

MY|LOGICA

LOGICAYACHTS



When I was introduced to the visionary minds of Luca Brenta and Lorenzo Argento, who reinvented sailboats with their smooth and sleek designs, the idea of creating a new and revolutionary motoryacht instantly emerged. And so the partnership with Logica Yachts was born.

A word from the President

The Logica 147 concept was meant to embrace everything I wanted: seaworthy performance, exceptional amenities, high quality construction, cutting-edge technology, and machinery components by leading brands. All in a design package that exudes classic style and grace with a modern twist for a pure, elegant, sophisticated and yet subtle design combined with the top-level security criteria and devices.

The spirit, energy and passion of our team meant we were able to identify winning solutions and achieve higher functional and aesthetic standards, which successfully lead to the Logica 147, a masterpiece exceeding my highest expectations. Such success is a prelude of more to come, and a 180-foot yacht is already in the initial design and engineering stages.

As a means of promotion, I am in the process of inviting yachting professionals, well-known personalities and potential customers to savour the Logica 147's comfort and beauty. It's quietness and absence of vibration while sailing at night goes well beyond our initial expectations and guests can sleep soundly even while cruising at over 13 knots.

The magnificently spacious outdoor spaces are simply amazing, as is the small gym, hammam, and 2.6m x 5.5m swimming pool equipped with a counter current and Jacuzzi. In terms of interior space with its six cabins and American-style galley, this 45m yacht matches that of many 55m yachts.

Simply put, the Logica 147 is a truly timeless yacht.



Elliott Aintabi

Logica Yachts would like to thank everyone who contributed to this publication.

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Logica Yachts
Shipyard: Viale Europa 2/A, 55049 (LU), Italy
Registered Office: Via Pacinotti 107/109,
55049 (LU) Viareggio, Italy
www.logicayachts.com


Project Coordinator
Silvia Corbetta

Written & edited by:
Justin Ratcliffe

Photography by
Giuliano Sargentini

Graphic design by:
Pierluigi Da Prato

Printed by:
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“Simply put, the Logica 147
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The graceful sheer line, sleek superstructure and general arrangement of the Logica 147 is the work of Brenta Yacht Design, founded by Luca Brenta and Lorenzo Argento. As their first foray into motoryacht design, the exterior styling owes its understated elegance to their experience of designing extraordinarily beautiful and swift sailing yachts.

Distinctly Mediterranean

“Together with my team, we imagined a navetta-style vessel that was comfortable, quiet and light-filled with a rational distribution of available space, a boat designed to make the most of everything the Med has to offer,” says Luca Brenta, an active sailor since the age of five. “Logica had to be as beautiful as a sailboat of equivalent length, but as roomy and comfortable as three of them.”

This was the inspiration and the ethos behind the Logica 147. Derived from the studio's renowned work in sailboat design, the idea behind the yacht's elegant exterior styling was to import the culture and values of Mediterranean sailing into the world of displacement cruising to appeal to owners who are genuinely passionate about yachting and the sea.

“We come from the world of sail boats, a field in which you have to be very attentive to the tastes and preferences of the owners,” says Brenta, “so we're used to sitting down with them and designing their boats together.”

The studio's sailing yacht projects are defined by their pure and clean exterior lines, a reflection also of their cutting-edge performance. But the design brief for the Logica 147 called for a different set of criteria: comfort rather than top-speed performance and the romance of classic design combined with contemporary appeal. At the same time, the exterior form had to be as much an expression of its function as it would for a sailing yacht.



“The key to producing a timeless design is taking something from the past and adding something from the future, which is more difficult than it sounds,” says Lorenzo Argento, responsible for developing the exterior design and general arrangement of the Logica 147 beyond the initial concept. “By way of example I would cite our 37m sloop Ghost. She looks as fresh and performs just as well today as she did when she was launched 15 years ago. That was the ideal, if you like, that we wanted to instil into the Logica motoryacht.”

As with all their projects, the design process began with a series of hand drawn sketches to define the right proportions between hull and superstructure to achieve a balanced and aesthetically pleasing profile.



"If you start from the bow and work your way backward", says Brenta, pencil in hand, "the design has a coherence and fluidity with no surprises or jarring elements."

The bow and sheer line are among the most defining features of any motoryacht; these have been emphasised on the Logica 147 with a near-plumb stem and by pushing the superstructure as far aft as possible. The challenge was how to achieve a low profile and balanced lines on a tri-decker of nearly 45 metres in length. The solution was to design a long, sweeping sheer line interrupted amidships with just one step-down and a low-slung superstructure that emphasises horizontal over vertical planes. A late addition was the cut-out in the forward section of the hull that allows natural light to flood the owner's suite.

The generous space freed up on the foredeck is taken up by a 5.5-metre contra-flow swimming pool. To leave the upper deck clean and uncluttered of tenders and toys, the pool is flanked by a covered bay for a 4.8m RIB (the 6m limo tender is housed in a side-loading garage forward of the engine room) and another bay to accommodate the jet skis and launch crane. Rather than hinging the carbon composite and teak-clad hatch covers, which would have required a bigger crane to lift the toys over the top of them, an ingenious hydraulic system was engineered so the covers slide one above the other over the pool. The composite panels that fit over the pool when underway can also be used to provide bench seating over the windlasses in the forepeak.

During the optimisation of the hull design it was discovered that at speeds in excess of 14 knots, the bow wave would hit the anchor chain plates, creating unwanted drag and spray. The solution was to devise hydraulic covers that fit flush over the stainless steel chain plates while underway, with the additional advantage of creating a seamless expanse of dark grey hull when viewed in profile.

The superstructure was designed to create long sightlines through the yacht and maximise contact with the marine environment. The main deck is enclosed by a curtain of glass windows to allow plentiful natural light in and panoramic views out, while the transom can be folded down and transformed into a large swim platform for easy access to the sea.

"We wanted to import the same philosophy into the interior layout, says Argento. "So thanks to a glass bulkhead and sliding glass doors, there is a continuous sightline from the wheelhouse through the salon to the dining area and seating on the open aft deck. With its large windows, open-plan spaces and airy ambience, the Logica 147 provides a seamless transition between interior and exterior."

