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With the extraordinary record of winning one of the most competitive international yacht racing series - the 52 Super Series - every year since 2008, it was inevitable that yacht designers Botin Partners would

end up making their mark in the maxi fleets too. Here the Maxi 72 is the most professional and hard-fought class.

After four years of Judel/Vrolijk victories at the Rolex Maxi 72 World Championship, finally a Botin Partners design prevailed, with Dario Ferrari's *Cannonball* winning the Maxi 72 racing in 2019 and defending in 2021. Albeit known almost exclusively for their racers, at present Botin Partners have their first superyacht, a 111-footer, in build at

Baltic Yachts, while they focus on their main task: Winning the 37th America's Cup for Alinghi Red Bull Racing.

Marcelino Botin comes from the famous Spanish dynasty of bankers behind Banco Santander; in 2020 ranked the 16th largest bank in the world.

Fortunately there are enough Botin cousins to take care of the family firm. As he puts it: "There wasn't too much pressure [to become a

banker]. There are a lot of sailors in our family, so they were happy to have someone designing boats." These have included a Class40 for his brother Gonzalo, which was one of the most successful in the class over 2012-17. Botin's father Jaime owns the magnificent 64.5m three-masted schooner *Adix*.

Botin's family comes from the yachting hub of Santander on Spain's north coast where he grew up sailing Optimists, Lasers and big boats. From an early age he was more interested in the technicalities of boats: how they worked and what made them go fast. Botin went on to attend the famous Yacht and Small Craft design course at Southampton College of Technology (now Southampton Solent University) that has produced many of the world's top yacht designers.

After leaving Southampton in 1994, he and fellow graduate Shaun Carkeek set up Botin & Carkeek. Their first race boat was the 33-footer *Zuritel*. This did well on Spain's burgeoning IMS circuit, leading to bigger boat commissions. They were firmly put on the map when their 46-footer *Zurich* won Spain's all-important Copa del Rey in 1999. "And it wasn't the biggest boat in the fleet - traditionally bigger boats win on the Bay of Palma because the wind drops at the end of the day," Botin recalls.

When the King of Spain encouraged the maximum length limit of the IMS fleet to be enlarged, resulting in the birth of the IMS 500, it was Botin & Carkeek's 57ft designs that came to the fore. They won Copa del Rey over 2002-04, on the latter two occasions with their 57s - Vicente Tirado's *Caixa Galicia* and Stefano Spangaro's *Subaru X-Sport*. Their designs were also



Design powerhouse Marcelino Botin (left) and Adolfo Carrau, both now work full time with the Alinghi Red Bull Racing America's Cup challenge.



Botin initially made a name for himself and then partner Shaun Carkeek in the heyday of IMS. Their IMS 500 and 600 designs were put into production in Cantiere del Pardo's Grand Soleil range, with 42s, like the Vasco Vascotto-skippered Italtel (top left) and 56Rs, such as Stefano Spangaro's Subaru X-Sport (bottom left). In the mid-2000s they got off to a good start in the fledgling TP52 class, winning the first season with Pisco Sour (right), campaigned again by Vasco Vascotto. Photos: James Boyd/www.thedailysail.com

regular winners of IMS World Championships. At this time, Italian production builder Cantiere del Pardo had 42ft and 57ft Botin & Carkeek raceboats in its Grand Soleil range.

When IMS owners began moving into TP52s in 2005, Botin & Carkeek moved with them. The first Breitling MedCup season that year was won by their design, the Vasco Vascotto-skippered *Pisco Sour*. They repeated this success with *Quantum Racing* in the 2008 Audi MedCup.

#### **New era**

While Botin and Carkeek went their separate ways in 2010, Adolfo Carrau had joined the company in 2008 and has since become a partner.

Carrau comes from Uruguay, where Punta del Este and the capital Montevideo are active sailing centres opposite Buenos Aires, lying further up the River Plate. Argentina has a huge legacy in yacht design, with the Frers family at its centre, providing inspiration for subsequent generations, Carrau among them.

