

# BOAT

International

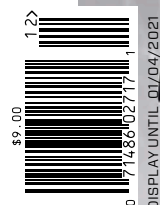
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# ARTEFACT

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# THE SMART BOAT







Cutting-edge research and imagination  
have made *Artefact* the brightest  
superyacht afloat. *Cecile Gauert* gets a  
lesson in the art of seaborne science

PHOTOGRAPHY FRANCISCO MARTINEZ

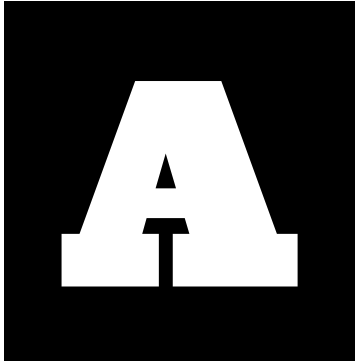




Behind *Artefact* are change-makers  
whose knowledge has produced a  
thoroughly enjoyable home on the water







against the green, hilly coast of St Lucia, birds swoop in daring arcs while flashes of silver leap over deep turquoise water. Occasional outboard-powered launches hug the coast, leaving freshly stirred foam behind them. *Artefact*, by contrast, is moving silently and slowly, allowing the splendid spectacle of nature to take center stage through walls of near-invisible glass. The warm light of

the subtropics bathes the quiet and high-tech bridge.

Captain Aaron Clark switches power from two small generators to batteries, and we keep moving silently at just six knots for several minutes, listening to the birds. *Artefact* is equipped with an ABB diesel electric system with a DC bus (a direct-current-based diesel-electric system which ABB calls DC Grid) that integrates lithium batteries, Azipods and a full dynamic positioning system. The captain loves the flexibility this provides. "You're limited only by your imagination," he says.

By the time this magazine comes out, it will have been five years since the contract was signed for the construction of a 262ft yacht that will no doubt become a benchmark. *Artefact*, which has been cruising nonstop since leaving a chilly Germany in early 2020, is like haute couture: one of a kind and perfectly fitted to its owners, but some of its features will inspire others. They already have.

The frameless glass that serves as the outer wall in the VIP cabins, for instance, motivated a client to ask for more glass in his own project, says Fadi Pataq, sales and marketing director for builder Nobiskrug. And diesel-electric pod systems, which were but a trickle over the years in the superyacht market, are more in demand than ever. "In a way, it started a trend," he says.

It could also be that we have come to a tipping point motivated by better stewardship of the planet and regulations that restrict emissions. What is certain is that behind *Artefact* are change-makers, whose knowledge and imagination have produced a thoroughly enjoyable home on the water.

Building the yacht has been a family affair, but while every family member contributed to the creation of the boat that would become *Artefact*, the impetus and driving force was an engineer whose company supports breakthrough technologies in quantum information sciences. His family had great memories of holidays on yachts they had chartered, and by 2013 he began to think about building a home able to travel the world. Inspiration also came from glossy publications casually placed by a friend on a coffee table. "It's your magazines that did it," he says with a laugh, of his decision to build *Artefact*. But it took some time to bring everyone on board, especially as a couple of family members suffer from motion sickness.

Along the way he met Captain Clark, a New Zealander who got into yachting in his early twenties and built a successful