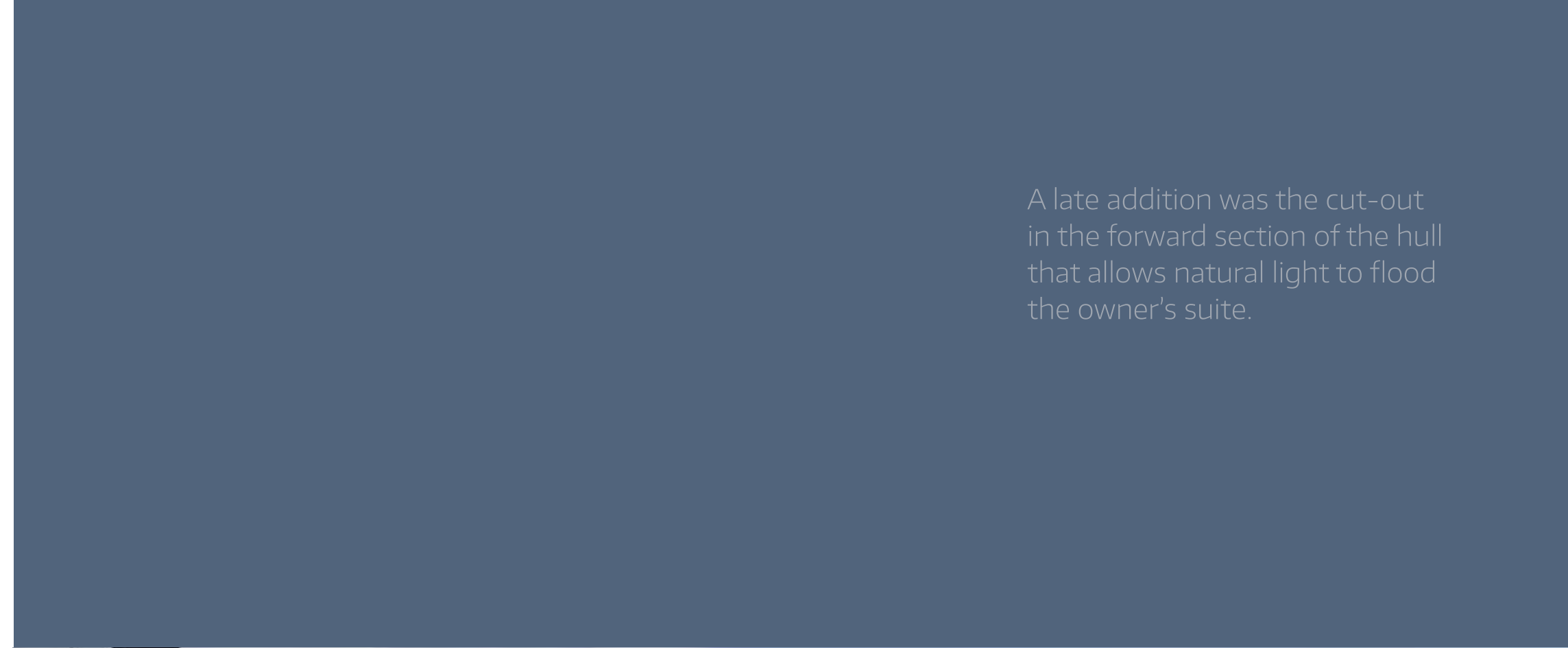






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Opulent Minimalism

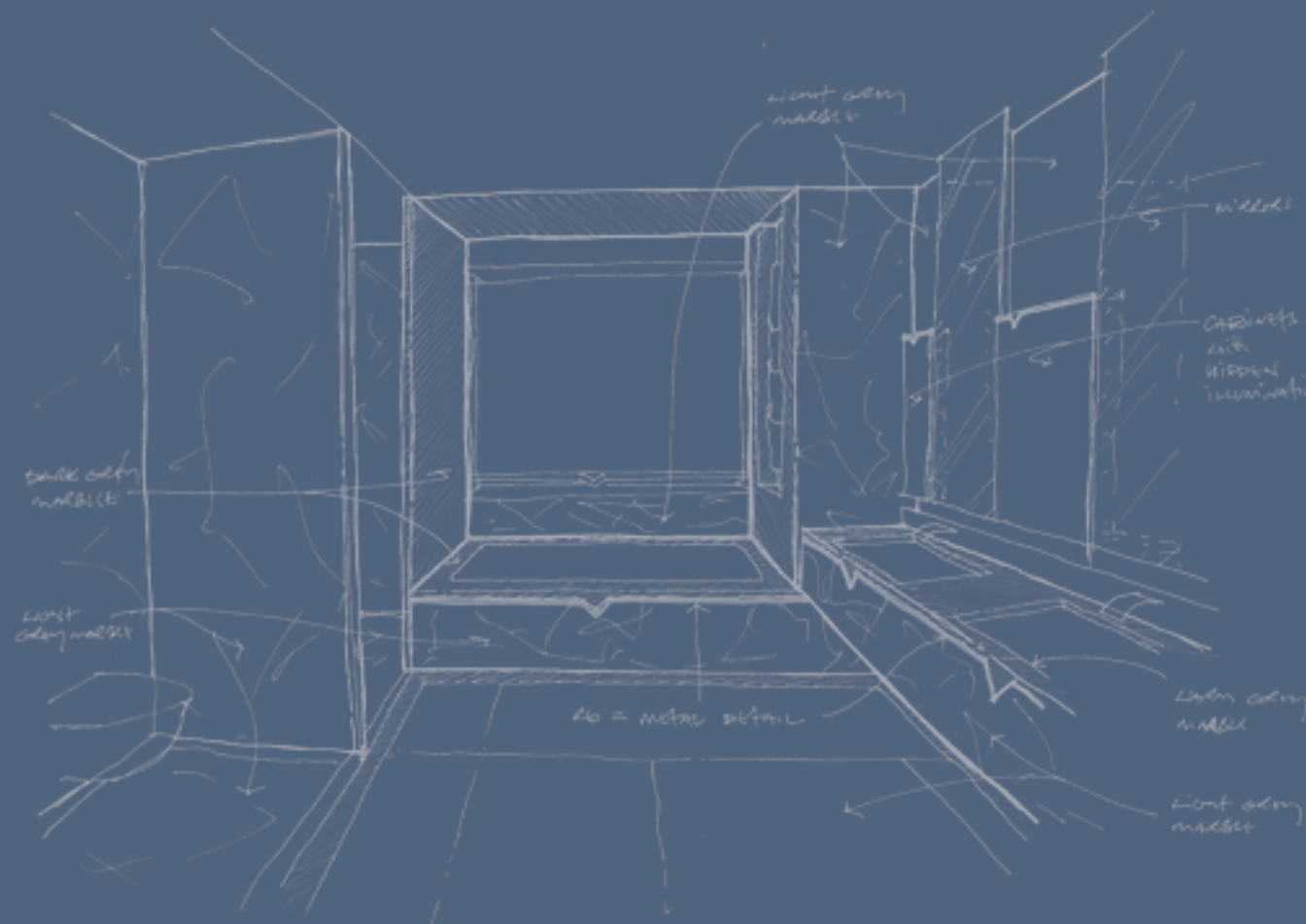
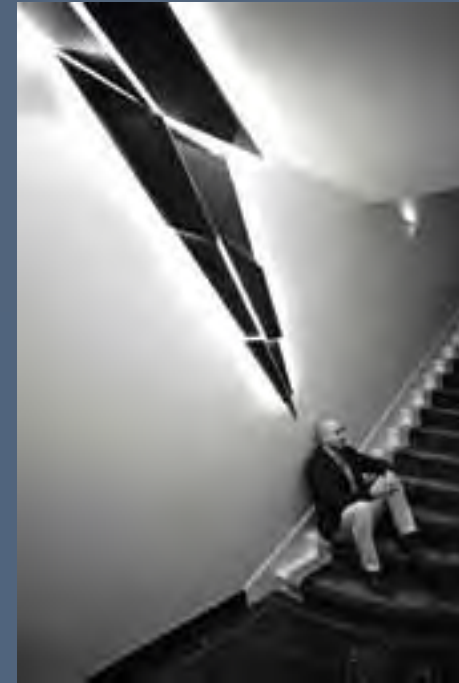
"I'm a creative person, so I feel challenged and charged by a creative brief," says the studio founder, Martin Kemp. "I was particularly gratified with this project because of the stimulating brief from the owner, who I had already worked with in the past on a residential project. Superyacht interiors are not simple, but I like to think we get it right in terms of attention to detail and the logic of the design."

