



Nico Martinez / www.studiomartinez.es

2015 generation (TP)52

Santi Lange gives us a tour of Eduardo de Souza Ramos' Botin & Partners designed Phoenix

Wednesday August 6th 2014, Author: [James Boyd](#), Location: [Spain](#)

As [previously reported](#) on the daily sail, yacht racing's premier monohull fleet racing class, the (TP)52, is back on the ascent with between six and ten new boats in build, or shortly to be in build, for a mix of existing and new teams, ready for next season when a set of rule changes effectively 'turboing' the boats comes into effect.

Surprisingly the first 52 built to the 2015 rule has already been launched and is racing on the circuit this year, but with corrector weights to level out its performance against the older generation boats. *Phoenix* is being campaigned by the class' first Brazilian owner, Eduardo de Souza Ramos, who represented Brazil in the Star at the 1980 and 1984 Olympic Games and in the intervening years has campaigned a Botin & Carkeek IMS 46 and a Soto 40.

The new Phoenix is a Botin & Partners design, built by King Marine close to Valencia and was launched this spring ready for the 2014 52 Super Series.

While *Phoenix's* crew is largely Brazilian, tactician on board is Argentinian two time Olympic Tornado bronze medallist Santi Lange. Since leaving Artemis Racing, where he worked for the 34th AC, Lange has this season been taking time out of his program coaching his 49er sailor sons and his own Nacra 17 campaign to sail on the 52 fleet's latest addition.

[Email](#)
[Print](#)
[Twitter](#)
[Facebook](#)
[LinkedIn](#)
[Stumble](#)
[Digg](#)

Tags

[Azzurra](#)
[Phoenix](#)
[TP52](#)
[Eduardo de Souza Ramos](#)
[Santi Lange](#)
[Nico Martinez](#)

Latest news!

[SAP 505 World Championship 2014 preview](#)
 10/08/2014

[Sevenstar Round Britain and Ireland 2014 start postponed](#)
 10/08/2014

[Copa del Rey Mapfre 2014 final report](#)
 09/08/2014

[Aquece Rio – International Sailing Regatta 2014 final report](#)
 09/08/2014

[52 Super Series Copa del Rey Mapfre 2014 final report](#)

09/08/2014



2015 generation 52
Eduardo de Souza
Ramos Phoenix
[Read more](#)

Andrew McDougall
interview [Read more](#)

2014 Moth Worlds
preview [Read more](#)

Nacra 17 Europeans
2014 day 6 report
[Read more](#)

Luna Rossa's
Francesco Bruni on
the 35th America's
Cup [Read more](#)



Once upon a time we used to see wholesale differences between new 52s, but today this requires a keener eye. According to Lange, *Phoenix* is a development of *Azzurra*, the last Botin & Partners 52 design to be launched (read more about her [here](#)). Compared to *Azzurra*, the new boat's hull shape has slightly more stability to improve downwind boat speed – although under the 2015 rules, boats are allowed 150mm more draft to make up for the stability loss incurred due to the boats' displacement being reduced by 200kg.

Otherwise the principle improvements with the *Phoenix's* hull over *Azzurra's* have been in optimising her structure. Tasked with achieving this was former Emirates Team New Zealand structures expert Giovanni Belgrano of PURE Design & Engineering.

The aims structurally when conceiving a new 52 are to make the boat as stiff as possible and ensuring weight is as far as possible located

in the centre of the boat (there is a maximum bulb weight, so weight saved in the hull can't be slapped on the bulb) and is as far down as possible to lower vertical centre of gravity (all within what is permitted within the 52 rule). At the same time the structure and build spec has to be approved by Germanischer Lloyd.

"We are very happy with what we got from King Marine," says Lange. "Since we started sailing we've had no issues at all. It is very well built, it came out on time and was very tidy. All in all we received an excellent package from everyone involved."



