

SYDNEY 40

DESIGN PARTICULARS :

Length Overall -----	12.5m (41')
Length on Waterline -----	10.75m (35'-3")
Beam on Deck -----	3.7m (12'-2")
Draft -----	2.68m (8'-9")
Displacement -----	5750kg (12680lb)
Sail Area -----	92 sq.m (990 sq.ft)

DESIGNERS COMMENTS:

At the outset of this project it was our clear intention to develop a state-of-the-art grand prix offshore, IMS racing yacht. The result is the Sydney 40, an exciting, high-performance, versatile boat and winner of the recent 2001 Transpac Race..

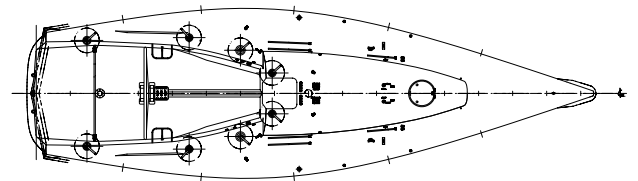
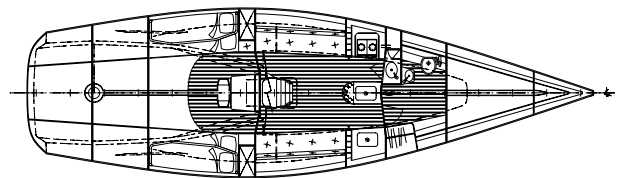
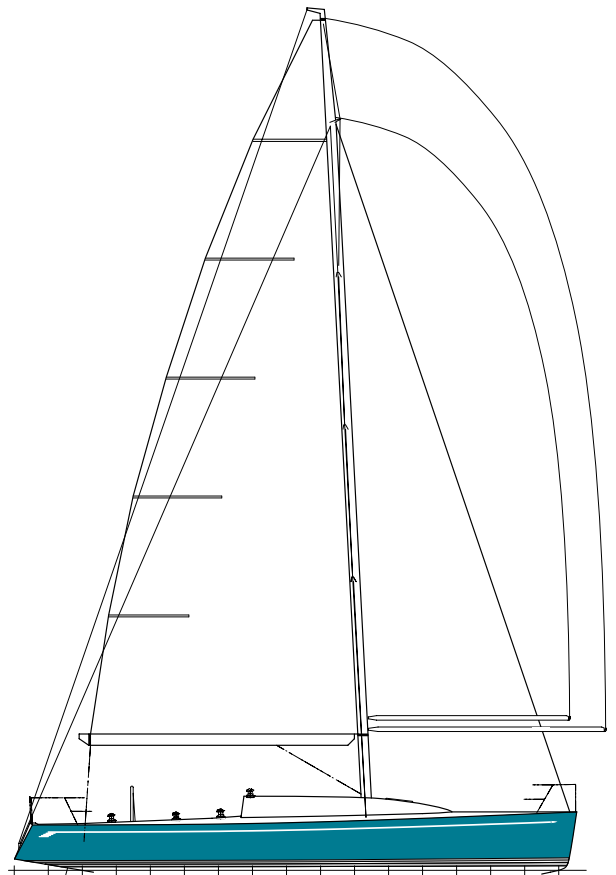
The length of 12.5 metres was chosen to set the boat right in the middle of the most active area in offshore racing today, the 40-ft band. This will give her plenty of competition in open IMS regattas and help keep the present fleets active. The displacement of the Sydney 40 (5,750 kg) is slightly of the heavy side for today's fleet. This makes the boat just a little safer at sea and also takes advantage of the slight swing of the 1998 IMS rule in favour of high displacement/length ratio hulls.

The hull form incorporates the result of our ongoing tank-testing program with the AME CRC. This series of experiments, now up to hull #12, has produced quantitative performance data for various hull parameters, both measured and unmeasured, giving us insight into the more timeless side of the performance for rating balance.

At 92 sq.m. the working sailplan is fairly typical for a modern IMS boat. In IMS configuration, she will carry 10% over length poles with symmetric kites to match, giving the boat 192 sq.m. of downwind sailplan. Construction will be primarily E-Glass in epoxy over foam, cured under vacuum. By using mainly unidirectional tapes and multiaxial 'fabrics', greater strength and stiffness are achieved. The rudderstock is a one-piece pressure-cured carbon moulding weighing in at 12 kg. The rudder blade is fabricated with carbon-fibre skins vacuumed over foam.

The rig is a very straightforward three spreader in-line fractional configuration. This arrangement is highly refined and has proven to be very versatile over the years and virtually unbeatable. CarbonTech will build the rig, including the single piece pressure blown female-tooled carbon mast tube, moulded using high temperature cure prepreg carbon tape. The boom will also be a carbon fibre fabrication.

Bull, the Sydney 40 that won the 2001 Transpac Race had a new keel (the original keel was targeted at IMS racing), similar to an America's Cup yacht's keel. The fin was cast in Nickel Aluminium Bronze and the discrete lead bulb is a very straightforward torpedo shape and bolted right to the bottom of the keel fin. This turbo-keel carries less wetted surface and generates significantly more righting moment than the original. So, the result is a boat that is lighter, stiffer and has less appendage drag.



The deck layout is a clean and simple grand prix arrangement. The steering will be built to owner's preference, either tiller or wheel. The large single wheel provides good ergonomics for the helmsman and plenty of purchase for heavy offshore conditions. The bridge deck at the transom is a bit of a throwback to the late IOR days and is included for safety offshore.

The interior has been kept 'race boat' simple and is designed for lightweight and offshore racing comfort. The settee-backs swing up from their normal position to form rigid bottom 'swing' cots; very functional storage bins are built into the backside of these berths. The navigation station is incorporated into the aft portion of the engine box just behind the companionway, providing a dry and highly functional site for today's computer-based navigation.

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