In Uruguay, Carrau was uniquely placed. Every two years during his youth the extraordinary fleets of either the Whitbread or the singlehanded BOC Challenge round the world races would stop in town – both the very cutting edge of offshore racing technology. Carrau was well-positioned to see them as his father was in charge of organising these stopovers on behalf of the Yacht Club Punta del Este. This provided huge inspiration to the young Adolfo, as he admits: “Since I was very small, I wanted to be a yacht designer.” He was also highly motivated and, before going to Southampton University to do a

Masters Degrees (his thesis was on VPPs), he had already completed a degree in mechanical engineering and had represented his country at the Sydney 2000 Olympic Games in the Laser. It was while in Southampton that he first encountered Botin, who was testing hull shapes in the University’s tank.

From there Carrau went on to work at the Frers office in Milan at a time when German ‘Mani’ Frers Jr. was with the design team of Victory Challenge, the Swedish entry in the 2007 America’s Cup. By coincidence, Botin was also working on his first America’s Cup campaign next door in Valencia at Emirates Team New Zealand.

Post-Valencia, Carrau signed on with Botin at a time when they were designing their first VO70 for Puma Ocean Racing Team (and later Team New Zealand’s *Camper*, which finished second in the 2011-12 Volvo Ocean Race).

So began the first of two abbreviated Cup campaigns for them. Both Botin and Carrau moved to Auckland to work on Emirates Team New Zealand’s AC90 design, in preparation for the 33rd America’s Cup, before the Alinghi-Oracle fiasco caused the event to descend into a Deed of Gift match to their exclusion. However, their continued work for the team produced what both regard as their finest ‘development’ boat, the Emirates Team New Zealand TP52.

As Botin describes it: “Compared to our previous generation of TP52s, the differences were pretty remarkable - the hull was narrow in the waterplane upright, but when heeled it was producing 10% more righting moment due to how the topsides were

curved to give [more] righting moment. You had a boat that was narrow and fast downwind, and powerful upwind - something more related to offshore boats that we got right for inshore, windward-leeward boats.” Emirates Team New Zealand’s TP52 crushed the opposition in 2009, winning on 128.5 points to *Quantum Racing’s* 202.5, and repeated their success the following season.

Of today’s 52s, Botin observes: “Boats that win the 52 Super Series are the ones that win in all conditions: light airs, in waves and in breeze.”

Botin Partners designs have become top boats in the other fleets too, with, for example Marco Seafini’s TP52 *Xio* winning the 2021 ORC Europeans in Capri or their Phoenix 44 design winning the Brazil ORC championship. However, as Carrau acknowledges: “Once you start working with the best teams, results start coming.”

Botin Partners designs have also won the Rolex Fastnet, Sydney Hobart, and Middle Sea Races, in addition to the RORC Caribbean 600, Transpac, ORC Worlds, IRC Worlds, Voiles de Saint-Tropez, Hamilton Island Race Week, NYYC Annual Regatta, Japan Cup and many others.

#### **Maxis**

While Botin Partners had designed two 65ft maxis, *Caro* and *High Spirits*, that shared the same hull shape but with different deck and interior layouts, these were largely Mediterranean cruisers, although *Caro’s* owner Maximilian Klink did start to race his boat enthusiastically in races across the globe, before downsizing to a Botin Partners 52.

*Incredibly, Botin Partners dominated the Audi MedCup and then the 52 Super Series, winning every year since 2008. Their latest winner in 2021 was Takashi Okura’s Sled. Photo: Nico Martinez/52 Super Series*





Aside from their VO70s, their first racing maxi was something of a compromise. After Karl Kwok's Farr 80 *Beau Geste* suffered severe structural failure during a gale in the 2012 Auckland to Noumea Race, Botin Partners were called in to design a replacement - a canting keel 80-footer (the Farr had been lift keel), but with the proviso that the rig and deck gear were used from the old boat. To accommodate this, they designed the lightest boat for the maximum given righting moment permitted by the rig spec, with the new *Beau Geste* weighing in at just 16.5 tonnes. Sadly, this made for a bumpy ride and the boat was sold to an American owner. It is currently back in Australia and competed in last year's Rolex Sydney Hobart, in fresh pink livery, as *Stefan*.

