



Rapido Trimarans

relocates production arm in Vietnam

Rapido 60 trimaran, *Ineffable*.

Established in 2014, the internationally owned and managed Rapido Trimarans earlier this year relocated its production arm, Triac Composites, from one district of HCMC (Vietnam), to another. The new state of the art factory on the river has direct water access to the oceans of the world. This enables Triac to launch its Rapido 60 ocean-cruising trimaran at the factory and to undertake outsourced projects including the building of large production and custom boats.

The Rapido 60 was dubbed the *Queen of the Oceans* by the owner of *Ineffable*, Steve Bourne, after crossing the Atlantic Ocean at the end of last year. Steve is well known in the Hong Kong and South East Asian sailing scene having raced a Magic for many years and helmed boats like the hot IRC Category Zero Freefire.

Separately, after a quick, comfortable, crossing of the notorious Tasman Sea, the owners of the Rapido 60, *Romanza*, delighted in telling a story of a day's sailing back in New Zealand. It started with breakfast in the Auckland Gulf on Great Barrier Island. They then sailed 30nm to Kawau Island for lunch before sailing another 25 nm to the famous wine making island of Waiheke for dinner! All of this before dark. What other cruising boat can deliver this kind of performance, and in comfort?

Clearly, there was a successful formula working with the Rapido 60.

However, one prospective customer from Majorca insisted that he wanted a 50' with foldable floats so that he could berth it in local marinas. Many marinas in the Med were designed and built for the monohull era, which

is rapidly dying and being replaced by the multihulls era, so having a multihull that can shrink its width by over 50 per cent with ease and speed either at the marina entrance or inside, is truly advantageous.

Rapido Trimarans' co founder and highly experienced folding trimaran builder, Paul Koch, embraced the challenge with enthusiasm.

After consulting with Rapido's naval architect, Pete Melvin, from award-winning designers, Morelli & Melvin, the result is a world class, innovative, and now patented folding mechanism designed so that the floats remain, at all times, in the upright position. This keeps the sides clean of algae and barnacles when folded. Additionally, the folding mechanism does not add to the length of the boat (marinas charge by overall length of the boat) and as the boat's width becomes that of a monohull when folded, there are no additional marina charges, that can range from 50-100 per cent, for being a multihull.

Very importantly, when folded, the boat maintains an extremely high degree of stability.

The first Rapido 50 will be launched in Q1, 2019.

Koch was also approached by other sailors who have come from performance monohull backgrounds. They were now looking at multihulls in the 40' range but found most cats in this range were boring, floating houseboats that lacked that real sailing feeling. The outcome is that Morelli & Melvin are now designing a folding Rapido 40 with C curved dagger boards on the floats which will give more lift enabling the boat to be driven harder. The

Rapido 40 will be priced from under \$400,000 with the first delivery due in Q1, 2019. Sailing Anarchy stated 'This (Rapido 40) might be the best looking multihull we've seen in a long time.'

Performance and Safety

When designing the RAPIDO range, safety considerations were paramount to ensure that the crew are always in control for fast, safe, fun sailing. Construction is infused carbon/vinylester laminates on closed-cell PVC cores. Pre-preg carbon is utilized for the high-strength parts such as the cross beams (which are cured in the autoclave) and the chainplates and bulkheads. Vinylester is used in the hull and deck laminates. It has better adhesion and compatibility with the gelcoat finish compared with epoxy laminates, which are used in the structural elements of the boat. There are numerous water bulkheads or bulkheads with through fittings above the water line and on the Rapido 60 and Rapido 50 the large very accessible engine room is self contained and water tight with auto fire suppression.

Construction meets ISO/CE standards and with CE Category A certification.

One of the key differentiating features of Rapido's range of trimarans is the ability to power up and sail when the other 99 per cent stand still. It also enables one to power away from bad weather systems, which can be critical for the safety of the crew and the boat. The boats are set up for shorthanded sailing with centralized systems, Karver reefing hooks, self tacking furling jib, furling reacher and stay sails.

On a windy tight beat, the Rapido 60's performance is amazing, with racing monohull angles (thanks in part to the deep pre-preg carbon autoclave cured daggerboard) and speeds of 17kts, while at reaching angles the boat far exceeds windspeed with exhilarating acceleration. There is a sweet spot between 18 and 23 knots where the boat simply purrs with one finger on the wheel. Even at 27kts the feeling of absolute control, comfort and security is most apparent. It was noted by Rapido's crew in the King's Cup a couple of years ago that racing past TP52s on a tight beat in a cruising trimaran gave them all a slightly perverse sense of sheer joy - particularly when the TP crew were hanging out over the rail and they were lounging on the floats and nets!

