

PRESS RELEASE

NGONI BACKGROUND INFORMATION



“Exciting”, “Radical”, “Edgy”, “Stunning”: these are the kind of words that greeted the 58m /190ft high-performance sloop Ngoni throughout the Mediterranean in summer 2017.

Designed by Dubois Naval Architects and featuring an innovative interior by Rick Baker Ltd, Ngoni is luxurious as well as ‘fast and furious’ – the product of bold and minimalist design realised with impeccable build quality by Royal Huisman. Ngoni’s sleek and beautifully executed exterior conceals a host of innovative engineering to meet the challenges of marrying a huge, powerful and advanced rig with a slender and easily-driven hull.

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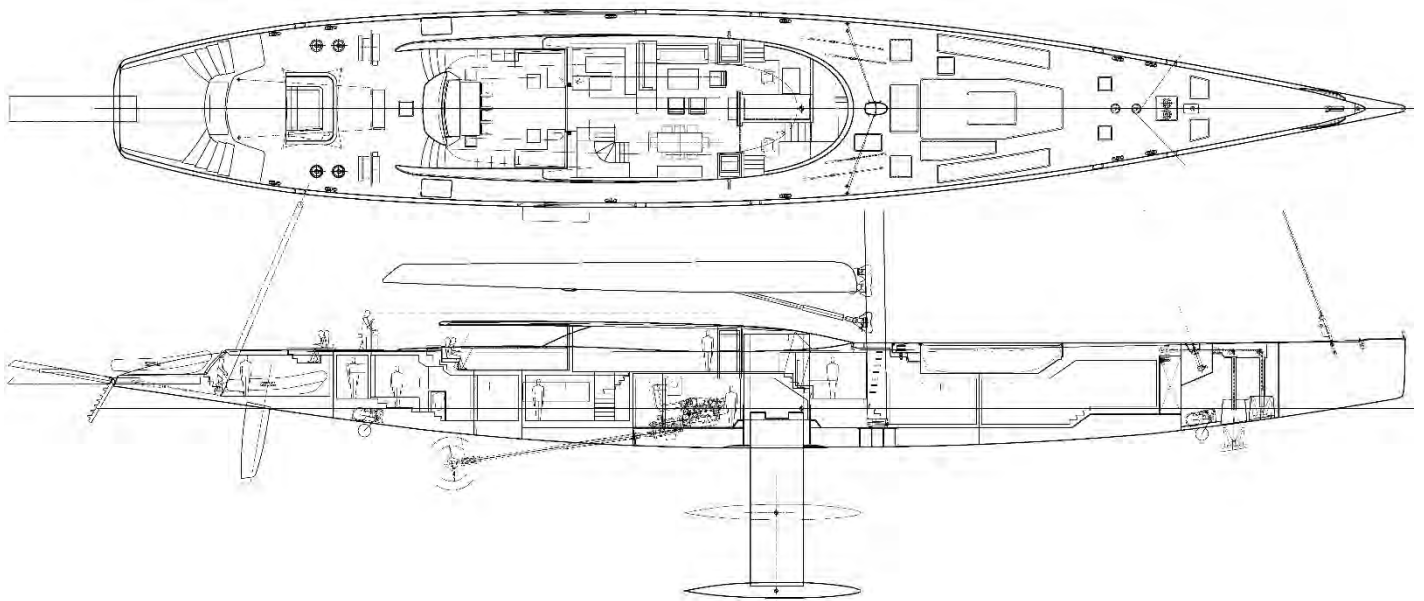
THE BRIEF

“This is some yacht, inspired by an owner looking for the next new, new thing – a dream project for a designer.” These comments from the late Ed Dubois would be echoed by Rick Baker Ltd, the interior designers, and by Royal Huisman, who had the privilege of building Ngoni.

From the outset, the owner was clear about his intentions:

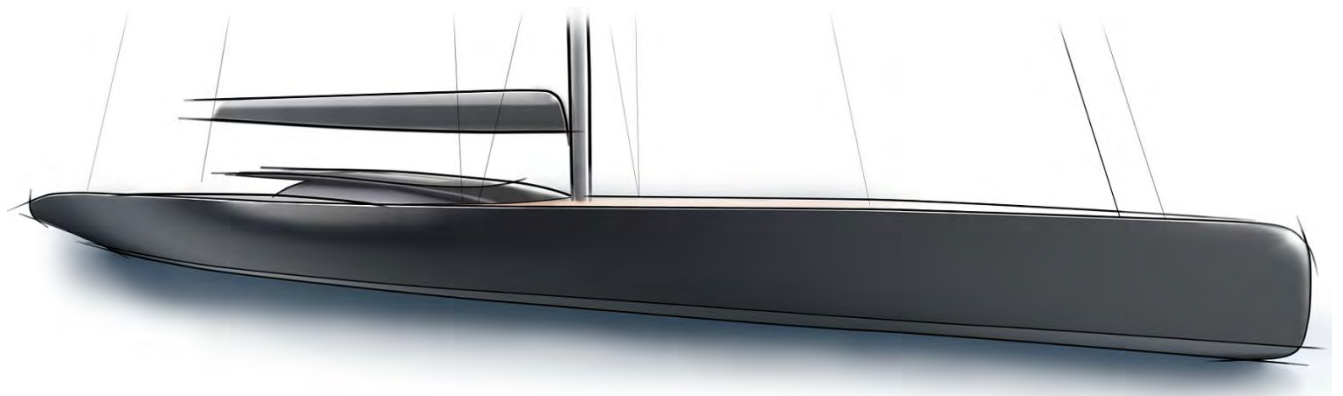
**“Build me a beast. Don’t build me a sheep in wolf’s clothing.
This has to be an edgy and innovative weapon; fast and furious.”**

Name:	Ngoni
Type:	High Performance Sloop
Length	58m / 190ft
Length Waterline	51m / 168ft
Beam	10m / 31ft
Draft (keel up - down)	5.3 - 8.1m / 17 - 26ft
Shipyard number:	Project 398
Naval architect + exterior stylist	Dubois Naval Architects
Interior design	Rick Baker Ltd.
Lighting design	The Light Corporation
Project management	Godfrey Cray Maritime Ltd + Captain Iain Cook
Builder	Royal Huisman
Year of delivery	2017



INITIAL DESIGN FOR THE OWNER
BEFORE HE CHALLENGED DUBOIS
TO PUSH IT FURTHER

Initially, Dubois drew a long and slender sloop with a plumb bow, sculpted aerodynamic superstructure and elegant beach deck, dominated by a towering sloop rig. It was a dramatic concept but the owner challenged Dubois to push it still further.



Dubois' response was the reverse sheer that now defines Ngoni. It began as an exercise in creative expression but it soon became apparent that it also held the key to structural stiffness. Dubois further finessed the hull profile so that the reverse sheer transformed to concave sheer aft of the superstructure – an attractive styling touch that also enhances cockpit visibility. The owner had what he wanted.



So much for the character and visual personality of the project. More specifically, the owner wanted an exciting contemporary yacht that combined exemplary performance, handling and seakeeping with luxurious amenity, optimising the hull volume. His 'less is more' philosophy demanded a highly minimalistic approach, seeking to maximise reliability by minimising complexity; and to enhance elegance and aerodynamic efficiency through a clean, clutter-free aesthetic.

As an experienced owner who likes to helm, he insisted on steering that was light, yet firm and responsive. The wheel had to give him the true feel of the boat under sail. Finally, the yacht, however edgy in presentation, must still accommodate the owner, his family and guests in style and comfort. And it should facilitate, not hinder, the safe and efficient operation of the yacht by the crew.

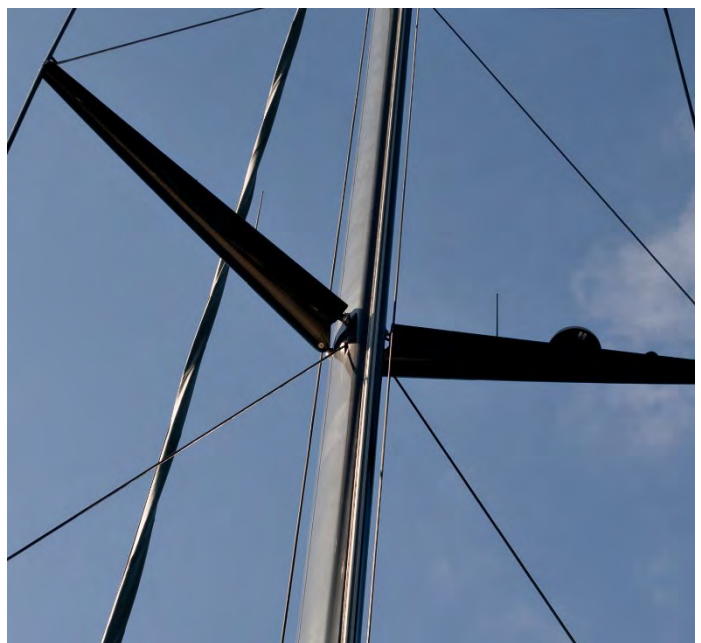


SAILING

Intensive research and analysis went into the development of the advanced and extremely powerful carbon rig and foils. The 853m² / 9,182ft² square-top mainsail is notable not just for its load-reducing halyard lock but for the innovation allowing the square-top and its supporting diagonal batten to detach automatically and furl neatly into the styled performance boom with minimal intervention from the crew. While hoisting, the diagonal batten attaches automatically too.



To further reduce weight and drag, the team opted for continuous carbon shrouds from deck to masthead (70% weight reduction over conventional Nitronic rod rigging) and internal D-Tang connections where diagonal stays meet the mast tube – thus also removing the visual clutter of turnbuckles.





The development of the rig was a major project in its own right and its success is a tribute to the highly productive collaboration between spar builder Rondal (Royal Huisman's sister company), sailmaker North Sails and Carbo-Link, together with Dubois Naval Architects and the shipyard team.





Rondal's 24 m / 79 ft style-to-order performance furling boom with automatic detaching and attaching top of square-head mainsail and gaff batten. Confronted by higher calculated mainsail leech and foot loads, the challenge was to redesign the proven performance outhaul system to cope with such extreme loads while retaining all of its main features (controllable mainsail foot tension at full hoist and reefed positions; no boom guide arms needed, so no chafe on the sail; hands off operation; no moving parts other than the clew slider itself; no wear or deformation on metal components such as the clew knob and slider).