Kemp was formerly Creative Director at a major international design studio in London, where he was involved in the company's high-end residential projects, such as La Belle Epoque in Monaco and One Hyde Park in London. The Logica 147, his first solo interior yacht project, also benefitted from his previous experience in the construction of two superyachts.

The brief called for a luxurious yet light and cheerful interior style, which Kemp describes as "opulent minimalism." It draws on luxurious materials such as Macassar Ebony, Striato Apuano and Cosmic Black marbles, combined with refined lacquered finishes that are anchored by calming floors and ceilings of stained oak with polished stainless steel "caulking."

The overall effect reflects the contemporary exterior styling and has been enriched with products by top international luxury brands. Based Upon in London was commissioned to create metallic resin wall panels of a striking petrol blue, which provide a signature motif in the main deck living areas. Soft leathers supplied by the likes of Ben Whistler and J. Robert Scott in the guest cabins are married with luscious fabrics by Sahco in Germany and Holly Hunt in the USA. The custom designed carpets are by Matthew Wailes in London, while the bespoke lamps and lighting fixtures are from Altraluce in Italy, Carlyle in New York and Haberdashery in London. The result is a delicious smorgasbord of materials, finishes and textures that delight and stimulate the senses.

The lighting has also been creatively designed to provide functional illumination and enrich the interior ambience. On the ceiling in the owner's cabin, for example, a slim dimmable LED panel of thin plastic sheet, based on innovative technology by Promotech, diffuses light uniformly over its entire surface to deliver a more customised lighting solution. Backlighting through opaque or translucent materials overcomes the limitations of the concentrated light source from traditional spotlights, allowing more natural illumination and avoiding areas of shadow to provide visual comfort on a par with daylight.



Martin Kemp Design, a high-end design firm based in London, was called in to define the interior design of the Logica 147.



Kemp has not overlooked the more practical elements. The owner has a young family, for example, and was keen to avoid any potentially painful sharp corners. Lacquer is susceptible to scratching, but Kemp points out that it is also a very hard finish, while the patterned leather door panels will develop a subtle patina, which is part of the appeal of a natural material that gently ages over time.

Kemp has a high regard for progressive American architects of the past, such as John Lautner and Kendrick Bangs Kellogg. Their influence meant he brought to the project an architect's sense of space, combined with a designer's appreciation of aesthetics and everyday functionality.

"My mind works architecturally and I like to plan space, but architects often have little sensitivity to the ephemera of our daily lives," he points out. "Where do you put your keys when you enter a house, or put your wallet in the bedroom? These are the kinds of knots I like to unravel."

However, the starting point of any custom interior design is the client and, with this in mind, Kemp's previous collaboration with the owner proved fundamental.

"You get to know their foibles, whether they're left-handed, or which side of the dining table they like to sit on," he says. "This is an essential part of the process for a good designer; clients place a massive financial investment in us and we have to honour that investment. Part of my job is to challenge both myself and the owner to come up with the best solutions."

The fact that Logica Yachts aims to build boats that are different from the mainstream chimes with Kemp's belief that yacht design, interior or exterior, should be fresh and exciting instead of relying on the same tried-and-tested formulas.

"Left to conventional shipyards and designers things do not evolve," he claims. "Custom yacht projects should be gratifying precisely because the clients tend to be more adventurous and willing to let themselves go a bit more, in an exciting and dynamic way."



