

Design in association with



Attention to the detail

Axel de Beaufort marks the completion of sea trials for Nacira's latest 67-footer by revisiting an age-old question...

What is a modern, fast cruising sloop?

However much we may think we know the answer, we need to check in against the best contemporary long-distance racing designs before we can really know for certain. Watch a decent Imoca 60 or Volvo 70 powering downwind at high speed and I would be surprised if you are not quickly having your doubts... Performance anywhere close to this level is still virtually unknown in a cruising design, despite the many annoying claims to the contrary.

Our own 'answer' to the question, the Nacira 67, is, we believe, an honest attempt to at least close the gap. We are not there yet, but by accepting guidance and advice from some of the real experts in this field we are convinced a good step has been taken.

The Nacira 67 *Shamlor* is a custom luxury cruising sloop. The brief was to combine the naval architecture and technologies of the Open classes with a generous helping of aesthetics-oriented luxury design. Fortunately there were to be no rating considerations at all.

The result is a 'reasonably' light-displacement wide-planing hull shape (the maximum beam of 6m occurs just forward of the transom), a twin-rudder steering system, a canting keel with a single self-orienting forward daggerboard, plus a single-spreader rotating wing mast with carbon standing rigging supporting a sail plan not dissimilar to a current Imoca 60. A final green touch is provided by an interesting eco energy management system using a pair of hydrogenerators from La Rochelle specialists Watt & Sea.

To stay faithful to our Open class performance framework, from the concept stage onward we felt it essential to involve some of the same key people who would be found in a top Imoca programme. Michel Kermarec, who we have worked with before, is an expert in cutting-edge aero and hydrodynamic solutions, making him an obvious choice. We were fortunate that we needed Michel at a quiet time... just before Oracle grabbed him back for their AC72 programme.

With Michel's help we delved deeply into the issues of power, balance and equilibrium that needed to be expertly



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resolved if we were to meet the twin goals of a boat capable of high average speeds but also reasonably easy to manage. A good twin-rudder system makes these powerful boats a lot more controllable, but if you don't get the basics right then you will never be completely happy with your boat (and the power consumption of your pilots will go through the roof).

This was a project that required constant evaluations of where to pitch 'the compromise'. For example, we knew that twin-daggerboards would be more efficient but against that were the more complex manoeuvres and the additional demands on interior volume. So a choice was made to opt for a single lifting board but one that 'gybes' automatically upwind to a preset angle of attack – like a giant

505 dinghy! Meanwhile, the board's angle of attack can also be wound back to zero when close-reaching at higher speeds.

Using our previous 60-footer, *Solune*, we had already evaluated this foil solution against a conventional board plus trim tab at full scale; *Shamlor's* gybing board arrangement comes out well ahead.

The choice of a wing mast was taken for two main reasons. The first is the aerodynamic benefit – particularly substantial when you wish to incorporate the increased structural safety factor advisable in a cruising design. The second reason was a much simpler standing rigging solution, which appealed to the owner on both engineering and aesthetic grounds.

Taking the simplicity theme to its conclusion we also attempted a mast without



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After an extended building programme caused in large part by the constantly evolving specification, the Dream 67 *Shamlor* eventually slipped into the water late last year at builder Maxi Dolphin's Brescia yard. The boat features plenty of discretely packaged race technology, including light Karver headsail furlers (*left*) driven via endless Dyneema loops from the powerful electric winches aft – much lighter than electrical furlers. A big single-spreader Lorima rotating wing mast, a powerful sailplan, plenty of form stability from the wide hull plus a canting keel are more than enough reasons for extra crew to be added when *Shamlor* starts racing this summer. And a boom (*lower right*) fit for bathing!

any spreaders at all... but sadly issues of compression eventually overwhelmed us. Our other main consultant on this project, Michel Desjoyeaux, was also clear that the no-spreader concept was something to avoid – even if our mast builder seemed to have complete confidence in the concept!

The project managers for *Shamlor* had originally proposed to the owner that Mich Desjoyeaux and his company Mer Agitée would be ideal to involve in a programme like this – it was a good decision. During the boat's creation there was steady valuable input from the Mer Agitée team of Michel, Denis Juhel and Antoine Carpentier into specific areas such as sail handling and management of the daggerboard system, as well as into the general discussions around the design itself.

I have known Michel for many years, but I was nevertheless still very impressed with his readiness to share his hard-earned experience from countless experiments into creating faster sailboats and finding better ways to handle them – while all the time reducing risk. The Mer Agitée involvement was an enormous plus in terms of the finished yacht.

So what are the distinguishing features of *Shamlor* compared with the best of the rest in terms of modern fast cruising designs at around this size?

Shamlor's canting keel is less unusual for a boat like this than it would have been even two or three years ago. Similarly the wide, planing hull shape, which was also seen, for example, on the nice Verdier-designed 54-footer launched for JP Dick last year. Compared to such contemporaries, one thing that does stand out is *Shamlor's* very large and powerful sail plan, with a mainsail that needs the first

reef at 15kt true upwind – the flipside, of course, is stunning offwind performance.

The weight management during the *Shamlor* build was also rather intense for a cruising design. I'm not speaking here about the main structure – today most high-end fast cruisers feature a high-tech build with plentiful use of the best materials. Instead, we are focusing on the accommodation concept and construction and the many service systems that are still needed to ensure comfortable use.

The build featured great attention to detail in areas that are often overlooked or taken for granted. For example, we undertook a separate optimisation programme specifically for the boat's insulation, similar to any other key area of weight sensitivity; this resulted in a saving of more than 1,000kg between the initial insulation proposal and the final installation (around 6% of the finished displacement!).

As on a raceboat, every component that went into *Shamlor* was carefully weighed against a weight study – numerous items being returned for modification or occasionally replacement. Interior furniture was all constructed using honeycomb core with the thinnest practical timber veneer. We even used a fabric solution for interior enclosures in place of normal doors.

In the final analysis *Shamlor's* onboard systems account for a little under 18% of the total dry displacement... a remarkably low value, as any boatbuilder will confirm for such a comfortable boat.

The owner also played a big part in this successful result, while we were careful to challenge him in any area where we felt that weight could be saved without compromising comfort; for example, a boat like this must have good air-conditioning



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but, by having outlets only where they are really useful, the weight of the whole installation can be drastically reduced.

On deck, modern race practice was rigorously adhered to. Loops replace shackles throughout, with Olivier Cusin from Trip Line again having been involved from the start. And where there was the odd question about longterm reliability in such areas, we simply turned to Monsieur Desjoyeaux for the casting vote!

Typical of the nice solutions found are the furlers for the two foresails; in place of the usual heavy electrical furlers, there are two lightweight Karver racing furlers, with endless Dyneema loops around the boat driven by the big automatic winches aft... This saved another 300kg against the 'standard' solution.

Shamlor eventually went afloat (rather late, we must admit!) right on the target displacement of 18 tonnes – not bad for a powerful 67-footer that is fully equipped for world cruising. During the owner's first sail on his new yacht we regularly exceeded 20kt... while the off-watch was enjoying hot showers and warm beds.

To be continued.

Axel de Beaufort, Nacira Design

