Modern, modern, modern

Designer Giovanni Ceccarelli introduces the NEO 400

Being invited to work with the new brand of Neo Yachts is like a breath of fresh air for us. With a practical but contemporary vision of the boat they wanted and led by top sailor – and sailmaker – Paolo Semeraro, Neo offered us the chance to try to do something special for the mid-size ORCi and IRC market. The new company’s ambition was to create the perfect stylish but dual-purpose modern yacht.

The finished design is visually eye-catching, comfortable, dry and safe for offshore cruising, but at the same time will be fully competitive under both the (steadily converging) ORCi and IRC rules. A lifting bulb keel (which does not require hydraulics) allows draft to be reduced from 2.6m to 1.6m, allowing greatly improved shallow water access when cruising. The deep and very high aspect carbon rudder is also retractable for the same reason.

The hull was created by the same group who worked with me on ACC design for the +39 team in 2007, making extensive use of CFD plus FEA for structural verification. The shape of the final hull flowed from our choice of bow profile, with plenty of volume forward visually disguised by a concave and nicely rounded sheer.

The new boat is strikingly modern, with its reverse raked bow, concave sheerline and the maximum beam carried all the way to the transom – where we were nevertheless careful to minimise transom drag in light air and also take care of the changes to ORCi following the ORC’s 2012 study on transom effects.

Displacement choice is critical at this size and we settled upon 4,600kg (lightship) as being a good compromise for both the ORCi and IRC system, with 2,400kg (52%) in the deep bulb keel. The combination of generous stability and a large sailplan, with plenty of headwall area, will ensure easy sailing with good average speeds in all conditions when cruising as well as racing.

The boat is built in female moulds using carbon pre preg in the hull and deck to ensure maximum mechanical stability. Wherever possible, the primary structure doubles up as an active part of a commodious modern interior. Nice finishing details include all of the stanchions plus pushpits and pulpit being supplied in carbon as standard.

One thing ORCi has encouraged is some stylish new designs for Italian skippers who – rightly in our view – think things should look nice as well as go fast. The NEO 400 fits the trend perfectly!

Neo yachts will be offering a choice of interior layout, though most clients are expected to opt for the 3-cabin solution with aft sea berths. The first boat is under construction in South Italy with the aim of being ready for the 2013 ORCi worlds in Ancona.

The predicted ORC gph is 530 sec/mile and the preliminary IRC TCC 1.185.

Giovanni Ceccarelli, Ceccarelli Yacht Design