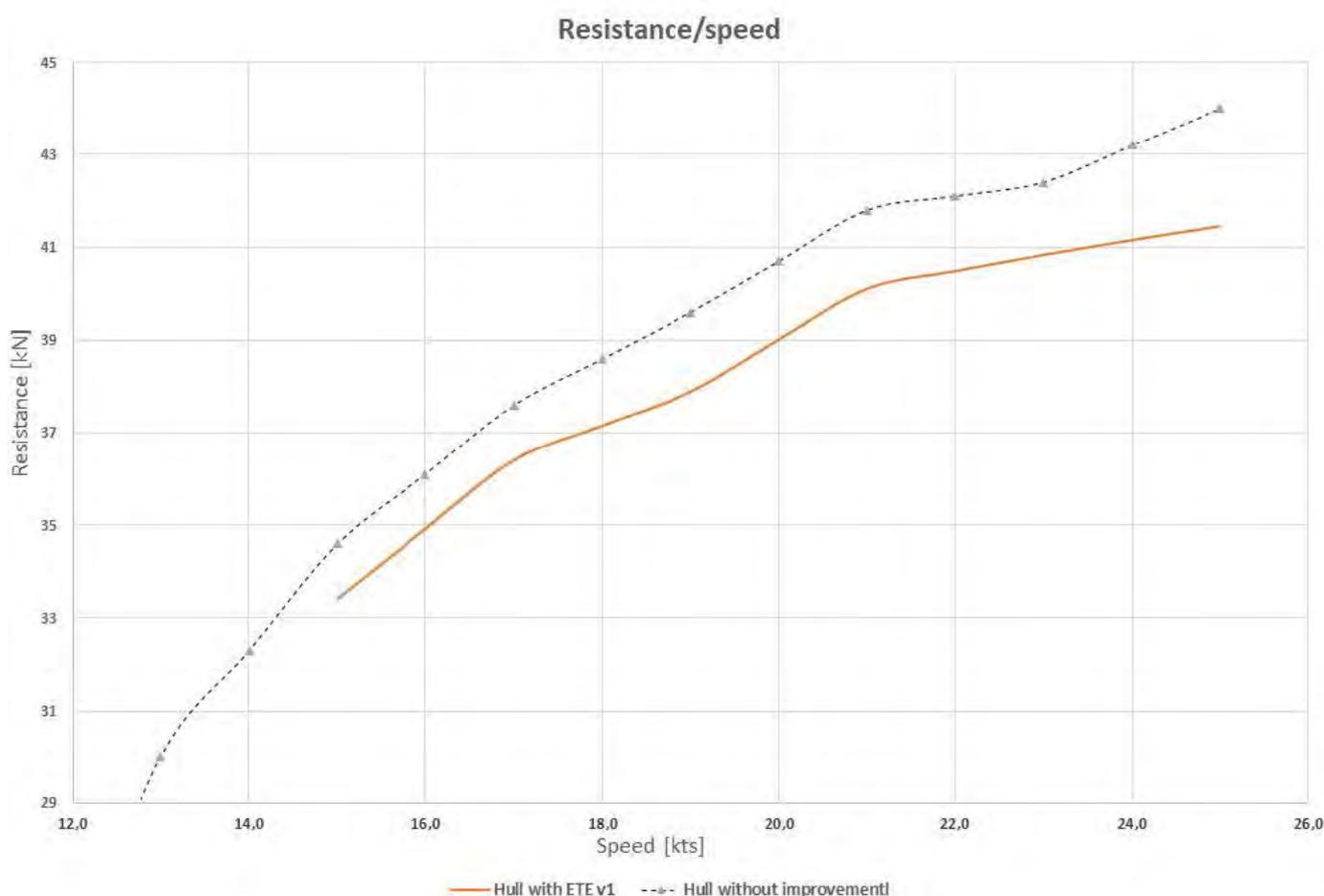
while the other elements are cut using a CNC milling machine. All work takes place in our shipyard. We did not choose polystyrene hooves due to the multiplicity of our forms.

The hull structure assumes a laminate with a foam CORE using vinylester resin. Being keel, bow and CHINE, shaft line housing. They are made of SOLID laminate. The lamination process is performed using the infusion technology.