A development with newer 52 rigs, like the Southern Spars mast fitted to *Phoenix*, is the fitting of deflectors. For those unfamiliar with these, a deflector is a line protruding from the upper reaches of the mast that attaches via a block to the backstay near its top. This is used to change how high up the backstay 'attaches' to the mast. With deflectors eased, the backstays extend to the masthead, for use when masthead kites and headsails are hoisted, but when sailing upwind under fraction jibs, the deflectors are cranked up, in turn pulling the backstays into the mast lower down, level with the forestay attachment point.

Lange explains: "The deflector gives us a lot more control and modes on the mast. We don't need to play so much with the rake and the shims down below, so we have a lot more flexibility. And we can adjust it during racing. We are learning how to use it, but it seems to work very well. And it allows you to have a better tube [for the mast] – you can use carbon more efficiently and it is a lighter solution compared to when you are hanging the backstay from the top of the rig.

"I think that will be a big development for next year for people doing new boats. It is a very good tool, because it gives you more options to change gears."

Phoenix's tube is made from high modulus carbon (as permitted under the 52 rules) and held in place with Southern's EC6 composite standing rigging, the change to carbon rigging significantly reducing weight aloft. The shrouds terminate at chain plates hidden below deck. Overall Lange says he's impressed with the rig set-up: "Since we pinned it, it has all remained in line and we haven't needed to adjust it at all. For me it is the best rig I've ever used. I was really impressed how well balanced it is and how easy it is to trim it, even though we are still learning how to use the deflectors."

Elsewhere in the 52 fleet the Turkish 52 *Provezza* has been fitted for this season with a new mast from Future Fibres.

Up forward *Phoenix*, like all the boats racing this season, has a longer bowsprit, which has been extended by 70cm compared to last season's versions.



The forestay is #35, fractionally larger than on *Azzurra*, which Lange says means that they can crank up a little more on the runner and for next season the forestay will be changed for a composite one (as the rest of the new boats will have). The forestay is adjustable with a floating Cunningham system on a purchase. Earlier this season the boat was fitted with Tuff Luff headstay foil, but the team was looking to replace this is a new product developed by Gorilla Rigging in Newport, RI, already being used on *Azzurra*. According to the manufacturer: 'The Gorilla Foil is a single groove, Cuben sleeve headfoil system for Grand prix race boats in the 40-60ft range. The current system is good for a 06mm luff tape, with a 7mm system for the Mini Maxi in development... The Cuben fibre sleeves are custom made to your HS length and width with Gatorback Kevlar added for chafe protection on the lower end. End caps are PTFE hard coat anodized 6061 AL, and the extrusion is polycarbonate plastic.'

A foredeck hatch is fitted for the now ubiquitous string drops that allow kites to be sucked below in a matter of seconds. The drop line for the kites disappears down the hatch, round the underside of a large (hatch width-sized), very very smooth Harken roller, mounted below the aft end of the hatch. It then runs back down the port side of the boat's interior to the transom and then directly forward to the below deck spool onto which the drop line is reeled. While on some 52s this winch is driven from the front pedestal, on *Phoenix* it is driven by the aft one. Because the drop line goes down the port side, the foredeck hatch is moulded slightly skewed so that its aft end is more to port.



Phoenix has the same low windage jib track system as recent Botin & Partners 52s, with the track itself mounted below deck and a narrow slot in the deck, through which the ring for the sheet protrudes. As usual the ring's position can be adjusted vertically and laterally, however the width of the slot is tiny and located impossibly close to the mast, allowing a headsail sheeting angle as small as 4°. Because the sheeting angle is potentially so tiny, the primary winches are mounted on small extensions in the cockpit sidedecks, closer to the boat's centreline.

There is an additional outboard ring system that is used for the jib when sailing downwind. Downwind in more than 16 knots, when the jib

remains hoisted inside the kite, a separate sheet is clipped on to it enabling it to be trimmed from the back of the boat.

