

SLEIGH RIDE

Sparkman & Stephens Design No. 2625

LOA 23.5 metres. 77' 3" LWL 21.59m 70' 10"

Beam 5.58m 18' 4" Draft 3.58m 11' 9" Displacement 32500 lbs. [water
10500lbs Lead 8570 lbs] Sail Area 2465 sq.ft 229 sq m.

Although Rod Stephens died recently and Olin Stephens retired from active participation in the firm that bears his name almost twenty years ago, Sparkman & Stephens continues to act as consultants and as Naval Engineers for the construction of super yachts and motor yachts. What is less known is that they are still very much at the cutting edge of high technology competitive sailing boat design. They are open to the commissioning of the most sophisticated new technology racing designs.

SLEIGH RIDE, an ultra-light, designed in 1996 for the Gosnal family without regard to any racing rules and built by Derektor-Goetz Yachts represents one of the most extreme designs that S. & S. have prepared. The drawings exhibited here clearly illustrate the technology and engineering capabilities which are required for a sophisticated, high speed design of this type. Every effort has been made to save weight and indeed the boat actually weighs *less* than an offshore S. & S. design of 47ft LOA of thirty years earlier when a high ballast / displacement ratio would have been 40%. SLEIGH RIDE carries combined ballast of 19000lbs on a displacement of 32500 lbs., a ratio of 60%! SLEIGH RIDE measures 23.5 meters overall, has a self tacking jib on titanium track with a hydraulically controlled ram for the traveller, hydraulic vang, retractable spinnaker pole which is quite unusually designed to fit into the centre line, flush when retracted, fully battened mainsail and carbon jibs [the boat only carries five sails] and an aerodynamic foil shaped flange keel with a torpedo shaped lead ballast bulb at its lower extremity. The stresses which this type of keel can impose on the hull structure require exceptionally careful engineering calculations. The greater bulk of the ballast is water [10500lbs] which is pumped by a 20hp diesel auxiliary into wing tanks.

The design brief for SLEIGH RIDE was so extreme that when she was launched, Lloyds initially declined to insure her offshore. Despite this, she has proved her ability offshore on passage from Boston to New York at high speed, literally flying through or almost over the water. This marvel of technology exceeded 23 knots on her first day out in Narragansett Bay and might well have gone much faster if she had not been carrying 25 people on board for the trial! SLEIGH RIDE is so efficient that she can manage 10.5 knots beating into 7 knots of true wind

The design is of particular interest as unlike many competition boats today, this yacht is intended to be handled by a family crew as a gigantic daysailer and so all main controls are servo assisted. Construction requires extensive use of sophisticated laminate resins and extensive use of pre-preg carbon fibre with the use of Hexcel arimid fibre and closed cell honeycomb foam for stiffening and end grain balsa coring. After lay-up the hull was baked at 100 degrees centigrade to ensure perfect curing of the resins. Carbon fibre and Nomex honeycomb was used for the structural bulkheads and similar arrangements were used for the interior furnishings with mahogany trims to save weight. The detailed drawing of the hydrodynamic balanced

foil rudder built of carbon fibre indicates just how sophisticated modern technology has become when compared to earlier designs like DORADE. The masts are also carbon fibre and the sails carbon/kevlar laminates, titanium is used for the deck hardware while stainless is reserved for the rigging, life rails etc. .

The accommodation plans show a huge comfortable open cockpit, an enormous pilot house saloon with 2 sofas, navigation area, tables and a step down into the central structure where there is an extensive galley and bathroom, one stateroom with 2 berths and 2 additional berths. The forward area of the boat is reserved for sail stowage.

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