

THE DELFT 25

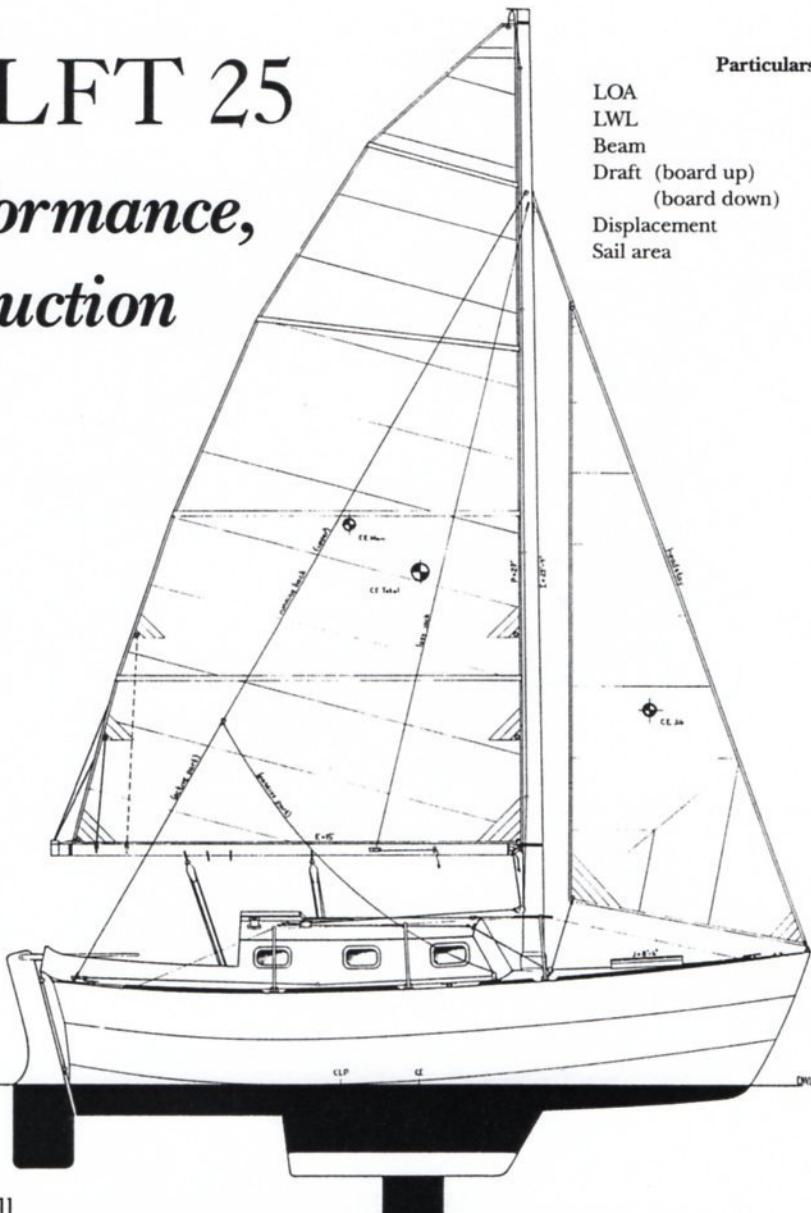
*Spirited performance,
simple construction*

Design by
Eric Sponberg
Commentary by
Robert W. Stephens

There's been much lamenting in the yachting press in recent years about the decline in interest in sailing—as evidenced by a decline in sales of new sailboats. Considerable attention has been paid to expanding the industry's marketing efforts to recapture middle-income families discouraged by the high cost and complexity of owning a sailboat.

Here's a boat that should pull more than a few would-be sailing families back into the fold. Designer Eric Sponberg has combined simple construction, roomy accommodations, trailerability, safety, and spirited performance in this 25' package—a fairly tall order. Let's look at how he's done it.

Sponberg has been careful to keep the construction of the Delft 25 simple enough for almost any amateur carpenter to tackle at home. It's a hybrid of conventional plywood construction and stitch-and-glue techniques, combining the best features of each and avoiding the aspects that can cause difficulty for the inexperienced.