It was after their second America's Cup campaign was canned in 2015 by Luna Rossa's team principal Patrizio Bertelli, that Botin Partners started work on their first racing maxi. This came about as a result of their long relationship with Italian tactician Vasco Vascotto, which had started with the Grand Soleil 42 *Italtel* and their first TP52 *Pisco Sour*. Vascotto was now racing with Roberto Tomasini Grinover on the Maxi 72 *Robertissima* (ex *Ràn II*). As Carrau recalls: "We were working for Luna Rossa and, when we work for America's Cup teams, we usually don't take on any extra projects because it takes up a lot of time. We were telling Vasco he had to wait, but literally 10 minutes after Luna Rossa closed, he called us and said 'no excuses - you are going to design our Maxi 72!'"

Halfway through the build of the boat at Premier Composite Technologies in Dubai, she changed

owner, having been acquired by Dario Ferrari and renamed *Cannonball*.

In terms of the design, the Maxi 72 allowed much greater freedom than the more constrained TP52, and enabled significant development. For example, *Cannonball* is the first 'inshore' Maxi 72. As Carrau explains: "They never had any intention to do any coastal or offshore races, which is what allowed us to do that bow and deck shape and low freeboard."

Thus weight could be saved from her structure, making her, at the time, the lightest of the Maxi 72s with the tallest rig. Much of the aero development work they had been investigating with Luna Rossa was put to good use with *Cannonball*. Her foredeck has a significant chamfer which removes and physically lowers weight from the bow with extra aero benefits. Botin explains: "It was interesting to see how the air flowed over the bow, and how we could improve the aerodynamics of the jib and the interaction with the main and jib. There were some interesting gains there that the boat benefits from - but it does look a bit strange. Not all the owners like it."

Launched in 2017, *Cannonball* had a development year before winning her class at the Maxi Yacht Rolex Cup in 2019. She successfully defended her title when it was next contested in 2021, despite not having been sailed in the interim.

*Cannonball* was followed by another Botin Partners design, launched for the 2019 season, in Hap Fauth's latest *Bella Mente*. Significantly, she is conceived to have some coastal racing capability (although she is unlikely to race the Caribbean 600 again) and,

according to Botin, much research went into developing her hull shape. Thus she has 250mm more draft and, at the time of writing, was some 500kg lighter than other maxis - continuing the trend towards lightness and power. Following the pandemic and key crew having been tied up with the American Magic America's Cup campaign, 2022 is expected to be the year *Bella Mente* fully gets up to speed.

Botin Partners' latest racing maxi is *Deep Blue* for Wendy Schmidt. This is 85ft long, which, size-wise, appears to be a 'No Man's Land' in the maxi world, but was the conclusion they came to having spent much time researching the design brief - to win races under corrected time. Carrau explains: "The plan was for a fixed keel boat and the 7m draft dictated the length of the boat. Going beyond that - to a canting keel and daggerboards, etc, we didn't think it was the right thing for Wendy." *Deep Blue* is fitted with a lifting keel. While not in her programme at present, *Deep Blue* has the structure and set-up so that she could be raced offshore.

As with the 52s, Botin says their approach, once again, is to create a maxi yacht with strong all-round performance. They also like designs which are easy to sail and, especially, to steer, due to the owner-driver requirement of the maxi classes. "Much depends upon the experience and ability of the person helming. The most important thing is that the boat is properly balanced and easy to helm with a wide groove. It is not so much the size of the rudder, but a question of having a boat with, and is efficient over, a wide groove. That is something we do across all classes and is perhaps one of our trademarks."

*Botin Partners' have duplicated their TP52 success in the Maxi 72s with Dario Ferrari's Cannonball (left) winning the class at the last two Maxi Yacht Rolex Cups and with Hap Fauth's more recent Bella Mente (right) expected to be a star performer this season.*  
Photo: ROLEX/Studio Borlenghi

To demonstrate this, Carrau points out that many of their TP52 designs, after their 52 Super Series careers are over, have ended up racing under IRC or ORC with amateur teams and yet still remain competitive.

### America's Cup

While they were not involved in the 33rd and 34th America's Cups, both were on the design team (Botin as Principal Designer, Carrau as Design Co-Ordinator) for the New York Yacht Club's American Magic challenge in Auckland, backed by Hap Fauth (see p28). They were the most promising of the challengers until a cruel nosedive destroyed their boat and, ultimately, their chances.