'At 10 tons in racing mode and up to two tons more when fully equipped and provisioned, the Rapido 60 is a perfect platform for long-distance and ocean cruising,' says Koch. 'The

Rapido 50 is also suitable for this kind of cruising, while the Rapido 40 is designed for more regional use.'

For ratios of length, beam and displacement, trimarans generally offer greater sail-carrying power and higher performance than equivalent sized catamarans. Because all the elements of the propulsion, electrical and plumbing systems are contained in one hull and not spread across two, there is also less weight to drag through the water and the centre hull's design can be more forgiving in trim variation than with most cats.

Trimarans are more stable and more sea kindly than monohulls and catamarans. They do not have the slamming and fore-and-aft pitching of cats or the terrible 30 degrees-plus heeling of monohulls. Centralising all heavy equipment in the centre of the main hull, as Rapido does, contributes immensely to comfortable, stable movement through the water.

Rapido enters the power cat market

Rapido Trimarans has now diversified into power catamarans. Without a hint of irony, Koch explains that sailing in a straight line from trimarans to power cats is not crazy at all.

"For 30 years, I have been building lightweight, performance sailing boats from composites. While trimarans are niche, the power cat market is growing strongly - but with big, heavy boats that require equally big, thirsty engines.

"With Rapido's expertise and capability, and design by Dr Albert Nazarov of Albatross Marine Design (AMD), we can easily make power catamarans that deliver superior performance and fuel economy."

Rapido's range of catamarans presently comes in two sizes: 12m (Commercial) and 17m. The 17m version comes in both a Commercial and Owner's configuration.

The RC12 has been designed for both the tourism industry (including resorts) and as a fun

Rapido 60 trimaran, Romanza.





Rapido 40 rendering.



Rapido Catamaran, RC17, Exterior View.

party boat. It can also be used as a water taxi commuter vessel. AMD won the European Product Design Gold Award for their 10m variation of this water taxi.

Dr Nazarov says that the priority has been to design an affordable, light, airy and spacious boat that is safe, comfortable, practical and easy to maintain. The RC12 is highly efficient and offers environmentally friendly options of hybrid or electric propulsion with solar energy. The design also takes into consideration low wave and low noise to minimize negative impacts in operating areas.

Dr Nazarov also notes that catamarans feature 30-50 per cent lower vertical accelerations and shocks compared to monohull craft of similar size. The RC12 design further ensures passengers enjoy a very comfortable stable motion at speeds of up to 15-20kts (depending on the propulsion system selected).

The RC12 is at home operating in the choppy conditions of estuaries, harbors and major rivers where there is a lot of traffic. In addition, the vessel is highly maneuverable in tight areas due to wide separation of the propulsion units.

The design shows a care about people with disabilities, so boarding of passengers has also been designed for wheelchair users. There are designated wheelchair zones, with adjacent seats for accompanying persons.

Safety is paramount and the boat complies to ISO Small Craft Standards for Category C and can be built to specific National regulations as required. The structure is composite sandwich with carbon reinforcements.

The RC17 (Commercial) was designed with the highest degree of versatility in mind with modular plug in/out seating. In summary, this vessel was designed for commercial operators wishing to maximise their return on investment.

Possible market segments include:

commuter, day charter, sunset cruises, up market lunches and dinners (eg for five-star resorts with aft deck having tables, sofas etc), party / disco boat, corporate events (incl. team building), dive boat, fishing trips etc.

The RC17's ability to effortlessly beach with reinforced bottoms and protected props as well as bow retractable steps is sure to win it a lot of friends.

The RC17 (Owner's) version is ideal and very comfortable for 20 guests. It offers robust elegance with a very competitive price tag. Dr Nazarov has designed the boat for energy efficiency and sea comfort with bright, open, airy spaces for living including top deck, main deck with bow seating, saloon and aft deck and either three or four cabin layout and an optional second helm in the saloon. The boat is perfect for the tropics yet it can be enclosed for year-round, all-weather, comfort. Propulsion can be the base twin 300hp diesels with options up to twin 700hp diesels or hybrids or all electric.

Investing in the future

Rapido Trimarans is building multiple products which can require a lot of new tooling.

To support that process, they recently welcomed a new Kuka milling robot to their production arsenal (which already includes a clean room, CNC machine and an 8.5m autoclave). Koch, an Australian, says the robot, which has been nicknamed *KukaRoo*, has been a critical investment. "This machine", he says, "makes tooling up for production far quicker - and the final molds are incredibly accurate".

Koch adds that *KukaRoo* is generating wide interest in the industry and that they are actually receiving orders now to make molds for other companies. "Just send us a 3D drawing and we can build you a set of first class plugs, molds and/or components."

2020 promises to be a very exciting year with Rapido launching so many new products onto the market!