As in conventional plywood construction, frames and bulkheads are set up on reasonably close spacing to define the multi-chine hull shape. This avoids the free-form aspect of stitch-and-glue building, where panels are stitched together in mid-air, and constant vigilance is required to avoid building in a twist or two. Frames are sawn out from $\frac{3}{4}$ " marine plywood, 3" deep, to make them rigid enough to serve as molds. After planking is completed, the frames are trimmed to $1\frac{1}{2}$ " deep, to remove weight and increase interior room.

Stringers are half-notched into the

frames 1" below each chine. Placing them here rather than at the chines means that no beveling is required—the stringers are simply installed normal to the straight line of the frame. An "I-beam" section keel runs down the centerline, split by the daggerboard trunk.

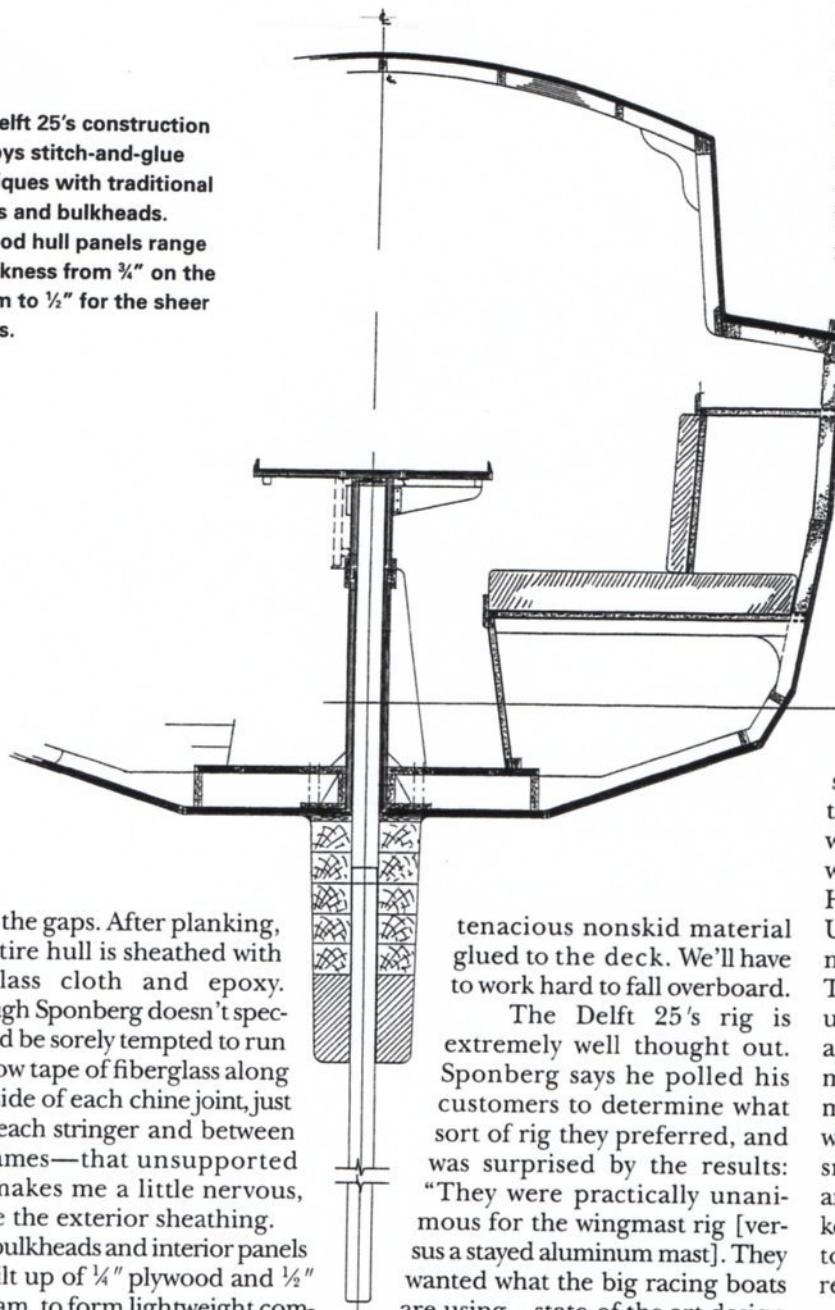
Planking is double layers of marine plywood, glued together with staggered butts over the frames and stringers, and ranging in thickness from $\frac{1}{2}$ " (two layers of $\frac{1}{4}$ ") at the sheer to $\frac{3}{4}$ " (two layers of $\frac{3}{8}$ ") in the bottom. Plank panels are roughly fit at the chine joints as in stitch-and-glue construction, with thickened epoxy

