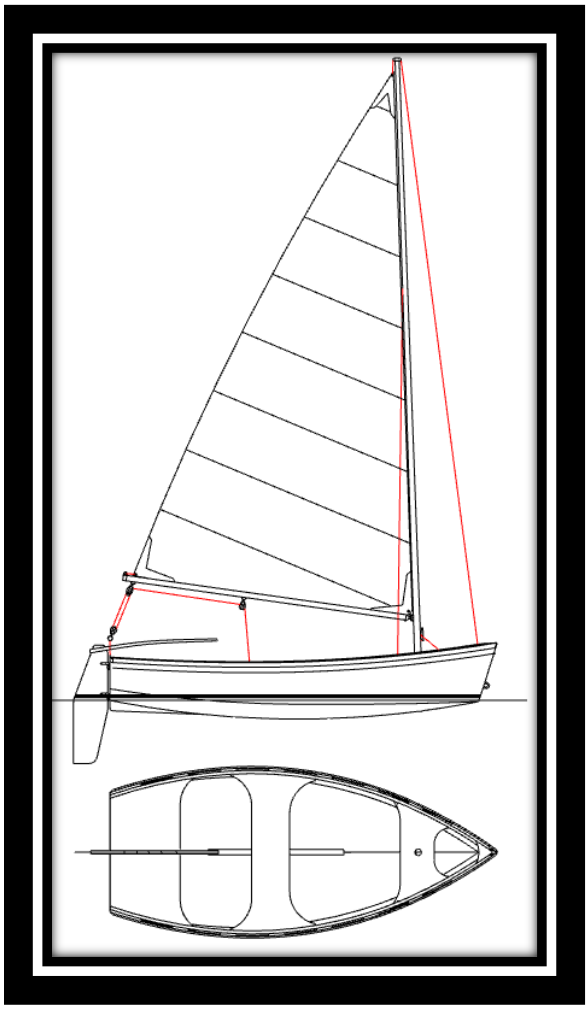

SPECIFICATIONS

LOA	11'-11"	3.63 m
Max Beam	5'-3"	1.60 m
Hull weight	135 lbs.	54 kg
Sail Area	77 ft^2	7.2 m^2
Material	Plywood Cored Epoxy Composite	
Building Method	Sharpie (on a jig)	

TABLE OF CONTENTS

DESCRIPTION

When we researched the design of an easy to build, easy to sail 12' cat boat with a Marconi sail, we found probably 20 examples in our library. From the Penguin to the Cherub plus a dozen other boats in the same style, this was nothing new except that none combined modern materials with ease of building. All were old fashioned plywood on frame designs except of the Cherubs, but those ones were not easy to build.

The Bruce Farr designed Cherub was one of the best, but we liked the low chine of some others and the result is our Cat 12. Not as complicated as the Penguin, probably a better sailor too, she is without doubt much easier to build and to sail.

The wide beam will provide good forgiving stability to a beginner but as he gains experience he will enjoy the performance potential and maybe be race her against other boats of her size. The ideal crew is one or two persons. The wide seats will be comfortable for relaxed sailing, but the plans also show a 3" (75mm) wide rubrail to sit on in strong winds.

A couple of nice features are worth mentioning. The halyard is used as a forestay: it returns to a block at the bow, inside the hull and from there to the mast. That block is fastened to a strap on the inside thread of the bow U-bolt: we save one nut and one washer! The swept back shrouds go to a Do-It-Yourself rigging screw on the rear side of the mast partner. The plans show how to make such a part from an eye bolt and a wing nut. One can also use plain lashings. The lifting system for the centerboard does not use any hardware, see our HowTo file for a description.

BUILDING METHOD

The Cat 12 is built the Sharpie way: two sides panels are bent around a frame and joined at the bow and the transom. Bottom panels are stitched to the sides and fiberglass seams are build. The building method is exactly as shown in our stitch and glue basic tutorial.

REQUIRED SKILLS

The Sharpie assembly method used on this boat is the easiest building method, identical to our Flat Skiffs , see our tutorials for pictures. The plans include full size patterns for all frames, transom and seat tops. All dimensions are shown on the plans: no lofting required. For the long side panels, the bottom and most large parts, we show the dimensions taken from the edge of the plywood sheets: no geometric construction required. We worked to keep lines simple: the side panels for example have 3 out of 4 sides straight, the 4th side is almost straight. All the dimensions for the sails and spars are shown on the plans. The C12 can be built by a first-time builder.

OPTIONS

The plans show two sails and four different spars. Each sail is 77 sq.ft., Marconi type (= triangular)

- The "standard" sail plan uses a regular aluminum profile. Dimensions and part numbers are given on the plans. Battens and reef line are optional.
- The sprit sail plan uses almost the same triangular sail shape: this is not the same sprit sail as in our PK78 etc. Here, the sprit replaces the boom. There should be no major performance difference between the sprit sail and the standard sail. It may even perform better with the carbon fiber mast, see below.
- The economical version of the sail plan combines a sprit sail with a wooden mast and wooden sprit. Solid wood or hollow: all the dimensions are on the plans. No hardware at all required for that sail plan.
- A performance variation of that sail plan uses a 6 kg (14 lbs.) carbon fiber mast. The specifications are listed but marked "experimental". It is a proven carbon fiber mast, similar to those used on racing Cherubs but it's fabrication require more skills than a wooden one: vacuum bagging for example.
- Each mast can be made as a rotating mast to improve performance even further. The plans show a Delrin sleeve and mast step pivot. This is an option.
- Each sail plan shows the sheet, blocks, cleats, traveler (=horse) and all details needed to rig the boat plus exact sail, running and standing rigging dimensions.

All these options can be combined to customize your boat: build her as simple or as sophisticated as you want.

A last option is a locker in the rear compartment: we show how to cut and make a lid.

LABOR

The hull with deck and seats will require on the average 30 hours and another 40 hours will be necessary for the appendages and spars.

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.

BILL OF MATERIALS

Plywood (4x8' – 122x244cm)		
6 mm (1/4")	3	
9 mm (3/8")	2	
12 mm (1/2")	1	
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.	42 yards	38 m
Fiberglass Tape 6 oz., 4 in.	11 yards	10 m
Resin		
Epoxy	3 gallons	12 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.

PLANS PACKING LIST

Plans are available in metric or US units.

- B224_1 Plan and Profile
- D224_2 Construction
- B224_3 Nesting
- D224_4 Stations & Frames
- D224_5 Expanded Plates
- B224_6 Appendages
- B224_7 Lamination Schedule
- D224_8 Sail Plan
- D224_9 Sail Plan - Marconi Sprit Rig
- E224_10 Full Size Patterns for Seat Tops and Mast Partner
- E224_11 Full Size Patterns for Transom and Frames
- B225_c Seat Lockers
- Specific building notes for this boat
- Help files reference list and more.