

An 18'performance trailerable sport boat.

Specifications:		
LOA:	18'	5,50 m
LWL:	16' 11"	5 m
Max. Beam:	8'	2,44 m
Displacement at DWL:	1460 lbs	662 kg
Draft CB version: (up/down)	7" / 4' 7"	18 / 140 cm
Draft bulb keel version: (up/down)	18" / 5' 2"	45 / 160 cm
Hull weight:	520 lbs.	236 kg
Ballast (CB/keel)	400 / 365 lbs	180 / 165 kg
Sail area: (small/large main)	226 / 241 sq .ft.	21 / 22.4 m ²

Material:

Stitch and Glue composite

*Weight or displacement?*

Note that we show a hull weight and displacement. The hull weight is just that, the weight of the hull only. Our displacement is the weight of the complete boat with rigging, sails, outboard motor, gas tank half full, gear and crew. This is how a naval architect calculates displacement.

*Some designers list a displacement without crew and gear because it gives much better ratios when comparing boats. If you want to compare our SB18 to other boats, please use a **displacement of 1,000 lbs** which is the weight of the boat ready to sail but without gear and crew.*

Our second generation stitch and glue is the ideal material for a light and fast sport boat. The plywood cored epoxy-fiberglass composite panels are stronger and stiffer than a plain fiberglass skin and the construction of such a boat is within the reach of any amateur builder.

The 5 panel hull shape is easy to build. It has less wet area than a sharpie hull but still has the flat bottom ideal for good downwind performance and planing.



The powerful fractional rig is based on a keel stepped Al tapered spar, 7/8 rig with swept back single spreaders, no running or mast head backstays.. Spinnakers are set on a retractable pole.

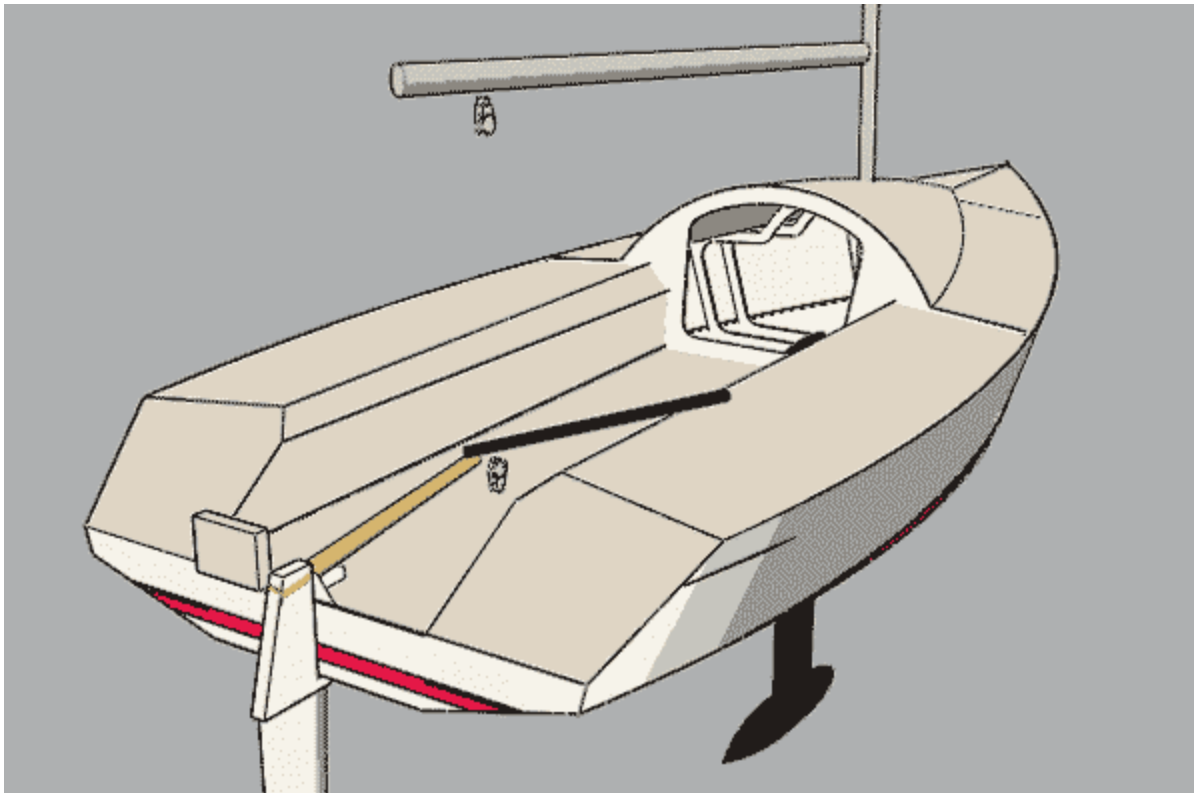
The preferred keel is the vertical drop keel with a 400 lb bulb on the end of the high aspect foil. It is lifted by a tackle made from the main sheet with an extra block. . Fully retracted, the bulb remains below the hull.