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The Delft 25's construction employs stitch-and-glue techniques with traditional frames and bulkheads. Plywood hull panels range in thickness from $\frac{3}{8}$ " on the bottom to $\frac{1}{2}$ " for the sheer strakes.



filling the gaps. After planking, the entire hull is sheathed with fiberglass cloth and epoxy. Although Sponberg doesn't specify it, I'd be sorely tempted to run a narrow tape of fiberglass along the inside of each chine joint, just above each strainer and between the frames—that unsupported joint makes me a little nervous, despite the exterior sheathing.

All bulkheads and interior panels are built up of $\frac{1}{4}$ " plywood and $\frac{1}{2}$ " PVC foam, to form lightweight composite panels of impressive stiffness—and significant buoyancy in the event of a hull puncture. To further ensure positive flotation, Sponberg has called for the interior of the hull and deck to be lined with $1\frac{1}{2}$ " PVC foam panels glued in place. He suggests that these can be covered with decorative fabric or thin wooden ceiling strips.

The theme of safety is continued on deck. The self-bailing cockpit is deep and secure, and all sail-control lines lead there, so there's no need to venture out on deck. Even so, the designer has provided us with reasonably wide side decks, lifelines, and

tenacious nonskid material glued to the deck. We'll have to work hard to fall overboard.

The Delft 25's rig is extremely well thought out. Sponberg says he polled his customers to determine what sort of rig they preferred, and was surprised by the results: "They were practically unanimous for the wingmast rig [versus a stayed aluminum mast]. They wanted what the big racing boats are using—state-of-the-art design and sailing efficiency." Sponberg is well known among the rotating-spar crowd, but this is a somewhat unusual application of that technology to a monohull, an application that is overdue, I think. The aerodynamic advantage of an elliptical section rotated to align with the streamlines over the sail, combined with the elimination of standing rigging and spreader windage, is significant. In addition, a strongly engineered freestanding spar is safer than one that depends on a multitude of wires to hold it up.

The sail plan shows a relatively low-aspect mainsail with a substantial roach, promising lots of power

without the high heeling force of loftier rigs. Though the rig looks somewhat small, the sail area/displacement ratio of 17.5 indicates plenty of area to drive this moderately light boat. The only standing rigging is a headstay to support the jib. Its forward pull is resisted by a pair of running backstays, keeping the jib luff taut and restraining the mast from pumping in rough conditions. None of these is required to support the spruce/carbon-fiber wingmast, which is strong enough to stand on its own. The mast, like the boat, is designed to be easy for the amateur builder to make. It rotates on a simple graphite/epoxy bearing in the deck and a trailer-hitch ball in a wood-and-Delrin socket on the keel.

The multi-chine hull form clearly has been designed for easy amateur construction, but hasn't sacrificed much performance. In fact, were we to ignore the upper strake of planking, and allow our eyes to blur the chines slightly, her lines would look much more like a lightweight raceboat than a family cruiser. Her plumb ends, long waterline, and U-shaped bow sections are all hallmarks of the modern fast sailboat. The additional freeboard of that upper strake, while it doesn't help her appearance, adds reserve stability, and makes all the difference in the accommodations. Her moderate draft of 3' with daggerboard up will allow her to sneak easily into shoal anchorages and onto a trailer, and her foil-shaped keel will, I suspect, keep her going well to windward even with the board retracted neatly into the cabin table.

I'm not sure how welcoming the industry pundits will be to the Delft 25—after all, they want to sell sailboats to families, not to sell the idea of building family boats. However, if families can be exposed to the enjoyment of building and sailing such an affordable, exciting, and safe boat as the Delft 25, the industry can't help but benefit.

Bob Stephens designs and builds boats at Brooklin Boat Yard, Brooklin, Maine, as well as under his own shingle. He lives in Blue Hill, Maine.

Plans from Eric Sponberg Yacht Design, Inc., P.O. Box 661, Newport, RI 02840.

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