

HANSA YACHTS

International
Maritime
Journal

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*»An enormous
brand power«*

Interview:

*Cantiere delle Marche CEO
Vasco Buonpensiere and new
owner Tom Schröder share the
story and philosophy of CdM*



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Michael Meyer

Deputy Chief Editor

It's time again for meet & greet, releases and rumours

Yachts, yachts and even more yachts – the Monaco Yacht Show is coming up again and one can be very curious about who and what will be present and how it will be presented at the get-together of the international industry. The same applies, of course, to the Cannes Yachting Festival and the Fort Lauderdale International Boat Show. These are the most important dates in the calendars of yacht builders, suppliers, service providers and also yacht owners. In Monaco alone, 120 super and mega yachts are expected to be on display.

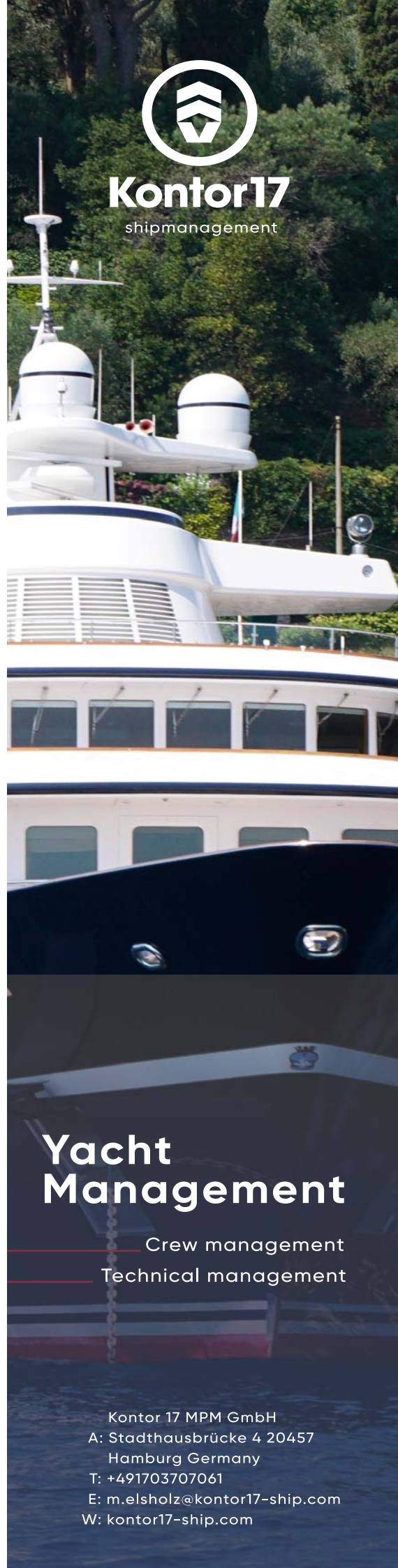
When it comes to the »Who«, it will be interesting to see who will be there (and – in view of the sanctions against some wealthy Russians – who won't be there).

Within the shipyards segment, one can expect to get some insights on who wants to excel in the yacht sector. There is plenty of potential questions for which the insiders will officially – and certainly unofficially – exchange views, e.g. which projects are in the pipeline, who can win new customers, what are the latest innovations and what is happening on the personnel carousel. Yachting is and remains a »people business«. Perhaps we will also learn during the show days who will take over the helm at the German shipyard group FSG/Nobiskrug after the departure of Philipp Maracke ...

The Italian shipyard Cantiere delle Marche has already attracted attention recently: German entrepreneur Tom Schröder has taken over the majority of the shipyard with his family office. We think this is reason enough to take a closer look at his plans and insights and have therefore conducted an interview with Schröder and shipyard CEO Vasco Buonpensiere for this issue of HANSA YACHTS.

For Cantiere delle Marche, as for the vast majority of other shipyards, one major focus is sure to remain: Sustainability. The question of the right materials, components, equipment, machinery and propulsion systems is still far from being fully answered (how could it be, given the still relatively vague political framework, many players will say).

In Monaco, there will again be a dedicated »Sustainability Hub« for this purpose. Accordingly, there will be a lively exchange between owners, service providers, brokers, shipyards and suppliers. Another part of this issue can serve as inspiration: We shed light on the current state of affairs regarding sustainability in the yacht business and we also look at e-fuels. Enjoy reading!



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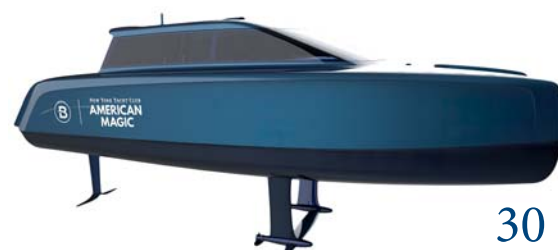
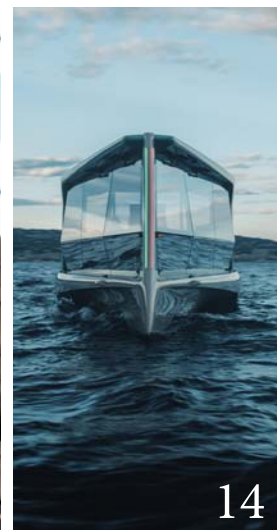
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Silent Yachts with new product line

Luxury solar-powered catamaran maker Silent Yachts is looking to strengthen its position as a leader in the sustainable yacht market, unveiling some exciting projects. The Austrian manufacturer is accelerating production at its recently acquired Italian shipyard in Fano, optimising the production process and expanding its workforce to meet the growing demand for innovative and sustainable yachts. The covered area of around 22,000 square metres is currently used primarily to build vessels in the Silent 60 series, a range of solar-powered, all-electric catamarans. More than 15 Silent 60 models will be built here in the near future, with the next available delivery expected in early 2025.

»The GRP hulls and superstructure are carefully manufactured and assembled in a dedicated area before being moved to another area for the installation of the technical equipment and interior fittings. Adjacent to the equipment hall, we have a spacious warehouse for efficient storage of components and materials. Since taking over the plant, our main focus has been on establishing reliable and efficient series production,« explains founder and managing director Michael Köhler. At



© Silent Yachts

the same time, in addition to a selected number of Silent 60 yachts, models from the Silent 80 and Silent 120 series are also being built in Turkey. Over the course of the year, the Italian company also plans to launch a number of other innovative vessels, including the eagerly awaited Silent 62 3-Deck – a version of the Silten 62 inspired by the Silent 60, in which an additional deck instead of the regular fly-bridge provides a hull that is two feet longer.

Looking to the future, Silent Yachts aims to reach an ambitious milestone of launching one new unit per month in 2024. In addition, production of the all-electric Silent Tender series will be centralised in Fano. The first tender prototype, unveiled at the 2022 Cannes Yachting Festival, featured an electric outboard motor. The series now comprises three models – Silent Tender 400, 450 and 520 – all of which are available with electric jet propulsion. ■

Rolls-Royce acquires Team Italia

Rolls-Royce has acquired Team Italia/ Onyx Marine, the Italian group specializing in yacht bridges and marine automation. With this acquisition, the Rolls-Royce business unit Power Systems is strengthening its position as a yacht market leader. Further expansion of its mtu portfolio for yachts will help it to realize its »bridge to propeller« strategy. Having begun to collaborate on joint development projects in 2019, the two companies now agreed that the best way to realize strategic growth plans would be for Team Italia to become part of Rolls-Royce. Rolls-Royce will showcase its expanded bridge-to-propeller portfolio at the Cannes Yachting Festival from 12 September 2023. In addition to Team Italia's bridge solutions, the focus will be on mtu hybrid systems, engines for sustainable fuels such as HVO and methanol, and service offerings.

Team Italia designs and develops integrated bridges and marine navigation and automation systems – mainly for Italian yacht builders and shipyards positioned prominently on the global yacht market.



© Rolls-Royce Power Systems

Team Italia's systems are already in use on around 350 yachts from 30 to 100 m in length worldwide. »This acquisition is the next logical step on our way to becoming a provider of integrated solutions for the yacht industry. Our products complement each other perfectly, and with this step we are expanding our solutions portfolio significantly to enhance our market position

and create further benefits for our customers,» said Denise Kurtulus, Vice President Marine in the Rolls-Royce business unit Power Systems. In addition to an mtu propulsion system, Rolls-Royce can now offer leading-edge integrated bridge products as well as regulation, control, automation, and navigation systems, and many other functions for yachts. ■

Privacy on board

Multiplex GmbH of Bremen, Germany, has launched a new system that ensures an undisturbed atmosphere on the sun and aft decks of large yachts.

When a large yacht is anchored in a marina, it automatically attracts the attention of many people. However, this attention can quickly disturb you when you actually want to relax on the sun or aft deck. That is why multiplex has developed the so-called Privacy Shield, which can be easily stretched with the same equipment as the company's own sun sail systems. This allows owners and guests on board to relax, dine or celebrate undisturbed without strangers watching. The Privacy Shield also keeps the wind out.

The system is flexible and can be adapted to any structure on board: Multiple mounting options allow for easy installation on any yacht. Each sail is individually handmade to perfectly fit



© Multiplex

the contours of the vessel. Various paint finishes on the supports as well as different sailcloth types and colors leave nothing to be desired in terms of de-

sign. The Privacy Shield developed by Multiplex is perfect for those who do not like to be seen on their yacht, but prefer to enjoy their privacy. ■



In sophisticated shipbuilding, the highest standards of quality and performance have always applied to all assemblies. Although grace and design may be important factors in modern shipbuilding, they may take a back

seat on the high seas. There, where man and technology have been exposed to the faces of nature for thousands of years, an absolutely reliable drive ensures serenity in every situation.

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»Skat« is followed by »Norn«

Lürssen delivered the very distinctive megayacht »Norn«. The customer remained loyal to the shipyard. When the 71-metre-long »Skat« was launched at Lürssen, it was considered one of the most unusual yachts of all by a US American and his wife. It was one of the first yachts with which designer Espen Øino established his reputation as one of the world's best in his guild. 22 years later, the 19-metre-long »Norn« follows the format in military look. Espen Øino, who gave the yacht a striking design with unusual features dominated by flat surfaces, straight lines and angular corners. The clean design of the exterior suggests a geometric precision that runs through all facets of the yacht. The interior was designed by Dölker + Voges and picks up on the same design themes as the exterior. Cornelsen & Partner acted as project manager on the owners' team throughout the construction process. Like all Lürssen yachts, the yacht is equipped with state-of-the-art technology and technical systems.



Lürssen's distinctive megayacht »Norn«

© Lürssen

These include stabilisers, an outdoor cinema and a variably adjustable pool floor with dance floor lighting. A dynamic positioning system enables »electronic anchoring« in sensitive and remote areas. Numerous German suppliers were involved in the

construction of the yacht, which bore the project designation 1601 until its delivery. With a length of 90 metres, »Norn« is incidentally one of the rather smaller to average formats that Lürssen recently delivered or has under construction. ■

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Green hydrogen from La Spezia

After launching the BZERO sustainability initiative two years ago, Italian shipyard Baglietto now unveiled the prototype of a module for onshore production of green hydrogen. The BZERO system consists of a hydrogen production module that uses filtered and deionized seawater to produce hydrogen with a purity level of 5.0 and a maximum pressure of 35 bar through a system of AEM-type electrolyzers (with a total power of about 55 kW). In this process, the electrolyzers are primarily powered by energy from renewable sources, such as photovoltaic systems, in order to produce as much »green« hydrogen as possible.

The compressed hydrogen is stored in solid form at low pressure and room temperature in metal hydride cylinders (MH storage). The process of storing and releasing the hydrogen from the hydrides is controlled by a thermal management system that heats the metal hydrides during discharge and cools them during recharge. The required thermal energy is obtained from the heat of the PEM fuel cell module (about 185 kW), which uses hydrogen and fuel to generate electric power without pollutant and noise emissions. The generated electricity is controlled by a DC/DC converter on a central 700 V DC bus, as already tested on Baglietto's yachts with hybrid technology. A series of lithium-ion batteries is connected to the same bus in parallel with the fuel cell to absorb peaks and abrupt changes in the user's energy needs.