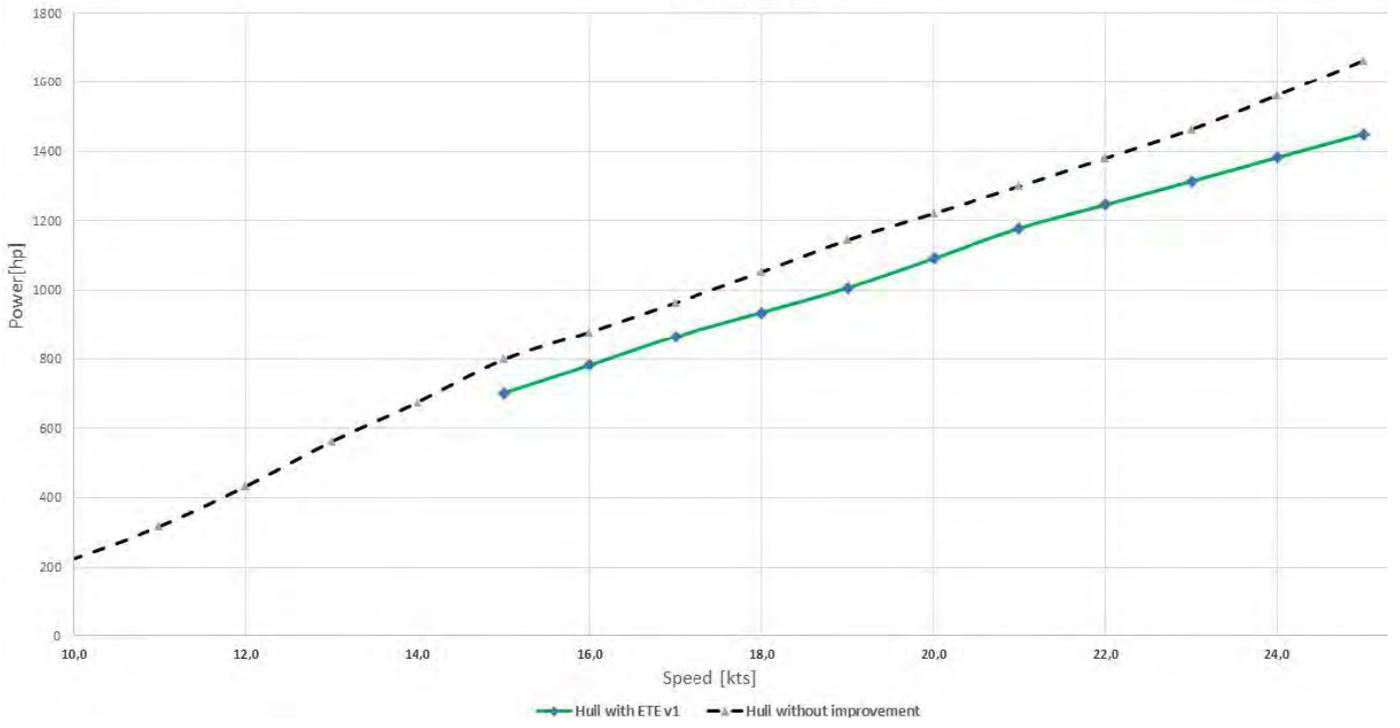
For supporters of a hull made of FULLY SOLID, it is possible to make a structure for this technology.

Mould

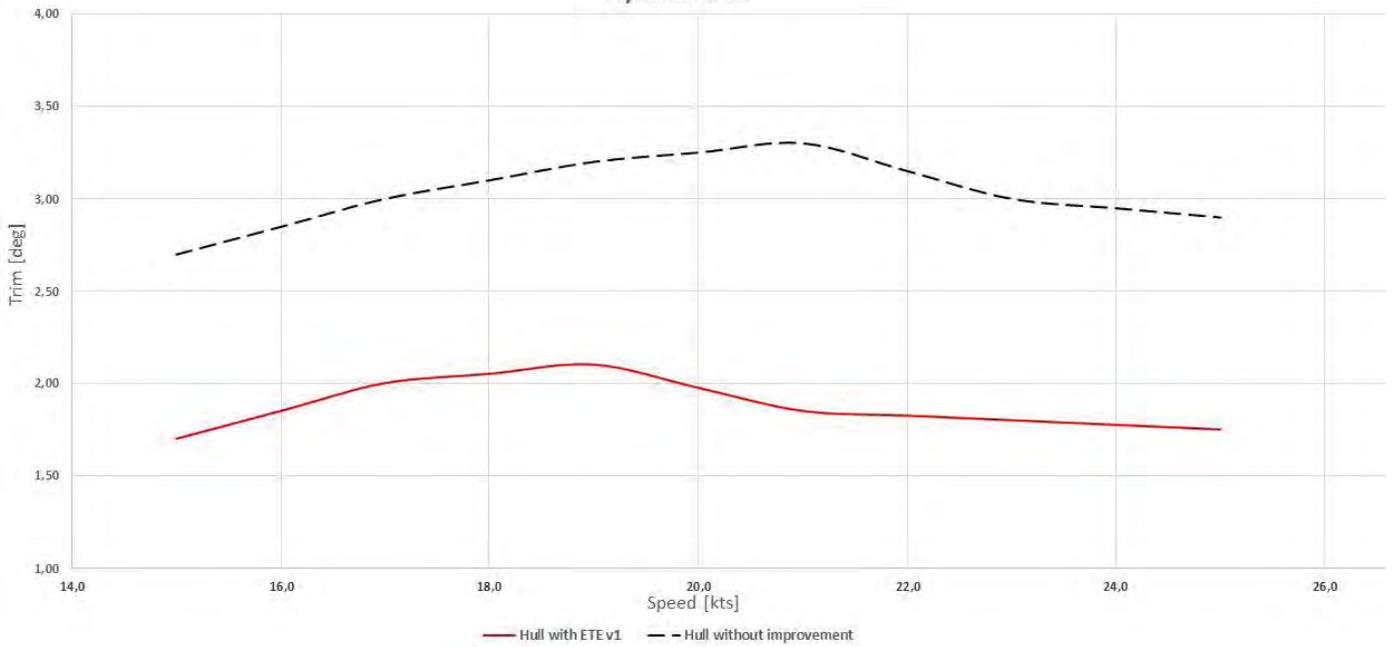
Combination of the classical method with the properties of CNC machines. All our forms are designed by Naval Architect Grzegorz Władziński with the use of 3D design environment. Then the prepared documentation is sent to our CNC machine tool. The skills of our builders are also very important in the assembly and smooth finishing of surfaces. All this adopted methods allow for dimensional stability not exceeding a few millimeters.



