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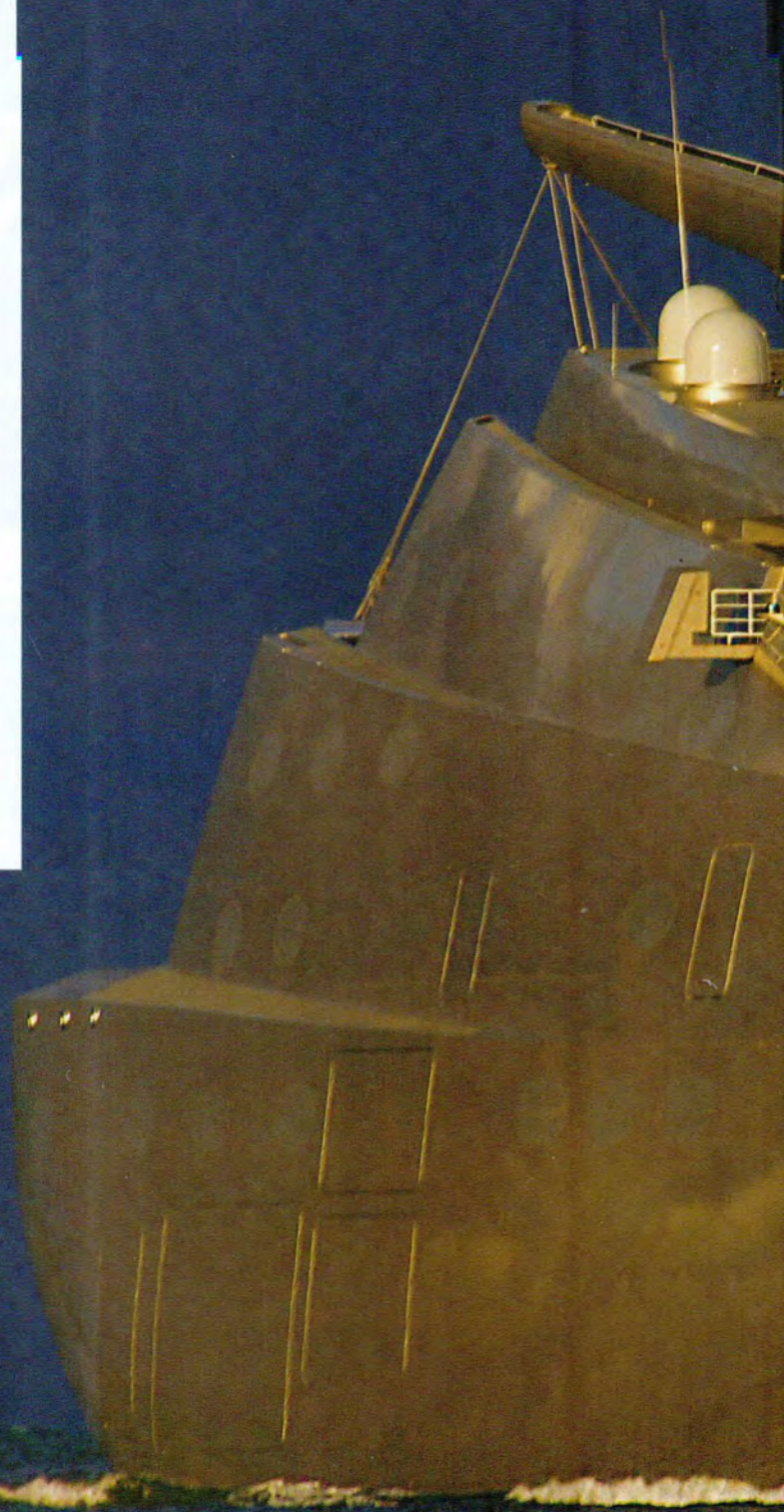
# THE CRAZY WORLD OF THE GIGAYACHT

MEGABUILDS WERE BIG NEWS IN 2016. HELEN FRETTER  
DELVES INTO THE WORLD OF THE GIGAYACHT

**D**warfing not only any other yacht that happened to be on the River Eider, but even the buildings along the foreshore, the monolithic *Sailing Yacht A* made quite an impression when she was launched from the Nobriskrug yard in Hamburg in the autumn of 2016. The 142m, eight-deck behemoth is the archetypal 'gigayacht', phenomenal not just in her dimensions but also in her radicalism.