For the shipyard, the BZERO project is an expression of Baglietto's vision of increasingly sustainable and environmentally friendly yachting.« The prototype BZERO system has been installed on one of the shipyard's quays and, after intensive testing, will be installed on Baglietto's T52 and T60 line diesel-electric hybrid yachts. The prototype will initially be used to develop operating procedures, optimize technical solutions and obtain the necessary RINA certifications required to use the system on board a yacht. Some of the green energy generated by the BZERO power plant is already being fed into the shipyard's power generation circuit. ■

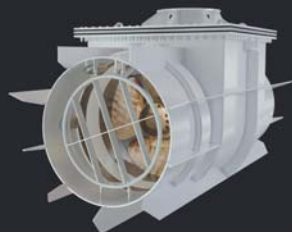
Swiss Ocean Tech wins World Cup

Swiss start-up Swiss Ocean Tech has won the Innovation World Cup at Hannover Messe with its AnchorGuardian solution. The expert jury announced the World's Top Technopreneurs 2023 during the world's leading trade fair for industrial change, basing their decisions on the degree of innovation, market approach, commercial potential and impact on sustainability. The finalists were selected from more than 400 applications from 65 countries.»The need for smart technologies for ocean health is understood both inside and outside the industry,« said Thomas Fritzlen, Managing Director and Founder of Swiss Ocean Tech. »This award underscores that understanding and validates the fact that AnchorGuardian is groundbreaking, addresses a real problem and has significant positive environmental impact.« AnchorGuardian minimises the risk of anchor dragging, provides predictions and triggers instant alerts with an accuracy of less than one metre. The solution offers a whole new dimension of safety at sea by monitoring the movement and position of the ship's anchor and providing intelligent data to assist the crew in setting and raising the anchor. The patented technology works independently of GPS and any ship movement. ■



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Danger to life: lithium-ion fires on superyachts

Fires on superyachts started by lithium-ion batteries are extremely dangerous – as the last two years, in which a total of 14 ships were destroyed by such incidents, clearly showed. But why are these batteries so dangerous and what can be done about it?

More and more yachts are catching fire due to lithium-ion batteries. The cause can be the batteries of water toys, but also of wireless devices, such as radios. Lithium-ion fires are dangerous because they are practically impossible to extinguish. If a short circuit occurs within a lithium-ion battery – for example, because the separating foil between the anode and cathode is damaged by falling down – this can lead to a so-called »thermal runaway«. In this chain reaction, the batteries generate so much energy that they are practically their own fire accelerant. Extremely high temperatures quickly develop, which can rise to well over 1,000 degrees. At the same time, hydrogen is released in explosive concentrations. If this is ignited, an explosion occurs in which individual cells

fly around uncontrollably at up to 300 metres per second. Furthermore, a smoke-gas mixture is formed which contains, among other things, hydrofluoric acid (HF) – one of the most aggressive acids there is. This acid is absorbed through the skin and penetrates the body without producing pain, where it can cause severe internal injuries. Therefore, a lithium-ion fire should only be approached in an absolute emergency. The fact that lithium-ion fires are so difficult to extinguish and relief workers are late to the scene on the high seas, combined with the risk of an extremely dangerous explosion, makes the batteries an acute risk.

Unfortunately, battery-powered devices are increasingly common on superyachts. Watertoys in particular are often subject to more severe impacts, but drones and other devices also pose a risk. To minimize this risk, there are systems that ensure the safe charging and storage of batteries, such as the active RACLAN boxes from the German company Fisa-



con. If a battery stored here catches fire, the box contains it and prevents toxins from escaping to the outside. Should an open fire occur, conventional extinguishing systems are not sufficient for a lithium-ion fire. However, a spread of the fire can be prevented with fire blankets, for example from the company Jutec. In general, the better the crew is trained, the lower the risk. ■

Carbon fibre specialist Rondal equips Royal Huisman cruiser

With its expertise in carbon fibre, Dutch company Rondal played a major role in the construction of the Nilaya, a performance-optimised cruiser from Royal Huisman. For the Royal Huisman Project 405 Nilaya, Rondal not only supplied the mast and mast boom, but also a new generation of winches and deck equipment. The Dutch company's carbon fibre expertise also contributed significantly to the yacht's design and resulted in a strong weight reduction. Thus, Rondal's role shifted from product supplier to system integrator, as one of the project managers revealed. Working with the owner and naval architects, they identified where carbon composites could be used to maximise the stiffness and weight-saving benefits. The Rondal team also worked closely with the naval architects on the sail plan and rigging. Together with sailmaker Doyle Sails, the carbon fibre specialist also looked at the special features of Doyle's new structured luff sails. For example, the leaf jib from Nilaya has no forestay lock – instead, lashings are used, a change that saved around 100 kilograms. The cruiser's tall mast is tapered in two directions at the top, saving another 50 kilograms at a key point. To take advantage of the very narrow headsails,



Rondal has developed a radical new curved carbon fibre spreader design that is both shorter and more aerodynamic than anything previously seen. On the mainsail, a unique and simple hook replaces the moving parts that attach the head of the mainsail to the halyard swivel. At the opposite end of the spar, the mast base was rethought and the halyard swivel blocks and their stoppers were integrated into the mast collar, making deck construction easier.

Probably the biggest innovation, however, was the development of new hybrid winches made of carbon and aluminium, which weigh only half as much as conventional all-metal winches. The hybrid winches use a low-cost bracket and housing made of aluminium, while the drum is made of carbon. The new drum design has allowed the drum diameter to be reduced from 600 millimetres to 450 millimetres, which also greatly reduced the weight. ■

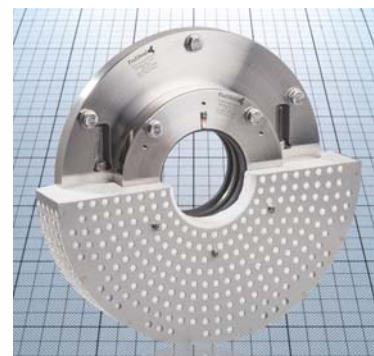
TISG and IYC sell three superyachts

Italian Sea Group (TISG) and International Yacht Company (IYC) jointly sold not one but three new 70 metre GC Force superyachts to a European family. Deliveries are scheduled for 2026, 2027 and 2028. The transaction increases TISG's current builds to seven superyachts, five of which are above the 70 metre mark. This includes two 72-metre projects in collaboration with Giorgio Armani. »This deal brings Italian Sea Group and IYC even closer together and solidifies a relationship that began 12 years ago,« says Michel Chrysicopoulos. IYC's global managing partner will oversee the construction processes of the three yachts. »We have absolute confidence in the vision and goals of Giovanni Costantino and the Italian Sea Group team. Together, we look forward to these successful deliveries.« Giovanni Costantino is CEO of TISG. He says, »This important transaction closed in Europe confirms the validity of our development journey in the megayacht market and the positioning of Italian Sea Group as a global reference player in this dimension segment.« Meanwhile, Raphael Sauleau, CEO of IYC praises the excellent collaboration between the brokerage and Italian Sea Group: »We are proud to say that our partnership with Italian Sea Group has been incredibly successful. The recent sales speak to the quality of their yachts and are a testament to the dedication and hard work of their team. We look forward to continuing our strong relationship and our future endeavors together.« ■

Fireproof bulkhead seal

ProfiSeal specialises in the development and manufacture of reliable and durable sterntube and bulkhead seals for the shipbuilding and yachting industries. In 2015, the company launched the world's first and specially developed fireproof bulkhead seal for drive shafts. This innovative design ensures that a

fire in the engine room cannot spread further into the ship. In the event of a fire, carbon dioxide is released inside the seal, which protects the actual sealing rings by smothering the fire at this point. The seal is type approved to IMO 2010 FTP Code, Part 3 and MSC85/26, Add.1, Annex 22 and has type approvals from DNV-GL and Korean Register. The type approval covers the entire series for shaft diameters from 50–500 millimetres. The seal has already been installed in around 20 new ships, including ferries, customs boats and transport vessels. ■



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Inflatable play deck

The British company Superyacht Tenders and Toys (SYTT) has launched an inflatable play deck, which it claims is the first of its kind. Space is often plentiful on large yachts. But what do you do with so much space? The new inflatable play deck from Superyacht Tenders and Toys now offers the opportunity to make full use of the space available on superyachts. The system can be ordered in any shape and size and as a whole unit or divided into individual panels and is made from a 10cm drop stitch material that ensures a safe and firm surface. The inflatable play deck can be customised for each yacht and for the customer's preferred sport.

The first unit of the new system from Superyacht Inflatables, SYTT's in-house brand, is a custom basketball court commissioned by avid basketball fan and entrepreneur Jonny Dodge. The founder and CEO of charter management company My Ocean commissioned the basket-



© SYTT

ball court to entertain guests on his 46-metre Pina Marine yacht during the Monaco Grand Prix. »I approached SYTT because I wanted to provide something out of the ordinary for the Grand Prix,« said the Briton, who has been dubbed a »superyacht influencer« by Forbes magazine. »At My Ocean we like to do things differently and SYTT was very accommodating. The team at SYTT fully under-

stands the expectations of the guests and the practical requirements of the crew. For example, the court can be inflated and stowed very quickly. They always go the extra mile and often make the impossible possible.«

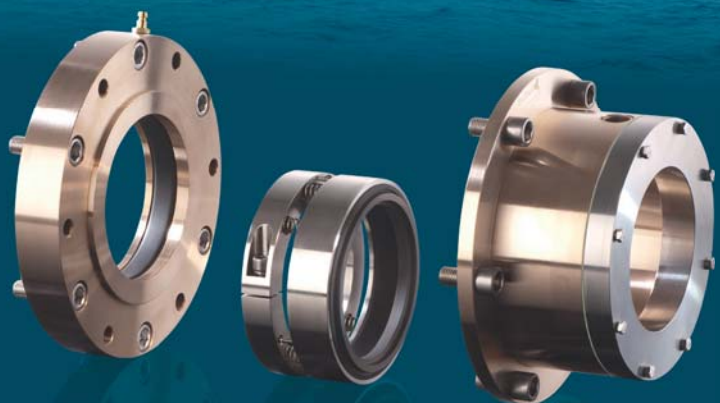
The inflatable play deck has a production time of just 20 days and comes with all storage bags, electric pumps, instructions and an easy-to-use repair kit. ■

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Extensive refit for iconic »Maltese Falcon«

Italian shipyard Lusben has completed the refit of the 88-metre Maltese Falcon and has now released pictures and information about the iconic sailing yacht, which was refitted in Livorno, Italy. Built by Perini Navi in 2006, Maltese Falcon was commissioned by Tom Perkins and is still considered one of the largest sailing yachts in the world. The design was by Dykstra Naval Architects and the interior by Ken Freivokh. The refit at Lusben took more than six months, but eventually the shipyard's team of technical experts was able to realise the owner's wishes by making a number of aesthetic and functional improvements. All the work took place in the floating dock of the Lusben shipyard in Livorno. During the overhaul, the main focus was on sustainability: the generators were replaced by more efficient models with lower fuel consumption and the silencers of the main engine were replaced, which resulted in a



© Lusben

considerable reduction in noise. The Maltese Falcon's propellers were also checked. Shafts, blades and bearings were disassembled and serviced to ensure efficiency in the years to come and to optimise fuel consumption. »It was a challen-

ging project for all of us, not least because the sheer size of this sailing yacht required us to design and build a special system to accommodate the vessel in dry dock,« Gianni Paladino, Lusben Commercial Director. ■



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A new mobility?

BMW and the boat manufacturer TYDE are presenting THE ICON, a new symbol for sustainable mobility on the water

THE ICON redefines the relationship between an electrically powered watercraft's dimensions, top speed and range. This is made possible by an innovation from the world of yacht racing: so-called hydrofoils reduce energy demand by up to 80 % compared to a conventional hull. The foiling technique, in which wings below the water level support the vehicle while the hull floats above the water surface, achieves higher level of ride comfort and a higher speed.

Two 100 kW electric motors each convert the energy content of 240 kWh provided by six batteries from the BMW i3 into a range of over 50 nautical miles (100 km) at 24 knots (45 km/h). The maximum speed is 30 knots (55 km/h). With its innovative drive and thanks to foiling technology, THE ICON enables almost silent cruising without vibrations, jolts or wave impact.

The Dolby Atmos system provides impressive sound quality for an equally impressive soundscape on board. Two-time Academy Award winner Hans Zimmer was on board for the sound concept, including pleasant, intuitive, functional sounds in addition to the drive sound.

The body of the watercraft, composed of a very flat hull and a central support for the transparent architecture, is characterised by a technically precise design language. The floor plan, with its prism-like shape, allows for a width of 4.5 metres in the stern area. This creates an exceptionally spacious entrance into the luxurious saloon. A lightweight origami structure characterises the hull itself. Since the foiling technique allows for a tranquil cruising experience, the designers took the opportunity to replace the conventional ship's side with large glass surfaces. Giving passengers an extraordinary view while they float above the water.