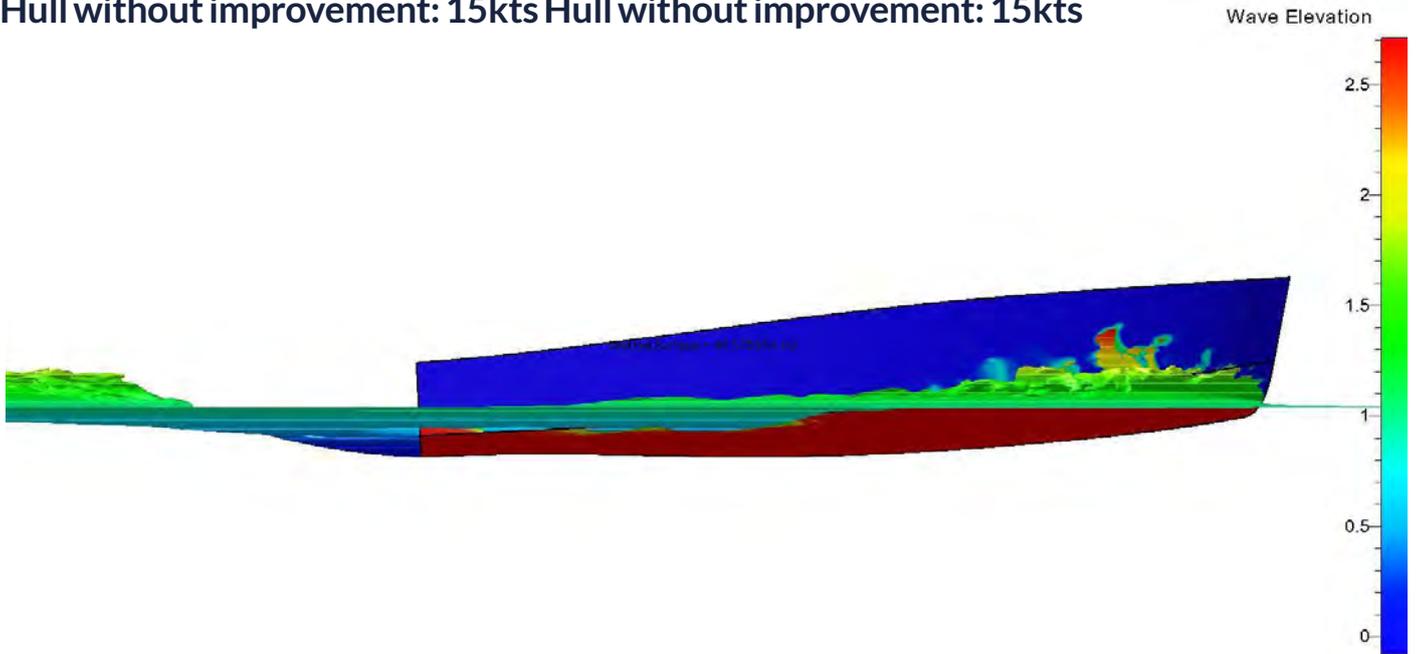
Power/speed



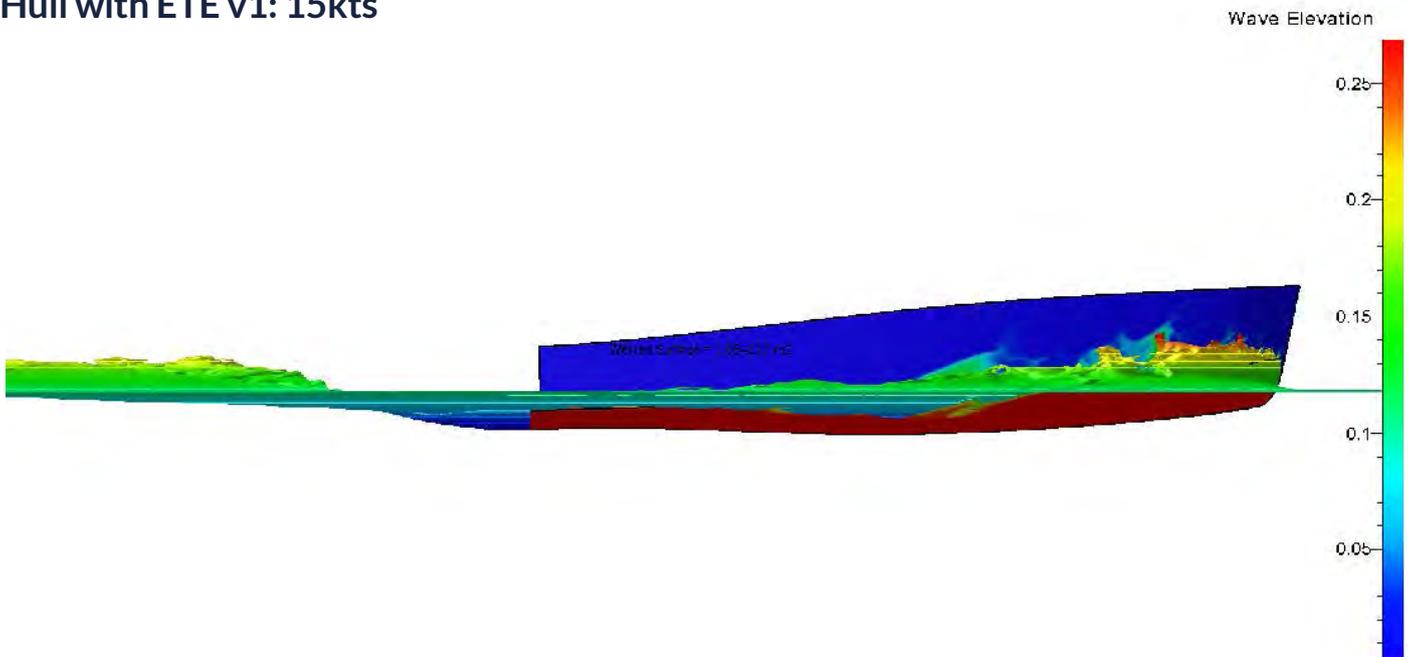
Dynamic trim



