

Little stormer

Designer Nicolas Goldenberg has been quietly pursuing his mission to create a major family of Mini 6.5 designs in South America...

RG650

After the success of our proto 650 we were approached for some more ideas to promote the Mini class in South America. After initial enquiries I soon found myself sitting down with Santiago Zizzi, owner of the Riotecna yard, which builds the famous Lange range of racing dinghies. Santiago has always had a personal interest in short-handed sailing and the idea of a new production Mini Transat quickly drew his attention.

Riotecna's one-design experience is ideal for this project as the company is used to dealing with class requirements and maintaining strict weight and quality control. The RG650 hull will be built by Lange in polyester and glass as stipulated by class production rules, with sandwich used in the deck. The vessel will be built with SP-Gurit materials to ensure quality and longevity.

Hull design

As is now typical, the RG650 is a powerful reaching design, with a high sail area to displacement ratio. The key decision was whether to follow the latest trend of chined hulls or to keep a more classical rounded shape. This decision was not just a matter of looks or fashion, we needed to support our thoughts with research and analysis. To do so we have developed 10 complete hull designs, including both classic and chine shapes. We then carefully compared the critical aspects such as wetted surface area, form stability, drag and finally velocity predictions.

The result (as we expected) showed a clear advantage for the chine hulls off the wind. The next stage was to move into detailed refinement of the candidate chine hulls, focusing on the position of the chine and its influence on performance, stability and heeled waterline. We spent many hours comparing results and looking into drag predictions and VPP comparisons to achieve what we believe to be an excellent hull shape; the final result being a clean, quite flat hull with relatively straight rocker and chines running along the final third of the hull.

Rig

The sail plan has been developed to match the powerful hull lines. The class allows the use of rotating bowsprits (up to 2.4m in extension) and there is no restriction regarding the area of the sails, only the number (a maximum of nine, including storm jib and trysail), all within a maximum air draft. Our final sail plan features a 27m² square-top mainsail, a 14m² jib and a generous maximum downwind sail area of 112m².

In the production class the spars are limited to aluminium with a minimum section weight of 2.1kg/m. Our mast and standing rigging will be supplied by Z-Spars, whose rigs have achieved some of the best results in the recent history of the class.

Appendages

Class rules state that draft must not exceed 1.6m and the keel blade must be in cast iron or steel with lead permitted in the bulb. Because of these limits it is important to create a good structural arrangement for the fin as weight saved there can be added to the bulb; our structure was developed in-house using our own FEA tools. We have elected to go for a T-bulb keel with a



What will stand out the most about this tidy new series Mini 6.5? The price... at €33,000 ex-sails, delivered to Europe, the RG650 may prove to be a tempting proposition for 6.5 class newcomers

smooth torpedo-shaped bulb that features low drag plus low CG for maximum stability. The keel can be easily removed for road transport. The boat is fitted with twin kick-up rudders.

Deck layout... and aesthetics

For us aesthetics are a key feature: everyone likes a hot-looking boat. But for a hardcore racer things must be kept simple and they must work. The RG650 features:

- Clean lines – both hull and deck
- Simple and light hatch system
- Curved main traveller for efficiency
- Transverse jib controls

Good reliable gear is a must on these boats. We have chosen Harken winches, Spinlock stoppers and Wichard pad eyes. In our search for weight reduction, simplicity and reliability we have also chosen Karver as block supplier – the RG650 is the only series Mini currently offering a full Karver fit-out as standard.

Price

The complete boat will be available in Europe for just 33,000 euros ex-tax, to include all hardware, running rigging, shipping cradle and hull pads (useful for trailing). This price also includes shipping to the EU. Two agents have already been appointed: North American Mini Transat in the US and Fastsailing in Holland.

Our first boat will be launched in May, with a further two already sold. A demo boat arrives in the EU in late summer.

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Mast mounted Class 40 halyard system