The Philippe Starck-designed *Sailing Yacht A*, with her 20m freeboard, begs the question: is she even a sailing yacht? The last yacht to divide opinion, and attract the shock and awe of the non-sailing public in the same manner was *Maltese Falcon*, the glossy, experimental megayacht designed for Silicon Valley venture capitalist Tom Perkins. But the *Falcon* was launched a decade ago, and *Sailing Yacht A* is just one of a crop of extraordinary gigayachts, or sailing superyachts of 80, 90 or 100m plus, to touch the water in 2016.

Besides the 142m *A*, another three-masted design was launched from OceanCo this autumn, the 106m yacht with the working name Y712 or *Black Pearl*, which looks set to become the largest sailing yacht in the world – for a while at least. *Black Pearl* represents a modern evolution of the rotating Dynarig pioneered by *Maltese Falcon*. 







**Main pic:** Ship or sail yacht? The aggressively styled 141m 'sail assisted' Sailing Yacht A is hard to categorise and its appearance has few parallels

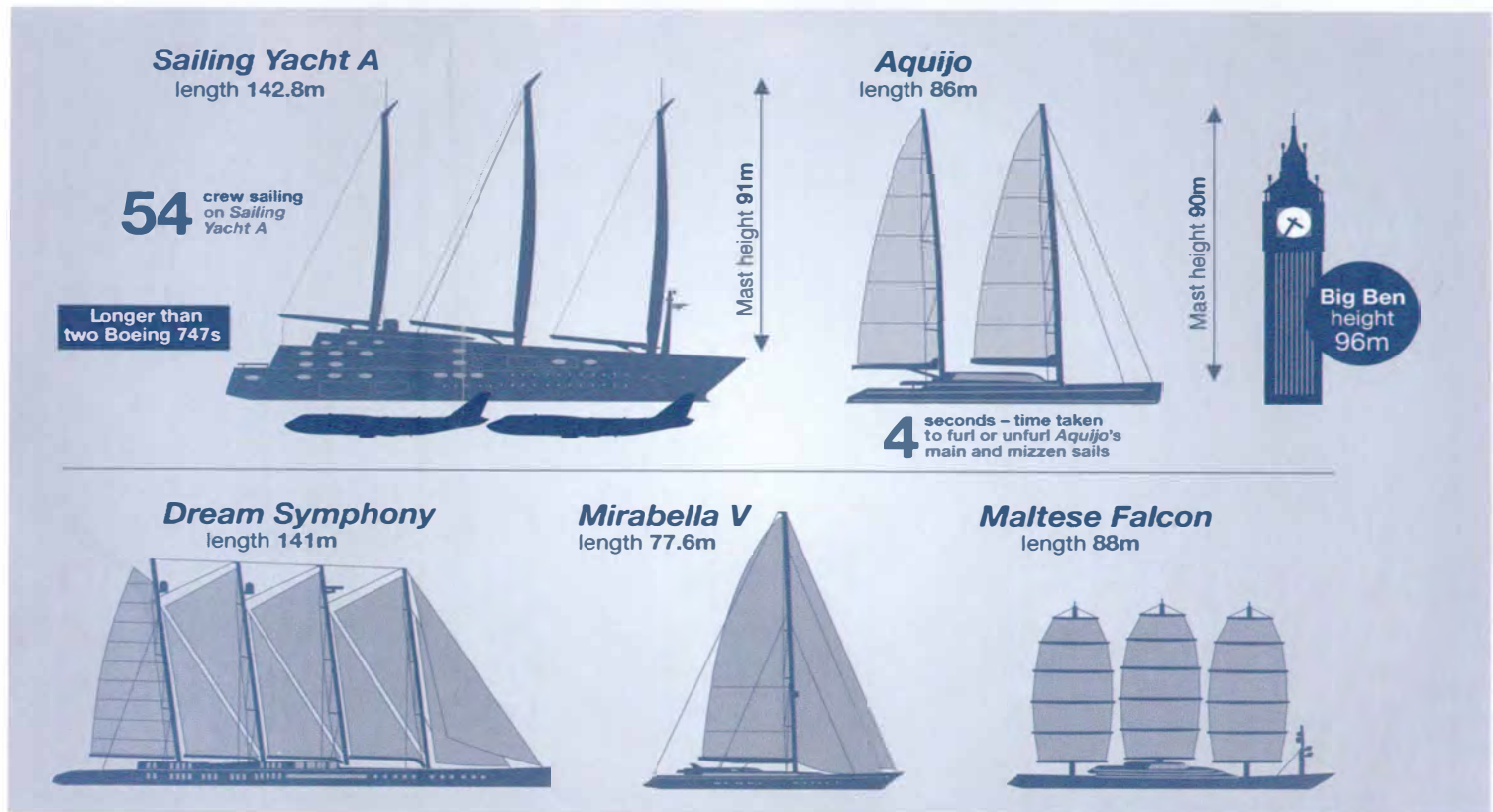




Carl Groll/the yachtphoto.com

**Above:** Recent sail trials on *Sailing Yacht A* saw the 1,464m<sup>2</sup> mainsail unfurled from the 27.5m carbon U-shaped boom. Incredibly she is designed to heel up to a maximum angle of 12 degrees under full sail  
**Left:** The hull has a maximum beam of 24.8m and includes 24 shell doors

**‘THERE IS A MORAL HAZARD HERE. WE ARE BUILDING DANGEROUS MACHINES’**







Meanwhile in the spring, the largest Bermudan rigged yacht ever launched, the 86m ketch *Aquiño*, powered through sail trials in preparation for a global adventure.