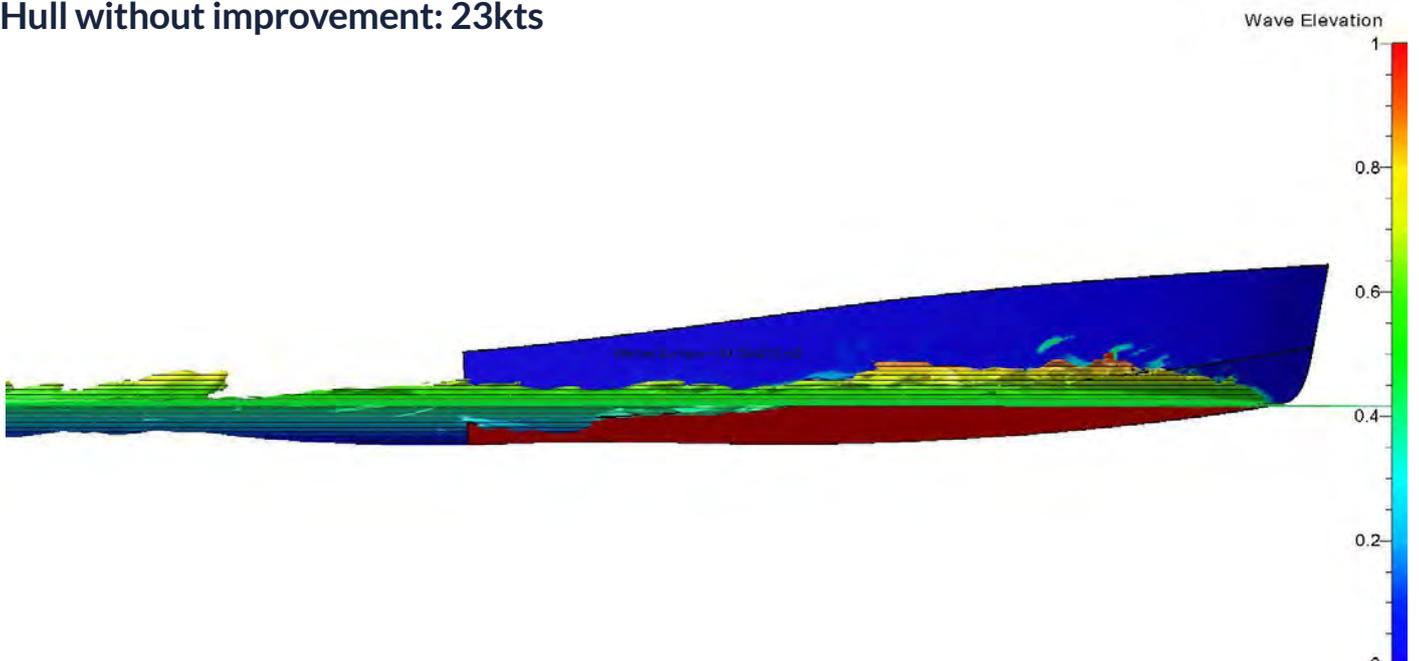
Hull without improvement: 15kts Hull without improvement: 15kts