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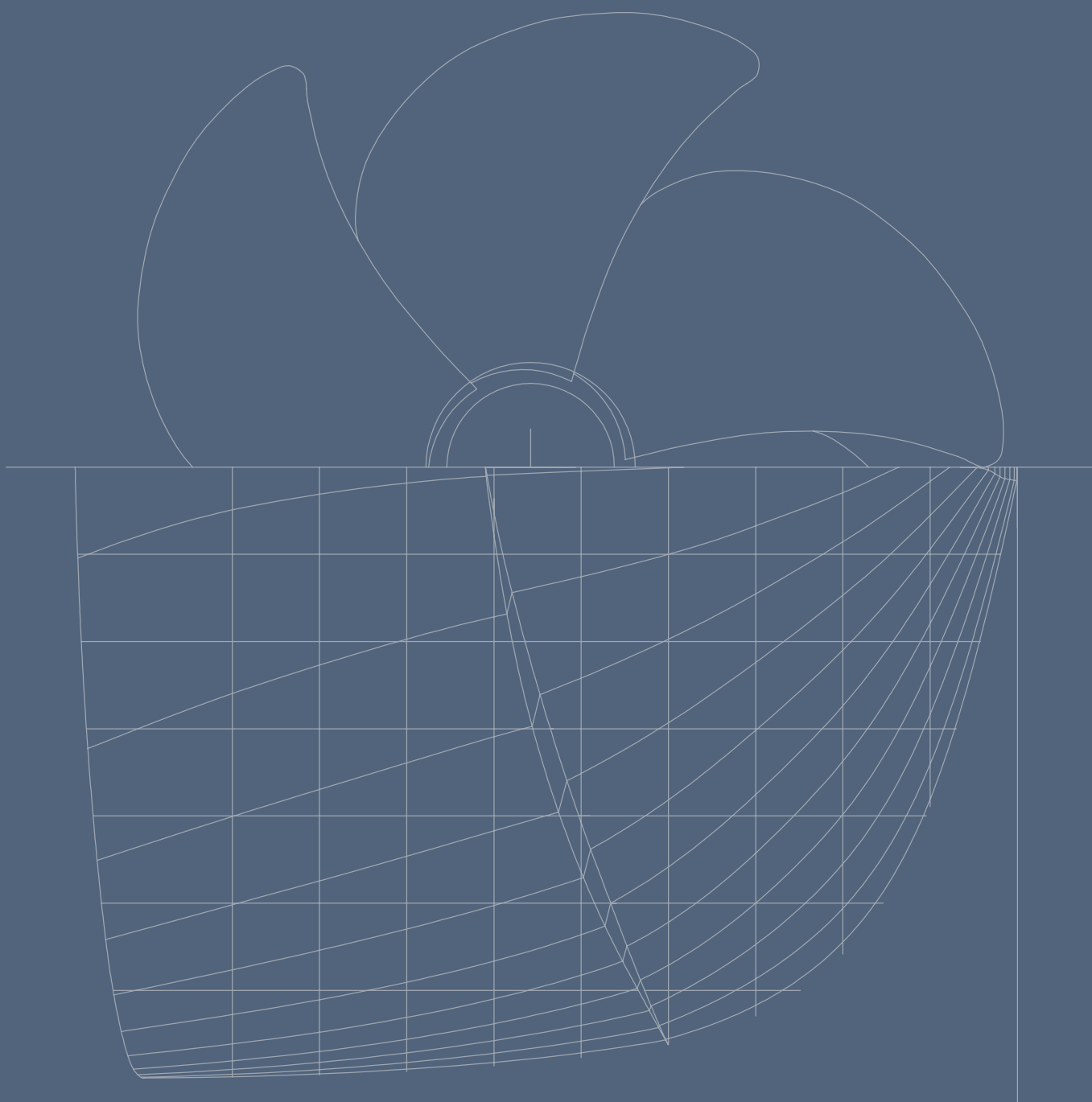








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Pierluigi Ausonio of PLANA Design is the naval architect behind the Logica 147. Together with the shipyard, he adopted a process of integrated optimisation to determine the design of the hull, appendages and propellers.

Integrated Optimisation

In the past, the process of designing motoryacht hulls was considered as much an art as a science, something akin to the exterior design or styling. In reality, the hydrodynamic design of an efficient hull, no matter the kind – full displacement, fast displacement, semi-planing or full-planing – requires in-depth technical knowledge in addition to some degree of “feeling” for flow-related problems. Nowadays, hull design is a highly specialised discipline and one that Ausonio argues is best carried out in the context of the whole design process.

“The naval architect is frequently appointed by the shipyard to define the hull form alone, without an in-depth analysis of the whole project,” he explains. “However, the complexity of a modern motoryacht is such that in designing the hull you have to take into account not only the performance-related aspects (speed, range, sea-keeping, manoeuvrability) and the control of undesired side-effects (noise, vibration), but also the safety and habitability standards required by Classification societies and Flag administrations, especially if you are dealing with a commercial charter yacht. Last but not least, there are the interior layout requirements that have to be respected. In other words, to achieve the best results the hydrodynamic design should be an activity that is fully integrated into the design of the whole yacht.”

The Logica 147 was developed with this process of integrated optimisation in mind and PLANA Design was appointed to carry out the full hull design, including hydrodynamic, hydrostatic and stability evaluations, appendage optimisation, propulsion study and the preliminary propeller design.

Looking to the desired performance and stability requirements, Ausonio began by considering the weight and centre of gravity estimations based on the proposed general arrangement and technical specifications. This meant taking into account issues related to propulsion, as a good hull from a resistance point of view may not suit certain propeller and shaft arrangements, leading to impaired propulsion efficiency. In order to manage these issues, a preliminary calculation of the propeller characteristics were made at an early stage to select the best diameter and gearbox reduction ratio, while also evaluating the impact of the propeller housing on the hull form. “It proved invaluable that the final propeller design could be performed, using a state-of-the-art methodology, by the same naval architect responsible for the whole hydrodynamic design,” says Ausonio.