The steering position is centrally located on the deck and features a steering wheel and instruments in authentic BMW design. Instead of numerous nautical instruments, all functions are combined in one digital control unit. The interface between man and machine is a 32-inch touch display with 6k resolution in the look and feel of the BMW iDrive operating system. ■



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New IPS platform from Volvo Penta

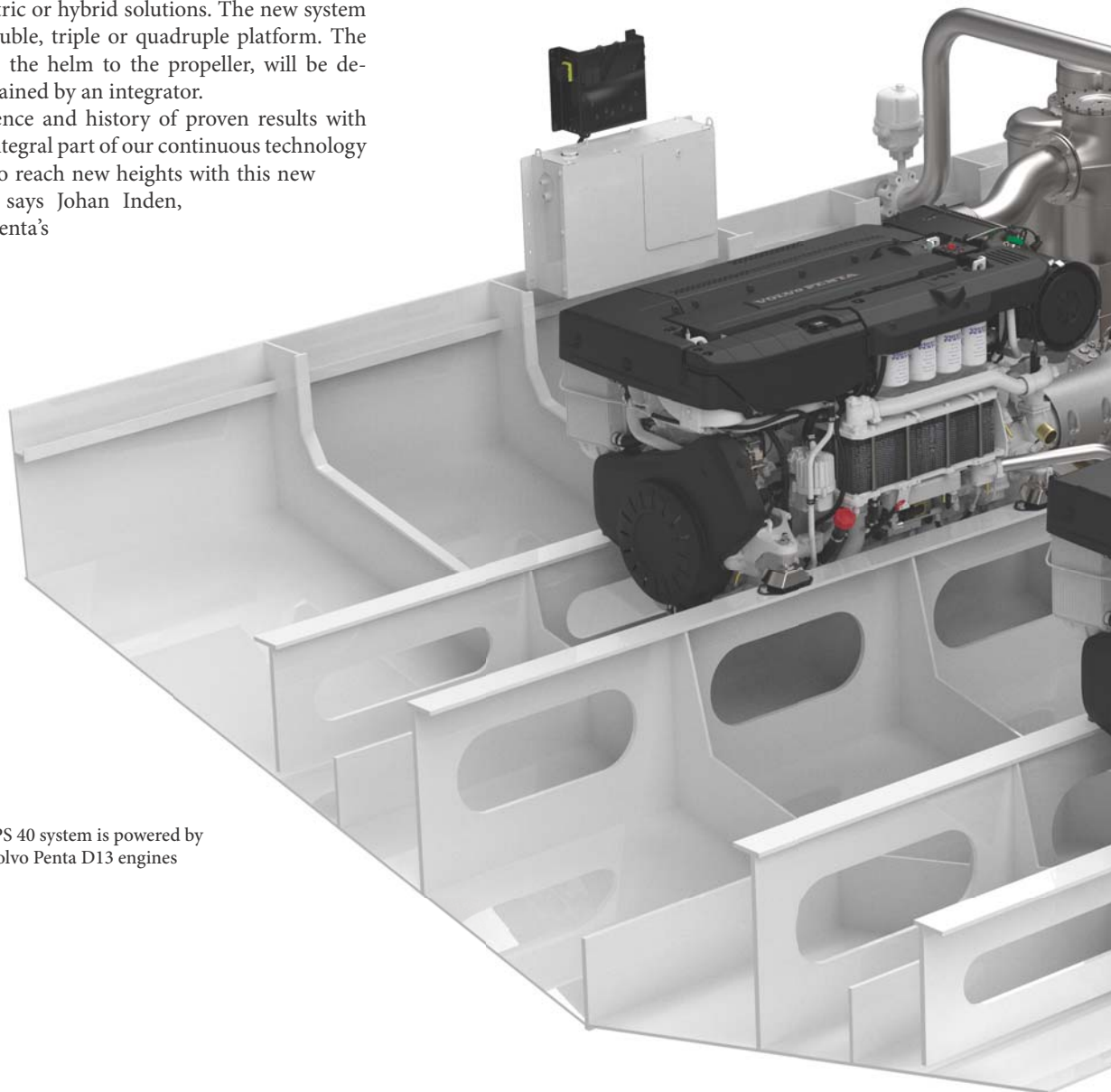
Swedish marine propulsion systems manufacturer Volvo Penta has released details of its professional IPS platform for superyachts and commercial vessels, due for launch in 2025

The new platform is based on the Volvo Penta Inboard Performance System (IPS) and promises to provide a powerful and flexible solution for commercial vessels and superyachts of 25 to 55 metres in length and above, with a top speed of 12 to 40 knots. The new Volvo Penta IPS 40 will be the largest and most powerful platform in the Volvo Penta IPS range to date. According to Volvo, the new propulsion system features a breakthrough dual power input concept that efficiently manages power and also acts as a key enabler for the use of different combinations of power sources. The IPS 40 system is powered by two Volvo Penta D13 engines, paired with a compact after-treatment system to meet the latest IMO Tier III standards. The platform is said to be already prepared for a mix of different energy sources: from renewable fuels to all-electric or hybrid solutions. The new system will be installed as a double, triple or quadruple platform. The complete package, from the helm to the propeller, will be designed, tested and maintained by an integrator.

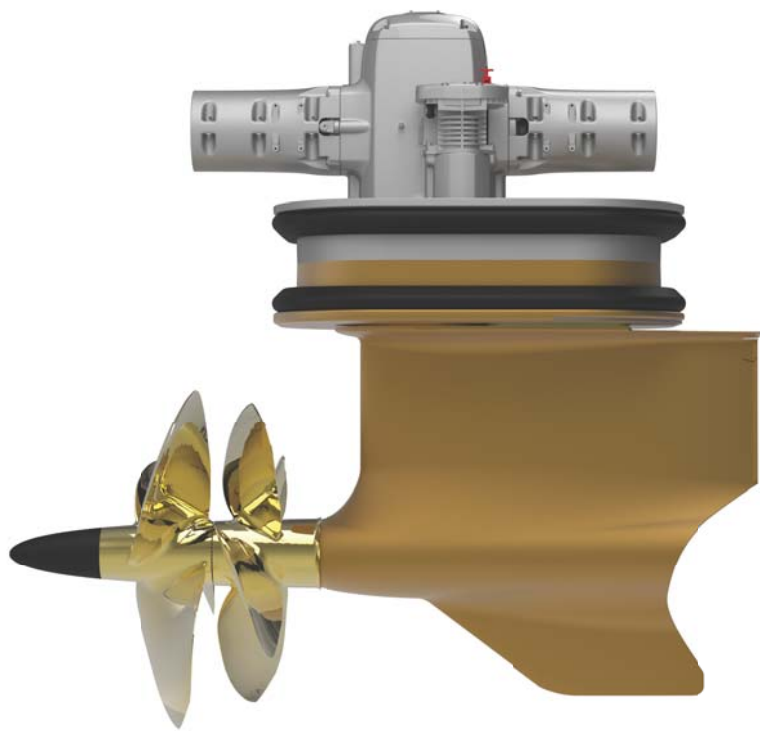
»Our passion, experience and history of proven results with Volvo Penta IPS are an integral part of our continuous technology development – aiming to reach new heights with this new professional platform,« says Johan Inden, president of Volvo Penta's marine

business. »The new system is designed to enhance our own high standards – with world-class performance, efficiency and flexibility – and a people-centric approach.«

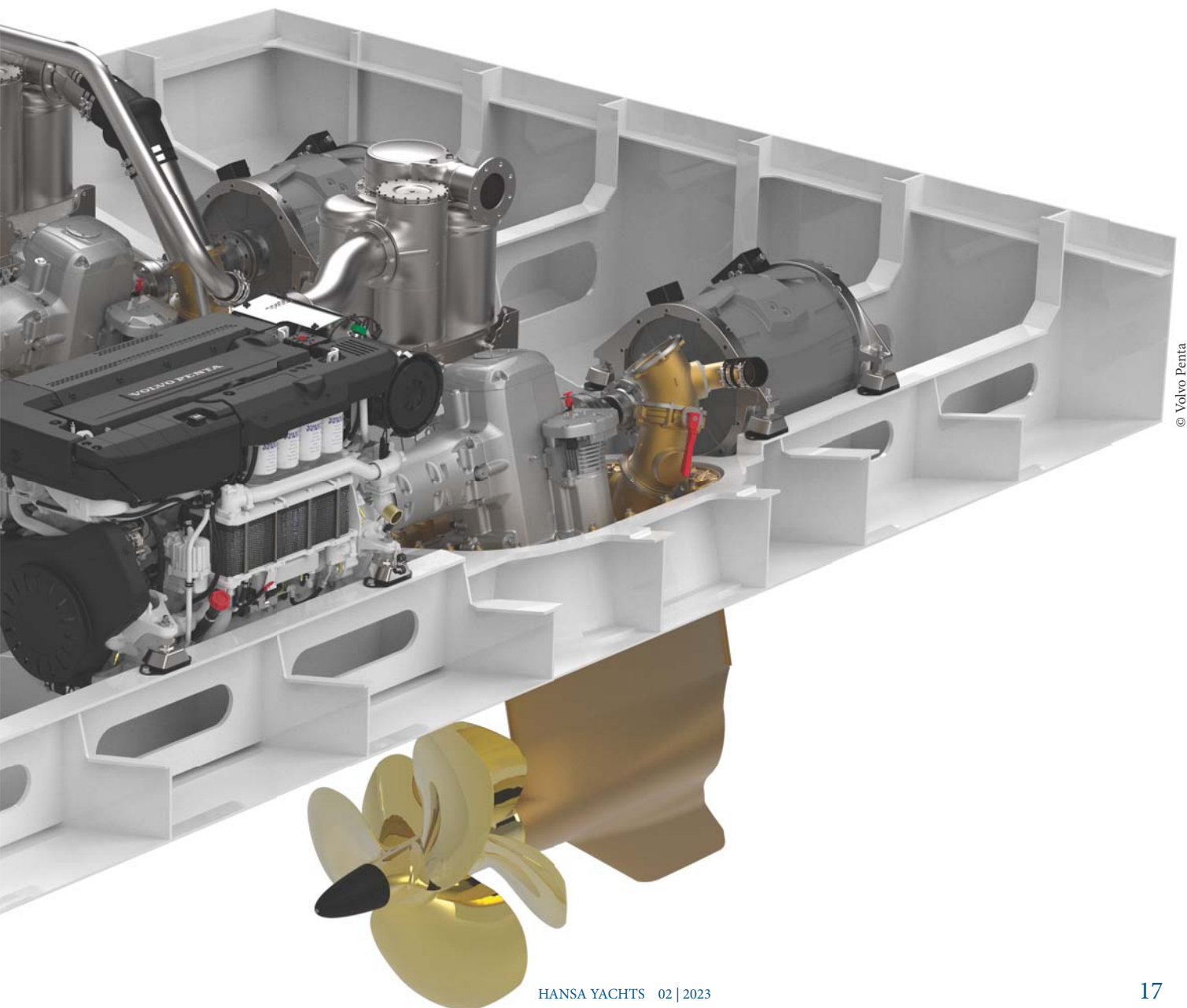
The new IPS platform is type approved and designed for heavy commercial applications as well as superyachts. Compared to a conventional inboard shaft installation, it is claimed to save up to 30 % in fuel consumption and emissions. A new efficiency-controlled feature allows the system to automatically start and stop individual engines based on the power required in each situation, optimising fuel consumption and engine operating hours. ■



The IPS 40 system is powered by two Volvo Penta D13 engines



IPS 40 will be the largest and most powerful platform in the Volvo Penta IPS range



© Volvo Penta

Benetti celebrates 150-year anniversary

When the name Benetti is mentioned, yacht aficionados click their tongues. The shipyard from Tuscany stands for outstanding design, an enormous portfolio and high innovative strength. Now the company celebrated its 150th anniversary for three days

In the 1960s, with Lorenzo Benetti, the shipyard revolutionized the yachting world by switching construction from wood to steel. Thus, the modern megayacht concept was born, with the Delfino, Gabbiano and Mediterraneo series which became iconic boats. They recalled legendary tales of the aristocracy and international jet set in the years of »la dolce vita«. From Rainier of Monaco to David Bowie, who used to spend his holidays on his »El Caran« with Mick Jagger, Robin Williams, and Michael Caine. The Beatles were often guests of their manager, the owner of a Delfino Benetti.

As Benetti's reputation kept growing, Adnan Kashoggi commissioned the most famous yacht of all time: the »Nabila« later renamed the »Trump Princess« by Donald Trump. Its extraordinary lines and luxurious fittings on board caused curiosity and a stir. The Nabila became such an icon that it was immortalized in James Bond's film »Never Say Never«. The band Queen also immortalized the Nabila with the song »Kashoggi's Boat«. Despite its huge success, it was this very project that imposed the change of ownership.