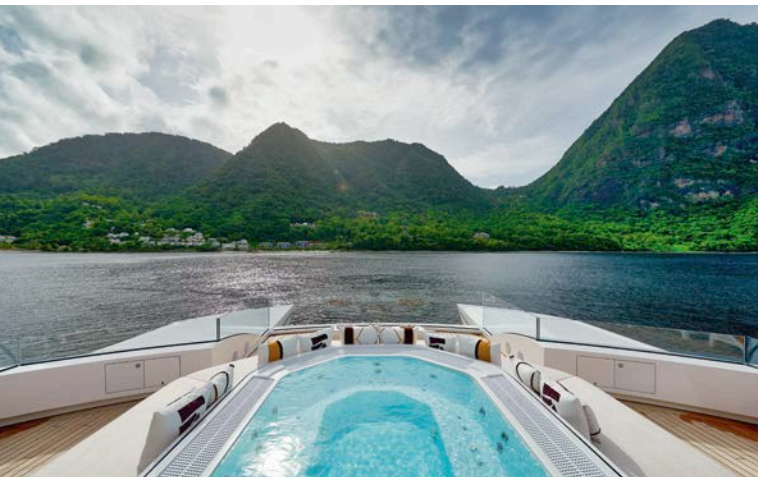
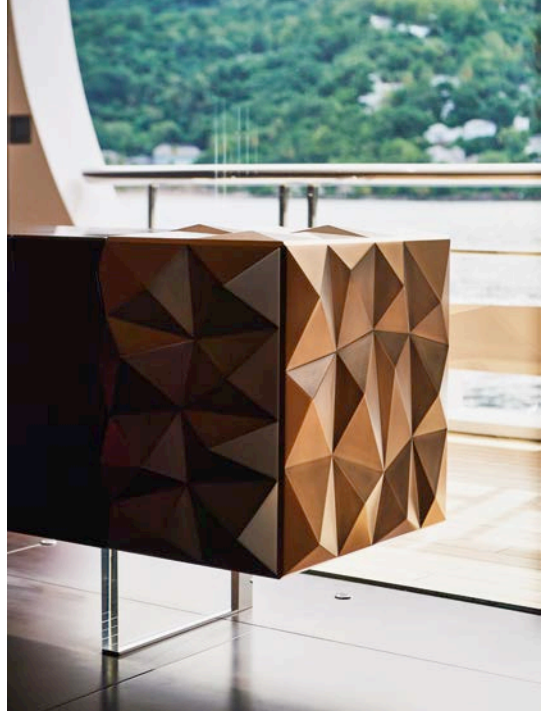
career as a charter yacht captain. Complementing the owner's big-picture ideas and deep engineering knowledge were Clark's understanding of the sea, yacht operations, project management and his undeniable people skills.

Before even knocking on the door of a yacht designer or a shipyard, they started researching the latest technology and solutions available to address the issues of efficiency and motion sickness. They looked into multihulls and SWATHs before embracing the practicality of a monohull. They saw numerous yachts with a keen eye on what worked and what didn't. They also went to trade and equipment shows to investigate the latest forward-looking technologies.

It became clear very early on that they would go to diesel-electric propulsion and embraced the idea of ABB's DC Grid, which thus far had only been done on a few commercial vessels. One of the major wishes for the design was that it should feature abundant glass, not only because it is visually pleasing but because seeing the horizon helps mitigate motion sickness. The owner also had a lot of experience with the material. The home he built on the shores of Lake Huron in Ontario is a marvel of engineering, with major sections of laminated glass – at the time among the largest ever made – cantilevered over open space. To realize this amazing structure, designed by architect Siamak Hariri, they had to do extensive work in acoustics to minimize the transfer of noise and vibrations that can occur with glass.

"I really enjoy the house we built. I love the views and the feeling that you are floating," the owner says. "I kept thinking it would be great if I could change the view, so when I had a chance to design *Artefact*, I wanted to bring that experience as much as I could."

One day, Clark saw a rendering of a 165ft yacht concept from Gregory C Marshall Naval Architect (GCMNA). It had unusual lines and lots of glass. He forwarded the concept to the owner and it struck a chord with him too. "We knew we were building an electric boat, so we wanted to make sure it had a bit







*The Tai Chi room (above and opposite page, bottom right) and spa pool are part of the wellness/*

*bridge deck; glass is used to minimize the wind and maximize the views, no matter where guests are*

more of a futuristic look and I thought it looked like an electric boat," he says of the original concept by Geoff Harrington, a senior designer in the innovative GCMNA studio.

"Artefact has evolved quite a bit from that original concept. The pieces were there: the narrow waist of the superstructure, the full-length glass, the way the overhangs were split, but Artefact is fundamentally bigger and more elegant," Harrington says. "The intent of the design was to create multiple private spaces and points of view forward, aft and on the sides."

While finessing the exterior, GCMNA also worked with the owners and captain on defining all interior







### **DINE WITH THE STARS**

The formal dining space is a world of its own. In the daytime, the eye wanders to the panorama behind invisible walls of glass on both sides.

For the centerpiece, Raymond Langton Design commissioned Silverlining to make a stunning dining room table inspired by the owner's love of astronomy. The "Cosmic Table" seats 14 guests. On the tabletop, cantilevered over a sculptural base made of steel clad in composite, is an artistic representation of the cosmos. The planets are finished in a textured bronze, metalized resin while smaller satellites, made in black mother of pearl, orbit a planetary compass. Laser-cut metalized inlays chart their movements around the sky. Continuing the theme is the dining room chandelier, made by interior outfitter List. The light-up domes represent the planets on their path around the solar system.







spaces. They built a full-size mock-up inside a vacant warehouse, using wood and Tyvek construction wrap for key spaces from the bridge, to the galley, the owner's deck and an extraordinary Tai Chi room. An adult holding a Tai Chi sword overhead defined the height of this particular space.