Beyond these important technical considerations, the style-to-order requirements proved to be one of the most rewarding aspects of the project. The Dubois office, together with the owners' team, created by far the most extreme style-to-order boom ever seen. The almost 4 m / 13 ft long aft extension of the boom, designed and crafted to follow the profile of the yacht's stern, created superb visual harmony between the two.



An interesting aspect of the project is the boost to aerofoil efficiency resulting from the minimalistic styling. The stem of the plumb bow, rounded top and bottom, the location of the headsail furlers, flush beneath the deck, and the absence of a conventional pulpit all contributed not just to spare, purposeful looks but to clean airflow, reducing disturbance at the luff and enhancing the aerodynamics of the headsail.



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The owner's insistence on steering that was light, yet firm, responsive and adjustable could only be met by a high aspect-ratio rudder and a manual system without power assistance – a major challenge considering the huge sail area.



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Rudder area, position, rake, profile, effect of hull form and linkage friction were all carefully analysed. The final system with a single, balanced 6.95m² / 75ft² spade rudder – one of the largest carbon rudders ever produced – has delivered superbly on its objectives.





Spars

Rondal carbon fibre mast with halyard locks and internal tang system. Style-to-order performance furling boom with automatic detaching and attaching top of square-head mainsail and gaff batten

Full air-draft

75m / 246ft

Standing rigging

Rondal / Carbo-link continuous carbon

Running rigging

Doyle running rigging package delivered

Sails

North Sails, material 3Di

Total upwind

1,950 m² / 20,989 ft²

Total downwind

3,093 m² / 33,293 ft²

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AT ANCHOR

The reverse sheer that visually defines Ngoni began as an exercise in creative expression but it soon became apparent that it also held the vital key to the hull's structural stiffness, delivering 12% more strength and load resistance than conventional sheer using the same materials (according to FEA - finite element analysis).



The importance of this factor to the entire project cannot be over-stated, given the challenge of constructing a strong, slender hull with numerous openings, yet rigid enough to take the heavy loads of a huge sloop rig (for example, up to 60 tonnes on the forestay alone).





Ngoni's hull is punctuated by large rectangular portholes, a sea-level gym door, fold-out side boarding platform, two submarine anchors and retractable thrusters. The deck has giant cut-outs for flush sail lockers, a large tender gage, crane, spa pool and cooled waste locker.

In addition, the near-100-tonne lifting keel imposes its own powerful loads (in this case contained by a single skin trunk milled from solid aluminium parts) – all of which had to be addressed within weight limits consistent with the performance objectives. This is truly a project that called on all the design engineering expertise represented within the Royal Huisman team.





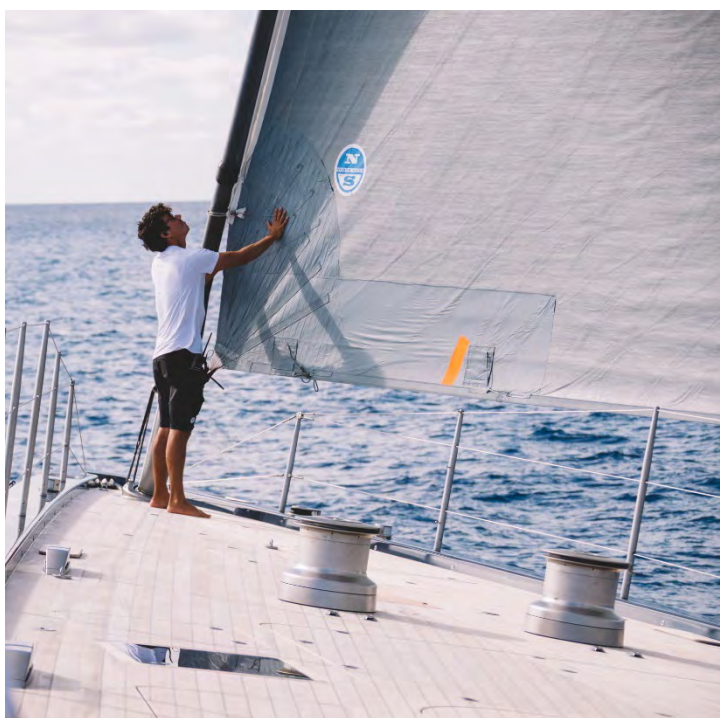
The reverse sheer transforms, aft of the superstructure, to concave sheer – an attractive styling touch that also enhances cockpit visibility. Set vertically into the plumb bow stem are two stainless steel ports that provide a conduit for snubbers to the submarine anchors or mooring lines.



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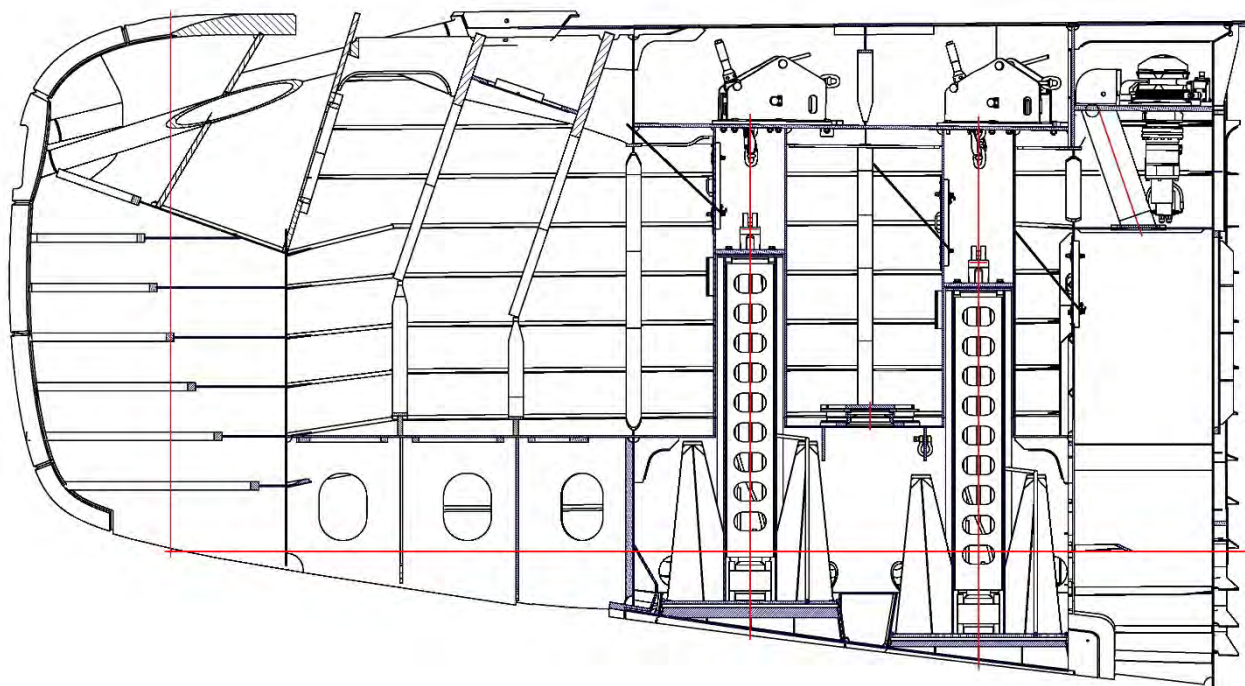
The absence of a conventional pulpit, anchor gear or furlers on the deck above lend to the lean purposeful aspect of the bow.





The topsides are strikingly finished in a bespoke metallic topcoat named “Claire de Lune”(moonlight) by the owner’s team. The paint has been applied with an electrostatic coating technique that uses charged particles to bond the paint to the surface.