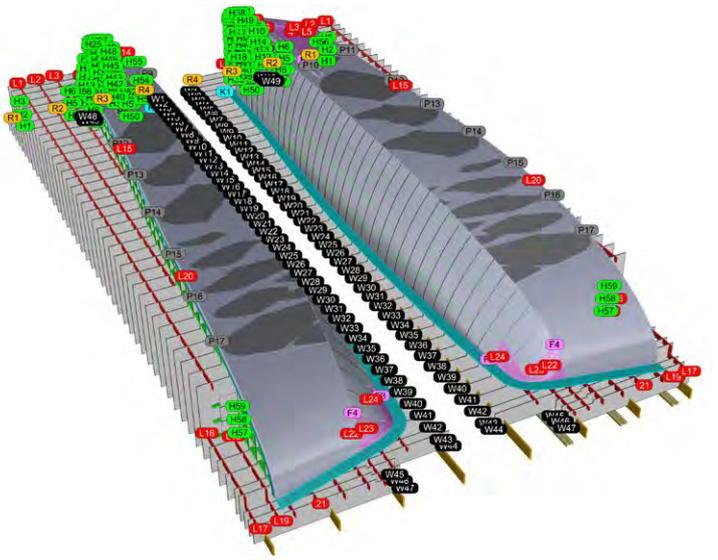
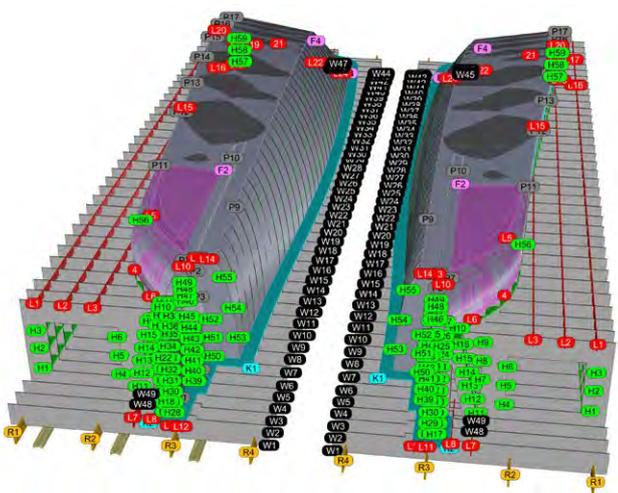