*Artefact's* layout bucks the current trends. It's a very different approach from that of many yachts afloat today. For example, the forward area of the yacht, except for the owner's panoramic office on the owner's deck, is dedicated to operations.

"Everyone says they want the minimum of crew, but they don't design the boat for it," Captain Clark says. "The key is to minimize footsteps." He concentrated the very well-designed and appointed crew area on the forward end of the main deck (spacious pantry, galley, stores and a light-filled and spacious crew mess) with a lounge and cabins in the same position one deck below. The guest spaces are primarily in the aft to center section, identified as the least subject to pitch and roll. The owner's deck includes a panoramic office and a fully equipped crafts room, just like they have at home.

The primary guest circulation throughout the yacht is via a central staircase and an elevator. The only exterior stairs connecting decks are between the beach club and the main deck. It has the advantages of providing privacy and allowing the yacht to be secured easily.

One major decision was to go with ABB's diesel-electric system and the first ever DC bus installed on a superyacht. Efficiency was a big driver in the

selection of this system, which builder ABB says optimally saves 30 percent of energy over a conventional system, as well as emissions, but so was comfort. The pods and DP system allow a great deal of fine tuning in positioning the yacht to minimize the impact of waves and wind on the hull. The DC bus permits more efficient use of power, drawing from any available source on the grid, such as redundant variable-speed DC generators, and the ability to store surplus energy in banks of batteries. "This eliminates the need for energy-wasting load banks, which are needed to dissipate the excess power produced by a traditional yacht's fixed-frequency AC generators," the owner explains. The modular design also allows future upgrades to new power sources, such as fuel cells. One challenge is that, combined with Tier III-compliant engines and the

*In the salon, art glass by DKT Artworks conceals storage beneath windows. The wood flooring is a straight-grain dark walnut while the walls are in a Taupe ripple fiddle-back sycamore. Below: the crafts room on the family deck*







Above and below:  
extensive use of  
glass throughout  
Artefact gives guests  
a commanding view,  
whatever the activity.

Bottom: geometric  
patterns in the  
guest corridor  
play off the  
yacht's irregular  
window shapes



Selective Catalytic Reduction system that accompany them, the whole set-up is space intensive.

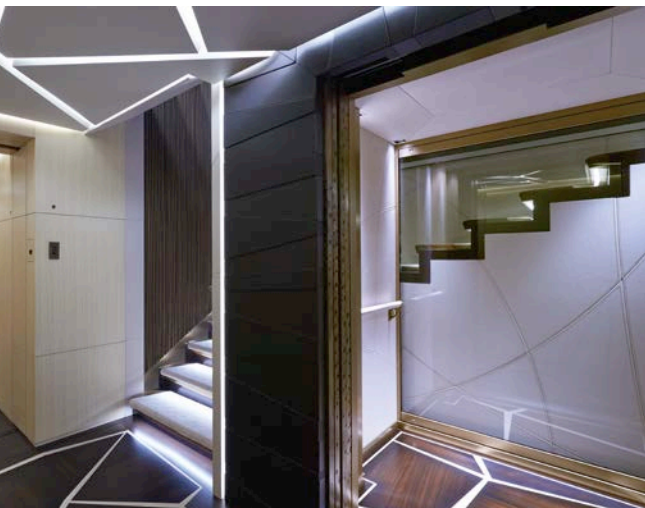
Another important piece of the puzzle was the toy garage. The largest of *Artefact*'s three tenders, a custom tender built by Lloyd Stevenson Boatbuilders, is nearly 39ft in length. It had to be both easily loadable onto the yacht and stored out of sight. By the time they had finalized the spaces, *Artefact* had grown to 246ft and the brief they had prepared was 85 pages long. They had already chosen key suppliers, including ABB, Caterpillar, Hug Engineering, Quantum and GLY for the glass.

"The owner and Aaron were very determined that this was the boat they wanted to build. This is a truly custom boat," Harrington says.

This appealed to Nobiskrug, builder of *Sailing Yacht A*, which the owner calls one of his favorite yachts. "After *Sailing Yacht A*, we noticed there is a gap in the market for people who do purely custom and since then we have been focused on that. When *Artefact* came around, we realized it was one of these projects again," Pataq says.