There are more in the pipeline also. Royal Huisman announced this autumn that they had been commissioned to design and build the 86m Project 400, another three masted design, this one more conventionally rigged. A proposal for the 114m *Endurance* has just been unveiled, an explorer concept designed to be able to cruise unassisted for three months. There is also the 86m *Komorebi*, an experimental wingsail-assisted hybrid trimaran design from the French multihull experts VPLP.

### Rise and rise of the gigayacht

Why the sudden flurry of these stratospherically ambitious projects? In truth, it is not that sudden – initial pitches for what ultimately became *Sailing Yacht A* were invited back in 2008, and pre-studies began in 2011. A decade between projects seems rather shorter when design and build takes at least five years – gigayacht owners may be exacting, but they also have to be extraordinarily patient.

What is remarkable, though, is how rapidly the yachts have grown in size – raising the upper ceiling from 88 to over 140m in a decade. Dutch naval architecture firm Dykstra has been instrumental in many of the world's most innovative megayachts, including *Sailing Yacht A*, *Y712*, and *Maltese Falcon*. Managing director Thys Nikkels comments, "Ten years ago a big boat was a very different size than a big boat is now. I can still remember when I started working in '91 a 40-metre yacht in those days was a big boat. In the mid-90s we started to design the yacht *Athena*, which we thought was the biggest boat we were ever going to see in our lives, as a sailing yacht she was 80 metres on the water."

The largest single sloop rigged yacht in the world remains *Mirabella V*, launched back in 2003 and since renamed (and slightly lengthened during a refit) *M5* at just over 77m. Rob Doyle, who worked on the project led by Ron Holland, recalls: "We started designing her 17 years ago now. We hit a very natural sweet spot with *Mirabella* and that's why it has taken so long for other boats to suddenly go over her length and over her rig height.