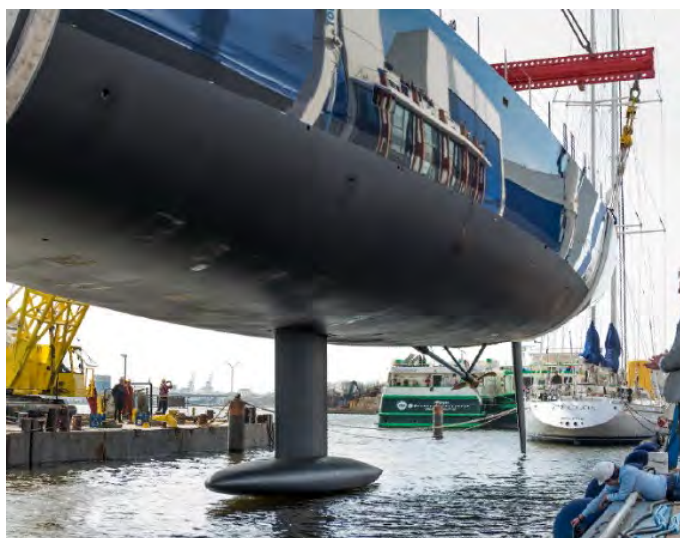


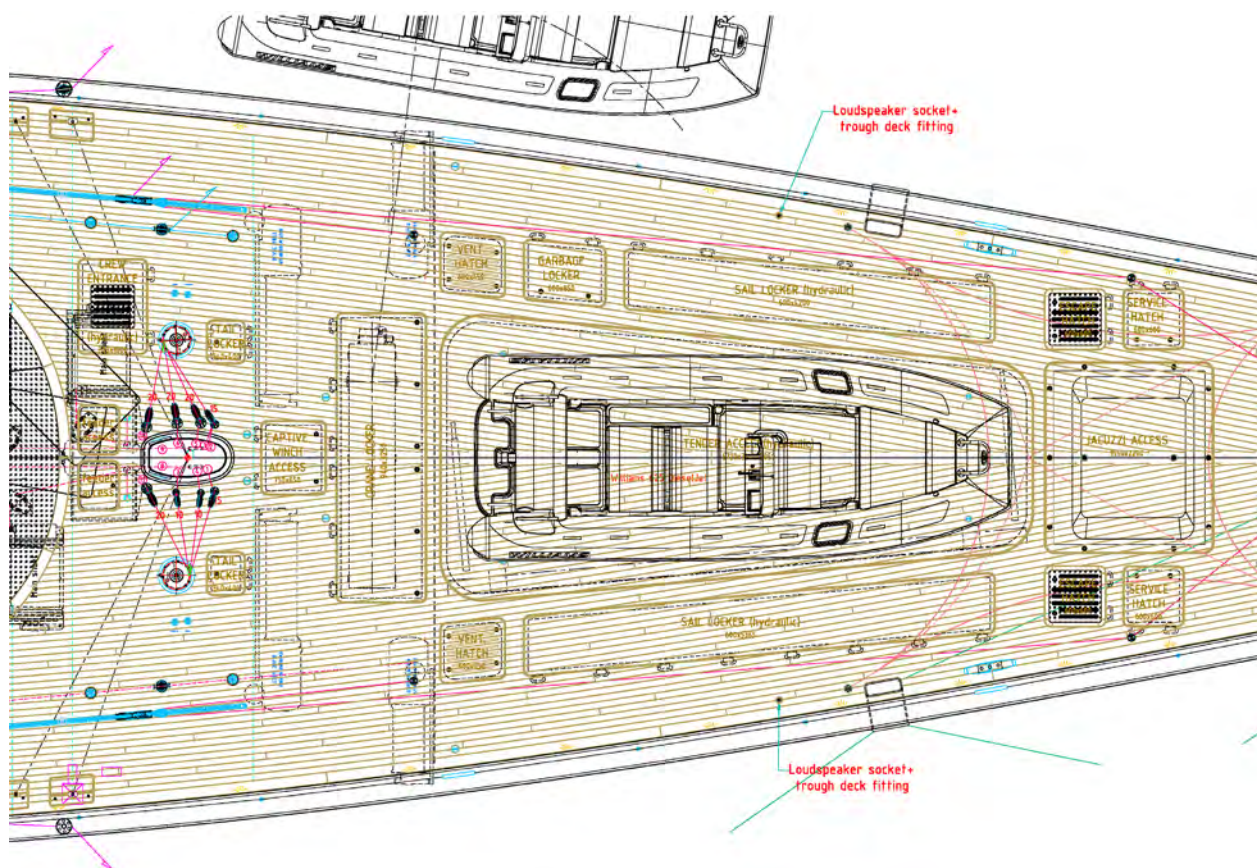
Underwater anchor system

2x hydraulic anchor winches by Steen
2x Manson anchor type Pool N, 380 kg (838 lbs.)
2x Rondal anchor stoppers

Lift keel

Hydraulically operated T-style lift keel by Brandjes
(2.80 m/ 9.2 ft stroke)
Ballast (fin + bulb) 96 tons / 211,643 lbs





Tenders & crane

Williams 6.3m diesel jet tender

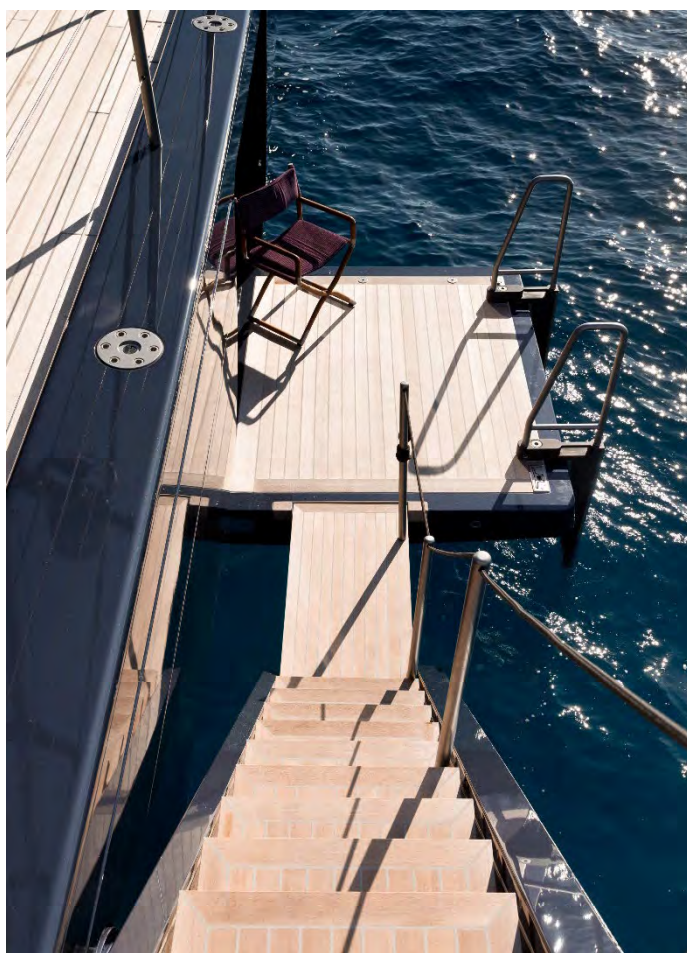
Bombard commando C3 sports boat, 15HP

Crane by Nautical Structures



COMMISSIONING OF THE CRANE

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Boarding platform
Side gangway

Royal Huisman hydraulic boarding platform
Hydraulically operated [Cramm] side gangway

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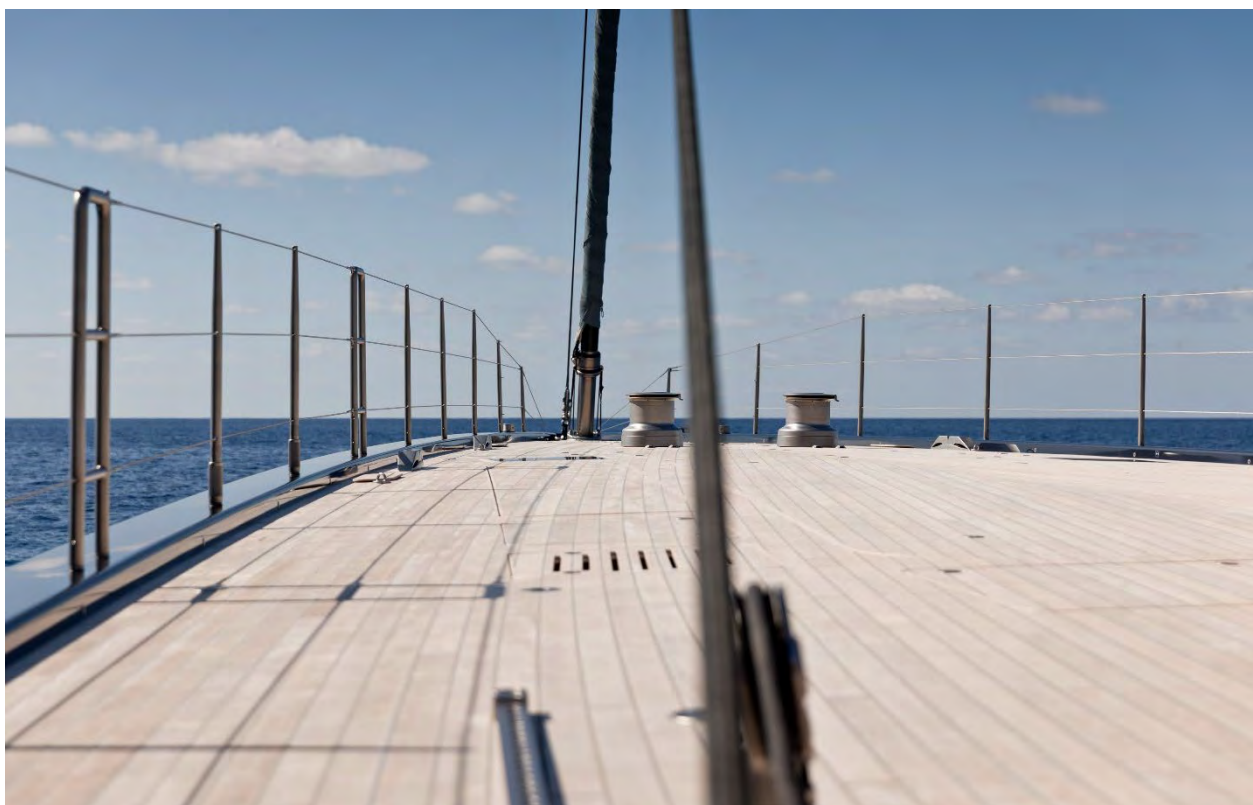


Passerelle / bathing platform

Hydraulically operated [Cramm]
carbon fibre passerelle with self-levelling steps
and platform; 45° up or down

Paint system

Alex seal paint system, name of color: Claire de Lune
and Grey RAL 7035. Jotun antifouling system, Black



EXTERIOR

The expansive teak foredeck shelters giant flush hatches with continuous, uninterrupted planking to conceal a large tender, a crane, spa pool, sail locker and cooled waste locker. Just forward of the forestay, the guardrails plunge to deck level, obviating the clutter of a pulpit.



CARBON FIBRE SPA POOL
ON THE FOREDECK



Aft of the foredeck, the towering carbon mast is one of the world's three largest one-piece spars ever built, all three having been manufactured by Rondal. Ngoni's full air-draft is 75m / 247ft and therefore disregarding the so called 'Panamax' level.



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EASE OF USE – INTEGRATED MAIN
FOREDECK CONTROLS ON THE MAST



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The outer shell of the performance boom is custom-styled in harmony with the overall aesthetics of the hull while, operationally, the mechanics of the system provide fully flexible mainsail foot and leach tensioning at both full hoist and in all reefed positions.



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Sail management is provided by Harken winches and deck hardware, complemented by Rondal reel winches with electrically-driven variable speed feeders. These feeders have been developed for high speed operation, contributing to overall safety and reliability.

All deck hardware is bead-blasted to a uniform titanium look, one of many examples of 'attention to detail, in every detail' aboard Ngoni.





The sculpted low profile superstructure centres the design with elegant understatement. Gleaming an authoritative black and disguising four expansive skylights from the external observer, it is constructed from double-curved moulded glass at the very limits of current technology.

