

PRIME NUMBER

*SAILSetc Marblehead
development of ROK (the 2000 design),
revised to pre-preg construction 2006*

design development

Experience with ROK showed that we needed to place the mast further aft than the position of the fin permitted. To get the balance of rig, fin and ballast correct on ROK we have to cut away the top of the fin more than we like to do and the centre of gravity of the ballast is further aft on the fin than we prefer. These compromises, while not spoiling the performance of the boat, are not ideal in a racing machine so we revised the hull lines in order to be able to place these items as we wanted.

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The boat looks very similar to ROK and this is hardly surprising. The rocker line is slightly different and the stern is a little narrower at deck level.

As with its immediate predecessors, the foredeck incorporates attachments for the jib boom swivels. Rigging the boat is straightforward. The A rig is a conventional A rig as an alternative to a swing rig; the other rigs are intended to be shroudless conventional rigs (page 9 of catalogue).

Overall beam is around 185 mm and the design ballast weight is 3.6 kgs.

performance

The prototype was launched a few weeks before the 2002 Ravenna world championship and confirmed that speed and handling were much as expected. The world championship was sailed in mostly A rig conditions and, in spite of some mediocre tactical sailing, a plastic bag on the keel when near the front of A fleet, and some unwelcome team sailing, PRIME NUMBER

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finished just 4 points behind the leader at the end having led for a brief period in the middle stages.

The boat was rigged with a conventional A rig supported by shrouds/spreaders and the lower rigs were of a new pocket luff design that has proved to eliminate the wrinkles and asymmetry normally associated with panelled pocket luff sails. These, combined with the boat's ability in a breeze, give marvellous performance when the breeze is up.

The prototype, fitted with the first of the 2003 design of keel that we now use, won a tightly contested national championship at Birkenhead. A sister ship, without the new fin, placed 4th.

The first of the hulls built using pre-preg carbon was used at the 2006 world championship by Croatian Zvonko Jelacic. It was the first time Zvonko had sailed a Marblehead but he placed a very creditable 3rd, tying on points with a ROK sailed by fellow Croatian Ante Kovacevic.

foils & ballast

In early 2003 we tested a new fin section and found it to be a marked improvement on previous designs. We revised the fin again in 2004 when another small improvement seemed possible. All new boats are fitted with the newest fin.

The ballast is the longer and thinner design we have used since 1998.

rigs

Rigs from PARADOX, STRAD and ROK can be used with minor modification. If you want to order new rigs or rig kits please see our Rig Specification and Rig Order Form.

specification and prices

Please see the our Marblehead Boat Specification and Boat Order Form.

ordering and payment

You can specify the boat you want by completing the Boat Order Form.

Confirm your order by sending us your copy of the Boat Order Form. This provides us with confirmation of what you have ordered. The specification of your boat can be altered at any time up to production time by submitting a revised Boat Order Form.

We have to buy the hulls in batches of 5 and we do not always have hulls in stock ready for us to work on. It may be a while before we order another batch of hulls so our normal practice is to

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take a £50 payment on submission of your Boat Order Form. This reserves your boat from the next batch.

If you are unsure of the final specification details it is worth getting in the queue and deciding the details later.

When we have the hulls here and start work on your boat we will normally take 50% of the total cost and the remainder including carriage when the boat is ready to send.

delivery

Please ask for current estimate of delivery date.

background

In late 2005 we experimented with a Marblehead hull made for us from pre-preg carbon baked at 70 degrees C using an existing mould. The result was very encouraging and we have continued to explore this method of making hulls. In fact, except for our IOMs, all our boats are made this way now.

The pre-preg hulls have several advantages. They are stronger, stiffer, heat resistant and longer lasting hulls, with the possibility of supplying hull mouldings and hull kits almost 'from stock' and more time available for us to carry out other work. One side effect (possibly good, possibly not so good) is that the natural carbon and clear resin produces a black hull thus requiring the hull to be painted/sprayed if you want any other colour.

Ideally parts made of pre-preg carbon are cured at 100 degrees C or more. To do that we had to make new mould. Because we had to make a new mould we also took the opportunity to make the hull in a different way that would enable the primary hull moulding to be made with all the deck structure, as well as a number of other useful features, all in one. By the end of 2006 we had also modified the moulds to enable the fin box and mast tube to be moulded as part of the primary hull moulding.

construction

The mould is in two parts: the hull and the deck. This permits many features to be incorporated into the deck that are not possible with moulds split on the centreline. For example a recess in front of the mast allows the headsail sheet fairleads to be fitted flush with the deck instead of above the surrounding deck. A recess in the foredeck permits the attachments for the headsail boom swivel to be below deck level and keeps the headsail boom as low as possible to the deck.

The fin box and mast tube is also be incorporated into the primary hull moulding guaranteeing repeatability and symmetry of these important elements.

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A recess for a pot (containing the receiver and batteries) at deck level is also incorporated into the primary hull moulding and all boats will be completed this way. Since 2006 we have developed a universal moulding (item 311p) for installing the winch and rudder servo. Any winch can be installed using this moulding but we think the RMG 280 most suitable for the purpose.

PRIME NUMBER also features the attachments for the new snap in/out rigging screws (item 31s). These are a quick and simple-to-attach rigging screw that create no snag points whether on or off the boat, and which can be adjusted in situ. If using our rigs we imagine they would be used only for the A rig. The lower rigs will be stiff enough without the use of shrouds.

See the Specification for fuller details.

rigging

PRIME NUMBER is intended to be used with conventional (shroudless or with shrouds) rigs rather than with swing rigs. See page 9 of catalogue for kits.

Choose a maximum height A rig with a mainsail luff of 2150 mm. Performance at all higher wind speeds will be superb. For those who sail regularly in winds above 8 knots the standard ballast weight of 3.6 kgs will be best.

If you sail in predominantly lighter winds a ballast reduction from 3.6 kgs to 3.3 kgs would enhance performance at the lower end of the wind speed spectrum.

The attachment for the headsail boom of lower rigs is by way of the headsail boom swivel, item 120d.

If you want to order rigs please see our Rig Specification and Rig Order Form.

end

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