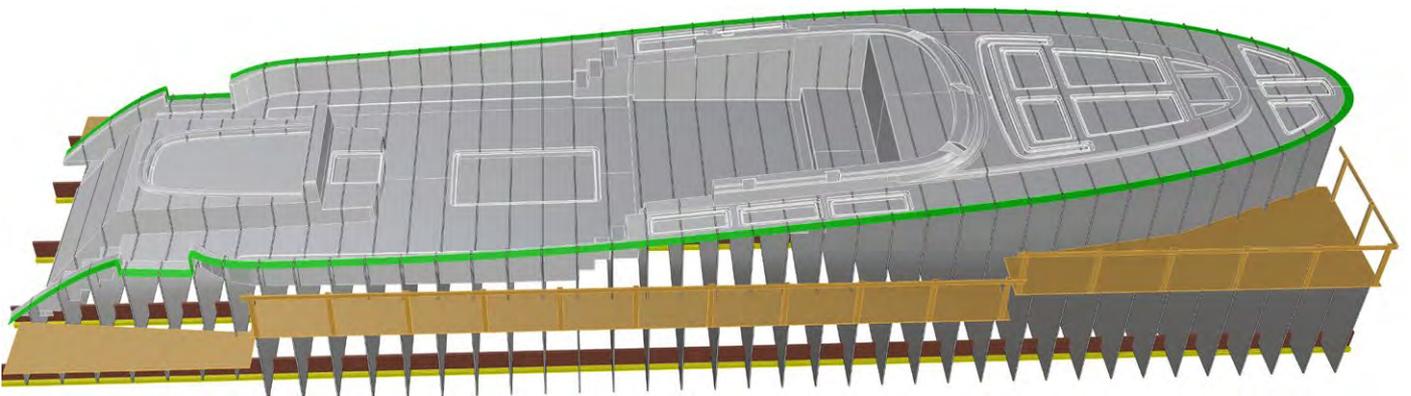
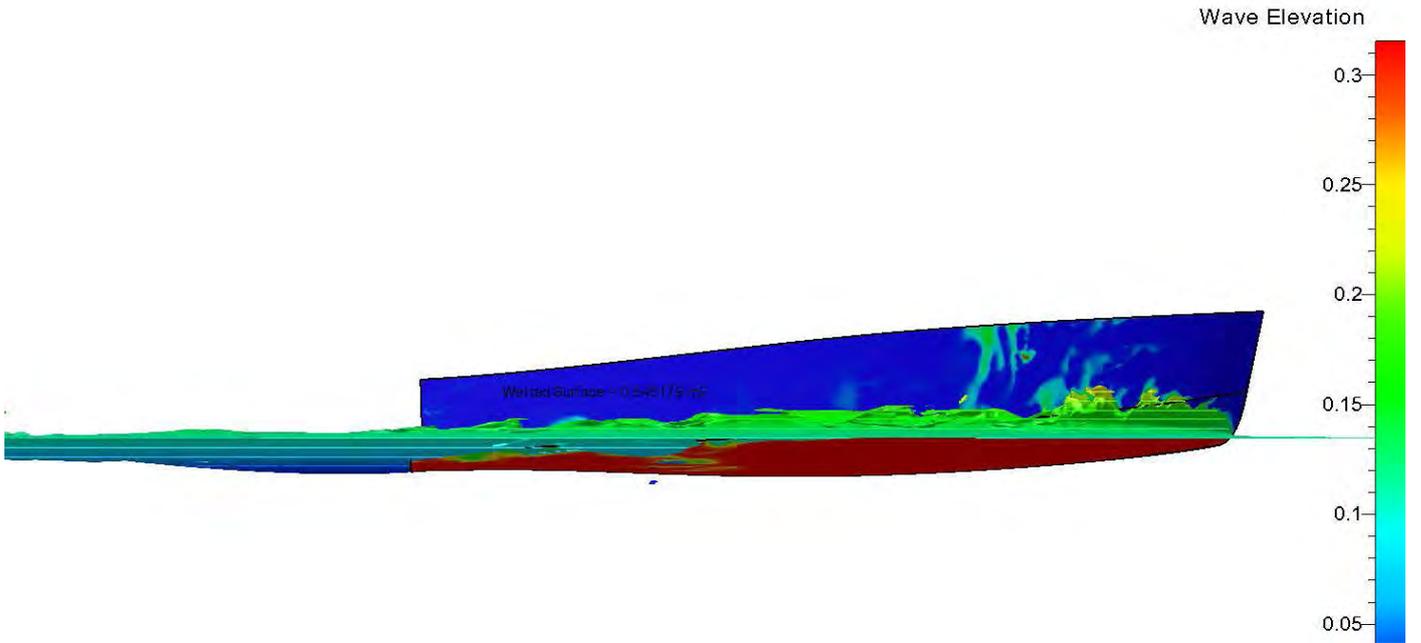
Hull with ETE v1: 15kts