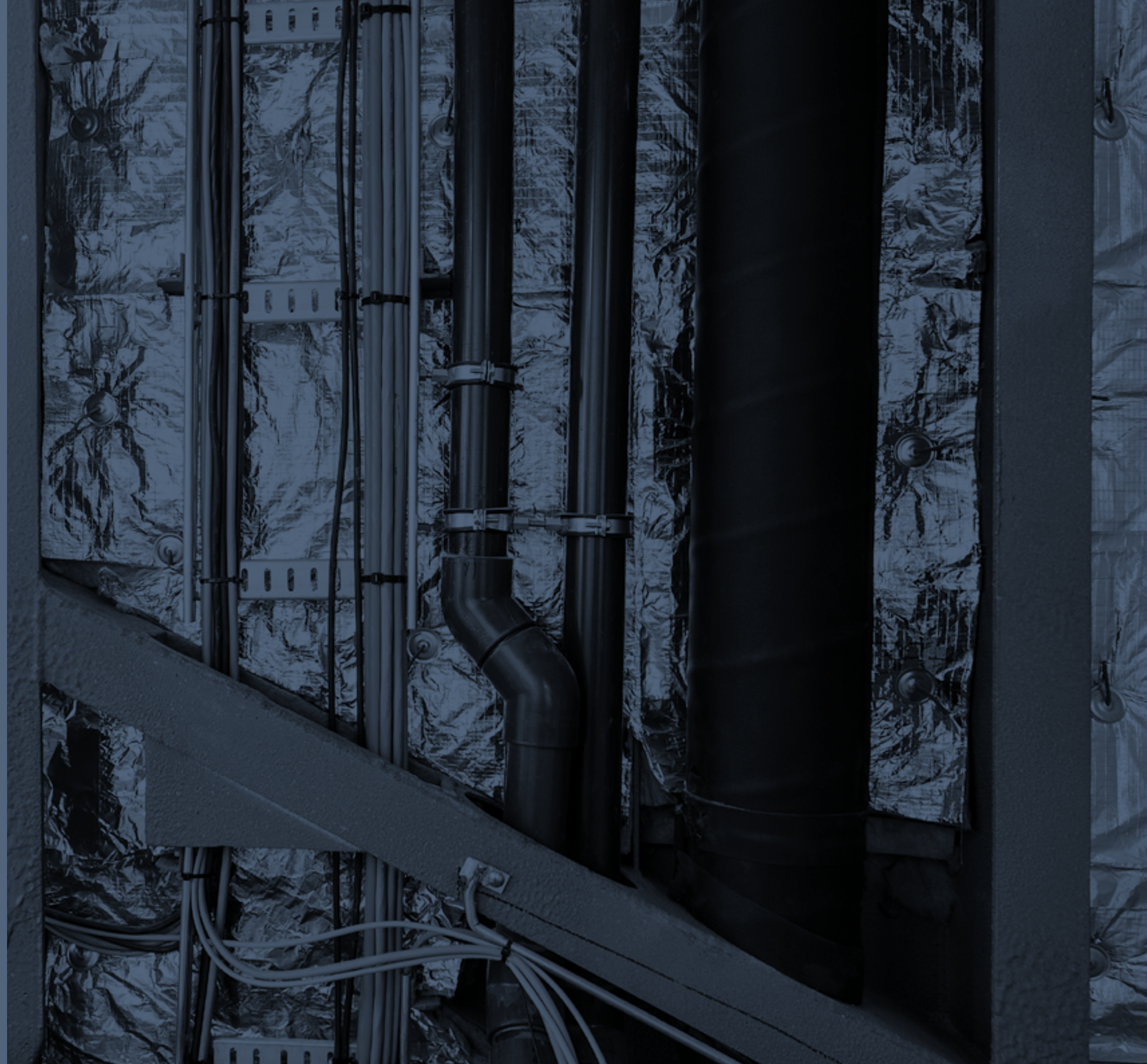


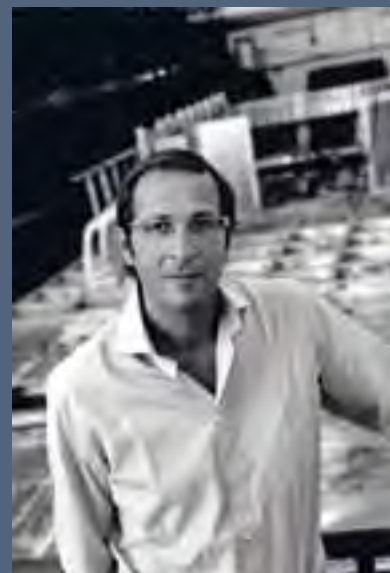
The shape, size and position of the hull appendages were other important aspects of the hydrodynamic optimisation process, as today's motoryachts are equipped not only with rudders, shaft lines and brackets, but also underwater exhaust scoops, large zero-speed stabiliser fins, bow and sometimes stern thrusters and, in some cases, bilge keels.

As CFD studies at various speeds had already validated the resistance predictions and the correct hull form geometry of the smaller Logica 98, a more traditional procedure was applied to the Logica 147 to determine the proper location and setting of the appendages. This consisted of tank testing a large-scale (1:9) model to reduce to a minimum the related effects of viscosity and friction. The data acquired, both visual and numerical, meant the hull behaviour and appendages could be further optimised.

"To get the best results from this integrated design approach," concludes Ausonio, "it was necessary to control the weight and centre of gravity of the motoryacht during both the design development and the construction."

The end product of this considerable research is a displacement hull form characterised by a vertical bow with reduced power requirements and low fuel consumption (97 litres per hour at 9.5 knots with one 100KwH generator at 75 per cent load). The yacht can reach a top speed of 17.4 knots and can cruise comfortably at 15 knots. Sea trials revealed that at maximum speed in a full turning circle to both port and starboard, inclination is 2° with stabilisers activated and 8° without. In addition, the highly efficient propulsion system displays a very smooth propeller inflow with low radiated pressure pulses, noise and vibration for extremely quiet and comfortable cruising.





"In terms of construction and specifications, our aim with the Logica 147 was to achieve the best possible standards in her class," says Simone Marconcini of Logica Yachts.

Building the Best

The hull and superstructure are joined using a system known as DeltaCoupling, by which steel and aluminium strips are explosively bonded to an inert centre section to avoid degradation of the two dissimilar metals in a saline environment. The engine room is the beating heart of any motoryacht, so great emphasis was placed on providing insulated foundations and flexible joints for the main machinery to reduce noise and vibration, and utilising the best materials such as cupro-nickel and stainless steel for the piping. Safety was another all-important factor, and multiple redundancy has been designed into the technical specifications.