Spade rudder , fin bulb keel are described in detail with full size pattern for the bulb and keel fin

While this a Mertens-Goossens design, credit must be given to Evan Gatehouse for his collaboration. Evan designed the rig, appendages and did most of the engineering work. Without Evan, this design would still be an unfinished project.

Layout:

The cockpit is 110" (280 cm) long, giving plenty of space for working the boat.



The plans show an integral outboard bracket for a motor of 2 to 4 HP, 20" or longer shaft..

The inside is wide open except for the mast and keel trunk. The sole extends under the cockpit. There is plenty of space for two sleeping bags. The max, height under the small cuddy is 34", 19" under the deck. While this is far from the comfort of a cruising boat, there sufficient space to sleep two.

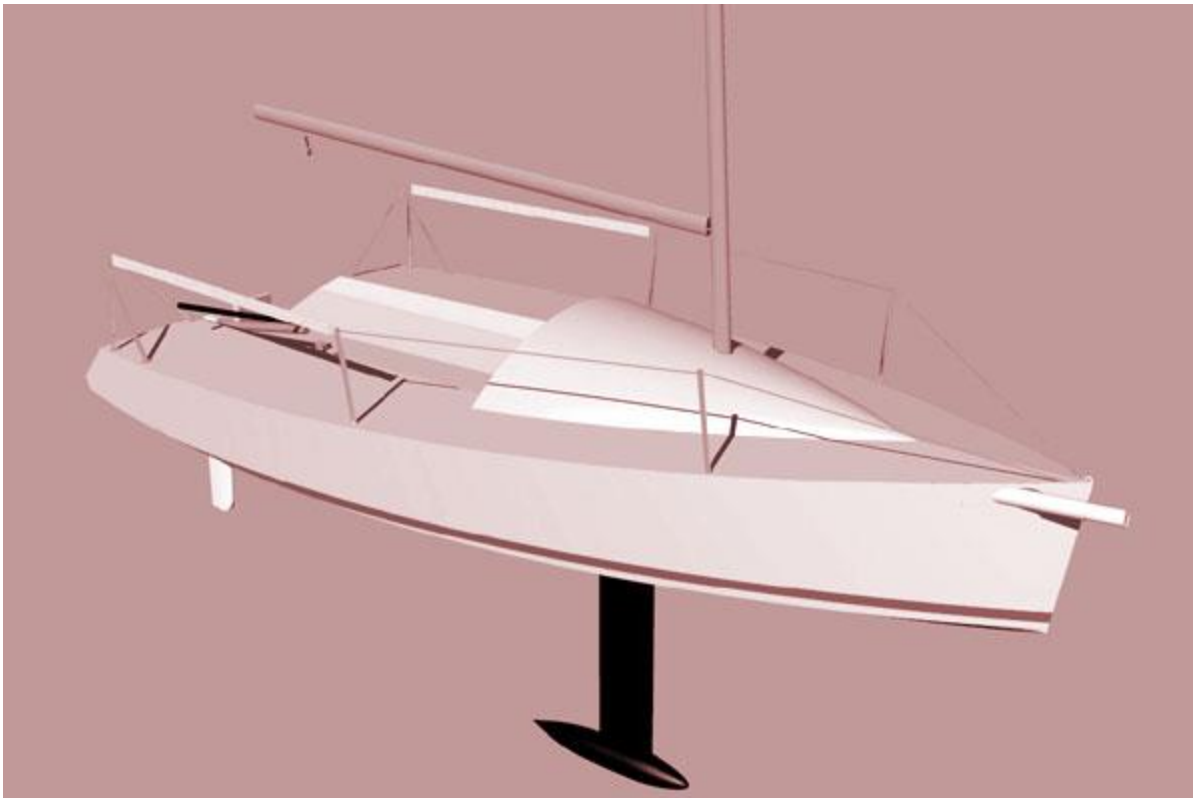
Options:

For best performance, we recommend the lifting fin keel. The plans show the construction of the fin and the lead bulb. This is within the reach of an amateur.

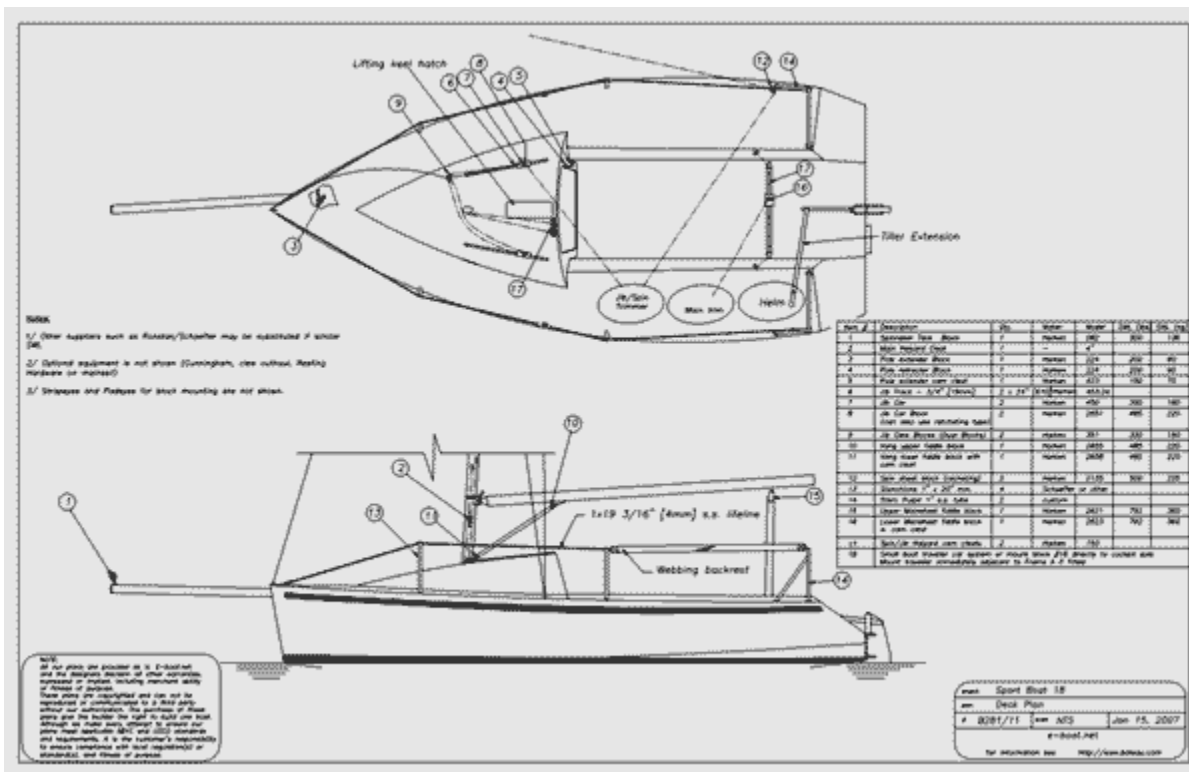
For those who prefer a centerboard type keel, the plans show in great detail a swing keel. That CB keel is made of a steel core (2x2 bars) in plywood-epoxy-glass foil. While the CB keel will not deliver the same performance than the fin keel, it is good solution for those who must adjust draft as they sail.