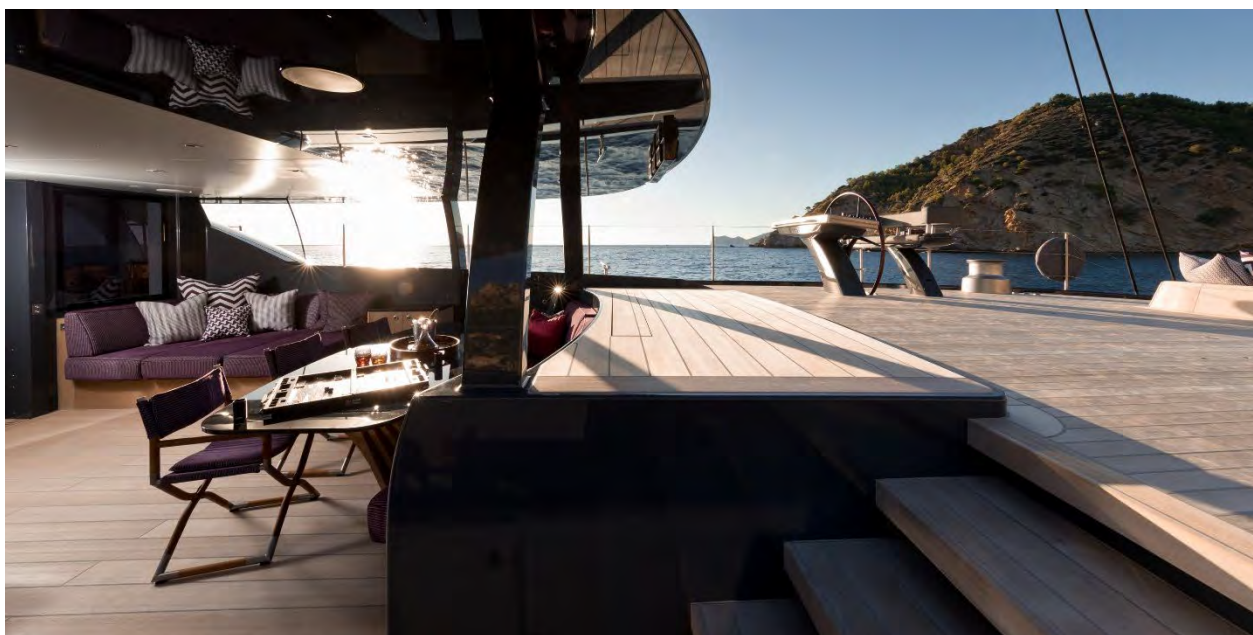
Inside, there is luxurious informal seating to port, formal dining to starboard and a nav. station forward, all affording superb visibility and comfort.



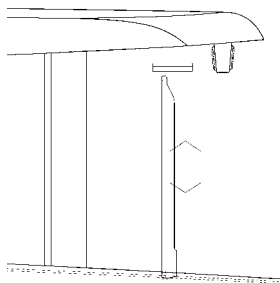
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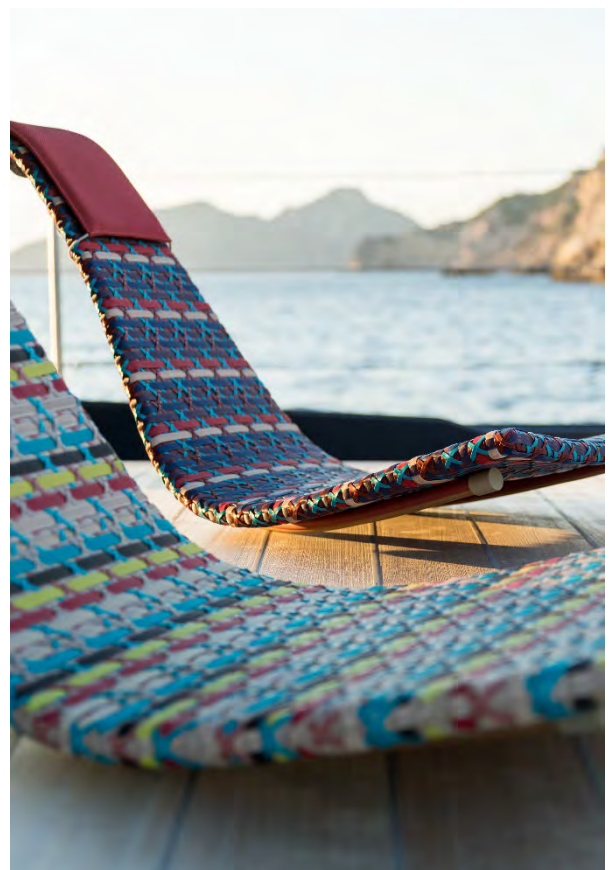
A 75 inch television can pop up from the cockpit counter to watch a movie while enjoying the outdoor ambience.



The glass doors slide open to offer a seamless transition – without any change in height of deck or deck-head, simply the inclusion of a teak deck grating – between the cockpit and the deckhouse salon.



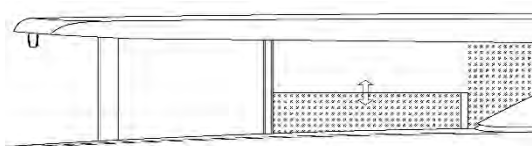
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Electrically operated sliding glass wind breakers ensure the perfect, flexible outdoor environment whatever the conditions at sea or at anchor.





A highly stable boarding platform at tender level is linked to the deck by boarding steps, offering easy access to the deck amidships, adjacent to the deck house.

The helm stations aft of the cockpit area have been ergonomically executed but they also double as eye-catching works of art in harmony with Ngoni's design ethos.



The elegantly arching pedestals are fashioned from advanced carbon and the curved surfaces of the tops are milled from stainless steel.

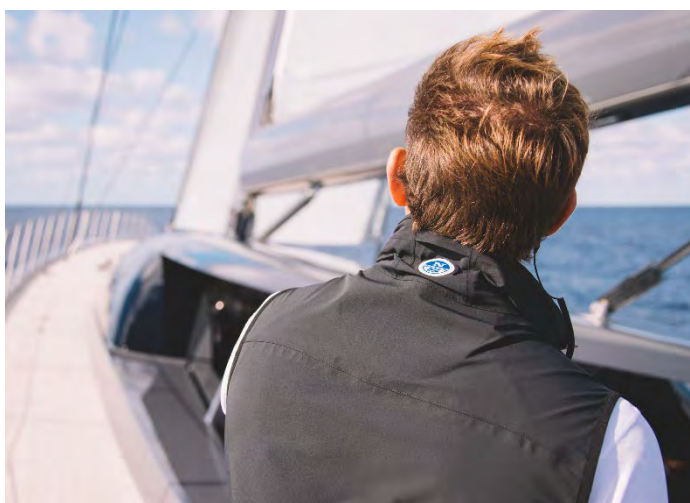
The modernistic carbon wheel spokes support finely joinered wood rims, with the wheels partially slotted into the deck to achieve the right combination of wheel size for control and height above deck for helming comfort.



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There is excellent visibility for the helmsman all the way to the bow and a free-standing carbon fibre bimini can be set up over the helms to provide shade when required.

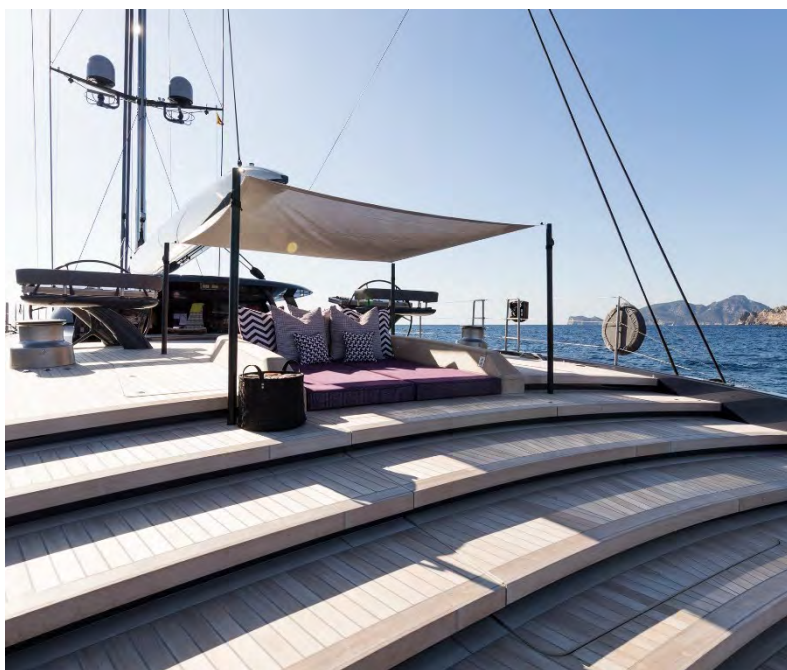


COMMISSIONING
OF THE BIMINI
OVER THE HELM





The beach deck aft completes the exterior picture in style: the grand, curving staircase descending elegantly to sea level beneath an informal sunbathing / social area (with direct access into the owner's suite). Swimmers may also enjoy diving from the Olympic diving board that can be fitted in between the aft sunbed and the helm station.



COMMISSIONING THE DIVE BOARD IN AMSTERDAM

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Glass

All custom made glass;
chemically reinforced and laminated

Deck hardware

Below deck hardware by Rondal;
custom deck hardware by Harken

Hatches and lockers

Rondal custom flush deck hatches
Royal Huisman Custom waste locker

Winches

Rondal reel winches (controlled from helm stations)
with electrically-driven variable speed feeders;
Harken drum winches

Steering system

Manual steering system without power assistance
and hydraulic steering system; Simrad Autopilot
system; Rondal balanced carbon composite
spade rudder (6.95m² / 75ft²)





INTERIOR

The owner's core brief to the Rick Baker design team was simple in the extreme, yet offered a clear direction of travel, with plenty of room for creative interpretation:

“Don't design a traditional yacht interior”

He went on to emphasise that there should be no predictable assumption that the styling, colours or finish of the exterior would inevitably inform the sensual experience below.

Instead, the owner threw an exciting palette of thoughts, experiences and ideas at the Rick Baker team...





...and challenged them to do something special:

“The scheme should have flowing curves interspersed with organic detailing and unique materials. The interior was to have a masculine feel, which was to be broken up with punches of vibrant colour.”





“The use of vivid resins, combined with sculpted metal surfaces, was to give an overall fluid feel throughout, however each area was to retain its own design identity.”

— Rick Baker





The selection of materials evolved as the designs came to fruition, with the client finally settling on some wonderful bespoke veneers, and distinctive marble and onyx from Italy. The result is an outstanding example of design originality that delights the eye in both concept and detail yet still provides warm and inviting spaces for the owners and their guests.

