

Sailing World

NEW FEATURES

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of an amazing yacht

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WHAT YOU NEED TO SAIL ANYWHERE



RUGGED FEATURES

CAN A DESIGN DRAWING INSPIRATION FROM IMOCA 60S MEET
THE UNFORGIVING DEMANDS OF HIGH LATITUDES CRUISING?
DAVID GLENN SAILS A YACHT THAT AIMS TO ACHIEVE JUST THAT

Right: IMOCA Influence includes soft shackie-style lashings, this for a removable furling headsail. Below: Twin 70kg Rocnas stowed on large bow rollers



Above: handholds built into the deck saloon coaming with engine room air intakes beneath. Left: ventilation is critical in all climes. Good access to dorade box, and cowls are protected to prevent rope snagging

If there were an award for brutalism in naval architecture *Qilak* would surely be on the podium. Her stark, purposeful, bare aluminium features look ideally suited to her owner's plan to seek out high latitudes expedition adventure. But that's only half the story behind this fascinating yacht.

Qilak will spend the northern hemisphere summer in the Arctic then make a 12,000-mile dash south to Antarctica via the Cape Verde Islands and Montevideo to take advantage of the austral summer. En route she will undergo a refit and bunker the special regulation diesel fuel needed to operate in those waters.

She'll undertake this programme with up to eight paying guests and four crew including ice pilots and other specialist guides when required. For any yacht it's quite an ask.

So to complete what owner and skipper Philippe Carlier calls *Qilak's* 'ice to ice' delivery, speed is of the essence. And it is the combination of speed and the ability to survive the hazards of high latitudes sailing which presented *Qilak's* designers and owner with the challenges that define this yacht.

The 66ft/20.07m *Qilak* – her name is Inuit for the sky or celestial sphere – was built by KM Yachtbuilders in Makkum in the Netherlands. The company specialises in tough, uncompromising, custom-designed yachts for long distance cruising and has attracted many experienced clients.

Disciplines unlikely bedfellows

In *Qilak's* case, a compromise was unavoidable. On the face of it, the disciplines needed for a fast, offshore 66-footer and a bulletproof ice expedition yacht are unlikely bedfellows. But Carlier, a 68-year-old retired commercial Boeing 747 pilot and experienced yachtsman with a high-octane spirit of adventure, has taken a pragmatic approach to designing this hybrid. He has done so in conjunction with naval architect Merfyn Owen of Owen Clarke Design, best known for its high performance IMOCA 60 and Class 40 designs.

In fact, Merfyn Owen is due to be one of *Qilak's* skippers along with his wife, Ashley Perrin, who is currently working as an ice pilot in Antarctica. Two years ago they married on the remote island of South Georgia, surely confirming their commitment to high latitudes!

The key influence from Owen Clarke is the genre of IMOCA 60s designed by the studio, offering speed and ease of handling for short-handed, high performance sailing. *Qilak's* underwater sections are relatively flat, she carries her 20.1ft/6.13m beam well aft to a usefully wide cockpit and a powerful transom, there's a pronounced chine from stem to stern and she is fitted with a lifting keel featuring a T-shaped torpedo-style bulb. She is also designed with twin, toed-out balanced rudders. With her keel up the yacht can safely take the ground, sitting on her bulb and two rudder tips.

On this evidence she might not seem an obvious candidate for high latitudes. When we asked Merfyn Owen about the vulnerability of the rudders to damage by submerged ice, he said he felt confident they were up to the task, equipped as they are with 150mm diameter, high strength aluminium stocks. The rudders are completely independent of each other.

The question of whether the T-shaped bulb might be liable to snagging detritus and, in particular, kelp, which is



Above: Philippe Carlier (right) casts an eye over the cockpit with the orange line runner winch loaded and the mainsheet winch on a centreline plinth. Right: *Qilak's* broad stern and cockpit. The arch carries aerials and engine exhausts



common in high latitudes, is also open to debate. Owen said: "Kelp entanglement can be mitigated by always approaching anchorages with a watchkeeper at the bow daylight, with the keel raised to its maximum extent and at reduced speed."

Qilak is fitted with the latest forward looking depth sounder, the keel and keel trunk are designed for grounding and the forward end of the bulb is designed as a crumple zone to absorb energy and protect the fin and the keel trunk.

Another distinguishing feature is her full, rounded bow profile, which performs an important role in terms of volume. "As we put volume aft to accommodate a 400kg RIB and the stern arch, we need to add volume forward," said Owen. "We don't mind this as it helps to provide generous forepeak space," he added. Although when upright the bow tends to push a lot of water, "at modern angles of heel that disappears," explained Owen.