During the engineering phase, requirements of technical spaces primarily determined the final length of 262' 5". The hull was tank tested and refined to achieve better efficiency and Nobiskrug identified the best method to build *Artefact*, which involved combining a steel hull with a superstructure built in composite with a steel core. "As we went deeper and deeper into the technical specifications, and due to the curved shape of the superstructure, it was evident we needed to do that in composite. Today a lot of airliners are made of composite, so why not superyachts?" Pataq says.

Right around the time that the *Artefact* team was speaking with shipyards, they also interviewed interior designers, among them Reymond Langton Design (RLD). "Reymond Langton really understood the interior design challenge that *Artefact* presented because they realized how difficult it is to compete with the outside views in a house that is made out of glass," says the owner who accurately describes the design as "radical yet minimalist".



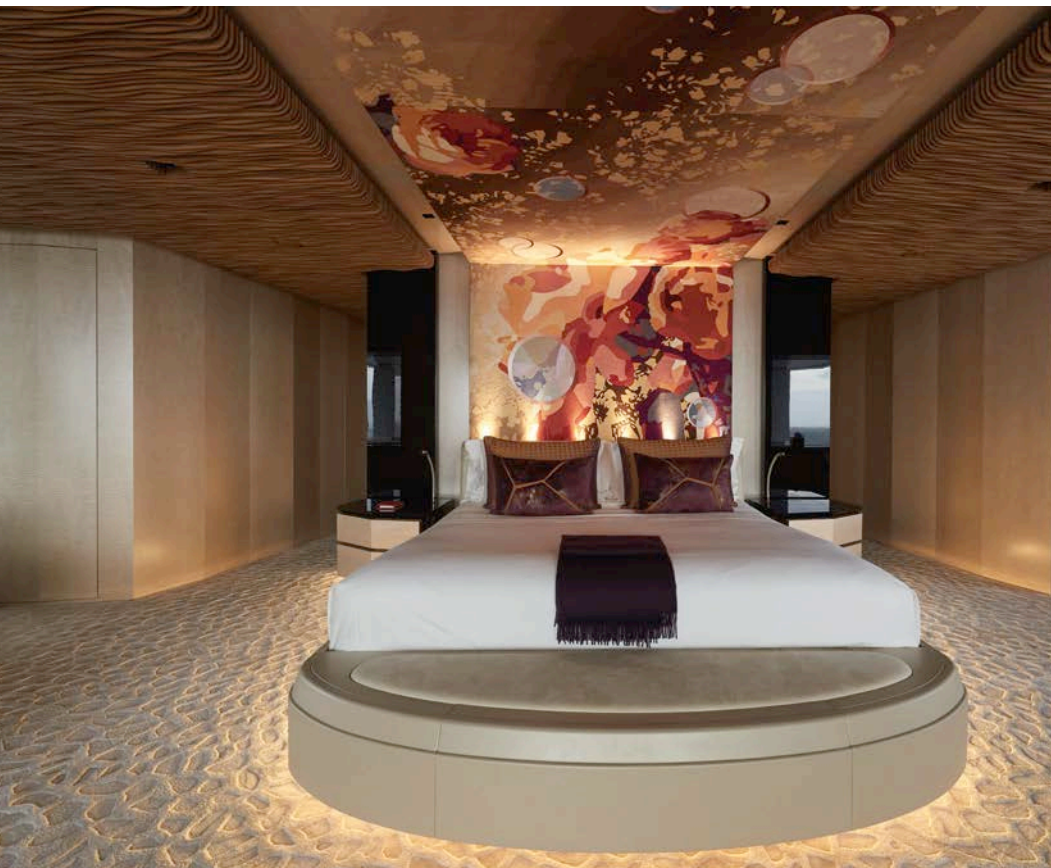




*RLD incorporated exterior window shapes in the design of the guest cabins (below) and allowed the panorama to shine on the family deck*



“The owner and captain were determined that this was the boat they wanted to build. This is a truly custom boat”



*Silk panels were designed by RLD – those in the owner's cabin (left) were made using Su embroidery, while those in other areas were made by artisans such as Project Art London and Sabina Fay Braxton.*





Above: RLD turned dayheads into an experience. Above right: the television room features Atmos surround sound



The designers admit that working with so much glass changed their approach because acoustics were such a consideration. To avoid the effect of an echo-filled glass box, everything had to be shaped in such a way that noise would not reverberate. “The glass is not straight, there is always a tilt on it, every surface has unusual finishes and a dual direction,” Pascale Reymond says.

The owner demonstrates what they achieved with a noise meter he keeps in his office, which is fronted by a stunning curved floor-to-ceiling window. With *Artefact* docked in the shadow of Gros Piton and waves crashing on the shore, the noise level is 28dB, “quieter than a library,” he says.