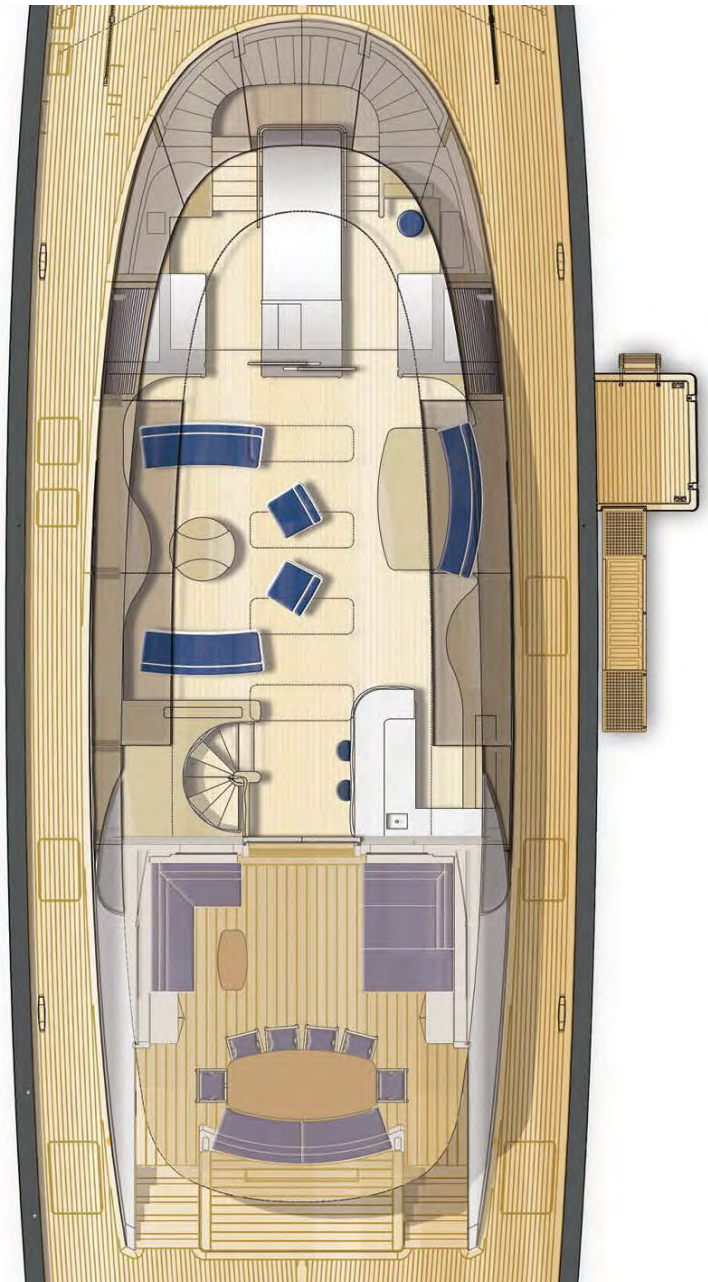
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DECKHOUSE AND COCKPIT

A few steps descend from deck level to the informal yet luxuriously appointed guest cockpit, an intimate and sheltered outdoor space for reading and relaxation, playing games or simply watching the marine world around you. The deck house overhang, together with electrically-powered retractable windbreakers, ensures a comfortable environment in all conditions.

Seamless sliding doors by Rondal give access to the deck house interior, presenting the first indication of the exciting materials, colours and finishes to be found throughout the interior.

To starboard there is a bar and dining area while, to port, there is informal seating with coffee tables and, when required, a pop-up television.



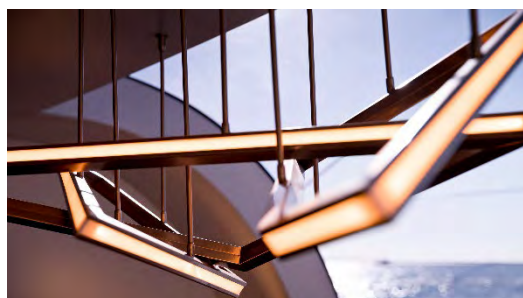
BAR TOP DETAIL



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DINING AND BAR



PRESS RELEASE



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Going forward, doors give access to the nav station and stairs leading below to the crew area and machinery spaces.

The head of the retractable keel housing is located between these stairways yet, thanks to meticulous design, its presence goes completely un-noticed.

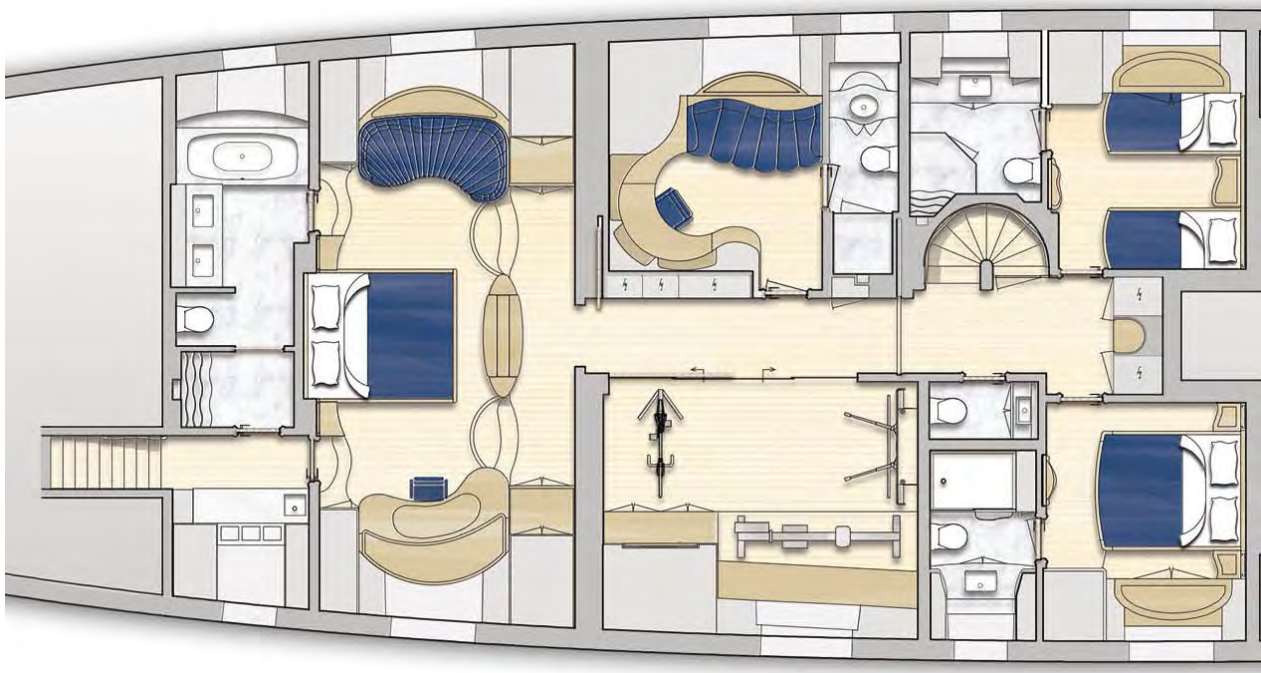
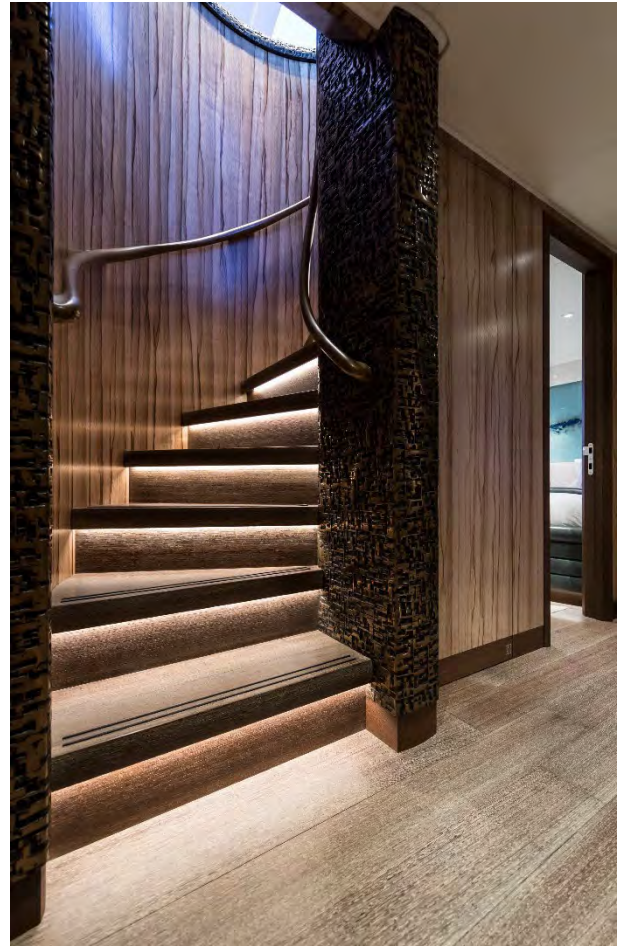


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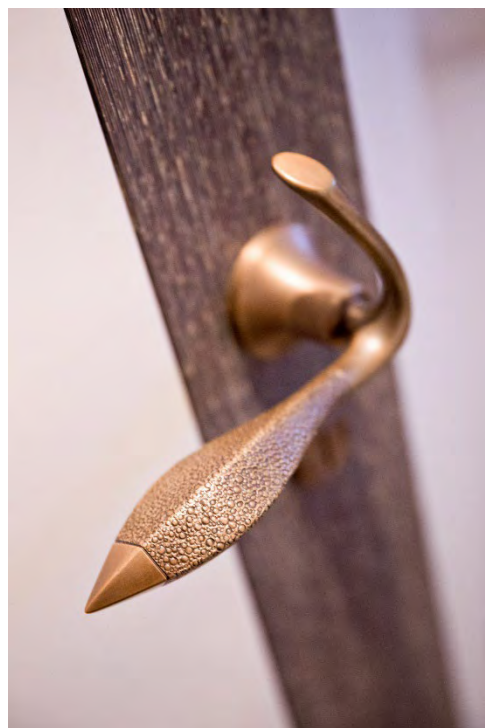
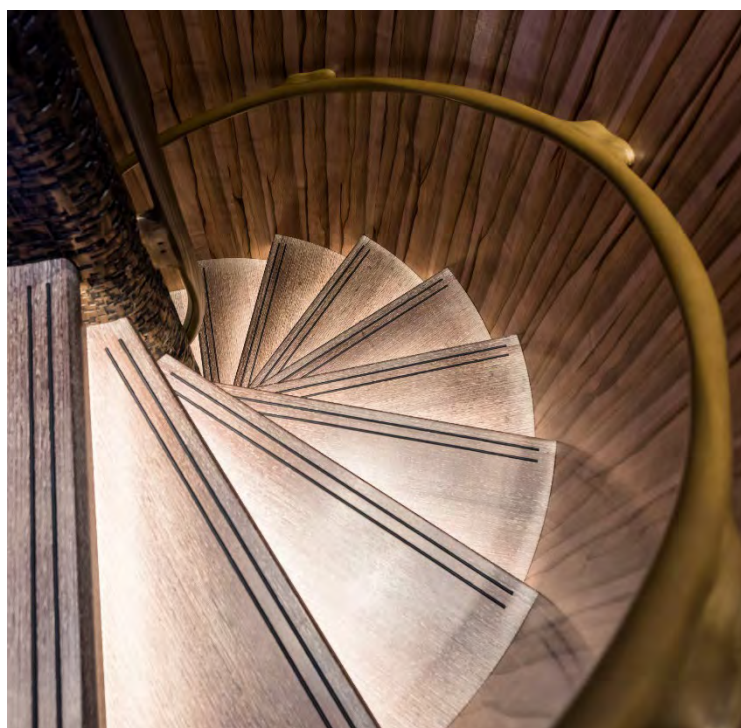
GUEST CABINS AND OWNERS' SUITE

Owners' and guest accommodation is accessed via a curving staircase from the deck house to the guest lobby area. There is a superbly appointed twin guest cabin with spacious bathroom to port and a double guest cabin featuring a Japanese bath to starboard. Both feature high quality exotic veneers, marbles and resin finishes. Large, rectangular ports offer superb natural lighting by day.