Speed and ice class incompatible

Fully loaded *Qilak* will displace about 50 tons. Asked whether she was designed to ice class Owen explained it wasn't an option because the yacht would simply be too heavy to meet her sailing performance targets.

"You can't really have a decent sailing boat and conform to ice class," said Owen. "We want to be able to



passage plan at nine knots," he added.

Qilak's hull shell plating for the bottom and for the 'ice belt' extending to the level of the chine, is 10mm thick Sealium marine grade aluminium. Four watertight doors separate the interior space into five compartments.

Raceboat thinking for sail plan

Apart from her hull shape, Qilak's sail plan has also been influenced by IMOCA 60 thinking with the aim of not only 'changing gear' quickly and easily, but also having two of the three headsails – the high-cut J1 or yankee and the staysail-cum-storm jib – set on halyard locks so that once furled they can be lowered to the deck.

A key advantage of this is the ability to reduce windage in the rig by some 25%. While at anchor it will not be uncommon for Qilak to have to ride out sustained wind speeds of 70 knots and more. With her enormous freeboard and relatively flat forward underwater sections, she could be vulnerable to being blown about in strong winds particularly with the keel in the up position.

Qilak's furling working jib can be used in wind strengths of 30 knots plus, and will undoubtedly be the headsail of choice for much of the time. This is set on a fixed stay.

A day aboard Qilak

As we left Qilak's Hamble berth on an appropriately cold January day, I was intrigued to see the engine exhaust billowing from an outlet set in the substantial arch



Above: deck saloon looking forward with a watertight door leading to the main accommodation. The portside berth doubles as a first aid station in event of an injury. Left: the view aft into the deck saloon showing the interior steering position on the port side with its adjustable, heated seat complete with suspension

carrying aerials, communications and safety equipment.

To restrict the number of through-hull inlets – they can become blocked by brash ice – and keep the damaging effects of salt water on machinery to a minimum, neither the main engine nor generator rely on raw seawater cooling, so the dry exhausts need to outlet well away above the waterline. The machinery is cooled using a heat exchange system relying on a large reservoir of glycol stored in two 400lt tanks set in the bottom of the hull. They are located well aft where there is less threat to their integrity in the event of a collision.

'Comfort not luxury'

The same glycol that circulates around the machinery is used in a multi-radiator central heating system running throughout the yacht making for extremely comfortable conditions below.

Philippe Carlier takes a realistic approach to what his customers will expect aboard a modern expedition yacht. "I think we provide comfort, but not luxury," said Carlier, whose own considerable high latitudes experience in one of his previous yachts, a Dufour 9000 A (for aluminium) left him in no doubt about how Qilak should be equipped.

In everything he approaches, one can sense his commercial aeronautical training coming into play, with systems thought out in the minutest detail, back ups in place and nothing left to chance.

Fuel filtration is a case in point, the importance of which was brought home to him in no uncertain terms when he was piloting a Boeing 747 cargo plane. All four engines failed due to fuel contamination. The ability of the fuel system to by-pass the badly blocked filters saved the plane and his crew.

Leaving little to chance

Crouched in Qilak's excellent and spotlessly clean engine room, Carlier explains the fuel system which is supplied by four separate diesel tanks which can be linked together, isolated or paired up in any combination. They feed a 200lt 'day' tank warmed by the fuel return lines from both the main engine and the generator. In very cold conditions heat is needed to avoid increased viscosity and 'waxing'.

A series of filters leaves little chance of contaminated fuel reaching the engines but, in the unlikely event of it doing so, you sense Philippe's complete understanding of the system would get to the bottom of the problem.

Qilak's main engine is a six-cylinder 150hp Steyr diesel driving a hydraulically controlled variable pitch propeller. The engine also incorporates a 4.5kVA glycol cooled flywheel generator, which, alongside a Fischer Panda 8kVA three-cylinder genset, feeds a bank of lithium-ion batteries. With domestic services including the galley range and the heads' flushing system plus electro-hydraulic power for the large transom door, the variable pitch propeller and the keel lift mechanism, the need for a reliable and large electrical supply is critical.

Once again, Carlier's detailed understanding of the electrical set up and his ability to 're-build' the supply in the event of a complete failure – which, incidentally, he and his crew have already practiced – are impressive.