Of course, not all of it is attributable to the interior materials. Soundproofing the yacht went from the bottom up. However, what is easily visible are ubiquitous wave patterns in walls and ceilings, which are interesting and soothing. The main salon’s ceiling, made of carved

oak over acoustic panels wrapped in Majilite, looks like it is finished with meticulously matched driftwood, a finish inspired by the owner’s house.

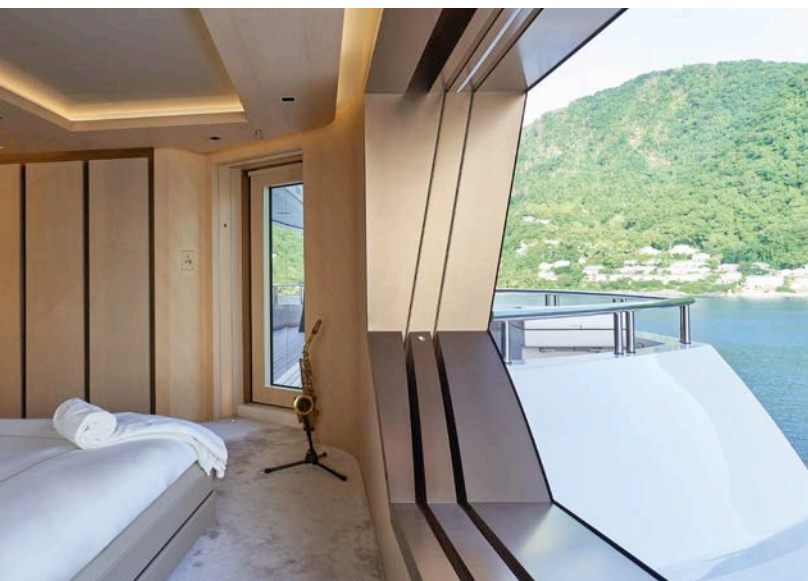
“You can affect the acoustic of a room massively by the finishes that you choose and the angles that you’ve used,” says RLD’s Jason Macaree, who worked closely with sound consultants on testing various materials, down to the type of perforations to use.

“We did not just put in an interior, we really [strived] for the interior to work with the outside, the acoustic and the volume. It is one of the cleverest designs we’ve done. It is a smart boat,” Reymond says.

It is also very personal. An armillary sphere in the salon represents the owner’s love for science. Before Galileo, he explains, “armillary spheres were super complicated and not that accurate, but once humans realized the earth was not at the center, they became very simple. This one helps you navigate the earth and figure out where all the constellations are.”

Reymond Langton worked with DKT Artworks and a Swiss horologist on this marvelous object that catches the light as the sun sets behind the horizon, casting a golden glow throughout the salon. The color gold is a bit of a theme in the art glass that lines lower portions of the walls, and in a stunning reproduction of Gustav Klimt’s *The Kiss*, handmade in an ancient silk embroidery technique perfected in China. A companion piece on the opposite wall is based on a famous Chinese painting.

Just like every element of *Artefact*, from her imaginative form to her cutting-edge function, the artwork is a perfect marriage of art and science. ■





*Below: the staircase's panels have a geometric pattern which mirrors the exterior features.  
Right and below: the owner's office, like the rest of the yacht, has windows made of two panels of bronze glass and one layer of mirror, which cuts heat without distorting views*



“We really strived for the interior to work with the outside, the acoustic and the volume. It’s one of [our] cleverest designs”