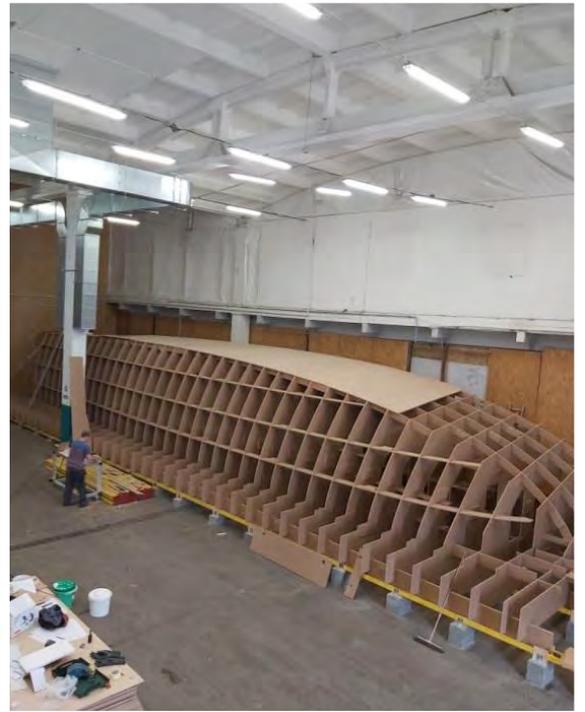


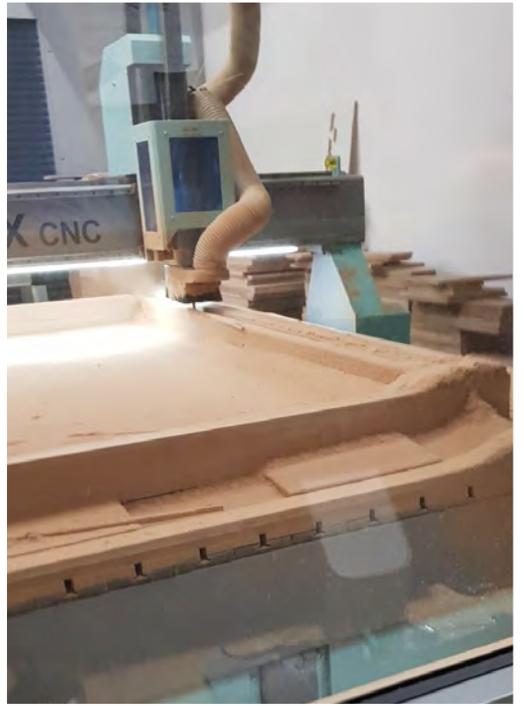
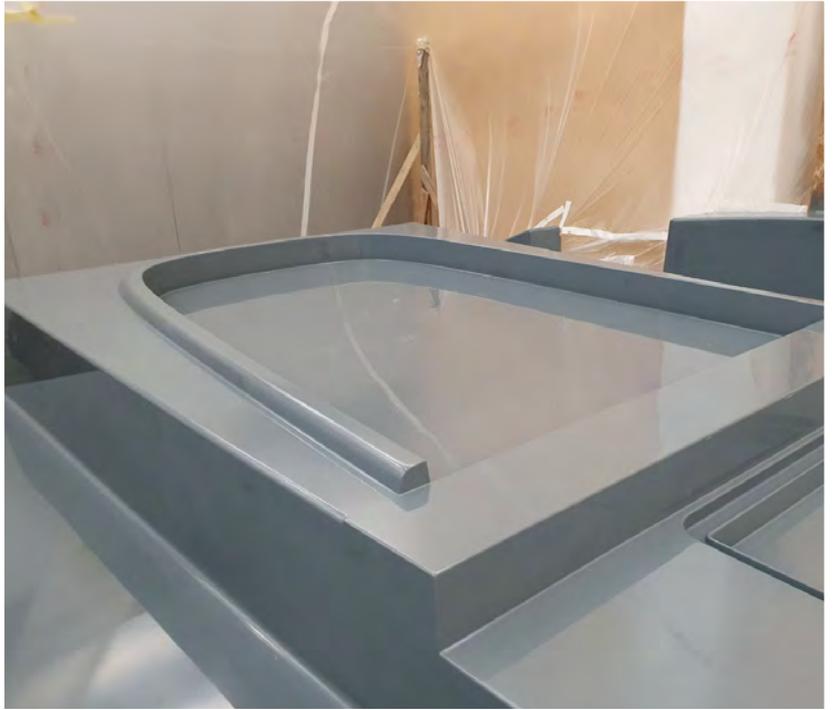
Hull without improvement: 23kts