Now they hold similar roles with Alinghi Red Bull Racing, Carrau's job being especially taxing - having

to pull in all the parts of the design, from the rig, the hull, the foils, and the control systems, via the different departments such as VPP, aero, hydro, engineering, composites, etc.

Not widely recognised is how being an America's Cup team designer is much the same as undertaking a perpetual PhD. In no other area in yachting is so much resource thrown at making a sophisticated racing yacht go fast. As Botin emphasises: "Designing boats is becoming more and more a technological endeavour. There is no way a design office that is not involved in the America's Cup can keep up with the technological developments."

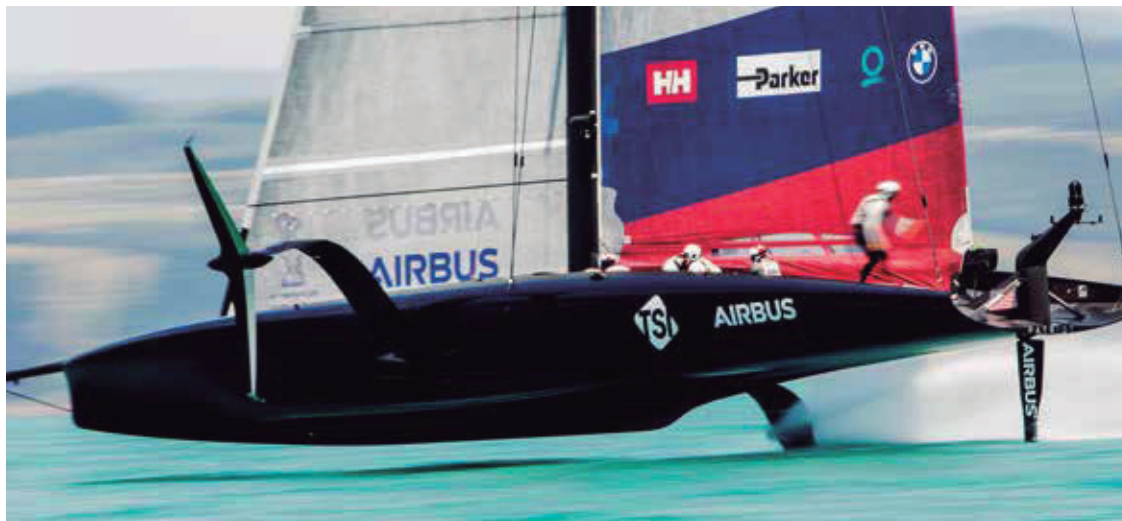
He cites the computing power available to an America's Cup team being something like 10x more

powerful than the already sophisticated tools they have in their own office in Santander. "The development we do in the America's Cup - like simulations and VPPs, and all sorts of tools for optimising different aspects of the design - you wouldn't be able to do unless you are in an America's Cup team."

But computers aren't everything. As Botin states: "The reality is that you can develop hull shapes and appendages to the nth degree, but there are still lots of things that need to be developed on the water by sailmakers and sailors. You can't model everything on the computer." Some 'black art' is still involved in a sport that involves the double media of air and water, and this is especially apparent when developing sails. "The subjective part is still important. The 'art' of sailing is still there, although we are closing the gap, especially in the America's Cup," he continues.

Already we are seeing foiling trickle down into different areas of the sailing market, with some owners eager to experience their exceptional speeds. But with this comes the potential for great discomfort, and it seems unlikely that such sailing will be for everyone. "It is hard to anticipate," says Botin of where this may end up. "At some point foils will be more common, maybe not full foiling as we do in the America's Cup, but getting some of their benefits. Right now, we are only at the start of this process and to keep a foiling boat up and running you need 110 people. But we'll get there. Things are getting simpler and we are achieving the same thing with more reliable systems."

We look forward to seeing how *Bella Mente* and *Deep Blue* get on in 2022.



Botin and Carrau were integral to the design team of the NYYC's American Magic America's Cup challenger in Auckland. Their AC75 was the most promising challenger in the 36th America's Cup before a nosedive and capsize effectively put her out of the running.

Photo: Sailing Energy/American Magic

Opposite: Wendy Schmidt's 85ft pure racer Deep Blue is Botin Partners latest maxi yacht to launch.

Photo: IMA/Studio Borlenghi





