



SPECIFICATIONS

LOA	21'	6.41 m
Max Beam	8' – 6"	2.59 m
Power - Recommend/Max	90 HP - MAX 125 HP	
Hull weight*	1300 lbs.	591 kg
Hull draft at DWL	10"	25.4 cm
PPI at DWL	543 lbs.	247 kg
Fuel	80 Gallons	303 liters
Material	Plywood Cored Epoxy Composite	
Building Method	Stitch and Glue	

** All specifications are approximate and subject to changes in function of the mood of the designer and the skills of the builder.*

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DESCRIPTION

The C19 is a true offshore boat with just the right hull shape for fishing or family outings. The proven hull shape with a typical 12 degrees moderate vee is similar to the boats that Jacques Mertens designed for Pursuit like the Denali hull: sufficient deadrise to run smoothly in bad weather but moderate enough to provide good stability at slow speed without the wild roll typical of deeper vee hulls. The generous freeboard and the classic sheer are also tried and true features contributing to seaworthiness. This boat will negotiate both head and



following seas with ease. The self-bailing cockpit with minimum 30" depth and 12" wide gunwales is another important element of safety. Thanks to the freeboard and transom design, she can be rated to a max. capacity of eight persons (USCG) and we recommend engines in the 90- to 125 HP range. While stronger than the typical production fiberglass boat of that size, she is also lighter and does not require as much HP (or fuel) to cruise at the same speed: a 70 HP will get her on plane. With 4 persons and gear, rigged with a 90 HP, she will do 30 mph and up to 37 with a 125 HP. Those are very conservative figures, and with some tinkering and attention to weight, she will go much faster. The 80 gallons of fuel will give her the range required for long offshore runs. This boat's transom is designed for a standard 25" shaft. The transom can easily be modified to accept other shaft lengths.

BUILDING METHOD

The construction is epoxy-fiberglass-plywood composite, a second-generation stitch and glue system designed for efficient and fast building. This building method combines the ease of stitch and glue (plywood-epoxy) with the strength, lightweight, longevity and low maintenance of a high-tech composite hull. The hull material is a fiberglass sandwich with a plywood core. The builder assembles the hull as a plywood boat first, then build the outside and inside fiberglass skins



to produce a strong composite hull without all the time-consuming woodworking associated with plywood on frame. We specify high performance directional glass and epoxy. While that type of fiberglass cost a little bit more, we save on resin and weight and the final material cost is lower. The bottom panels thickness varies from minimum 3/8" to almost 1" along the framing: thicker and stronger than the typical production fiberglass boat in that size. The internal framing is characteristic of a fiberglass or composite boat: a monocoque structure made of interlocking bulkheads and stringers, tabbed to the hull and fiberglass chines and keel. The hull is assembled upside down on a simple jig. Our jig system is very uncomplicated, self-aligning and economical since we use the internal framing of the hull as molds. Our jig does not require all the precautions, alignments or even a perfectly flat floor that are a must for traditional boat building.

REQUIRED SKILLS

As all our stitch and glue boats, the C21 is easier to build than other plywood or fiberglass boats. No woodworking skills or special tools are required. The plans include all dimensions to cut all the hull parts flat on the shop floor. No scarfing required. While she can be built as a first project, some experience with our building methods will save time and materials. If you have never built a boat, try our free canoe plans first. One of the reasons why our boats are easier to build is the level of detail on the plans. All the plywood parts, even the smallest ones, are shown with dimensions, including the assembly notches. All panels are calculated to bend easily: no effort is required to shape the bow, no special tools, no steaming as in some plywood on frame boats. The topsides panels are made of two parts: this is stronger and much easier to assemble than a one-piece side panel. It is also easier to fair and looks better.

LABOR

The hull can be built in 100 hours, but a finished boat will require 200 to 400 hours or more depending on the level of detail and the skills of the builder.