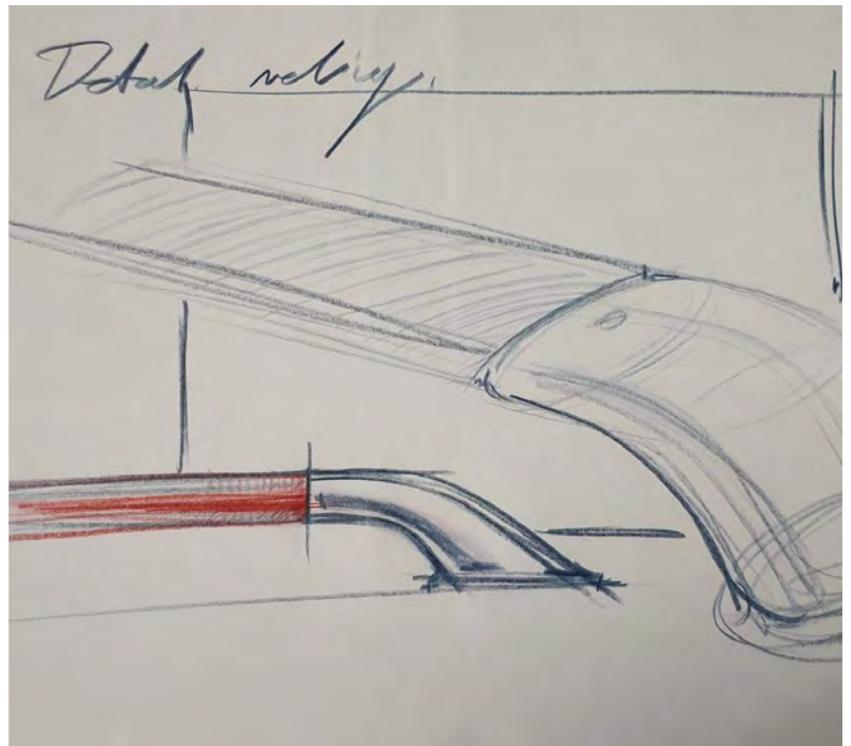
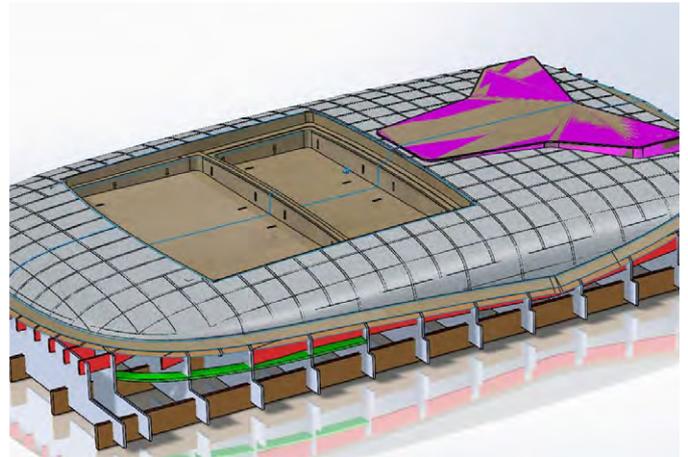
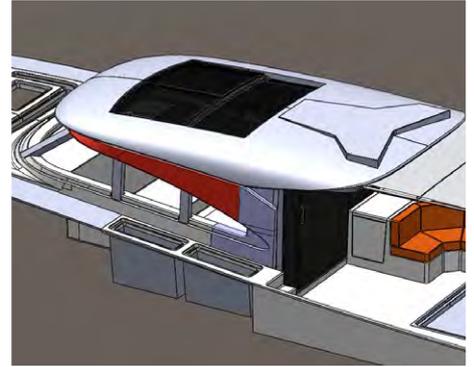
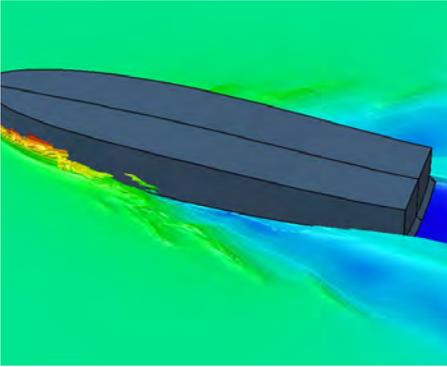
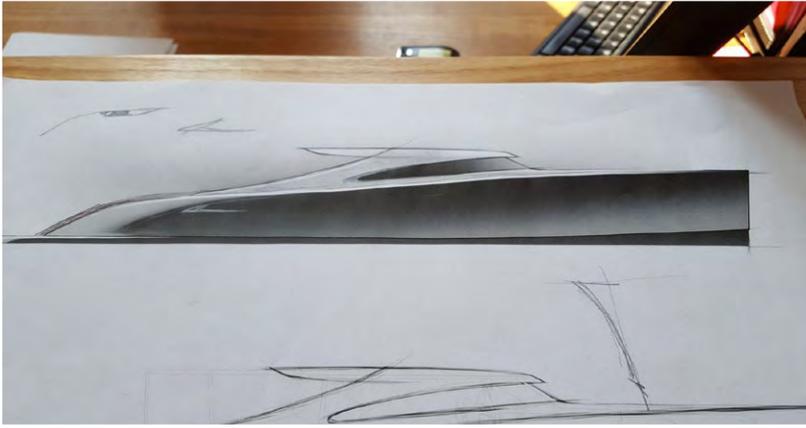


Hull with ETE v1 : 23kts









CORMORANT

YACHTS

Cormorant Yachts
Oliwska 21/23
80-536 Gdańsk