## ARTEFACT

## NOBISKRUG

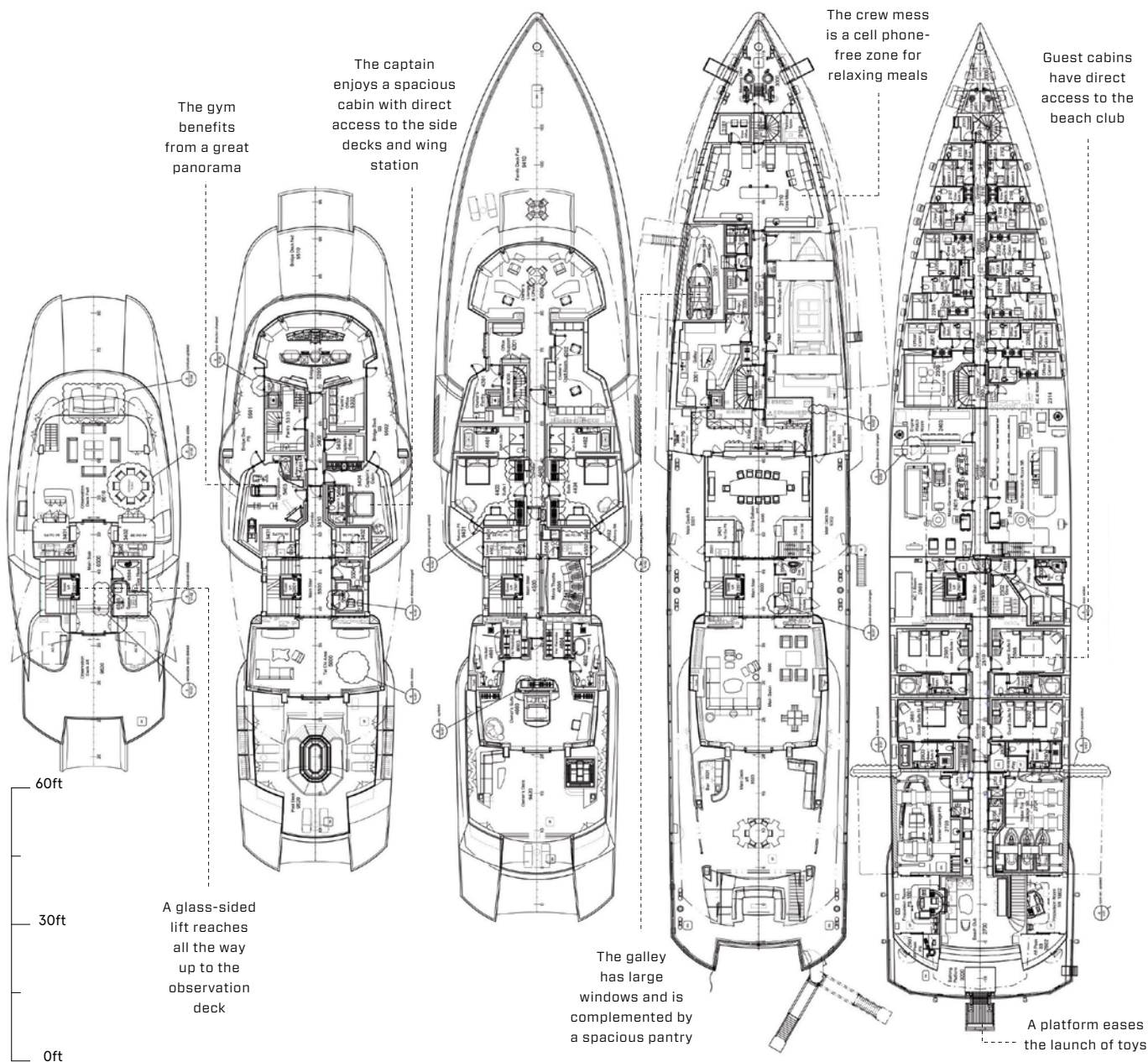
### OBSERVATION DECK

### BRIDGE DECK

### FAMILY DECK

### MAIN DECK

### LOWER DECK



**LOA** 262' 5"

**LWL** 254' 5"

**Beam** 55' 2"

**Draft** (full load) 13' 9"

**Gross tonnage**  
2,999GT

**Speed** (max/cruise)  
17.8/15 knots

#### Engines

2 x CAT 3516E-HD  
SCAC; 2 x CAT C18  
ACERT SCAC; 1 x CAT C9

#### Propulsion

2 x ABB 2,200kW  
Azipod

#### Generators

1 x 2,425kVA;  
1 x 610kVA; 1 x 219kVA

#### Range at 15 knots

5,300nm

#### Fuel capacity

57,192 gallons

#### Freshwater capacity

12,098 gallons

#### Owners/guests 14

**Crew** 24

#### Tenders

1 x 38' 6" Lloyd  
Stevenson  
Boatbuilders; 1 x  
23' Sealegs; 1 x 23'  
Novurania Chase 23

#### Classification

Lloyd's \* 100 A1 SSC  
Yacht Mono G6; \*  
LMC UMS

#### Construction

Steel hull; steel  
and composite  
superstructure

#### Naval architecture

Nobiskrug

#### Exterior styling

Gregory C Marshall  
Naval Architect

#### Interior design

Reymond Langton  
Design

#### Builder/year

Nobiskrug/2020  
24768 Rendsburg  
Germany  
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nobiskrug.com