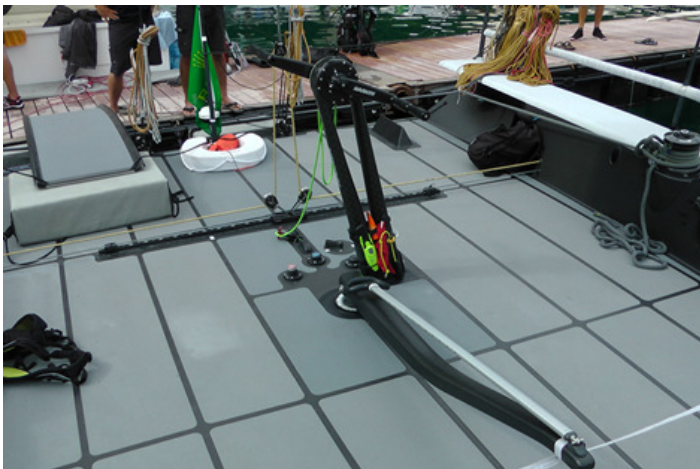
Unlike 52s of old, *Phoenix* has no cabin top, giving the boat a generally sleeker look. This will be a feature of next year's boat, possible thanks to the minimum interior headroom restriction being written out in the latest iteration of the class rule – a smart move as it is safe to say that these boat will never be used for cruising...



However *Phoenix* continues the trend of minimising windage in the pit area. Thus the deck immediately aft of the mast slopes down, with the main hatch – accessed to the companionway step are from above – offset to port and with the pit area to starboard. The minimal pit has a single ceramic coated winch while the release lines for the halyard locks are mounted in the cockpit side below. To the left of them is a continuous line system for winding up or releasing the staysail furler, the drum for which is, of course, mounted below deck forward.

The cockpit features two Harken 'Air' pedestals, developed originally for the America's Cup and designed with cutouts in their centres to minimise windage. *Phoenix* is the first 52 to fit this cool looking equipment. Mounted athwartships (as the 'Air' is designed to be), one is fitted immediately aft of the pit, the other aft immediately aft and slightly offset from the rudder stock, as is now standard on 52s.

In addition to the winches and the take-down line, the pedestals can also drive a rotary hydraulic pump, which specifically powers the rams used for adjusting mast rake and cranking in the deflectors. According to Lange, on *Phoenix* the aft pedestal is the busiest, particularly during bottom mark roundings when the grinders have to go from deflector to the spinnaker take-down line to the mainsheet.



The control line for the traveller is neatly integrated into the rack acting as foot support for the helmsman and trimmer, while the Cunningham and outhaul lines protrude through the cockpit sole beneath this. Other random lines protruding from the cockpit side within reach of the main trimmer include the release lines for the rams controlling rake and the deflectors. Then there is the control for the spinnaker sheet tidying system - *Phoenix* is fitted with the latest Lou

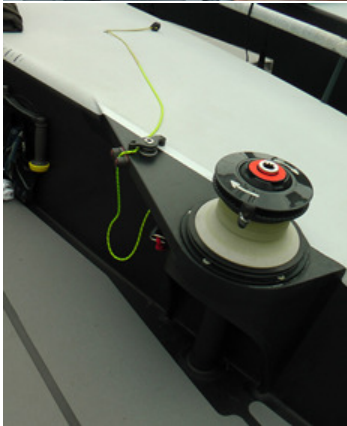
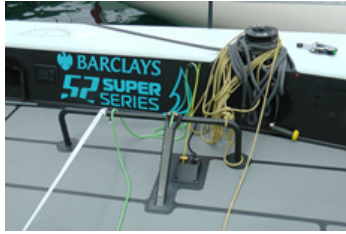
Varney 'Reeler' which, with a couple of pulls, sucks the sheet ends down below in a matter of seconds (more of this [here](#)).