"*Mirabella* still has the highest 'P' measurement [distance from boom to top of mast] and the longest boom in the world, though there are taller masts now.

"She set a bar and we didn't realise we'd actually set it. It came down to a ratio of the rig weight to the draught and the keel weights, and everything else to be able to carry that amount of sail and that ballast to satisfy the rules.

"We pushed technology a lot – about 16 companies went bust over *Mirabella* because the jump was so massive. We were jumping from a 64m to a 75m [yacht] and that jump was like learning to fly, then going to the moon!"

Ken Freivokh, who was responsible for the radical styling of *Maltese Falcon*, also points out that after the much publicised launch of the *Falcon* many buyers did not want to be seen to be emulating Tom Perkins's unique style, preferring to wait, or opt for a conservative design. After the *Falcon*, Freivokh's next radical Dynarig yacht was *Black Pearl*, which he began work on six years ago. At 106m *Black Pearl* dwarfs *Maltese Falcon*, with a 2,700GT volume that puts her just under the key 3,000GT limit.

Surprisingly, Dykstra's Thys Nikkels says that the Dynarigs being built today are not markedly different to the one developed for *Maltese Falcon* a decade ago. "In concept it is not very different. In detail there are a number of improvements that have been made. But *Maltese Falcon* was – for her time – years far ahead and she proved to be very successful in sail handling and sailing, so there are not many improvements to be done. Nowadays you just have different materials you can use, or different electronics and software systems that you can use for control."

### Sail handling

Meanwhile a decade of development in superyacht rigs and sail systems, means that *Aquiño's* owner could opt for a conventional ketch rig, which can deploy over 3,000m<sup>2</sup> of sails in around six minutes.

Sail handling routines are necessarily different – the jib is furled when tacking. "Vitters organised a nice system that keeps just a nice amount of tension on the jib sheets furling in and out so that they are not flailing about," explains *Aquiño's* designer, Bill Tripp. "So it's not a dinghy tack, but it is safe and orderly.

"The spinnaker is on a fast furler and furls up in 30 seconds, making gybes less complex. There is the ketch choreography of bringing the main and mizzen in, but the steering is precise and there is no need to put too much sail up for the conditions."

**Above:** The 141m four-masted *Dream Symphony* is currently in build out of wood in Turkey, and includes vast living accommodation, and a swimming pool that converts to become a helipad platform





**bove:** The three-masted Y712 design has an angular 'Pacman' bow with a wave-piercing reverse sheer lower section, and an extended traditional foredeck above

The forces generated on yachts such as *Aquijo* may be enormous – mast compression can reach around 580 tons – but are no longer beyond the realms of riggers' experience. "When we started building boats like *Saudade* [the 2009 45m *Wally*], 14 tonnes was a very big load. Once we understood racing these boats, and understood they were controllable, you can take another step.

"We were delighted when sailing *Aquijo* upwind in a lot of breeze that the load on the mainsheet was showing around 12 tonnes. It's 2:1 so that's 24 tonnes. I'm not saying that's not a massive load, but it's similar to what we have on *Saudade*'s big sheet 1:1, and we have years of experience with handling that." Custom built 40 ton carbon and alloy winches help manage the sheet loads.

Tripp notes that a Dynarig was never considered as an option. "What you're really asking is do you want the ease of sailing or do you want to be able to access something exciting? And we wanted both of them.

"Sailors tend to like the more fundamental experiences, and when the technology allows them to access those more fundamental experiences, well that's a great joy."

### Finding the limit

Just how big can a sailing yacht go? Five years ago plans were unveiled for a 101m sloop, with a single 125m carbon mast, which raised a few eyebrows and discussions over whether it might be possible. Malcolm McKeon worked on the proposal and says that it was the cost, rather than technical limitations, which put the brakes on the project.