The owners' suite, aft, comprises a full-beam stateroom with bespoke built-in furniture, twin doors to an enormous bathroom, a spacious study with its own bathroom and a large gym with an opening hull port in the topsides. This area, too, is flooded by natural light.



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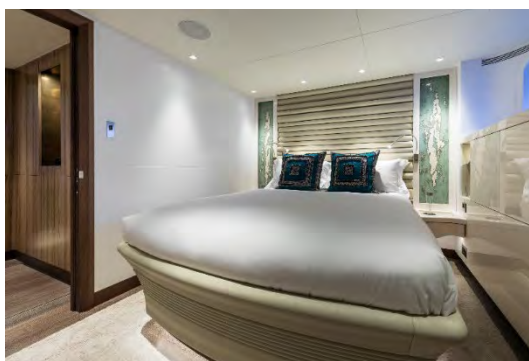
PORTSIDE GUEST CABIN

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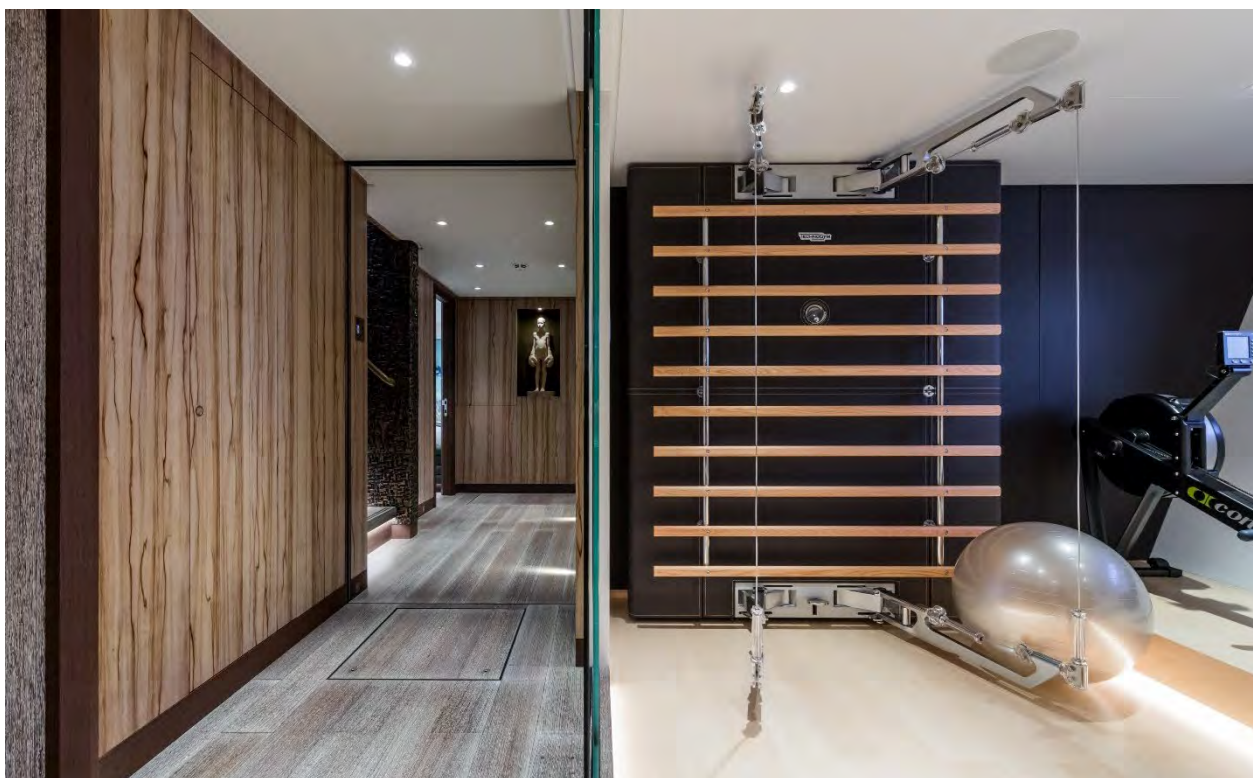


PORTSIDE GUEST CABIN
AND BATHROOM

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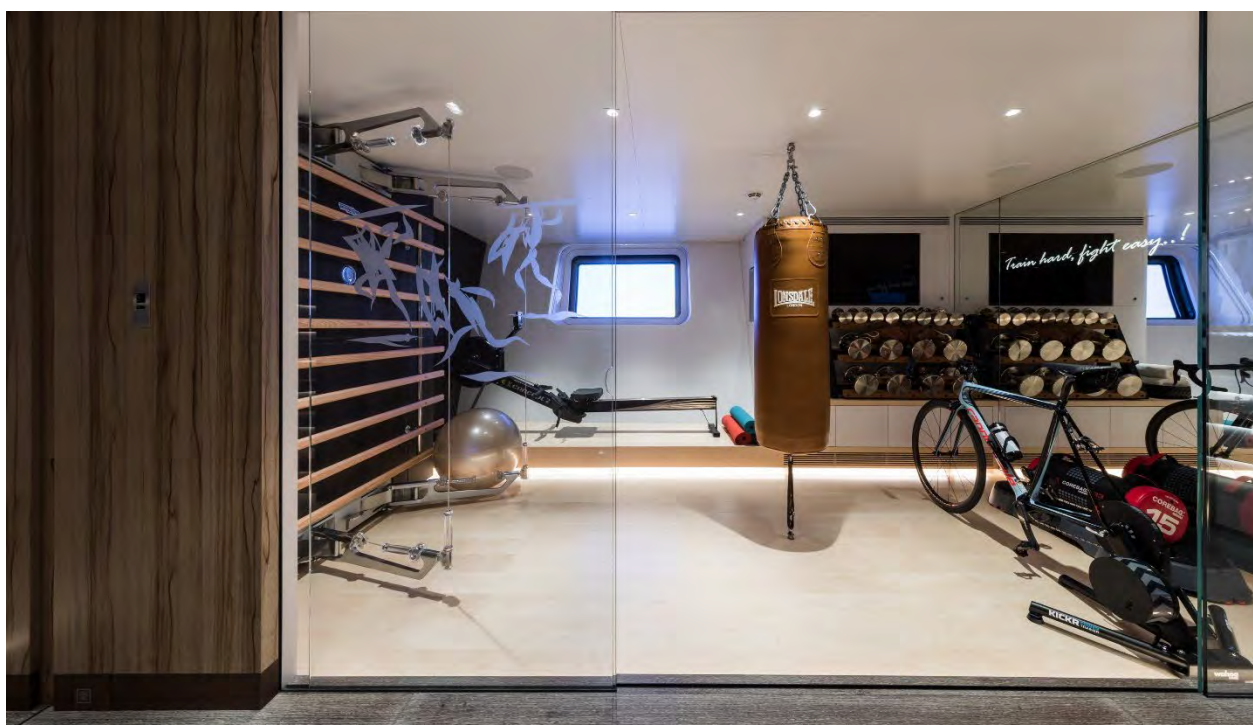


STARBOARD GUEST CABIN
+ BATHROOM WITH JAPANESE BATH



MASTER GYM

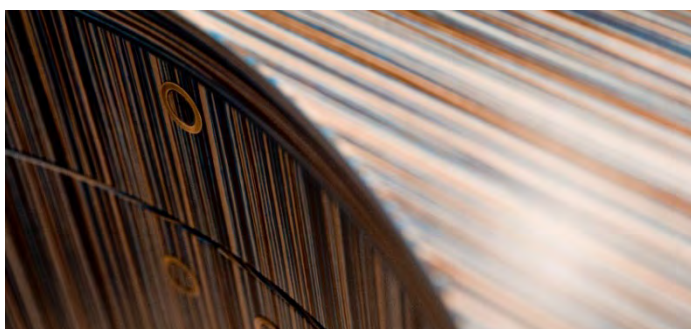
SEA BREEZE ROWING - THE EXTRA-LARGE OPENING PORTHOLE
IN THE GYM AT SEA LEVEL REQUIRED SPECIFIC SAFETY PRECAUTIONS,
WHICH HAVE BEEN DISCUSSED IN DETAIL WITH THE CLASSIFICATION SOCIETY