In 1985, Elli Benetti was acquired by Paolo Vitelli, the young owner of the Azimut yard. Under the new name, Cantiere Benetti, Vitelli implemented a financial restructuring plan to restore the brand to its former splendor. Paolo Vitelli built the world's first diesel-electric yacht, the »Ambrosia«, in 2006. He also established an in-house R&D center, focusing on reducing consumption and increasing the use of sustainable materials. One of the company's latest creations embodies Benetti's technology and know-how: »Luminosity« launched in 2020, with its 107 metres, is the largest Giga yacht with a hybrid propulsion engine. In 2022, the »B.Yond« 37-metre was awarded the greenest yacht in its class, for its innovative hybrid propulsion system. In the same year, the yard revolutionized the concept of on-board lifestyle with the Oasis Deck series. Its side-wing sterns that open flush to the water, created a new trend in the industry. ■





© Benetti

Yacht design meets chronometers

Wempe engages the star designer Tim Heywood to design its marine chronometers. The result is extremely expressive

One of Wempe's watchmaking traditions is the construction of marine chronometers. Since 1905, the company has been equipping ships with these special watches, whose great precision cannot be affected by sea states or changing temperatures.

Now Wempe is bringing together nautical tradition and modern yacht design. The renowned British ship designer Tim Heywood has designed new, expressive marine chronometers.

In recent decades, Heywood has given mega-yachts in particular an unmistakable appearance. He develops a comprehensive overall concept: »I literally start with a blank sheet of paper, so the hull shape and the large superstructures as well as individual lights are created in consultation with the client,« he explains. The design of a single piece of equipment that Wempe asked him to create was unusual. But Heywood approached it like his major projects: He wanted to be proud of it in the end, he says. When designing the marine chronometers, a particular challenge was that they had to fit into very different environments. Tim Heywood is sure that he succeeded: »The chronometers look as good on traditional boats as they do on a modern yacht – and they fit into the owner's country house as well as into his city flat.

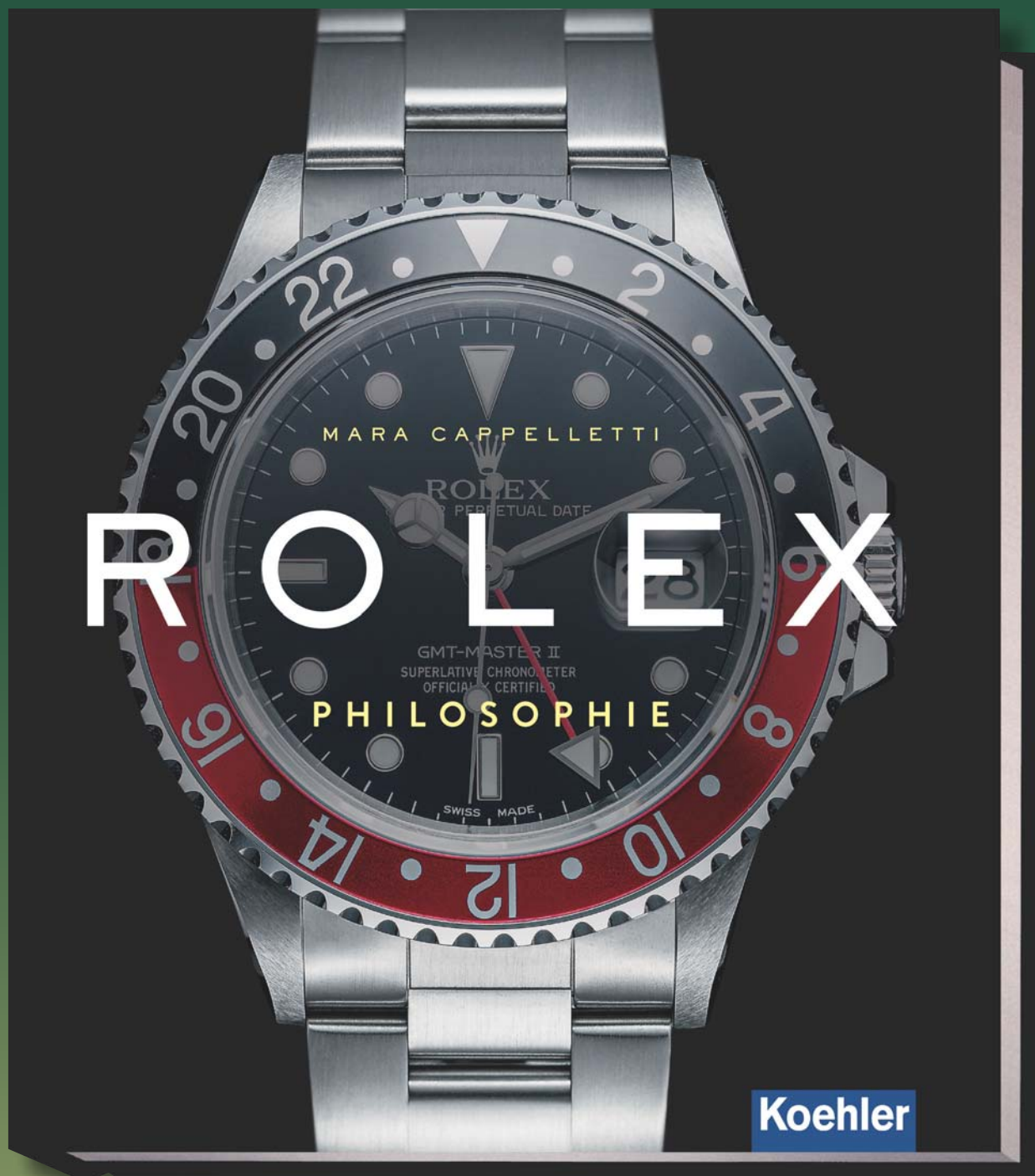
Kim-Eva Wempe is also very pleased with the cooperation: »Tim Heywood's designs ideally combine our watchmaking tradition with the demands and expressiveness of modern ship-building.«

Heywood has equipped the new chronometers with a bold blue dial. It features modern typography, with two apertures at 4 and 8 o'clock allowing a view of the movement. The borosilicate glass on the dial side is cut from a solid block. And irradiated into it are twelve meridians – the purpose for which the first chronometers were created. These lines continue on the wide curved glass of the underside. When the gimbal of the gold-plated brass case is fixed with the movement facing upwards in order to wind

it, it looks like an abstract sculpture. The collaboration between Wempe and Heywood has produced two models – Cube and Coco de Mer – which cost just under € 50,000 and just under € 80,000 respectively. ■



© Wempe



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»An enormous brand power«

German entrepreneur Tom Schröder recently acquired the Cantiere delle Marche shipyard through his family office. In an interview with HANSA Yachts, he and CdM CEO Vasco Buonpensiere explain the background

HANSA Yachts: You recently bought 75 per cent of the Italian shipyard Cantiere delle Marche. Is shipbuilding a good investment?

Tom Schröder: In general, there are probably simpler and more profitable business models than superyacht building. However, we see enormous brand power in Cantiere delle Marche, or CdM for short, which will inevitably result in a higher return if we consistently continue along the path we have been following for over twelve years. CdM stands for quality that can easily compete with the quality of Nordic shipyards. Furthermore, our yachts are very robust, maximally easy to

maintain and have an enormous range to spend months self-sufficiently in the most remote regions of the world.

CdM is the market leader in real explorer yachts, which technically meet the requirements of an explorer from keel to mast and don't just look like one. All our yachts, even those whose exteriors are more like typical yachts, have one hundred percent Explorer DNA – and so do their owners. Our owners cruise around the globe, from the Arctic to the Antarctic to the crossing of the North-



Tom Schröder

© CdM

West Passage. Thus, CdM stands not only for a product, but for extraordinary experiences that the owners experience with a CdM Explorer.

The investor is your family office FIL Bros. What are the key factors for you or FIL Bros. to invest in a company?



Schröder: We invest in growth companies that are already on the right track and profitable. We always follow three rules:

Firstly, the people involved must be a good fit and identify 100 % with the company. And this is not only the case with the co-partners Ennio (President) and Vasco (CEO), but also with Gianfranco (CFO) and the entire team, which I have met so far, 100 %. People of integrity and honesty are at work here, who give every hair of their body for CdM with passion.

Secondly, the product and the market have to fit. I had the advantage that I came through the product and had already »ticked the box«.

Thirdly, the business plan must also fit, of course. But if points 1 and 2 are fulfilled, this point is usually a logical consequence.

At CdM, the details were as follows: Ennio and Vasco have been pursuing a focused plan for twelve years – to build high-quality explorers that are comparable in quality to the renowned shipyards in Northern and Central Europe. In my opinion, the two of them and their team have achieved this. This can be seen in the fact that experienced owners from Nordic shipyards have already switched to CdM from Italy. That existing custom-



Vasco Buonpensiere

ers have already ordered their second or third CdM yacht. That most owners buy a CdM yacht from recommendations of existing owners. That I have not yet spoken to a captain of a CdM yacht who is not one hundred percent satisfied with the yacht and the service. Therefore, there was only one condition: The people

involved must remain on board for the long term. Therefore, the management was given a significant stake in the company with a package of 25 % in real shares. Otherwise, the team must continue to pursue the path they have chosen. We at FIL Bros. provide support from the side, enable further growth and





I personally contribute my experience as a yacht owner. But it has to be said quite clearly: we should grow very carefully. Our ultimate goal is to deliver three to four yachts per year. We want to stay small and fine. To achieve this, we will probably build another shed with two building sites at the Ancona location. In total, we would then have nine building sites where yachts up to 150 feet can be built.

What makes the Cantiere delle Marche shipyard so special?

Schröder: We call it the CdM tribe. When you are at the shipyard, you get the feeling that all the employees live CdM. Everyone is proud to be part of it and to build great ships. Furthermore, this Tribe spirit is also evident in our customers. Well over 50 % of our business comes from returning customers and new customers who come because of referrals from existing customers. These developments are really the real reason for the yard's success. We – customers, employees, management and shareholders – are a tribe.

How did you become aware of the shipyard?

Schröder: I visited the Cannes Yacht Show in 2019 with my partner at the time from our voucher company. A friend of my partner's said that we should definitely take a look at a CdM yacht, as she thought it was the up-and-coming shipyard on the market.

When I boarded a CdM yacht at the show and Carlo, who is now responsible for the brokerage business at CdM, explained CdM's philosophy in the engine room, I was hooked from the very first second. For me, everything fitted together – what Carlo told me and what my eyes saw. After the tour, I met Vasco, the current CEO of CdM, for the first time, who convinced me even more of the CdM philosophy. I also immediately liked the Flexplorer project, which at that time consisted only of renderings and drawings. In the end, my family and I ordered a CdM Flexplorer yacht in 2020. During the construction phase, the opportunity arose to take over the shipyard. We seized this opportunity as FIL Bros. together with the CdM management.

What is your personal yacht connection?

Schröder: My father, together with a partner who was and is an absolute sailing enthusiast, had a medium-sized mineral oil business in Brilon, Sauerland, where I also grew up. In the mid-1980s, the two of them took over the nearby company Dehler Yachtbau from Freienohl and sold it very successfully to an investment company of DG-Bank about five years later. As a result, we had a Dehler 24 first on Lake Diemel and later on the Jsselmeer. At the beginning of the 90s, my father's partner emigrated to Mallorca and became the general importer of Bavaria yachts for Spain combined with a large charter fleet. My friends and I were allowed to help ourselves to this charter fleet for a small fee, which we often made use of and were thus able to explore the Balearic Islands extensively. In the meantime, my family and I also live in Palma.

At the beginning of the 2000s, the focus was on starting a family with four boys and building up a few companies, and the passion for sailing took a back seat. In 2013, we bought a sailing catamaran – a Sunreef 70. After a season in the Mediterranean, we used the boat extensively for three to four months a year in the Caribbean. As my family and I were planning to emigrate to Mallorca in 2019, combined with a motor-

boat to reach the bays quickly, we sold the catamaran.

Do you think the explorer trend in yachting will continue to grow or have we already reached a good plateau?

Vasco Buonpensiere: I personally think that we are witnessing a real »evolution of the species«. When Cantiere delle Marche started up in 2010, we have been among the first one intercepting where the luxury world was going and the idea of creating a new category of yachts to interpret it at the best was the natural evolution for us. Briefly, after 2008, the luxury world has shifted from just »owning expensive goods« to »living exclusive experiences«. We translated it into the yachting world and we decided to give to UHNI all over the world the possibility to live exclusive and unique experiences on a vessel. We merged the two worlds into one: The Explorer Yachting World. Obviously, after 13 years we adapted to the evolution and with us the Explorer Yacht-

ing World and the Explorer Yachts. In the beginning it was just the Darwin Class, the pure Explorer Vessel, resembling a trawler or a commercial ship, but then – knowing that Explorer Yachting was not about the look of the boats, but about the contents of them – we started designing and building Explorer Yachts with a much sexier and contemporary look (Nauta Air, RJ, Deep Blue ranges).