Moreover, the wheelhouse features a Böning integrated bridge; the zero-speed stabilisers are by Vosper Naiad; there is a user-friendly Yachtica automated control system for lighting, curtains and AC throughout the guest areas; home entertainment components are by Denon, Samsung and Apple; the galley is equipped with professional Rational and Miele appliances; and the deck gear is supplied by Opem Sistemi.

"These are all leading brands in their various fields and no expense was spared in specifying the best solutions for the job," concludes Marconcini.



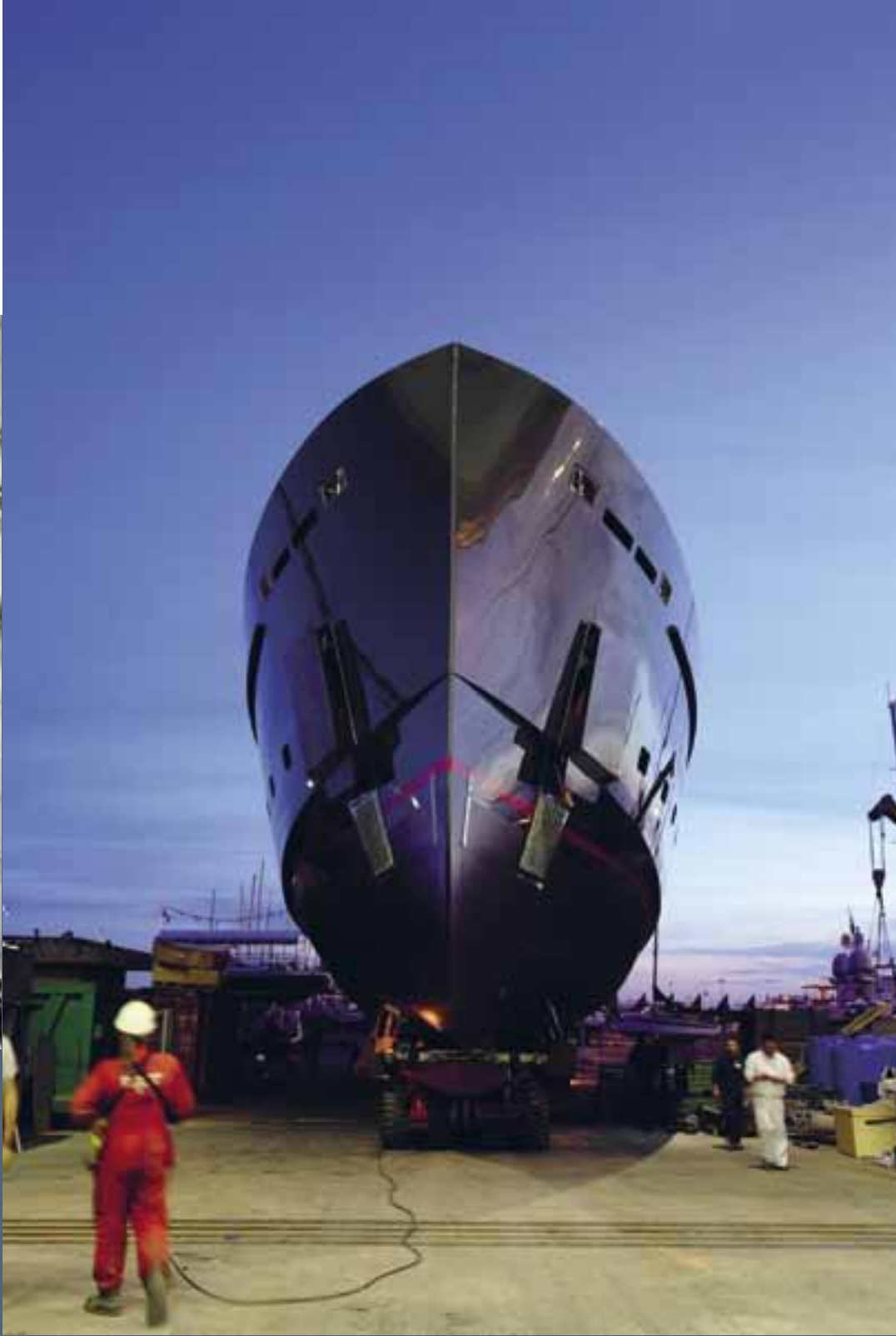
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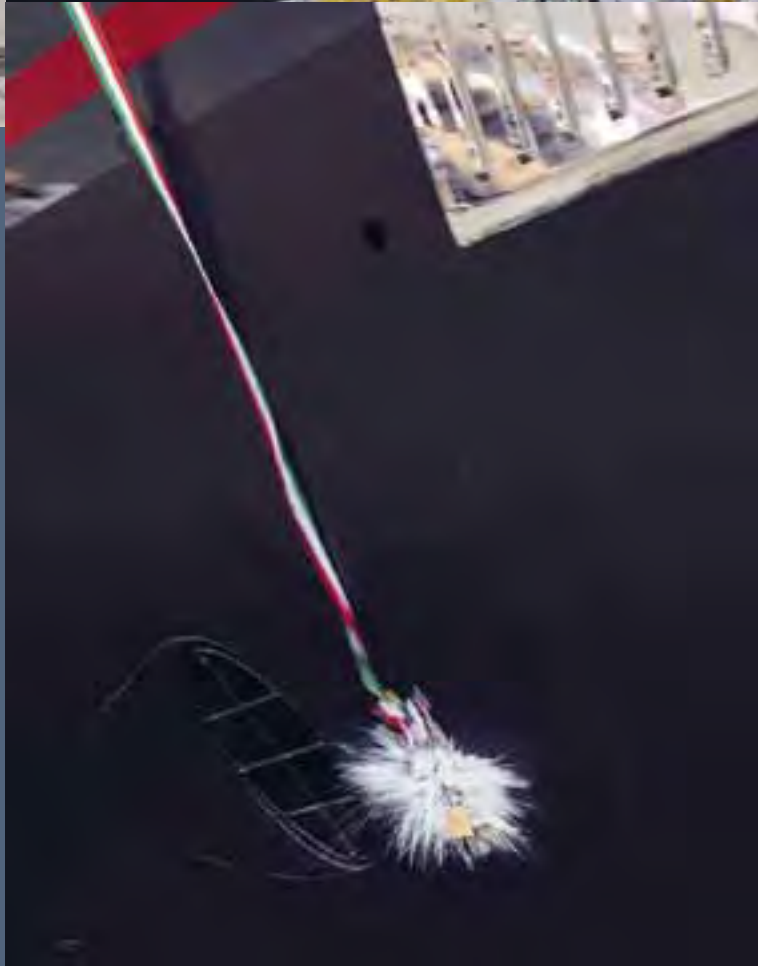




