

A versatile cruiser that sleeps 4 on the road or on the water.

## SPECIFICATIONS

31 LettreAtion3				
LOA	23'-6"	7,17 m		
Max Beam	8'-6''	2,59 m		
Draft at 3,000 lbs.	6"	15 cm		
Hull Weight*	1,500 lbs.	675 kg		
PPI at DWI	636 lbs.	289 kg		
Recommended HP	25	Max 150		

\* 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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BUILDER'S THREADS ON OUR FORUM

LaChefels - new build GT Cruiser 23 - Texas, USA

BB Sig - Midstream GT23 - Florida, USA

Daddy - My GT23/22 Blog - Vermont, USA

Gubbs - Gubbs GT23 - Ottawa, Ontario, Canada

Iowa Boy Greg - Greg's GT23 Blog - Iowa, USA

**Boat Builder Central** 

# GT Cruiser 23 – Study Plans

### DESCRIPTION



The GT23 was inspired by the river boats of the northeast of Brazil and Guyana. Those "tapouiles" come in all sizes and are used to transport people and goods on the rivers and in large open estuaries. Our standard hull is slightly different with a pronounced vee at the bow and a high chine. While this reduces the buoyancy forward, it will allow her to handle a good chop without pounding. We also designed a "houseboat" version with more volume forward, see the Options paragraph for a complete description. The planing hull bottom and the wide and strong transom allows her to take fairly large engines, but she will be very happy to move at displacement speed with a 25 HP. Engines fit on an outside bracket or in a motor well. The plans show dimensions and layout for the two versions. The outboard bracket is the recommended version.

PERFORMANCE



Per USCG calculations, the max. HP rating is 285 HP with remote steering! This is absurd and we would never recommend using more than 150 but with 150 HP one can expects speeds of 35 mph or more depending on the load. To plane, she needs between 70 and 90 HP again depending on the load. In all cases, for planing speeds, trim tabs are recommended.

Much smaller engines will move her at displacement speeds of 6 to 10 mph: a 25 HP would be ideal.

### LAYOUT



The cabin offers standing headroom: 6' 2". Our suggested layout shows a separate head, a galley and two bunks. There is a steering wheel inside, on the forward bulkhead, starboard side. The forward part of the bunk folds backwards to become a seat. A folding table slides under the floor of the fore deck through an opening in the bulkhead (not visible in the picture). It is a standard Coleman camping table, and the plans even include the part number! There is plenty of storage under the fore deck and under the bunks. We show fuel tanks under the bunks for those who install a large heavy engine on the transom but with a small engine, the tank should be under

the cockpit seats. This is a matter of weight distribution and is explained in the building notes. The forward cockpit is much higher than the sole, not only for storage but for safety. It is drained with wide scuppers. It will be your porch while on anchor, an ideal place to sit on folding chairs under a beach umbrella. All that beach gear fits under the cockpit. Access from the cabin is a 12" step. The lower part of the door is a simple drop panel, the upper part is a hinged door (see that drop down panel on the picture with the steering wheel). That way, the door can be kept open while under way, but the cabin is protected by the drop panel. The same system is used for the door to the



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rear cockpit: a drop panel and a double louver door that opens above the seats level. Besides the two doors, the cabin has fixed Lexan windows and two small hatches: one above the galley, one in the head. The self-bailing rear cockpit is very large. Most builders will cover it with a Bimini top. A standard pontoon boat top is a perfect fit. One can add canvas sides and turn it in an extra cabin. The more than 7' long seats are wide enough to be used as bunks. The motor well version cockpit is a little shorter, but a queen size inflatable mattress still fits on the floor. The 8" wide gunwale allows access from the rear cockpit to the bow without walking through the cabin.