"It was an evolving process. The owner has a 50m-plus sailing superyacht, and he wanted a new yacht big enough that he could put a reasonably sized chase boat on board. He wanted an explorer type sailboat that he could go to the Pacific on, and carry all his toys with him, and not have to have a support boat. The design started at 65 or 70m and it just grew and grew until it got to 100m, and then it basically just got too expensive.

"The big problem with the large sail boats is the mast price goes up by a bigger proportion to everything else so the rig price becomes a much bigger percentage of the overall build. Technically it can all be done, it's just the value of that part becomes a much more significant part and sometimes more difficult for an owner to accept.

"If somebody came to me and said they wanted to build a boat with a 200m mast I would think well, is that really possible? Certainly rigs up to 100m and a bit more I think are possible today, but where we're going to go after that I don't know."

Rob Doyle points out that sailing superyacht owners pay around a 30 per cent premium over opting for a motoryacht, yet the boats lose around a third of the equivalent interior volume. However, for him the biggest limitations are the humans onboard.

"I think we are coming to a stage where we need a new type of rig, to be honest, to be able to safely deploy these sails without killing people. I think we are getting very close to where the metal meets the flesh at the deck level where the people and the guests are hanging around."

With the ever-increasing winch and line speeds needed to handle the huge loads, serious hand and limb injuries can happen in the blink of an eye. "There is a moral hazard there that keeps playing on my mind," says Doyle. "We are building very dangerous machines and we have to be very careful of people."

More prosaically, the bigger your gigayacht, the bigger the challenge of just getting on and off it. "Once you are getting to a stage where you can't get into anchorages you are in constant fear of drifting – even putting down an anchor you need a huge amount of space around you. So then you anchor further out into the slop and the big waves, so the owners find it difficult to get on and off the boat, and suddenly other problems can overwhelm the project," Doyle points out. One increasingly popular solution to that particular problem is a luxury landing craft.

### The wish list

Russian billionaire Andrey Melnichenko is keeping his *Sailing Yacht A* tightly wrapped under non-disclosure agreements, but a few intriguing details have been released, including magnifying windows which appear larger inside than outside, and a gimballed crow's nest, accessible by lift, 60m high in the curved mast. An observation pod embedded in the keel with foot-thick glass gives a mesmerising – and frankly terrifying-sounding – view of the propellers, and there's a three-man submarine.

Gigayacht designers have come up with some imaginative solutions to meet owners' foibles and demands. Drawings for the 101m sloop incorporated an entirely retractable hardtop to the flybridge to give the owner his requested uninterrupted view of the sails and sky. Plans for the Japanese-influenced *Komorebi* design feature a live tree on the aft deck. Watersports toys are old news – now tender garages are specified to house motorbikes, amphibious quad bikes, even custom-built marinised supercars.

On *Aquijo*, the headline feature is the 'beach club' on the lower deck. "For a sailing boat it is a huge area, they have a sauna, hamman [Turkish Bath], a rainfall shower, a relaxing area, this huge whirlpool in the middle, a little pantry, and enough space for gym equipment around





**'IT'S GREAT WHEN SOMEONE SAYS LIFE'S SHORT, I'M JUST GOING TO DO THIS'**

Aquijo is the world's largest ketch, with a mainsail that can be furled or unfurled in around four seconds

### Too big for the Panama Canal

It might seem counter-intuitive, but it is *Aquijo's* owner's focus on the sailing experience that has enabled the designers of the 86m ketch to push the size limits of a traditionally rigged yacht.

"*Aquijo* is a sophisticated machine and brings most aspects of a 1,600GT motor yacht with her," comments designer Bill Tripp. "But she does not aspire to helicopters or submarines, the feeling of the boat is one of use. She is for getting out there,

and for going out sailing. In Greece this summer, she would go out for an afternoon of sailing in 35 knot Meltemi because it is so much fun to sail at 20 knots, as if on rails.

"We have always done sailboats that can get under the Panama Canal bridge, and the biggest we were happy to do and put under the bridge was really 46m because after that we didn't have big enough sails for the boat.