Plans give specs for Al spars and it is easy to extrapolate to carbon fiber.

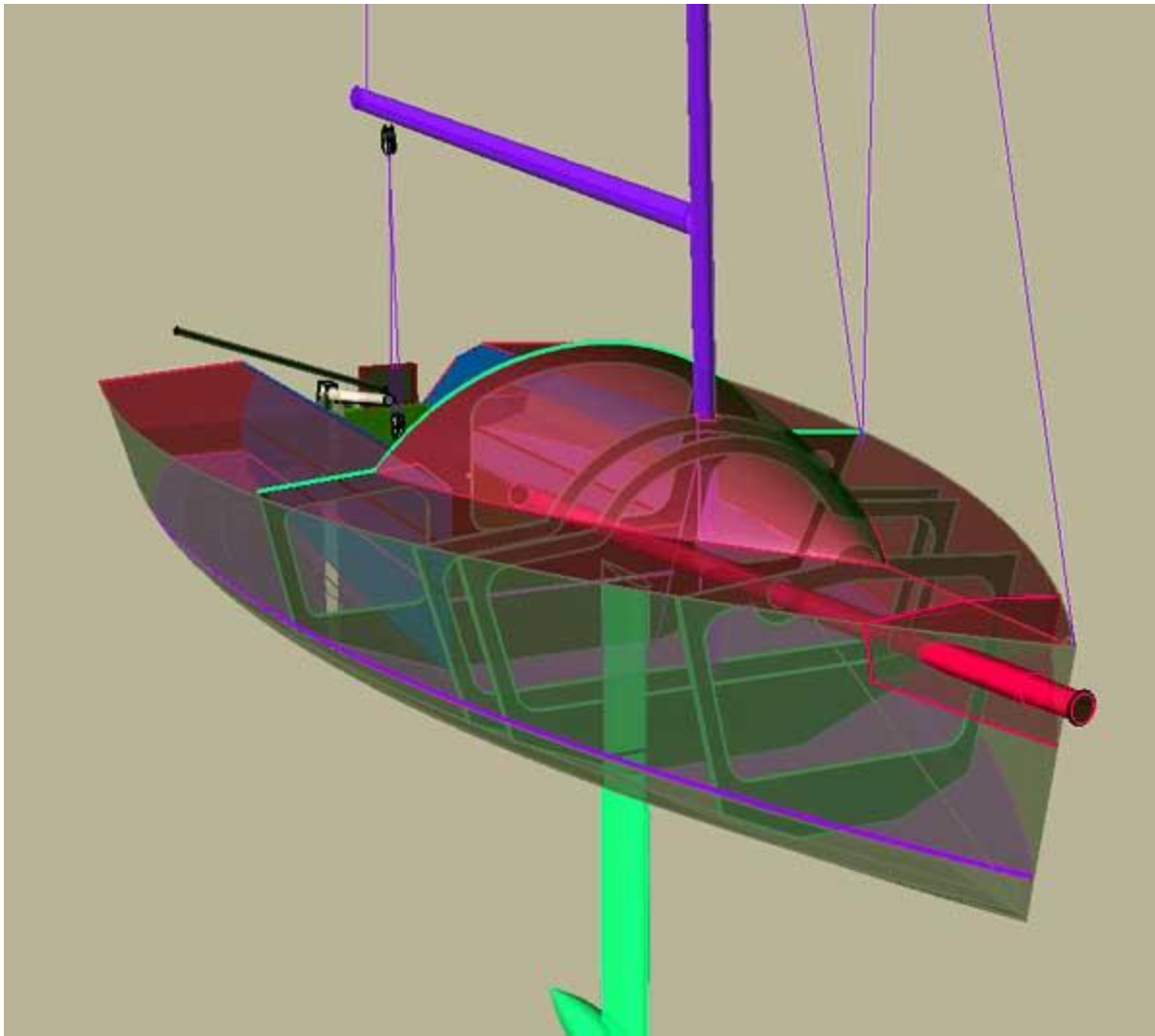
Stanchions and backrest webbing are an highly recommended option .