Coming to your question, in fact, I frankly think that once again we are leading the evolution of the Explorer Yachting World and that this evolution will definitely lead to an even faster growth of this segment of the market: the fact that we are showing to the market that in order to be an Explorer, a yacht doesn't need to be rough and tough in its look, it is definitely widening the perspective markets: yachtsmen are understanding that they can have a stylish and modern look and they are realizing that they should be the ones deciding what to do and where to go with their yachts, they do not accept anymore

that that decision has to be taken based on the limits of those yachts...

Another reason of the aforesaid is the fact that owning an Explorer yacht sets you apart and distinguishes you among all the other yachtsmen. Owning an Explorer Yachts is a way to state your maturity as a yachtsmen, your knowledge about yachting lifestyle in all its forms and shapes. This reinforces the fundamentals of the luxury world: exclusivity, in terms of excluding the others, in terms of doing something that has to be understood. Basically, there is nothing like an Explorer Yacht which positions a yachtsman into a major league of yacht owners... That is pure luxury in modern terms and this will attract more and more people who would like to be part of that major league, indeed.

Do you feel a crisis coming on at the moment or is the segment in which CdM operates totally robust?

Schröder: Generally, according to some shipyards, a slowdown can be felt.



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Current 146 ft yacht project: Flexplorer »Maverick«

Funnily enough – or fortunately – we are feeling the exact opposite right now. We have already sold three more projects this year and some are about to be completed. And we can only deliver three to four yachts a year. We believe that CdM operates in an excellent niche. I believe that the multiple crisis has created a new currency – the emotional currency. Affluent people want to enjoy life.

Furthermore, the current customers are a different generation who also like to spend their money and do not want to pass it all on to the next generation.

To what extent has your know-how as an entrepreneur already been incorporated into the shipyard?

Schröder: Ennio and Vasco and their team are still responsible for everything operational. Nothing will change there. The only difference is that – instead of a rather passive partner with little affinity for yachting – they now have an enthusiastic yacht guy at their side who allows a lot of freedom and is also a bit crazy.

I think that Vasco and Ennio can now really develop. I will provide some input on what an owner expects – both from a yacht and from the services around a yacht. I have also worked with a designer to develop a new range. The FIL Bros. management will be involved in guiding the company in terms of digitalisation and increasing effectiveness.

What are the shipyard's further plans? Will they stick to yacht sizes up to just under 50 metres in length?

Vasco Buonpensiere: Since I acquired CdM I wanted to be clear with the amazing team which have brought it where it is now: I still remember I sent a message to the Senior management team saying 'Stay small, Stay Family, Stay Quality oriented like you are and we will have a huge success under all points of view'. Our mantra is: we want to become better and better, not bigger and bigger. And this is because we believe in the intrinsic quality, reliability and detailed engineering of our vessels.

This, together with the best customer experience possible, would be impossible if we would follow the market's requests and grow accordingly. We all have seen what happens to the above characteristics when companies grow too much in our industry... and the reason is simple: these yachts are handmade. If you enter a shipyard which builds metal boats like ours, the first thing you notice is that there are no machines or robots. For two to three years these vessels are built by skilled and experienced workers, basically with their hands only... So the question is: looking at the crazy growth of the yachting industry of the post pandemic era, where all the needed skilled and experienced workers will come from?

We don't want to jeopardize our quality just for the sake of growing. Therefore we will keep growing sustainably, solidly and responsibly.

As far as the dimensions and kind of yachts: let me just say that we will not go over the 499 GT threshold, where the market becomes dense of competitors. We will keep on being focused on Explorer Yachts, always. We will evolve the concept, we will develop very interesting engineering ideas (on propulsion, batteries, materials, performances), but CdM will always be the leader of the Explorer Yachting World. We do what we know to do at the top level of this industry, as the market is recognizing us, and we stick with it.

It is said that the new, younger yacht owners want to experience as much as possible with their yacht. Do you feel that at CdM as well?

Schröder: 100 %. For the owners, a CdM yacht is the key to extraordinary experiences. That is exactly the CdM DNA.

Buonpensiere: This answer would need a whole magazine to be elaborated properly, but let me just say that a big transformation in the use of yachts is happening, and the young owners are starting interpreting it full speed. I can't elaborate further because this is the fundament of our future projects, but I can say that the mix of Post Pandemic attitude and the different approach to working life of the younger generation is definitely leading to a change in conceiving the yachts of the future.

You are having a yacht built yourself at the shipyard; the Maverick M/Y146. Can

you already reveal some of the features?

Schröder: Actually, you don't talk about your yacht. But as a shareholder of the shipyard, I don't think I have any other choice here. I apologise for this.

Until now, my family and I have been more into sailing. But after my family and I spent the Corona time very closely together, which worked out very well, the idea of a joint circumnavigation of the world arose. We want to complete this within seven years, whereby we will be permanently on board for the first two years. And since we will also explore the Arctic regions and I happened to come into contact with CdM for the first time a few months before deciding on the round-the-world trip, the decision was made to go for a real explorer. Perhaps the first contact with CdM and the philosophy of a real explorer also fuelled the idea of the world trip. I don't know that for sure.

So we decided on a CdM Flexplorer yacht. As already mentioned, my family and I want to sail around the world and

will also visit arctic and tropical regions. For this, the yacht has to be well thought out. In addition to the natural Explorer DNA such as quality, robustness, ease of maintenance and range, this starts with the obvious need for a small ice class with an all-round icebelt and ends with the air-conditioning, which must function perfectly even in high humidity without causing hidden mould.

The lower deck houses four cabins and the crew area. The maindeck consists of a huge saloon, a kitchen open to the saloon including a refrigerator and a very large cabin – the actual owner's cabin, which our sons are now »fighting« over.

The current owner's deck originally housed another saloon or lounge and the wheelhouse. During the construction we had the idea that the wheelhouse naturally has the best view forward and that another saloon would not really offer any added value, especially as the lazarette area is home to a lounge including a cinema. So we came up with the idea of de-

veloping an owner's deck, positioning the wheelhouse one deck higher and the sun deck only aft but still very lush. And to top it off, we also developed a Crows Nest to have everything in view from the best place on board.

We have also developed a tender with a length of 9.50 m, which can still be craned with the A-Crane, but acts like a small support tender. It accommodates seabobs, jetboards, water skis and other toys. It also fits in that our family office has just taken a stake in the AUDI AG spin-off www.aerofoils.de. We see these eFoil as »the next big thing« in the toy market, especially for smaller excursions around the carrier ship.

If you only have to cover short distances with the mother ship and want to use the main deck of the Flexplorer as a sun deck, the big tender can piggyback the small tender (a Williams 435 Sport-Jet) and thus both can be towed. In tender mode, up to twelve guests can be shuttled in the dry. ■



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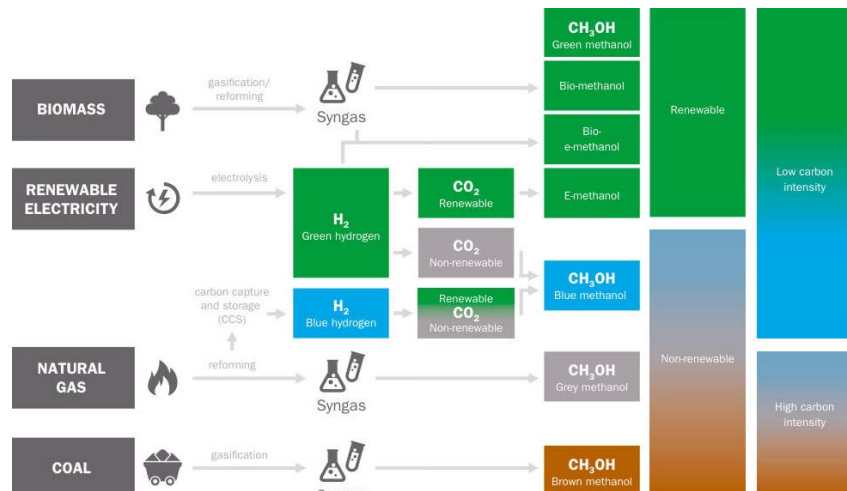
E-fuels: A long Way to go

Decarbonisation of maritime transport requires solving a fuel challenge. Every future-oriented business, from giant commercial shipping companies to modest yacht manufacturers, is concerned with which road to take

Countless discussions have been going on in the industry since the moment when the IMO initially set and recently adjusted major goals on decarbonisation. By now the general script seems to be clear: electrify small vessels, switch ocean going fleet to sustainable modern bio-fuels while using LNG or ammonia during transition, and finally get ready for drop-in e-fuels in the future.

»There are two main groups of alternative carbon neutral sustainable fuels«, explains Algora Castle, Head of European Affairs at eFuel Alliance. These are bio-based fuels and e-fuels. »The »E« stands for »electro«, and unlike biofuels, they are synthetic. What is important is that very first step of synthesis uses renewable electricity when renewable hydrogen is gained via electrolysis. If electricity comes from non-sustainable sources, the e-fuel cannot be considered climate neutral. Hydrogen is then combined with atmospheric or biogenic CO₂ for the production of e-methanol, e-gasoline, e-diesel and other kinds of e-fuels that can replace fossil fuels saving up to 90% of the CO₂ emission. It is the way forward, and together with biofuels they will phase out fossil fuels.«

One of the advantages of E-fuels comes from their relatively high energy density and easy, safe handling. This means that



Overview of methanol production methods: grey = fossil, blue = carbon-recycled, green = renewable

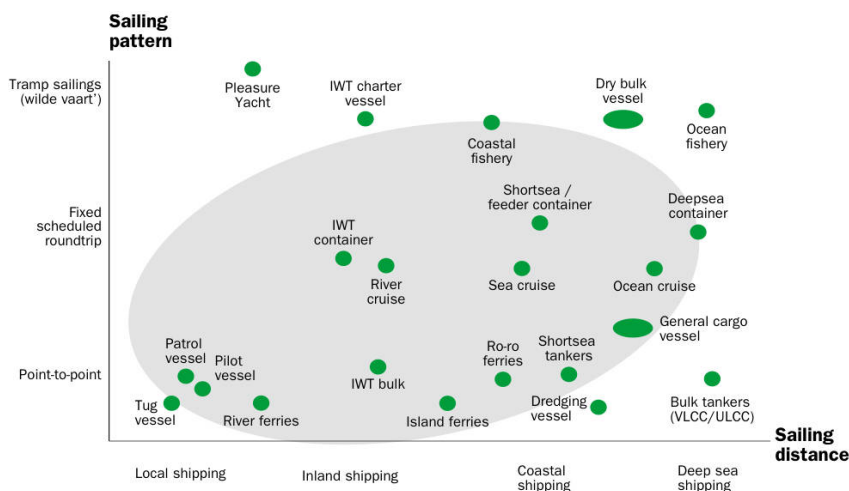
they can be transported and stored much like traditional fuels and are not severely hazardous to the environment.

You may ask why not just use biofuels without spending a lot of expensive green electricity? The problem lies in the limited biofeedstock that is used for fuel production. Therefore, manufacturers will not be able to supply enough biofuel to meet the needs of the maritime industry. »With biofuels we will reach a production plateau in about ten years, and to really close the gap, we will need scalable e-fuels«, says Castle. »For some feed

stocks there will be a plateau, but then at the same time we believe that there are a lot of routes that are not explored at the moment«, adds Sveta Ukkonen, head of marine fuels and services at Neste Corporation. »We are exploring technologies to deal with very poor feed stocks and utilize existing ones even more.«

After Maersk, HMM, and CMA GCM hit the green button by ordering dual fuel ships and signing initial agreements with green methanol manufacturers, other players are ready to follow. Methanol became the fuel of choice for Lürssen, Feadship, and Sanlorenzo. All of them are running methanol projects and are also waiting for e-fuels to eventually emerge on a large scale. To boost things, key industry players have joined Green Maritime Methanol consortium led by the Netherlands Organisation for Applied Scientific Research (TNO) to investigate the feasibility of renewable methanol (bio- & e-) as a fuel for the maritime industry.

Unlimited production scalability and high carbon utilisation potential are two strong selling points of e-fuels. Once enough sustainable energy, renewable hydrogen, and carbon dioxide (through direct air capture or from biomass) are available, refineries can produce any large hydrocarbons using Fischer-Tropsch synthesis. This Power-to-Liquid



Ship types thought to be suitable for methanol propulsion

(PtL) concept looks like a very promising solution that could also become a great energy storage and help to provide grid stability. However, one should be aware of wishful thinking trap, which makes people overoptimistic and could lead to poor decisions. According to DNV Transport in Transition 2023 report, the infrastructure needed to produce green hydrogen for e-fuels is very far from scaling, and the energy losses in the value chain simply add up to prohibitive costs for all but very niche applications for many years to come.