"Then five years ago we launched *A Better Place*, and the owner said 'I'll go around, I don't

want to limit my boat because of the bridges.' With *Aquijo* they said, we want to go to these places anyway, so let's get the best sailboat we can. So suddenly, instead of having this 63m limit on the rig, that all opened up and we could start doing a sailing boat that had a gross tonnage like some of the bigger motoryachts.

"I think we're going to see more of that. You can look at the Strait of Magellan [an alternative route to rounding Cape Horn], as a place that's a really long way away or a place you really want to go."





**Above:** The newly announced *Endurance* concept design is a 114m four-masted explorer design with a 6,000 mile range under power

the pool," explains interior designer Robert Voges.

Voges says the trickiest element on the yacht was the flawless high shine steel mast claddings which run through the interior. "It is like a piece of art. The mast was going through the main saloon and guest corridor, and we didn't want to hide it. So we decided to make a feature out of it with seamless stainless steel cladding with integrated LED strip lights from top to bottom over two decks."

One of the most radical projects in progress is the 141m *Dream Symphony*, a four-masted design currently in build in Turkey. Originally slated for launch this year, the project is progressing slowly – in part due to the fact the yacht is constructed of wood. Her design includes a large aft deck swimming pool that transforms into a raised helipad area.

This is the type of concept which seemed fantastical just a few years ago, but is now reality in the motoryachts world where designs like the 81m *Alfa Nero* have deployed it successfully. "It's a good solution because you usually have to drop down all the stanchions and any elements that are higher than the helipad itself, whereas if you lift the helipad you don't have to lower the other elements," explains *Dream Symphony* designer Ken Freivokh.

"The brief did not call for a resident helicopter that would have its own hanger - it's just a 'touch and go'. You don't want to set aside space for a helicopter permanently that's almost never there, so if you have a reasonably sized swimming

pool why not use the base of a pool to just receive the helicopter, and then once the helicopter flies away you can put it back to normal operations?" Why not indeed?

No matter how grandiose your ideas, however, not even the vast volumes of a gigayacht can be entirely filled with art galleries and Reiki studios. Robert Voges explains that, like any other ship, "We have to start with all the emergency exits, the corridors, staircases... and from there we can work with the other areas which are left over." Ken Freivokh estimates that at least 20 per cent of the interior space has to be allocated to the back-of-house systems required to maintain the equivalent of a small hotel – air conditioning, waste, media, and other unglamorous elements behind the touch-screen luxury.

### Edge of reason

At 12,700 GT, *Sailing Yacht A* has the vastest volume of all. But can she be called a sailing yacht? She carries three of the world's largest carbon rigs – curved, unstayed, capable of rotating a maximum of 70 degrees – featuring in-boom furling that can deploy 3,747m<sup>2</sup> of sail area (67 per cent more than *Maltese Falcon*) from a finger tip command. And yet she cannot help but look implausible.

No matter how innovative the technology on board, or how vast the expense, the elements will not bend to the will of man or millionaire. Various estimates have put her cost at \$400-500million, or in the region of £320 to £400 million – to put those sort of figures in context, the bill for the London Olympics Aquatics centre came in at under £300m. *Sailing Yacht A* will be 'sail-assisted', not wind-powered. Confounding, aggressive in her styling, she's a yacht that has attracted scathing opinions as often as wide-eyed wonder. But what is the point of creating a gigayacht that doesn't?

"It is a creative process with the owner," comments *Aquijo's* designer Bill Tripp, "They have this idea that they can make something that speaks to them. They don't write symphonies, and they're not great painters or sculptors, but on the other hand money is vital energy, and they can create these things that wouldn't exist otherwise.

"It's great when someone says, 'Life's short, I'm just going to do this.'"

**Below:** *Maltese Falcon*, launched in 2006, pioneered the Dynarig concept utilised on many of the next generation of larger gigayachts