# BUILDING METHOD

The GT23 is built the stitch and glue way: simple, fast to build and strong. She is not a plywood boat held together with some resin and glass tape. Epoxy is used for the fiberglass laminations and all parts are saturated with resin. The GT23 is engineered as a composite boat. The bottom and most the topsides are made of a plywood-epoxy-glass sandwich in which the directional fiberglass provides most of the strength. Completely encapsulated in epoxy, the plywood will not rot. The monocoque structure with its fiberglass framing is typical of composite boats: stronger than plywood on frame. The hull assembly is very simple: two bottom panels stitched together, stringers dropped in, a frame in the middle, sides bend around it and transoms inserted. No jig.

There is one difference between the GT Cruiser and some of our smaller boats: the cabin can be built from a sandwich composite if the builders choose that option. There are several advantages to a foam sandwich superstructure. Lighter topsides mean better performance, improved stability, and easier towing on the road. Our sandwich is very simple: a sheet of foam with a thin door skin plywood epoxy glued on each side. The resulting panel is much stronger than plywood and much lighter. The builder can also use a classic foam sandwich schedule: foam sheet between two thin fiberglass skins. The plans show specifications for the two methods: cabin made of regular plywood and epoxy and our sandwich panels. We can supply all the materials for either method.

### OPTIONS

The GT23 exist in two hull versions. The difference is the hull volume. The performance version (=standard version) has a fine entry with volumes concentrated aft. That version will accept larger engines, on a bracket or on the transom but the cabin must be very light, and all weights must be kept in towards the stern. The houseboat version has more volume forward is designed to take the weight of more comfortable accommodations distributed over the full length but there is a small price to pay in performance.

The standard version should be selected if the builder keeps the weight of the cabin and superstructure to a minimum and distributes the other weights as in a regular outboard planing boat, towards the stern: cabin sides, top, inside cabinets and forward deck made from sandwich windows and doors from roll up vinyl or canvas minimal accommodations tanks, batteries and generally all heavy weights in or under the cockpit large engine: 50 HP or more.

The houseboat hull is ideal for: heavier plywood cabin construction with framed doors and windows, a smaller motor for displacement speeds weights distributed evenly through the boat. The plans include drawings for each version. The two versions look very similar: same superstructure, same deck and sheer line, same transoms. Only the underwater sections differ. The houseboat version uses one more sheet of 10mm plywood.

Besides the hull shape choices listed above already mentioned, there as a many layouts options as builders: Outboard in motor well or on transom bracket. Topsides from plywood or foam sandwich inside layout and even cabin and cockpit location: some builders have moved the cabin all the way to the stern with a very large cockpit forward. The builder can adjust the layout to fit his needs as long as everything under the floor is built as designed and as long as the main bulkheads are kept approximately in the same location. One can install doors on every small locker, build shelves all over, install a fixed freshwater system, install a marine toilet with waste tank, replace the head door with a curtain, cut a wide sunroof etc. etc.

The GT23 can be made unsinkable with expandable buoyancy foam under the sole and foam sheets glued under the gunwales for upright floatation.

#### LABOR

The hull can be built in 20 hours, but a finished boat will require 40 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'')	5			
9 mm (3/8'')	23			
12 mm (1/2")	11			
Also see our <u>CNC Kit</u> , 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.	300 yards	270 m		
Woven Tape 6oz., 4 in.	50 yards	45 m		
Biaxial Cloth, 12oz., 50 in. wide	25 yards	22 m		
Resin				
Ероху	18 gallons	72 liters		
Also see our MarinEpoxy or Silvertip Epoxy kits which include all of the epoxy and fiberalass 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.

### MORE

Visit our <u>forum</u>, 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.

### PLANS PACKING LIST

Plans are available in metric or US units.

- 🚈 B231\_1 Plan and Profile
- Magazine B231\_2 Nesting
- 🚈 D231\_3 Construction
- 🚈 B231\_4 Stations
- 🚈 E231\_5 Expanded Plates
- 🚈 B231\_6 Bulkheads
- 🚈 B231\_7 Lamination Schedule
- 🚈 B231\_8 Typical Door Assembly
- A B231\_9 Details
- Motorwell Option
- No. Specific building notes for this boat
- Melp files reference list and more.