Merf Owen on Designing the M65

The M65 production (series) mini-transat design is built and marketed in North America by The Mini Store (TMS), a company formed in 2004 to bring the Mini to the North American market. The boat was built to the highest standards, using the latest production techniques including the hull, deck and other tooling being milled from the solid using the latest CNC cutting technology. Owen Clarke Design produced the complete design in a 3 dimensional format to suit this build method.

The yacht itself was over twelve months in conception and is a natural progression to Owen Clarke Design's previous work and involvement in the mini class. The program of hull development and vpp analysis we have just completed has resulted in the yacht specifications attached below. Fundamental to this work has been the series of tank testing we undertook two years ago in co-operation with Ian Campbell of the Wolfson Unit, Southampton University for the Open 60 Ecover. With new models, this testing period built on the knowledge gained during previous tank testing on the Kingfisher and Hexagon programs. In this latest series of tests one of the areas we were specifically investigating was the relationship between chines, close to the static waterplane (as opposed to higher up the hull surface) and the resulting increase in static and sailing righting moment with respect to drag. It should be borne in mind that every class and rule is different in its treatment of beam, draft, sail area and displacement for instance. IRC in particular leads to the design of relatively short rigs, heavy and narrow boats that are at the opposite end to the Open Class fleet and therefore the approach and results of any work is likely to be somewhat different.

Nevertheless, Owen Clarke entered the design phase with an 'open mind' as it were and even looked at some rather unlikely candidates to test the water and to be absolutely sure we weren't missing a trick. This included some of the narrower hull derivations we looked at during our Volvo 70 and TP 52 work with Clay Oliver. Our initial desire was to 'break' the cycle of maximum beam designs in the mini class, especially since the production boat rules do not allow water ballast, canting keel and has no ten degree rule. We were in fact able to produce a design at 2.8 meters that we believe was overall faster than any of the 3 meter wide mini hull forms we'd used or seen before. Inexorably however with more time we were able to surpass those and the final hull derivation at 3 meters represents we feel the highest performance all round hull that we can develop at the moment for this fixed keel rule.

Notably as with the route we finally developed with our Open 60 Ecover we have opted for an even harder turn of bilge, flatter topsides and powerful aft sections, but without the marked detail of a chine low down at the turn of the bilge that can be seen on some other boats. In the end 'minis' have a high sail area to displacement ratio with greater speed potential than their equivalent size 'sports boat cousins'. Without the brake of any rating rule being applied to them they are hungry for righting moment to offset their impressive sailplans that see them fully powered up at relatively low wind speeds. Added to that, once heeled and tracking on the leeward of their twin rudders the wetted surface area and waterline beam diminishes quickly and the heeled waterlines take on a clear sweet form. Like it or not, these fat little boats with large sail areas are quick, yet well balanced and highly controllable, just like their longer, world girdling Open 60 cousins.