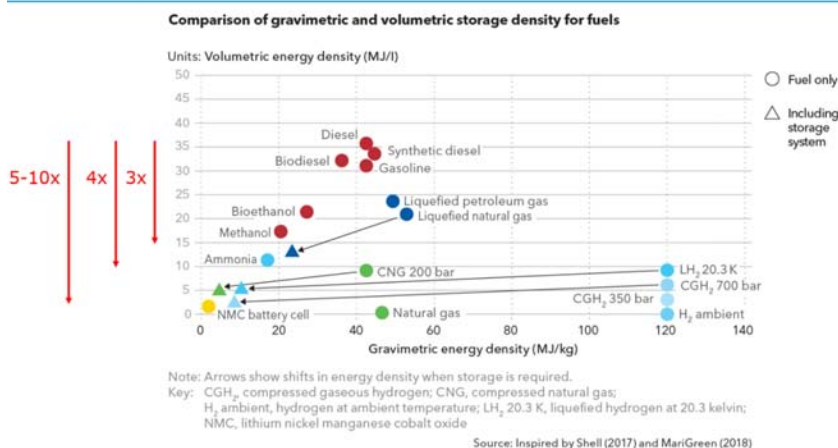
Today there are 26 vessels in operation that can use drop-in e-methanol, and even more to come in the next three years including several superyachts. According to Maria Strandesen, head of future fuels at Maersk Decarbonisation Group, to run its entire fleet on methanol Maersk would require roughly 20 million tons of fuel every year. Step by step the company is securing future supply via direct negotiations with large plants like the one commissioned by European Energy in Kass, Denmark. At the same time smaller companies and private yacht owners are facing the risk of sticking in so called »valley of death« until e-methanol production meets economical acceptance.

»The biggest challenge is to find early adopters who are ready to pay high bills«, comments Bart Hellings, director at the GoodNRG Group. »Challenge number two is to get the fuel to the yacht, because at first it will be an incredibly inefficient supply chain.«

The top managers of Sanlorenzo hope that large businesses such as Maersk will eventually boost the expansion of methanol shore infrastructure. Until it happens, the yachts would have to travel for bunkering. »It's fine since 50+ m yachts do not need to be refuelled every day«, says Paolo Bertetti, the shipyard's technical and R&D vice president. »Also, there is very limited knowledge about these fuels among clients«, he adds. »I would say that one of the ten has enough knowledge about it to become curious and ask about the possibility. Captains are much more informed, but I cannot say that there are many clients around who are ready.«

One of the conclusions of DNV's report states that e-fuels that require green hydrogen and a lot of energy to produce will start to scale only from the mid of 2030s and before then they will be quite costly. The projected price difference is four times higher compared to oil and al-

Fuel storage limitations



Gravimetric vs. volumetric energy density of different fuel types

most two times higher compared to bio-fuels. By 2050, the cost of biofuels and e-fuels is expected to match although oil and LNG will still be three times cheaper.

In May the European Commission, the Council and the Parliament have preliminary decided that a combined quota of 5.5% advanced biofuels and e-fuels will be mandatory in the transport sector by 2030. There is a double multiplier resulting in a real quota that will be twice less. In addition, a binding subquota of one percent, likewise with a multiplier, was adopted for renewable fuels of non-biogenic origin (RFNBOs). As a result, if these numbers are agreed, the industrial ramp-up of green hydrogen as well as

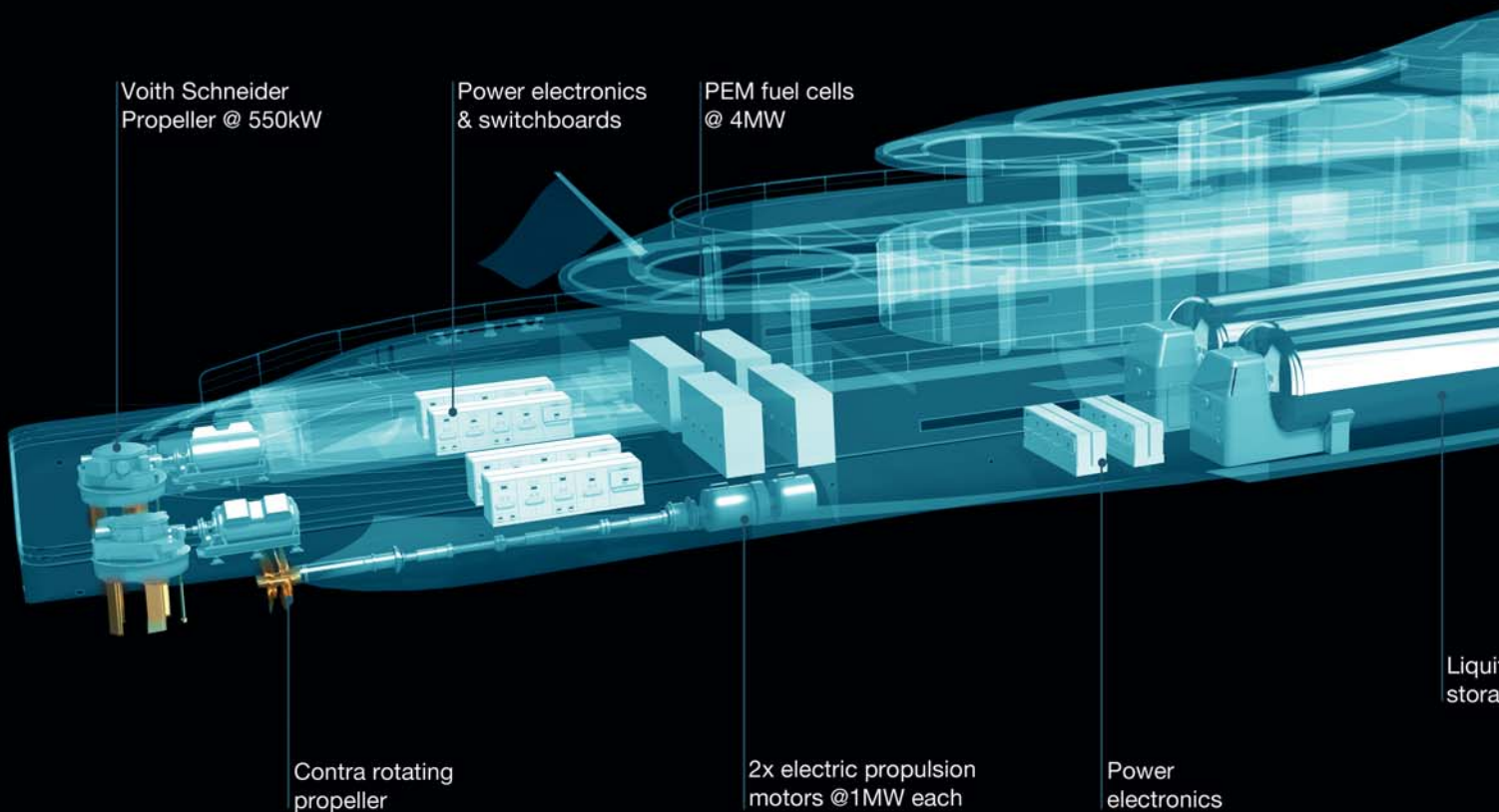
e-fuels cannot be stimulated sufficiently. »The industry remains in the starting blocks and dangles in the air in terms of planning«, concludes Ralf Diemer, Managing Director of the eFuel Alliance. »Projected, the combined quota only achieves an expansion potential of around 100 TWh. The amount produced during a successful ramp-up falls drastically short of what the transport sector urgently needs for a sustainable transformation. The 0.5% binding for RFNBOs, while congruent with the decisions in the corresponding regulations for the aviation and shipping sectors, does not stimulate further investment beyond that.«



Announced production facilities for bio-methanol (orange) and e-Methanol (green) in Europe

Sustainable super yachts: Where are we now?

Most leading shipyards are currently involved in massive multidisciplinary studies aimed at developing sustainable and future proof superyachts. Very few have the potential to succeed alone without cooperating with experts in the alternative energy field. Thus, ongoing cross-pollination is very active and provides manufacturers with new competition tools

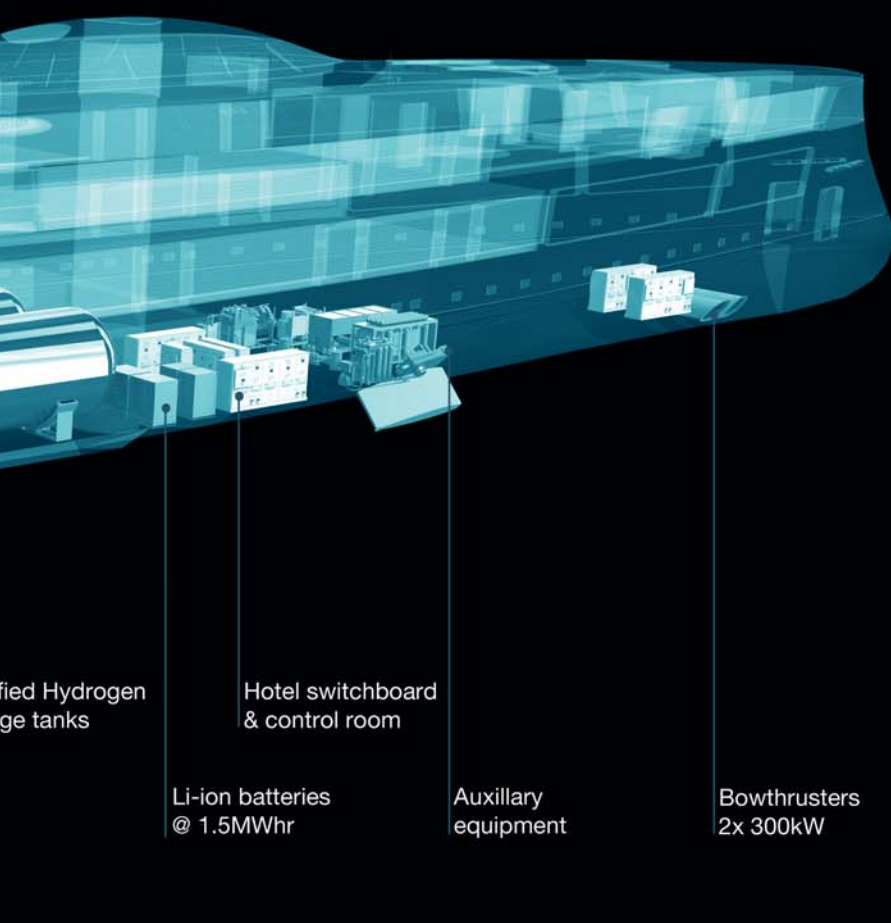


According to the study by Lateral Naval Architects and PA Consulting, estimated monthly H₂ consumption for 112 metre\3,500 GT yacht (concept »Aqua«) given the typical operational profile (11 % sailing, 62 % harbour mode, 25 % at anchor) varies from 20 to 37 tons throughout the year and requires bunkering at least once a month. They have calculated that to develop a dedicated liquid green hydrogen

infrastructure of sufficient capacity to cover typical Mediterranean and Caribbean operations for a single large 110 metre liquid hydrogen powered superyacht, a CAPEX amount of between \$ 60 – \$ 82 million would be required for two facilities.

This is followed by the conclusion that the overall acceptability and feasibility of this concept is hard to define. The benefits of investing in infra-

structure for yachting will be dependent upon the clients' perceived benefits of zero carbon yachting and/or any connected business opportunity. The overall CAPEX is, however, sizeable. The cost of a 110 metre liquified hydrogen yacht project could be as high as \$ 350 million. In this case, the required infrastructure represents at least 25 % of the overall project cost. It is therefore not considered to be a suitable ap-



112 metre H₂-powered yacht concept
»Aqua« by Lateral Naval Architects.
With a typical operational profile, the
vessel's hydrogen consumption would
vary from 20 to 37 tons a year

hotel load. The yacht is currently being constructed under supervision of Lloyd's Register.

Once she is ready and has passed the sea trials, Sanlorenzo will bring her to MYS to claim leadership. The second stage will be further collaboration with Siemens Energy and MTU to offer a hybrid version by 2026. The final goal is to build a 100 % carbon neutral yacht by 2027 once MTU is done with designing and testing methanol engines. Before that, Sanlorenzo, together with partners, must solve the puzzle of increasing output from the less energy dense fuel in order to keep the same volume of it. One of the potential solutions would be to improve the efficiency of fuel cells when they operate at higher temperatures.