The deck plan is detailed. We show specifications and part numbers for all parts but this an area where experts sailors will customize their boat.



The inside sole is an option. It can be replaced by a smaller, lighter structural platform to support the keel trunk and a stringer all around.



Lockers can be built in but racers will prefer canvas pouches.

As with all our boats, buoyancy foam is an option. Around 4 gallons of our two part foam will make the boat unsinkable. There is plenty of room for that foam under the sole.

Foam core is not an option for the hull but is a good choice for all other parts.

Consult the designer for a super light version using honeycomb for most parts except the hull. Weight gain will be around 80 lbs but material cost will double.

Sailing Rigs:

The plans show two main sails, the larger one with a pronounced roach. This is not a boat for a first time sailor and builders will use our sail plan and deck plans as a starting point that they can adapt to their preferences.

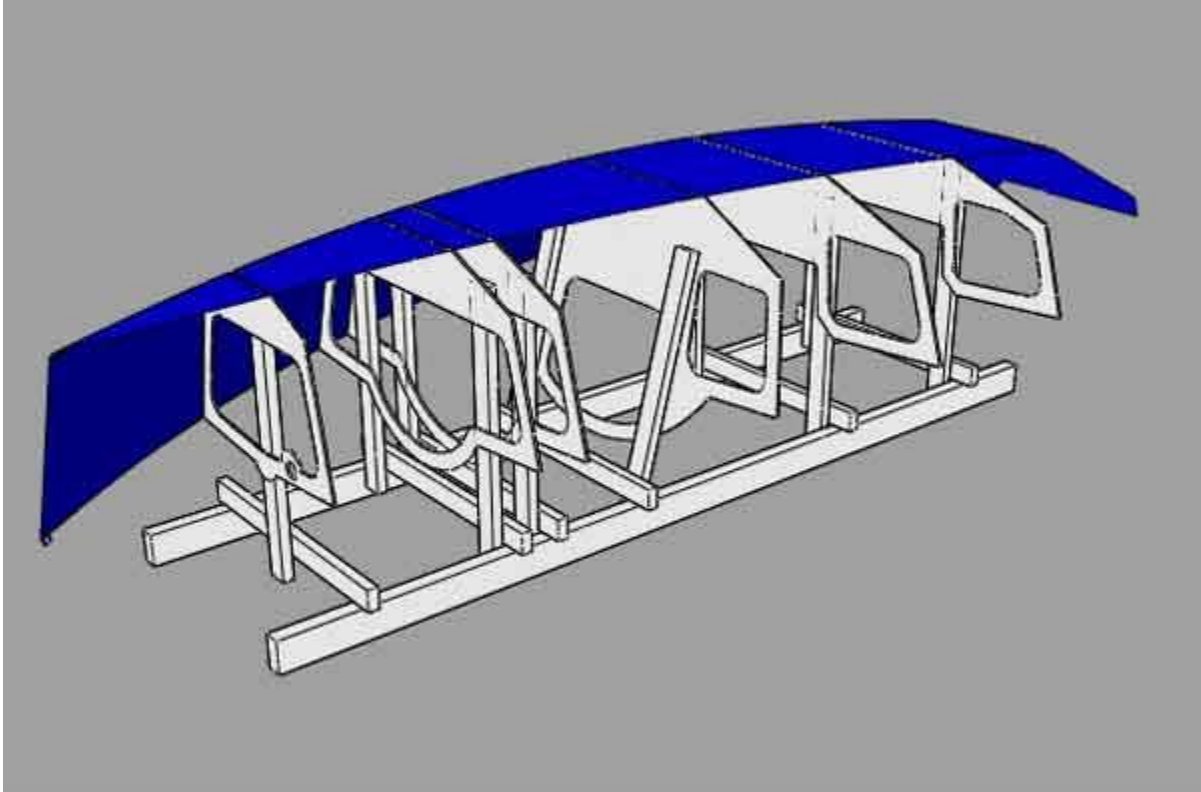
Building method:

This is a second generation stitch and glue boat. The hull is assembled the stitch and glue way but panels are made of thin plywood sandwiched between layers of directional glass and all structural framing relies on fiberglass seams. There is minimal wood framing, no fasteners, no bevels.

The rounded cuddy cabin top is made from fiberglass foam strips or wood strips. The plans show the two methods.

The plans show the building sequence step by step:

- the boat frames and a bow mold are set up on strongbacks
- hull is planked around the frames, outside fiberglassed
- hull is flipped and fiberglassed inside
- inside structure and keel trunk installed
- cockpit and deck



We specify building on jig for accuracy. Long hull panels are assembled with fiberglass splices.

Required Skills:

While there is nothing complicated or out of reach of the average amateur, this boat should not be build as a first stitch and glue project. Weight and quality are critical and some experience with the material is necessary.

The keels are simple to make and we show detailed specifications for each. An amateur can pour the lead bulb with minimal equipment.

The building notes explain step by step how to make a bulb keel cast, melt lead, pour it etc.

BOM:

The plywood layout was calculated to minimize waste: we show the nesting of all parts on the plans. Marine plywood is a must. Ideally, Okoume BS1088 but Meranti is valid too.

Marine Plywood 4x8' (122x244cm)		
1/4" (6mm)	11	
3/8" (9mm)	11	1 more sheet for CB version
Fiberglass (Totals)		
Biaxial Tape 12 oz.	160 yards	150 m
Biaxial Fabric 12 oz. 50" wide	35 yards	32 m

Cloth 4 oz.	12 yards	11 m
Resin		
Epoxy, total	12 gallons	25 kg
Ballast	bulb: 350 lbs (160 kg) lead	CB: 320 lbs (145 kg) steel bars

More:

Visit our message board, help pages, tutorial pages and read our FAQ: most questions are answered there.

Plans Package List:

- Detailed drawings with all dimensions required to cut the sides, bottom, bulkheads, deck, floors and all parts from flat plywood sheets: no lofting, no templates required.
- Nesting drawings for the best plywood layout.
- Construction drawings showing assembly and parts numbers for small hardware.
- Drawings list:
 - B281 : Plan and profile with specifications
 - D281-2 : Construction and frames
 - B281-3 : Rudder and centerboard with trunk and ballast notes
 - D281-4 : Lift keel with 2 full size patterns, trunk and lifting system.
 - B281-5 : Hull panels
 - B281-6 : Nesting 1 and cabin roof construction
 - B281-7 : Nesting 2 and assembly details
 - B281-8 : Sail plan with two mains, one spi, one jib, spars specifications with profile part numbers, standing rigging specs.
 - B281-9 : Retractable spinnaker pole and outboard bracket
 - B281-10 : Chainplates, forestay.
 - B281-11 : Deck plan with hardware specifications
 - B281-12 : Assembly sequence
- Specific building notes for this boat including keel fabrication.
- Bill Of Materials included in building notes
- Help files reference list and more!