BILL OF MATERIALS

Plywood (4x8' – 122x244cm)		
6 mm (1/4")	13	
9 mm (3/8")	10	
12 mm (1/2")	6	
Also see our CNC Kit , which is a precut plywood kit that includes all the plywood needed to build the boat as designed.		
Fiberglass Fabric and Tape		
Fiberglass Biaxial Tape 45/45 12 oz., no mat, 6 in.	400 yards	360 m
Glass Tape, 6 oz., 4 in.	50 yards	45.75 m
Biaxial fabric 12 oz. 50" wide	41 yards	37 m
Glass Cloth, 6oz., 50 in. wide	20 yards	18 m
Resin		
Epoxy	22.5 gallons	85 liters
Also see our MarinEpoxy or Silvertip Epoxy kits which include all of the epoxy and fiberglass listed.		

This BOM covers all the supplies for this boat as designed. Usage of materials will vary in function of several factors. An experienced builder will use less resin. First time builders always use more resin, take that in account. Our resin usage calculations are based on a 50% glass content. Options, customization, and variations in fabric and foam cutting preferences will also affect the Bill of Materials. Our figures show an estimated average. Small variations in fiberglass specifications are acceptable, consult us for substitutions.

OPTIONS

There are many options to consider but the first one should be positive and upright buoyancy (unsinkable boat). This can easily be easily achieved with our marine flotation foam. For production boats in that size, the USCG requires upright floatation. Our foam kits provide 8 cubic feet of extra buoyancy per 2-gallon kit.



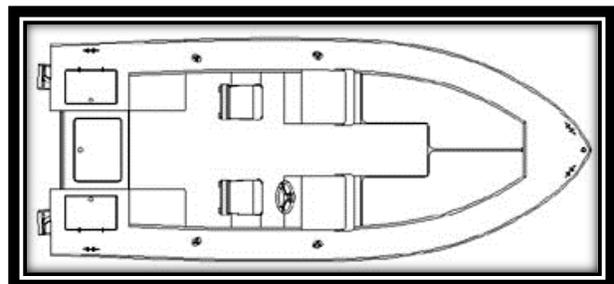
The basic center console layout is ideal for the fisherman. This layout leaves room for plenty of options: a cooler under the swing back seat; a baitwell in the forward part of the console or one in the stern lockers; a fish box and storage under the casting deck; and rod holders under the gunwales. A pilothouse style console can be fitted as an option. The plans include 3 different center console plans to choose from.

For family outings, you may want more seating. Some of our pictures show

optional quarter seats but a fixed or removable bench can also be installed across the boat, in front of the motor well. An outboard bracket can be used to free even more space for storage in the stern. Some details can be changed or added. Standard bow pulpits, T-tops or Bimini tops, and windshields are easy to fit. Another option is the dual console layout (see image below). A



last option is a twin-engine layout. The plans show two different motorwells: one for a single outboard with a standard 25" shaft and an optional twin engine motorwell. Each layout is compliant with international industry standards: all recent outboards will fit.



PLANS PACKING LIST

Plans are available in metric or US units.

-  B226_1 Plan and Profile
-  D226_2 Construction drawing with assembly details
-  B226_3 Nesting of all parts on standard plywood sheets
-  D226_4 Stations/molds dimensions
-  D226_5 Frame details and dimensions
-  D226_6 All interior parts dimensions
-  E226_7 Expanded Plates - Hull & Deck
-  B226_8 Lamination Schedule
-  B226_9 Dual Console layout with dimensions
-  B187 Standard Center Console with notes
-  B225 Seat Lockers, typical DIY hatch.
-  B221 Typical Small Boat Electrical diagram
-  "Building on a jig" file including a detailed description of the assembly sequence and building tips.
-  Specific building notes for this boat.
-  Bill of Materials.
-  Help files reference list and more.

MORE

Visit our [forum](#), help pages, tutorial pages and read our FAQ: most questions are answered there.

LICENSE

As with all our plans, you have the right to build one boat from those plans. The designer holds the copyright to the design and you purchase a license to build one boat. If you plan to build more than one boat, please contact us about licensing fees.

BUILDING STANDARDS

These plans were drafted according to the ABYC rules. The ABYC (American Boat and Yacht Council) defines the boat building standards in collaboration with the USCG. Professional builders may be subject to more requirements. Consult the designer.

The ABYC standards are very close to the ISO norms and CEE requirements but no European certification was applied for since this is not required for amateur boat building in Europe. CEE/ISO certification is available to professional builders for a fee.