In addition, Sanlorenzo is developing a new structural methanol tank concept. According to existing rules, one has to have 60 cm watertight compartment around tank with methanol. It is called cofferdam and prevents fuel from pin-hole leaking into adjacent spaces. Due to this requirement it is almost impossible to design a methanol-

proach for the majority of the yacht market.

At the same time, hydrogen as fuel still remains a good option for relatively small recreational crafts. For example, Sanlorenzo is building H₂-powered BGH tender with EODev fuel cells for the 2024 America's Cup and is gathering technologies for Bluegame 65 HH catamaran that should be launched in 2025.

Sanlorenzo 50M

One of the leading Italian builders has announced quite distinct road map to 2030 which includes three-stage move to methanol powered superyachts. First, next spring they will put on the water 50 metre steel yacht with methanol reformer and 20 modular Siemens fuel cells. This setup will provide up to 100 kW of electricity to fully cover

© Lateral Naval Architects



powered yacht below 50 metres without sacrificing guest spaces. That is why Sanlorenzo is trying to rethink the whole tank concept and talking to registries and IMO in order to lobby for the deduction of volume taken by additional fuel from the total gross tonnage calculation.

Rossinavi Sea Cat 43

This concept of full electric catamaran with design developed by Fulvio de Simoni was unveiled in Miami in 2021. In less than a year, Italian builder has announced that the construction of the first hull was underway with scheduled delivery in 2024. The inspiration behind Sea Cat has come from observing bioluminescent dinoflagellates that accumulate solar energy during sunrise-to-sunset and release it at night. Solar panels neatly integrated into the superstructure are to provide enough carbon neutral electricity that permits daily use of the 43 metre vessel (under 500 GT) without burning a drop of fossil fuel. As for long-distance cruising, Rossinavi claims that Sea Cat is expected to cross Atlantic at 8 knots almost exclusively on solar power running just 20 % of time in diesel-electric mode. Part of this high efficiency is due to smart energy management systems that enable Artificial Intelligence algorithms to control battery health.

Vitters Zero

Being a member of Foundation⁰ project, the Dutch shipyard is building a 69 metre sailing ketch with codename Zero. She is claimed to be the first real zero emission yacht combining numerous innovative technologies. The Vripack studio stands behind her exterior and interior design, while Dykstra is responsible for naval architecture.

According to engineers, the amount of power required to move such vessels can reach as much as 1,5 MW, which roughly equals the daily generated energy from a modern wind turbine with a 70 metre propeller. Therefore, their main challenge is to harvest at least 1/6 of this energy and convert it into electricity to use on board. The solution is two azimuthal pods with four-bladed screws that act as hydrogenerators when the yacht moves forward under sails (combined disk area is 2.9 square



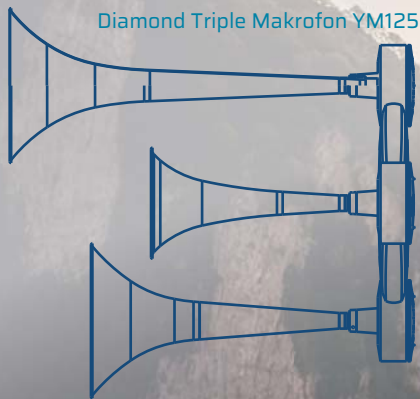
© Sanlorenzo

Bluegame design of the New York Yacht Club American Magic team's hydrogen-powered chase boat for the America's Cup

metres). The forward one is smaller and optimised for energy generation, while the larger one behind the keel is responsible for propulsion. Both of them can be used as thrusters for manoeuvring. Additionally, the Foundation⁰ team has

developed highly efficient solar panels that can catch 20 % of photovoltaic energy along with 60 % of the thermal energy that in the case of regular panels is typically dismissed as heat loss. The design is simple and elegant. The panels

are well insulated and have thin tubes filled with running water inside. High temperatures (80–85 °C) warm up the water so it can be used for showers, laundry, and even for absorption chiller (17 kW).



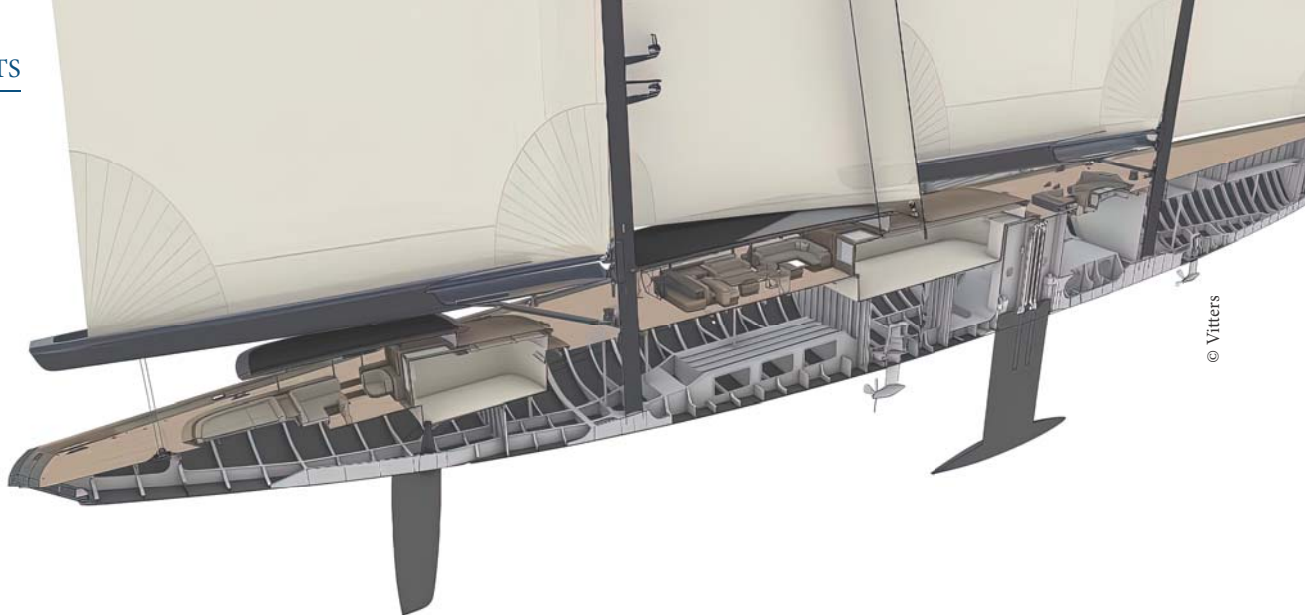
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69 m by Vitters,
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The deck of Zero will be insulated with a 30 millimetre cork layer over the metal plating. Furthermore, the hull will be coated with an insulating filler and special paint containing an infrared reflecting additive that saves 3,5–4 °C. Altogether this will provide expected heat influx through the hull reduced by a quarter.

Lürssen's Cosmos

Lürssen has a reputation as a company that prefers to lead rather than follow and usually does it in its own way. Thus, it was the first to take the »methanol route« and announced the yacht equipped with carbon neutral energy system. Project 13759

Cosmos (114 metres) designed by Marc Newson has recently entered the outfitting stage while Lürssen engineers and their colleagues from Freudenberg e-Power Systems are busy with fine tuning fuel cell efficiency. Around two years ago they established a dedicated innovation lab for long-term testing to ensure



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RESILIENCE at its most BRILLIANT



Hull and superstructure of Lürssen's »Cosmos«



© Lürssen

that the new system is safe and reliable. The core technology behind it seems to be an open secret; however, the devil is in the details. Namely it is steam reforming of methanol when the heat needed for this process is taken from fuel cells. The Freudenberg system was shaped in Pa-X-ell 2 research project and was approved in principle by DNV. Later, RINA has issued type approval for using these modular fuel cells on all kinds of vessels.

Stacking several modules with rated output of 500 kW permits generating enough power to cover the hotel load of the 6,300 GT yacht and the leftovers could be utilized for propulsion. Preliminary trials have shown that the lifespan of fuel cells reaches at least 35,000 hours, which is equal to four years of continuous operation. According to Justus Reinke, managing director at Lürssen, there will be enough methanol capacity on Cosmos to spend around 14 days at anchor or cover around thousand miles being

100 % carbon neutral. As for propulsion, the German manufacturer is working closely with Rolls-Royce to develop a methanol engine based on MTU Series 4000 block. All these R&D pathways will converge in 2025 when Cosmos is handed over to her proud owner.

What about others?

Several A-brands of the yacht-building world have ongoing sustainable projects, but keep them under hat. For instance, Feadhsip is building 85 metre methanol powered yacht to deliver it in 2025 and has stated that all their future projects will be «fuel flexible». It means that the engine bay and key systems will be designed and set up in a way allowing easy upgrade to the carbon neutral fuel.

Damen Shipyards' division Damen Yachting has recently announced the signing of a high-level strategic collaboration with Danish Blue World Technologies to benefit from its energy-efficient and cost-effective methanol fuel cell technology.

Meanwhile, Oceanco is developing sustainable yachts under a shroud of secrecy. Norwegian Ulstein successfully builds dual fuel methanol/MGO commercial vessels and offers even more sustainable methanol/biofuel expedition yacht concepts.

This list is far from complete, and it will continue to grow quickly because the decarbonisation clock is ticking. ■



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E-Tender affection

The market for Tenders experiences a boom in terms of electrification. The small boats are easy to switch from combustion engines to fully electric propulsion. There are options for luxury seekers, technocratic aesthetes, advanced owners and passionate drivers

Tenders belong to those boat types that are very easy to switch from combustion engines to fully electric propulsion due to their straightforward and highly predictable usage pattern. Typically, they offer enough space available under the deck for substantial battery bank and have easy access to charging points, be it mother vessel or station in the marina. As a result, this market niche is booming with manufacturers designing all kinds of electric models.

Falcon E8 — for pure luxury seekers

British company Falcon Yachts led by well known tender expert Mark Pascoe teamed up with ThirtyC Yacht Design and Vita Power to create ultimate electric luxury tender E8. It boasts cocoon-like deep octagonal cockpit belted with sofa seating, teak clad deck, low steps in the aft for safe boarding, and custom finishing. Clean exterior lines and sharp ver-

tical bow refer to the timeless shapes of famous classic cars.

E8's propulsion system consists of stern drive with two counter-rotating propellers, electric motor, battery bank and proprietary energy management system. Customers are welcome to choose between 90 and 150 kW continuous power versions (120 and 170 hp, respectively). The latter provides 220 kW peak performance which translates into 30 knot top speed. Flexible Vita Power system is

E8's propulsion system consists of stern drive with two counter-rotating propellers, electric motor, battery bank and proprietary energy management system

designed to work with both AC and DC networks. When a fast charging point is available it will take less than an hour to charge a 63 kWh battery from 20 to 80%. To add cruising capacity, standard battery can be upgraded to double pack (126 kW). This will provide a range of about 30 miles in case of E8 equipped with the more powerful motor.

Candela C-8 Polestar Edition – for technocratic aesthetes

Recent addition to Candela's portfolio, C-8 Polestar edition highlights deep collaboration of innovative Swedish boat builder and emerging Volvo's subbrand. Apart from the low-key Scandinavian grey and gold color scheme C-8 will feature a number of car-inspired finishing details to further increase the level of comfort on board.

The C-8 Polestar Edition has a 69 kWh battery and charging equipment similar to those in the Polestar 2 liftback. This setup allows her to cover 57 nautical miles effortlessly, cruising at 22 knots without recharging. C-8 has a unique propulsion system comprised by front hydrofoil on protruding poles and C-POD, 75 kW direct drive electric pod motor. By design, C-POD is a custom water-cooled outboard with set of internal hydraulic rams. They adjust the height of the drive and angle of the attack of rear foil to tune the trim on the go. Sophisticated software developed by Candela's team uses real time data from various sensors to estimate distance to the water surface, heeling, and acceleration to actively change geometry of the foil by moving front poles back and forth. Thanks to efficient hull shape and smart hydrofoil control system, the boat requires just about 20 kW of power for starting planning. Candela offers C-8 in several variations including centre console with or without T-top so it could easily serve as a capable tender.

YTender – for advanced sailing super yacht owners

After getting tired of solving endless tender choice puzzles, German yacht builder YYachts decided to design its own. Garage size is not always limiting factor on sailing yacht, while tender weight is because it may severely decrease performance under sails. There are two versions of the YTender – YT7 & YT9 –

measuring 3.6 and 4.3 m. Both can be made of carbon fibre, resulting in 170 and 230 kg of weight, respectively (without engine and batteries). The YTender is essentially a multihull RIB with relatively low profile and integrated compressor. This ensures additional safety and possibility to deflate so called smart tube on the go. It takes less than a minute and can be done right before the boat is lowered into the garage. Yachtwerft Hamburg

which builds and sells the YTender offers flexible layout with custom finishing and electric propulsion as an option. Torqeedo Cruise 12.0 R TorqLink outboard (12 kW) and high performance lithium battery (5 kWh, 48 V) ensure a YT7 travel distance of up to 15 miles at 9 knots. YT9 has space for two of these outboards and can cover 20 miles at 8 knots. This is much more than typical daily operations require.



