Most unexpected

Many of us quietly expected the new Farr 11 to be a revamp of the all-carbon but otherwise relatively conventional Farr 36 embryo one-design. Wrong! What appeared at the Annapolis Boat Show can best be described as a 36ft Volvo Open 70…

Clouds of sail and a plethora of the most modern appendages – only the raked stem looks traditional. But it is there for good reason, and with no length limit to worry about, why not?

Design 613 originated in a brief from a Farr 36 One Design owner who wanted an inshore racer with sufficient freeboard for coastal races, a very fast keelboat for its size (35-38ft) to be crewed by no more than six or seven intermediate-level sailors.

With this in mind, the design would therefore require substantial horsepower for light airs, while also retaining the ease of handling necessary to be controllable when the breeze comes on. For coastal racing Category 3 safety standards would have to be met, including stability and fit-out requirements. Finally, the boat would have to be built to a sensible price, but be uncompromising on performance (note the projected IRC rating of 1.303!).

To meet these requirements the design features a canting keel with twin asymmetric canards and twin retractable rudders on a hull with high form stability. This combination has been previously explored in FYD's research work for Open 60s, Volvo 70s and the 30m *Leopard 3*. But unlike on these larger boats, side loads on the forward foils will be sufficiently small to retract manually, making tacking and gybing faster and easier.

The keel is canted using a single hydraulic cylinder driven by an electro-hydraulic pump powered by a dedicated battery bank. This bank is sized to allow approximately 100 cycles on a single charge, with a time from side to side of approximately 10 seconds. This system fits well with the concept of a lightweight day-racing boat, with the capability for short-distance racing. For longer distances the addition of a second battery and/or a charging system would increase the number of canting cycles. The keel can also be automatically returned to centreline in the event of loss of battery power. VPP work indicates typical upwind heel angles of approximately 15 degrees.

Unusually, the Farr 11 features a rakes stem. The plumb stem angles that are more currently typical are a product of fashion that has aligned itself with today's box rule racer. But, when unconstrained by rules, designers are free to look for advantages in alternative concepts. With this boat two things prompted a more angled stem: first the desire to tack a removable masthead light genoa forward of the forestay; when sizing this sail the resulting foot length positioned its tack well forward of the forestay requiring some form of structure. The structure could have been provided by means of a fixed bowsprit, but FYD consider that a section of extended bow slope can also provide useful added volume and flare to the topsides forward. This geometry in turn creates additional reserve buoyancy in the bow, a benefit in waves and high-speed running conditions when nosediving is a concern. When discussing these possibilities with the client it was decided to pursue the less fashionable but perhaps more technically correct solution.

The rig is developed from a skiff-rig concept with highly swept spreaders and no backstay, allowing easy tacking and gybing of the large square-headed mainsail. The concept should provide some automatic depowering, and minimise demands on the crew during manoeuvres, leaving hands available for keel and canard manipulation and sail handling. The retractable bowsprit further stretches the sailplan to allow generous asymmetric spinnakers.

Construction is of carbon skins over honeycomb core sandwich. The keel fin is also carbon with a 1,090kg lead bulb for an overall displacement of just 2,400kg. Motoring power comes from a 15hp outboard that retracts into a well beneath the cockpit.

The boat is being built by Premier Composite Technologies in Dubai who have several ongoing orders with hulls 2 and 3 scheduled for delivery in early 2008. Base price for the boat is US$300,000.

Dobbs Davis ❑