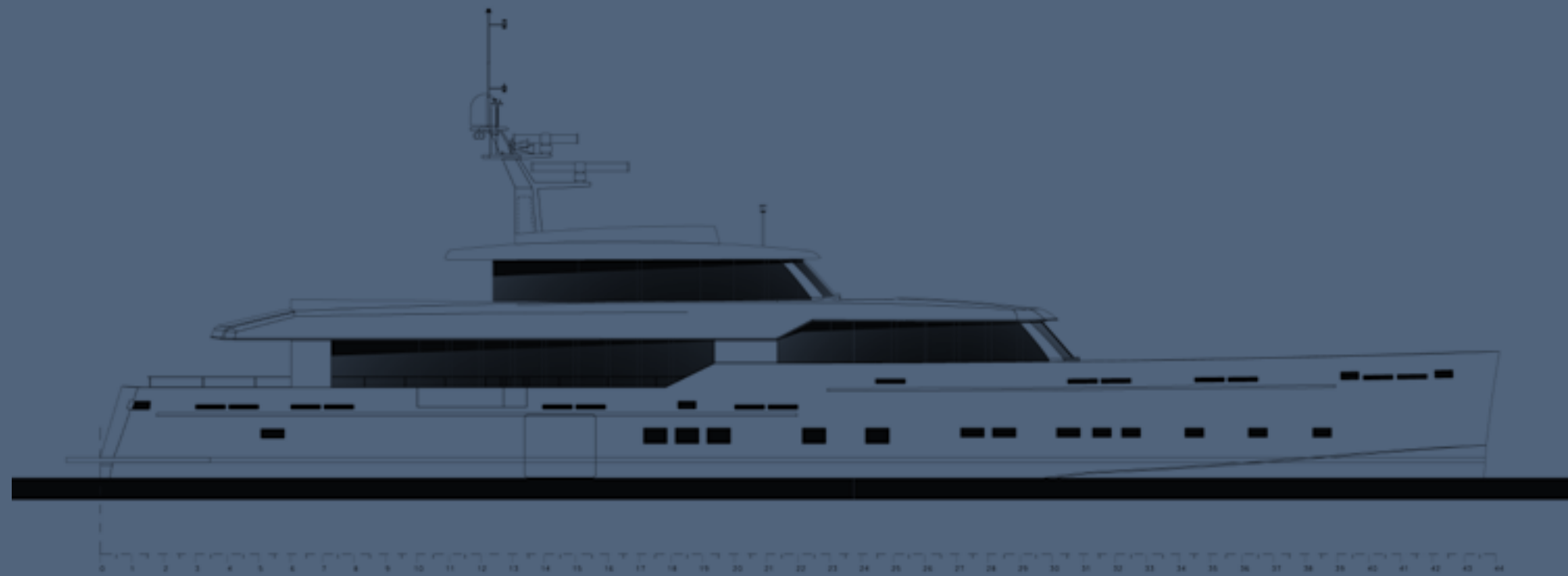
The launch

The launch and christening ceremony took place on May 21, 2014. Following the sea trials and commissioning process, during which the yacht met or exceeded all her specification requirements, the Logica 147 was delivered in July to her proud owner and departed immediately for her maiden cruise in the Mediterranean.





Specifications



LOGICA 147/01

Dimensions

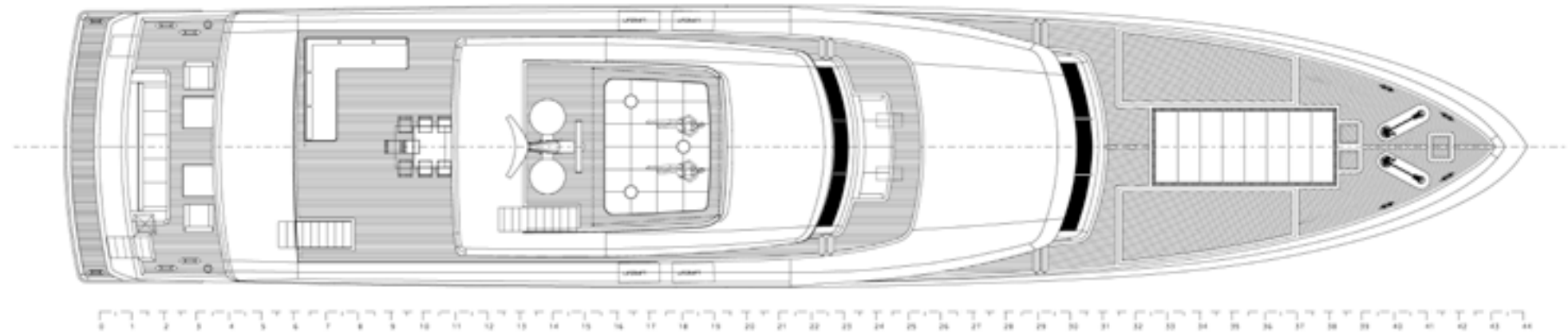
Overall length	m	44,80
Length at water line	m	43,50
Width over all	m	9,00
Maximum design draft (indication)	m	2,40
Inside height at main deck	m	2,15
Light Ship displacement (indication)	ton	330
Half load displacement (indication)	ton	365
Gross Tonnage (indication)	ton	427
Fuel tanks capacity	Lt (K)	71,00
Fresh water tanks capacity	Lt (K)	17,00
Grey and black tanks capacity	Lt (K)	5,00 and 3,00
Guest's bed places	n°	12
Crew's bed places	n°	6+3