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MASTER STUDY / LIBRARY



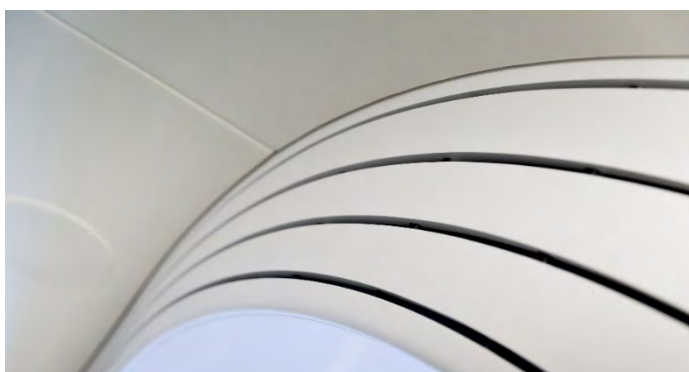
MASTER STUDY / LIBRARY BATHROOM



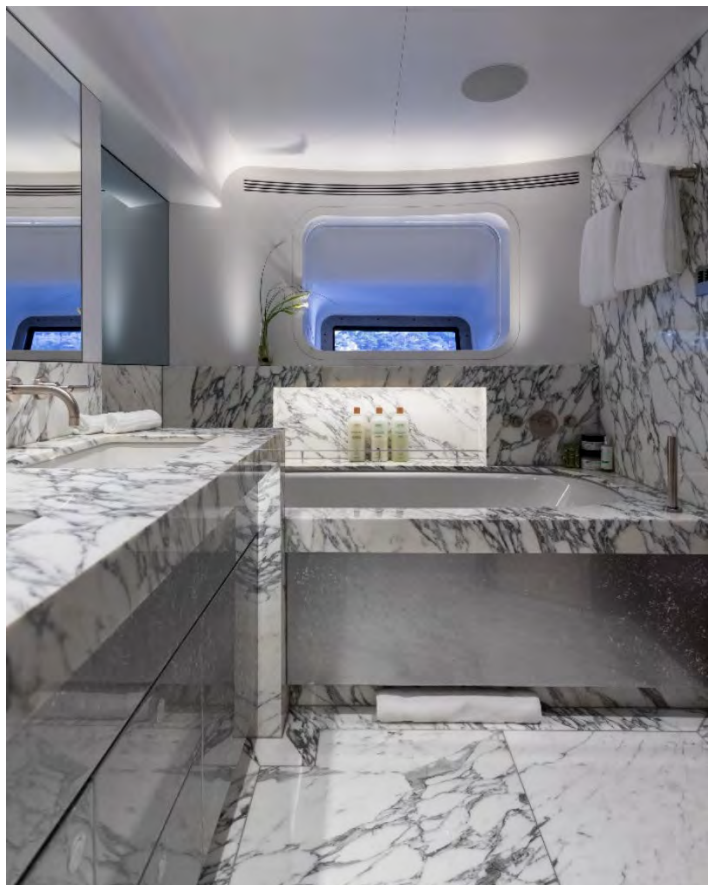
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P R E S S R E L A S E

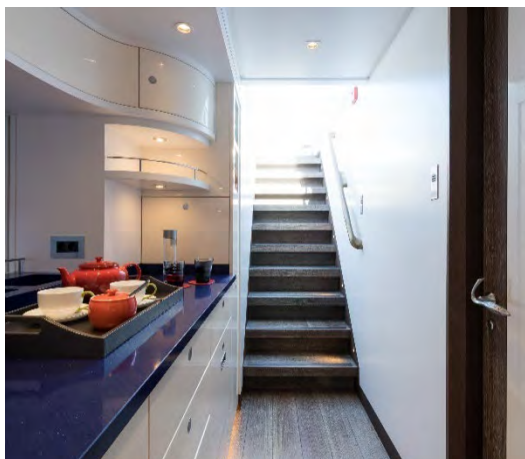
The sophisticated audio-visual system was thoroughly tested a full year prior to delivery. The owner was very specific about the configuration, asking iPad users to interface with the custom setup supplied by Tijssen Elektro based on Royal Huisman engineering.



With 48 terabyte storage by Kaleidescape and a vault for 320 disks, there is access to a wealth of music and movies. The owner also wished to view his favourite TV channels without relying on VSAT, so a special configuration bundles 3G and 4G broadband while close to land, via a booster mounted on the masthead.



BELOW: MASTER SUITE PANTRY WITH DECK ACCESS

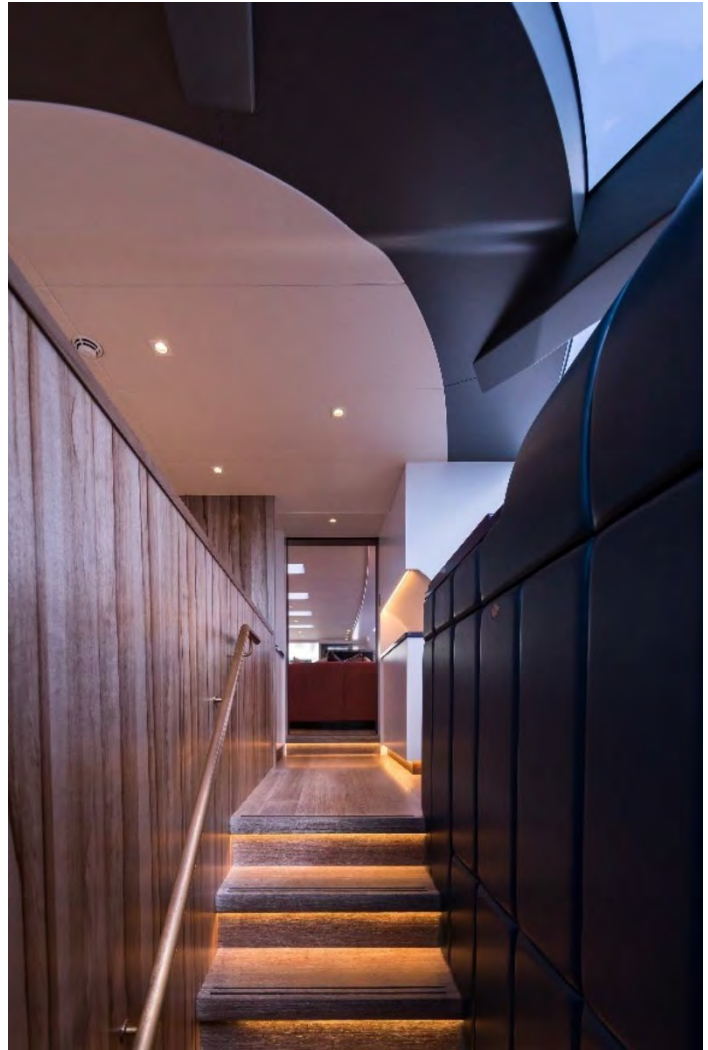


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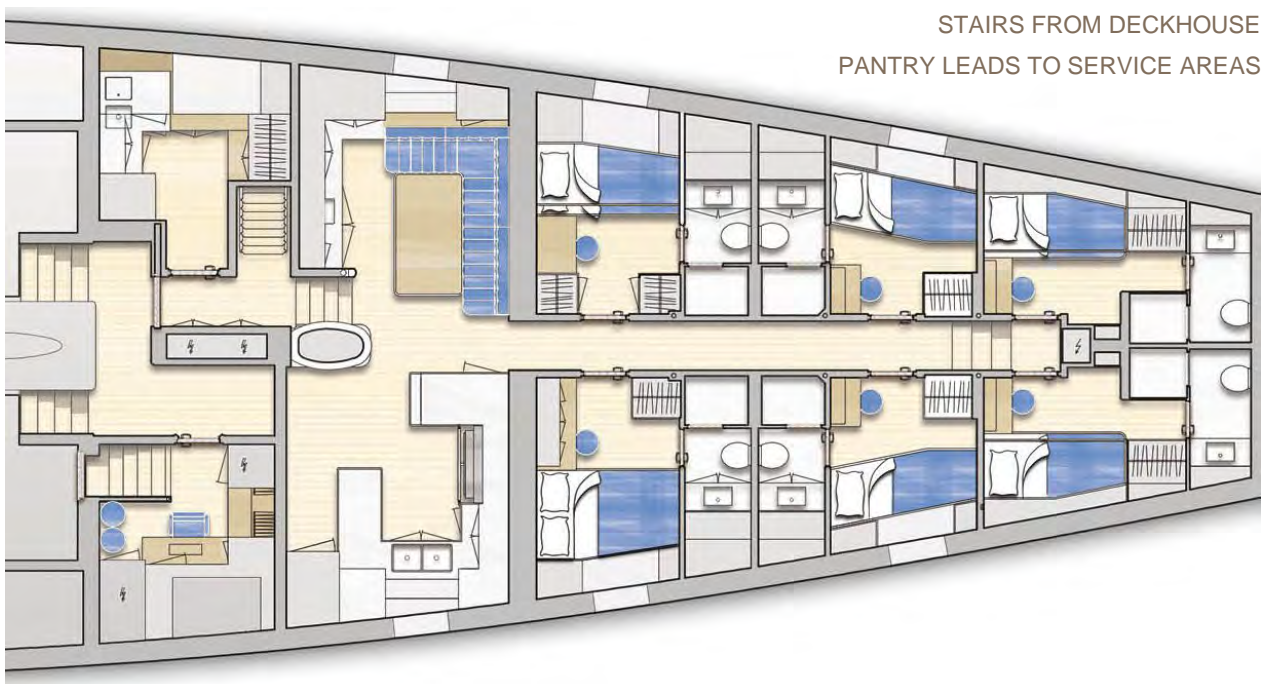
CREW ACCOMMODATION

A good deal of thought and investment has gone into providing the crew with high quality amenity and services on the forward cabin deck, in conformance with Large Commercial Yacht Code (LY3). There is accommodation for up to nine crew in six crew cabins. All enjoy high quality cabin fit-outs with full ensuite bathroom and shower facilities.

Aft of the accommodation there is a bright, spacious and professionally equipped galley to starboard, open to the crew mess on portside. Just aft of the crew mess is a large laundry. Stairs from the adjacent deckhouse pantry give direct access to the service areas.