Multi-role deck saloon

Before we moved out on deck Carlier explained the thinking behind the deck saloon with its secondary steering position (via autopilot) and navigation area to



Above: Philippe Carlier (right) explaining Qilak's concept to the author. Right: convenient urinal, complete with red nightlight to aid accuracy



Philippe Carlier (right) believes he is offering his guests 'comfort but not luxury', including a fully functioning sauna (above) which will undoubtedly be appreciated in high latitudes



Right: Qilak's naval architect and experienced offshore sailor Merfyn Owen will also be one of the yacht's skippers



Above: Qilak's immaculate engine room. Left: guest cabins are well appointed, but not fussy, a decent size and have their own wash basin. Below: Philippe Carlier and daughter, Marion, who will form the basis of Qilak's permanent crew



port and an observation station to starboard. Both are equipped with excellent fully adjustable, heavily upholstered, heated seats complete with suspension and safety belts. They were sourced from the fishing industry.

Forward and on a lower level is a long, drop-leaf table in bamboo with a large settee seat to port. With its substantial lee-cloth this doubles as an emergency medical first aid berth. The main companionway dimensions are sufficient to get a stretcher below.

The large, toughened superstructure windows provide a superb view from all seating and the forward one is angled, commercial vessel style, to keep the water off without the need for a wiper. The windows all have storm boards which, apart from protection from solid water, satisfy Antarctic requirements to avoid bird strikes. Birds are attracted to light and the authorities insist that yachts take measures to avoid what could be fatal accidents to wildlife.

Accommodation comprises crew quarters aft and a large workbench area to starboard with an additional pilot berth above – literally for a pilot. The all-important galley area is set to port with a dining area capable of sitting at least eight in comfort.

We were assured that fiddles for the forward-facing electric range and oven were being fabricated as we spoke, but it surprised us the opportunity to gimbale the entire stove had not been taken. Owen defended the fixed, athwartships installation based on his experience in the BT Global Challenge during which thousands of meals were prepared successfully. He also argued that the space for gimbaling was difficult to find.

None of the work surfaces had adequate fiddles – again we were told that fiddles set outboard from the worktop edge were on their way. This boat is still a work in progress.

Working cockpit

With a full complement of 12, it's hard to see how everyone could fit easily into the cockpit, but that's an unlikely scenario. In fact the 'bench seat' running across the transom could accommodate at least six and there are two excellent, well-protected 'off-watch' webbing seats (to avoid water accumulation) nestling beneath the superstructure overhang. The bench seat, incidentally, doubles as a passarelle.

The steering positions provide an excellent view forward down either side of the deck saloon superstructure. There are some additions to come – foot chocks, a platform to provide the helmsperson with even more elevation and heavy duty netting across the open-ended cockpit to improve security.

An essential bit of kit for high latitudes cruising includes a really robust tender. The yacht's main RIB will be stowed in the enormous stern garage accessed via the hydraulically operated stern door. The opening extends right to the waterline and care will be needed when using this in anything other than flat water.

Line drums, for secure, multi-warp mooring to shore in tight anchorages, are essential and these will be fitted either side of the mast and beneath the stern bench seat mentioned earlier.

Anchor handling is key

Although the bow of the yacht was the last feature on our deck tour it was, according to Owen, the starting point for the entire design. "If you don't get your anchor specification and handling right in high latitudes you've



Right forward is a cavernous forepeak in which sails and the plethora of specialist high latitudes cruising and climbing gear will be stowed

had it," he said. Gigantic bow rollers hold two oversized 70kg Rocna anchors connected to 100m of oversized 14mm chain handled by two oversized Lewmar windlasses.

"You have to remember that you can pick up kelp weighing as much as an anchor on your ground tackle so you must be prepared to lift much more than the anchor weight," Owen explained.

A remarkably handy yacht

We'd opted for a reef in the main in a northerly breeze blowing in the teens. With around 20 knots over the deck at times, Qilak settled into a nice groove upwind while we got used to the cockpit and trimming controls. On the wheel in these flat water, upwind conditions she felt totally controllable, tracking well and virtually sailing herself. We had to short tack into Southampton Water and she proved to be remarkably handy.

First impressions suggested an easy to sail, fast and manoeuvrable yacht. She feels lively and rewarding to sail and it will be interesting to see how she behaves in big waves. I expect she has every chance of meeting the passage making targets her owner has set for her and provide a comfortable, safe platform for high latitudes adventure. ■

For details of Qilak's expeditions and how to contact the organisation go to www.qilak.com and www.antarcticicepilot.com

DIMENSIONS	
LOA	20.38m
LWL	19.75m
Beam	6.13m
AVS at MLDC (max loaded displacement condition)	13"
Maximum operating displacement (at MLDC)	51.7 tonnes
Design	Owen Clarke Design www.owenclarkedesign.com
Builder	KM Yacht Builders www.kmy.nl