If this is the first example of a 'turboed' 2015 generation 52, then racing next year looks set to be as close but faster, but it will be interesting to see with so many new boats under construction if there are any innovations with the bigger ticket items design-wise. Class Manager Rob Weiland has said that having just two designers active in the class at present – Botin & Partners and Judel-Vrolijk – is stifling progress and most believe that all the new boats launched for next season, will have small developments, rather than wholesale ones. As Jan Klingmüller, *Ran Racing's* Boat Captain puts it: "The class has existed for so many years, that there have been a lot of developments over the years, so what we are going to see for next year is fine refinements in little areas. I don't think you will see big changes. I think the hull shapes will be closer to what we see from the Botin boats."

As the halcyon days of the mid-2000s are now behind us, when the keenest owners would build a new boat each season and when some early generation boats, purpose-built solely to win the MedCup, were notoriously 'flimsy', today 52s must be built to Germanischer Lloyd. With this and design development having slowed up greatly, modern day 52s have much greater longevity and remain competitive for substantially longer. Because of this, designing new 52s has also required a change, as Jan Klingmüller observes: "You want to have a good all-round boat, because events are going to change so you can't optimise the boat to certain events, as we used to on the MedCup when we used to do wind studies, etc."

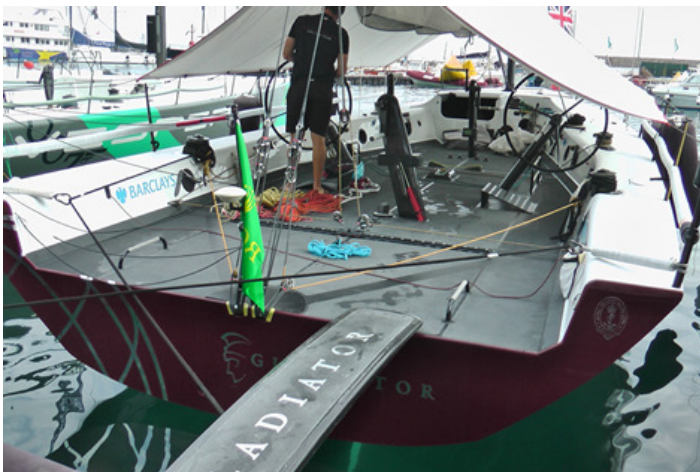
Saying that, the boats are optimised for competing inshore in the Mediterranean, so this typically means being sailing in 5-15 knots rather than 15-25. Also, with the turboing of the boats and the change to composite rigging they are also getting closer to where some of the IRC-ed 52s are currently, such as the boats that have come over to Europe from the States. This means that they will have more chance of a life post-52 Super Series along with maintaining a far better resale value. In short all very smart moves by the class.

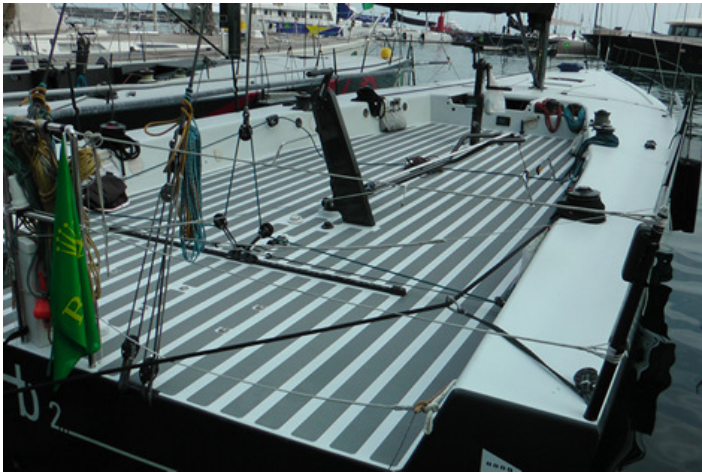






And the others...







Latest Comments

[Add a comment - Members log in](#)

[Back to top](#)



[Back to top](#)