STAIRS FROM DECKHOUSE
PANTRY LEADS TO SERVICE AREAS

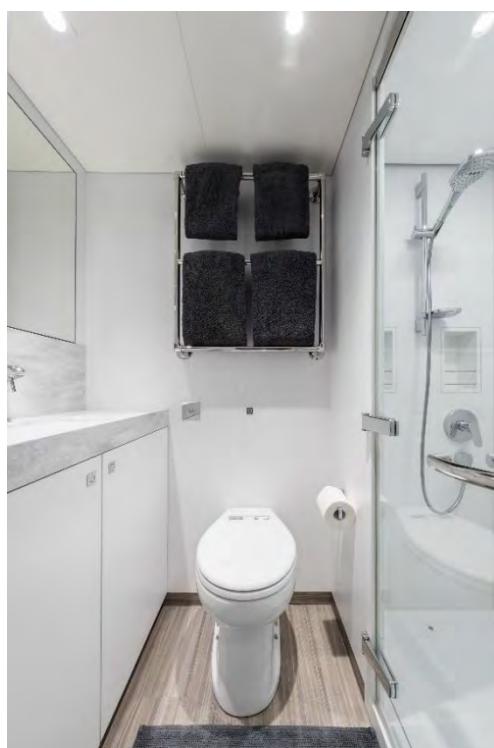




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Accommodation

Owner's suite with study and gym;
1 double & 1 twin guest cabin;
captain's cabin, 2 single and 3 twin crew cabins

Interior

Manufactured in-house by Royal Huisman as per the contemporary style of Rick Baker Ltd.
Joinery Luxury styling as specified by Rick Baker Ltd.
Walls and furniture produced with special finished surfaces, Tabu and Alpi veneers
and Wengé door frames, skirting and floors.
Crew styling as per RH standard with white HP laminate walls and furniture
with oak wood details. Floors in Amtico

P R E S S R E L E A S E

Upholstery

Amtico, ceiling panels, sofas, blinds and curtains by Zijlstra. Furniture and wall panels, headboards and leather work by Cools Upholstery. Deckhouse sofa and loose chairs by Francis Sultana. Carpets and M. Ronson Contracts Ltd. Exterior cushions and mattresses by Telstar Marine

Interior lights

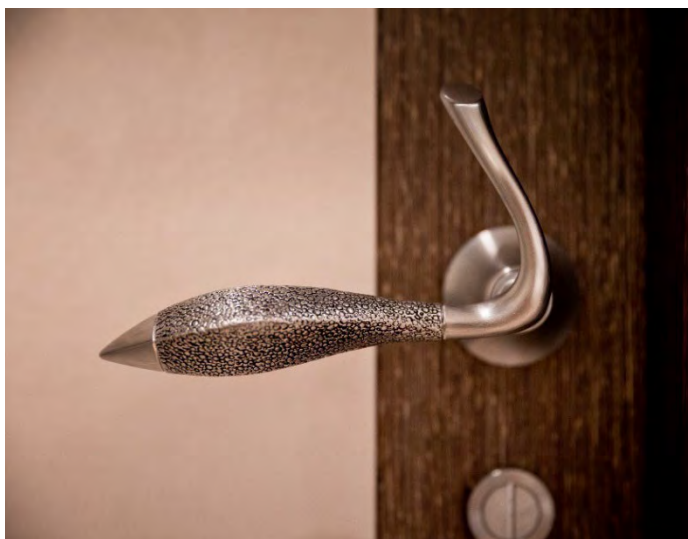
Lighting plans and armatures by The Light Corporation

Natural stone

Basins and bath by Stone Natural Class
Bathroom floors by Stone Natural Class
Galley counters by Stone Natural Class

Interior specials

Special finishes by Officina Coppola
Special finishes by Page Lacquer
Hand painted marble shower door by Davique



Interior hardware

Custom door handles by J.C. Birtles

Household equipment

Appliances from Miele, Foster, Vitrifrigo, Liebherr and Hoshizaki

Refrigerating and freezing system

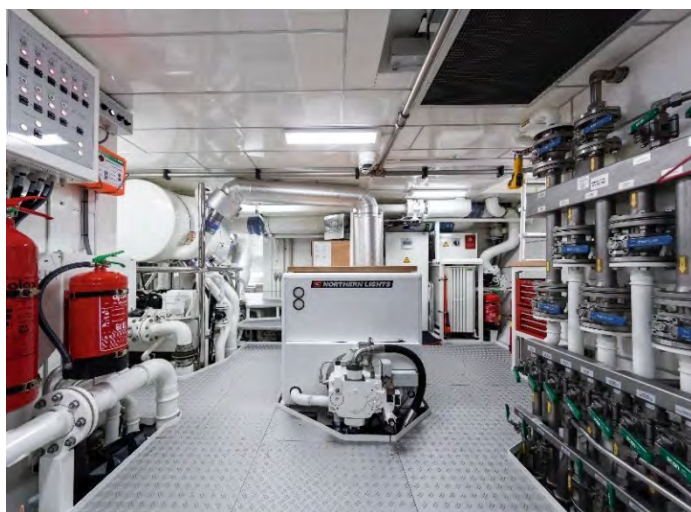
Frigonautica Custom made cold store
Cooling system with Foster refrigerator and freezer boxes





TECHNICAL

The forward crew accommodation gives direct access to the engine control room, with its desk for the engineer. The control room in turn provides direct access to the state-of-the-art engine room.



PRESS RELEASE

The engine room is every yacht's beating heart, most certainly for the engineer, but not always for guests, who generally prefer to experience a tranquil environment aboard. Royal Huisman have turned their usual surgical precision into an art form by designing and engineering Ngoni's machinery space to exceptional standards. If this 'art form' cannot be seen by the casual observer, it certainly cannot be heard: Royal Huisman has given Ngoni the full benefit of its expertise in suppressing sound and vibration to unheard of levels throughout the accommodation.



Classification

Built according to the requirements of Lloyd's Register EMEA and British Register of Ships in Jersey:
✕ 100A1, SSC, Yacht, Mono, G6, [✕]LMC, UMS .

In conformance with Large Commercial Yacht Code – LY3 (MCA)

Construction

5083 H321 for hull and deck plating. "Alustar" 5059 H321 for high loaded areas. "Alustar" 5059 H321 for internal structure and profiles. "Alustar" 5059 H112 for extrusions

Main engine

MTU 8V2000M72, 720 kW (966hp) @ 2250 rpm; rating: 1B for (high load factors)

Gearbox

ZF 3310

Propeller installation

Hundested VP10 controllable pitch propeller, diameter 1600 mm with 4 blades



Generators	2x Northern Lights M 1064A, 70 kW
Tank capacities	Fuel storage 30.307 I / 8006 USG (7 tanks)
Fresh water	10.000 I / 2641 USG
Waste water	7.000 I / 1849 USG
Range at cruising speed	4000 nm @ 12 knots
Bilge system	Royal Huisman central bilge system. Oily water separator, RWO Veolia OWS-COM 0.1 m3/hr
Thrusters	Bow thruster, Hydrosta, 110 kW Stern thruster, Hydrosta 110 kW
Insulation	Thermal and acoustic insulation in accommodations by means of Melamine foam Fire protection insulation in galley, engine room and around petrol locker by means of Isover mineral wool. Anti-drumming on ER bulkhead en ventilation, above propeller, outside ER ventilation



Conditions for all board systems

All equipment is able to achieve the continuous output ratings as stated in the full specification in the following conditions: Outside air: min. -5 to max. 45 degrees C (90% humidity.);

Seawater: min. 0 to max. 32 degrees C

Watermaker

HEM 30/3400, capacity 13,000 l (3434.24 USG) /day

Firefighting system

Royal Huisman seawater fire-fighting system

FirePro fire extinguishing system for engine room



Fuel system

Custom made by Royal Huisman, Facet fuel separator. Tender fill system Gianneschi tender fuel pump. Flexibimec hose reel

Hydraulic system

Royal Huisman / Parker main hydraulic system

Pneumatic system

Junair air compressor OF1201

Junair air dryer CRDC54

Kahlenberg air horn

Bauer Mariner 250-E diving compressor

Waste water system

Hamann HL Cont PLUS 02 Slim
capacity 5200 l (1373 USG) / day

HVAC

MAR-IX system with chiller units (307000 BTU = 90 kW) and fancoils, fresh air system

P R E S S R E L E A S E

Electrical system

230/400 VAC - 50Hz parallel, 3-phase and single phase electrical system;
Main switchboard with power management & paralleling system; Emergency power system / 2x set of 2 starting batteries / 1x set of 2 radio batteries / shore converter 60 Kva; Systems supplied by Tijssen Elektro, Alewijnse, Eekels, Valence, Victron

Navigation systems

Navigation system | B&G H5000; 2x Radar | Furuno; Chart | MaxSea; GPS | Furuno; AIS | Sailor; Gyro compass | Alpha Minicourse; Navtex weather receiver | Sailor; Satcom C | Sailor;
Echosounder | Furuno FE-800

Communication systems

VHF transceivers | Sailor (2x); SSB transceiver | Sailor 6381; VSAT | Sailor 800 Vsat;
TVRO | Sailor 90 TVRO

Entertainment

Kaleidescape audio and video system; Samsung UHD TVs; Apple RTI room control

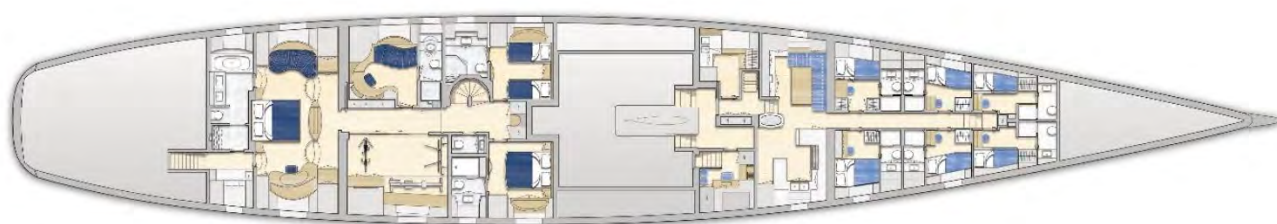
Alarm and monitoring system

Royal Huisman Alarm & Monitoring system



PRESS RELEASE

GENERAL ARRANGEMENT



IN SUMMARY, NGONI IS LUXURIOUS AS WELL AS "FAST AND FURIOUS"
SHE IS THE PRODUCT OF BOLD AND MINIMALIST DESIGN
REALISED WITH IMPECCABLE BUILD QUALITY

"Attention to detail. In every detail"

PRESS RELEASE

LAST, BUT NOT LEAST

As you might know Royal Huisman works closely with our clients and members of the yachting press. We do this in order to give all our media friends equal support and opportunity. Please introduce us to new press colleagues: we will be pleased to assist them and add their contact details to future press releases.

The images from this background information file (and more) can be available on request. Also, we have also interviewed the key members of the design and build team to gain further insights from the perspective of their individual disciplines: these Q&A's are available upon request too.



Please respect the following:

- “Let the yacht be the hero”: the owners of the Royal Huisman yachts respectfully ask that their names, nationality, occupation and all additional references to their personal lives should be excluded from all articles printed, online or otherwise.
- The information and illustrations are for media or press publications only.
- Royal Huisman requests that the use of images should also acknowledge the photographer / creator where applicable. The file name of each image contains the creator's name.
- Feel free to also send your draft text for review or fact checking before publication.

For any questions, please contact Jurjen van 't Verlaat (jurjen@royalhuisman.com or +31 527 243131). Can you please send us a high-res pdf of the final article or link to the website page after publication?