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Candela C8 featuring efficient hull shape and smart hydrofoil control system



Silent Speed 28 features two electric surface drives

YTender by Yachtwerft Hamburg and YYachts



Silent Speed 28 — for passionate drivers

This innovative carbon RIB tender looks like it has nothing special above the waterline, and it is true. But once you look below, perception completely changes. The catamaran-shaped hull vaguely resembles the Uffa Fox sea sled and has two sets of hydrofoils. The front one is fixed and meant to lift the hull, while two rear moving foils are to control trim and heel angles in manual or automatic mode. Moreover, Silent Speed 28 features two electric surface drives developed by German startup eD-Tec.

ED-QDrive is a fully integrated unit where all parts, including 700 V motor, gears, inverter, and cooling pumps, are enclosed in a robust composite housing. With two 100+ kW of continuous power drives the claimed top speed of Silent Speed 28 reaches 60 knots. Cruising at 30 knots tender is expected to cover a relatively large distance of 70 miles.

Software with an AI function plays an important role in putting all onboard systems together. For example, it will adjust the engine load settings depending on the operation profile to prevent applying excessive power when berthing. On top of that, each boat will be connected to the cloud for quick software updates and paid functional upgrades. Silent Speed 28 has a solar cell »carpet« on the hardtop and supports DC fast charging, including the B2B mode that allows cross charging between boats and electric cars. ■

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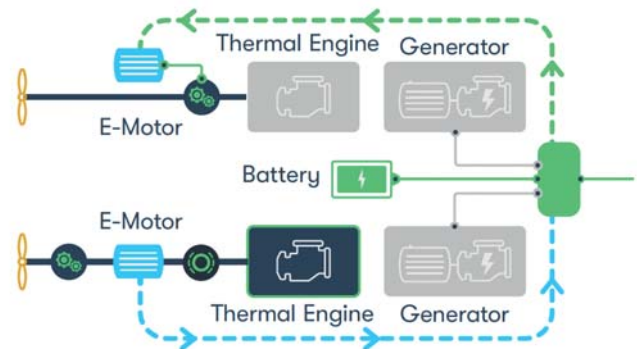


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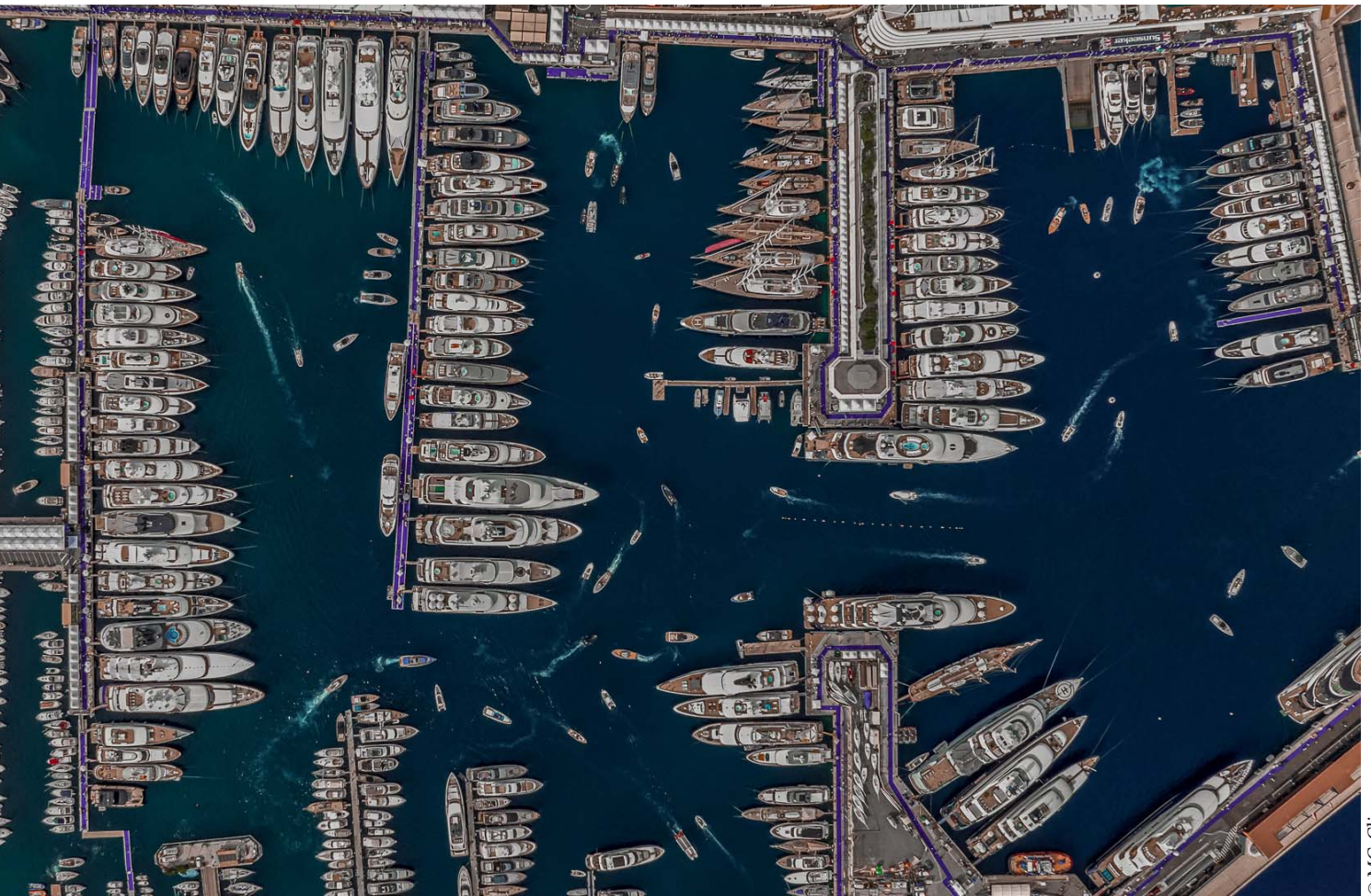


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Showtime on the Côte

When the Monaco Yacht Show moors at Port Hercules from September 27 to 30, the Principality will once again become the center of the global superyacht industry. And there are more shows in autumn

A number of stakeholders in the superyacht industry are looking forward to this event for a variety of reasons. When the Monaco Yacht Show takes place at Port Hercules from September 27 to 30, shipyards and brokers will be hoping for solvent owners, service providers for many captains and yacht managers at their booths, and suppliers for well-tempered buyers from the shipyards. The entire spectrum of the industry will be presented by 500 exhibitors, and around 100 yachts up to 100 metres in length will be docked in the Principality's harbor. The largest formats (at the time of going to press) have been announced by Lürssen, Feadship, Bilgin, Golden Yachts and the

Italian Sea Group. Currently the longest exhibit is the 97.20-metre »Carinthia VII,« one of the most famous Lürssen yachts ever. The exterior design is by the legendary Tim Heywood, the refit interior by Bizzozero Cassina Architects. »Carinthia VII« has eight cabins for up to 14 guests with a volume of 3,643 GT.

Also built by Lürssen, Cecil Wright & Partners is exhibiting the 95.2-metre »Kismet.« Built in 2014, the superyacht was designed by Espen Øino International, while the interior was penned by Raymond Langton Design. Kismet is equipped with eight cabins that can accommodate up to 16 guests. Dutch shipyard Feadship, one of Lürssen's largest

competitors, comes to Port Hercules with the 83.50-metre »Savannah,« delivered in 2015. Marketed by Feadship as the first »eco-friendly« motor yacht, she features such features as a high-efficiency hull design and a single Wärtsilä high-speed diesel engine driving a central propeller shaft. The next largest yacht at this year's Monaco Yacht Show is the 80-metre »Leona« from Bilgin Yachts. The exterior of the Turkish build is by Unique Yacht Design, while the interior is by H2 Yacht Design. »Leona« has a volume of 1680 GT belongs to the Bilgin 263 series. Like »Leona,« Golden Yachts' 77.7-metre »O'Rea« is brand new to the market. Launched only in May 2023, she features

an exterior design by Studio Vafiadis – a powerful profile with strong, muscular lines. The contemporary interior of »O'Rea« is a collaboration between Studio Vafiadis and Italian studio Massari Design. »Kenshō,« finally, showcases an iridescent blue hull. Designed by Azure Yacht Design & Naval Architecture, the yacht was supplied by Italian Sea Group. Her interior design with oriental influences and organic shapes is by Jouin Manku. The yacht can accommodate 16 guests and 20 crew members and is as impressive on the inside as it is on the outside.

The industry associations from England, New Zealand, the USA, the Netherlands and Germany will of course also be on site. The 60 or so members of the German Yachts Working Group, for example, will have their »show home« at booth number AL6 in the air-conditioned tent on Quai Albert 1er. Separate booths have been booked by around

a dozen members – these include Meyer Yachts, Tilse, Oldenburger, Pantaenius and Ocean Independence. Claus-Ehlert Meyer, managing director of the German Boat and Shipbuilders Association and thus also of the German Yachts Working Group, is looking forward to the show: »The fair is an extremely important event for our members and the theme 'Made in Germany' is still extremely important in the industry, which will be observed on the exhibits in the harbor.«

www.monacoyachtshow.com

More shows in autumn

Cannes Yachting Festival 12.–17.09.

This popular show is considered the start of the exhibition season on the Mediterranean. About 650 boats and yachts moor; maximum size is about 50 metres. This year, 140 premieres have been registered. Motor yachts are moored in the

Vieux Port, sailing and brokerage yachts in the Port Canto.

www.cannesyachtingfestival.com

Fort Lauderdale International Boat Show 25.–29.10.

If you want to attract U.S. customers, you can't miss this show. Brokerage yachts are moored at the Bahia Mar Hotel Marina, and members of the Superyacht Builders Association exhibit in a dedicated Village at Pier 66.

www.flibs.com

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»A symbol of freedom«

Sarah Henningsen is one of the few female sales brokers. For HANSA Yachts she explains her current market assessment



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How did you get into the industry and why did you choose BehneMar?

Sarah Henningsen: I originally worked in commercial shipping and then gained some private yachting experience that excited me. A good friend, who had already been involved in large yacht projects for Lürssen, recommended BehneMar to me. After my first meeting with Dr. Rainer Behne, I was immediately drawn to the company. BehneMar is an exclusive yachting consultant with offices in Dubai, Monaco and Hamburg. We are a forward-thinking, family-owned company for superyachts that acts in the interest of the client. This speaks to me because the focus is on the individual.

As a representative of BehneMar in Germany – what yacht sizes, types and features are German customers particularly enthusiastic about?

Henningsen: Apart from sailing, which still plays a major role in Germany, German customers have recently become increasingly interested in motor yachts in the 20 to 50 metre size range. This is partly due to the economic development of the last ten years, where a lot of wealth has been accumulated, especially in the

real estate industry, but also in other areas. A yacht as a vacation home in the Mediterranean is still attractive and a symbol of freedom.

How do you assess the current market situation in brokerage? What are your expectations for the coming months?

Henningsen: The current market situation remains positive. Especially after Corona, the desire to cruise flexible on the seas has increased. The mobility and freedom a yacht offers attracted many buyers, combined with the thought to no longer save money at negative interest rates, but rather to invest in hobbies, so-called »fun returns«.

BehneMar has its headquarters in Dubai, where the maritime scene is developing rapidly. Will the Arab region become an alternative to the Mediterranean in the medium term?

Henningsen: I think alternative is the wrong term, it's more about exploring unknown regions. In Dubai and the neighbouring Arab world, business has developed very positively. Apart from the purchase of very large mega yachts by Arabian royal families, the influx of many

so-called expats has made the market situation there very pleasing. More and more people from Western countries are discovering Dubai as a new centre of life and this is clearly reflected in the yachting business.

What trends do you see in the future and how are the requirements of future owners changing?

Henningsen: We continue to see a great interest in innovative yachts. The typical fast planing yacht is replaced by displacement yachts to consume as little fuel as possible. Yachts with smaller engines or innovative drive concepts such as hybrid drives and engines powered by biofuels are also playing a greater role. The issue of sustainability has also gained importance, especially among younger owners. Another trend is individual designs, where proximity to the water can be lived with active swim platforms and large beach clubs. In the future, owners will also place more emphasis on wellness and fitness facilities on board. This includes concepts with a separate fitness room for various sport activities, but also relaxation rooms for sauna or massages. Balancing body and mind is becoming increasingly important. ■

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