Performance

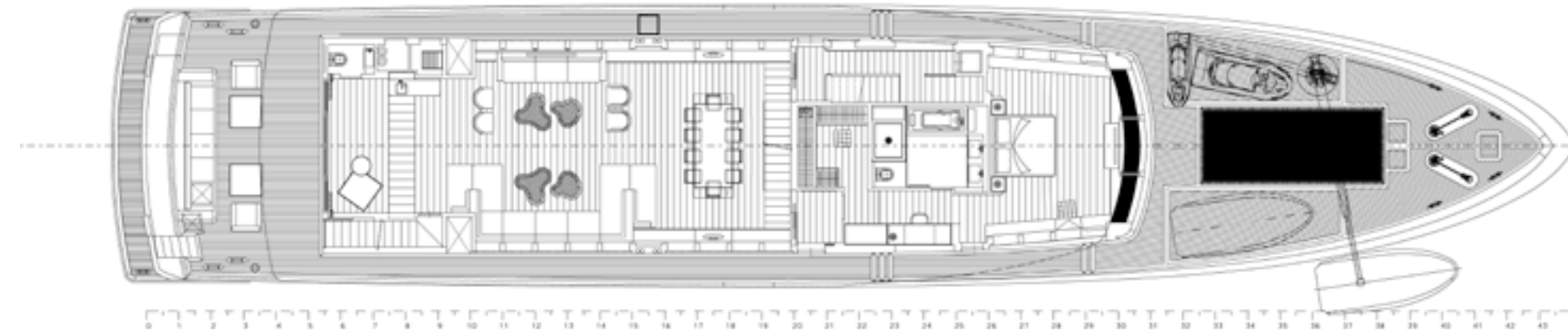
Max speed at 1/2 load conditions	Kn	17,40
Cruising speed	Kn	15,00
Range at 14,70 kn	nm	5.000
Range at 10 kn (economical cruising speed)	nm	7.000

Propulsion system

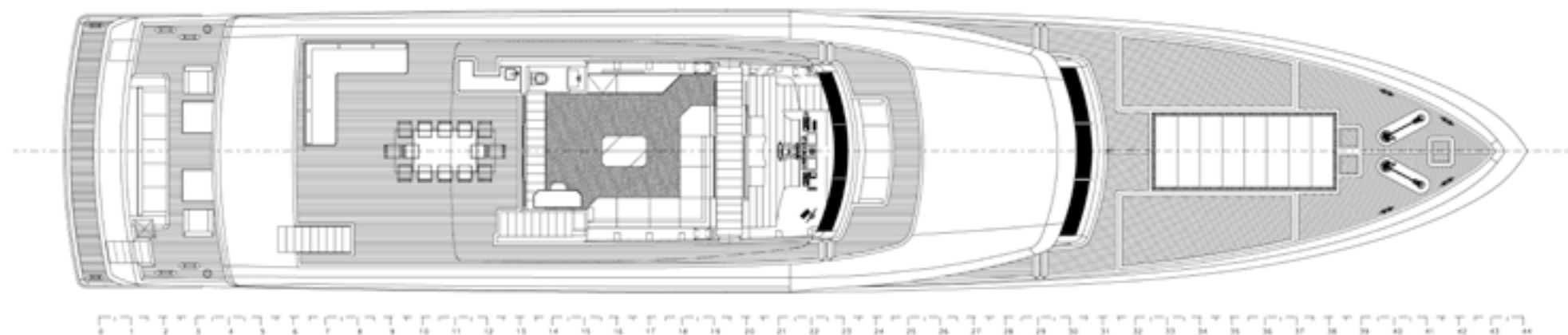
Main engines	Type	2 x MAN D2862 LE 463 medium duty
Max power	Hp@rpm	1.400@2.100
Generators (KOHLER)	Kw	2x100 + 1x40 Gen Kleen on stb 100Kw generator
Gear boxes		ZF 350
Reduction ratio		3,519:1
Propeller – bronze (RADICE)		2 x 5 blades
Bow thruster Naiad 24 right angle VT75	Kw	1 x 90



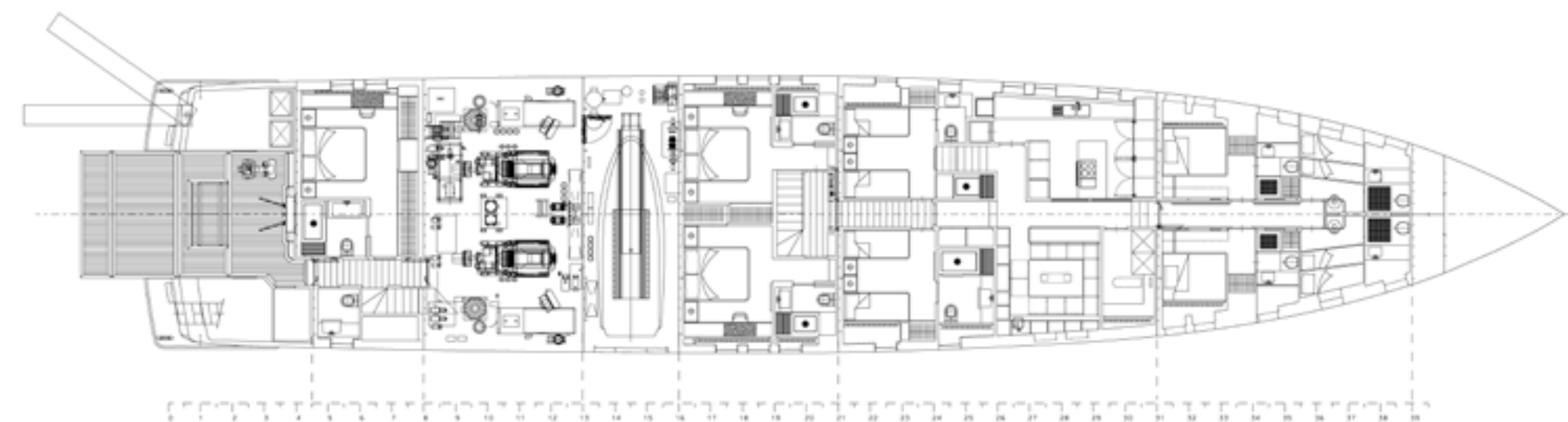
Sun Deck



Main Deck



Upper Deck



Lower Deck

