

# SPECIFICATIONS

LOA	18'	5.5 m
Max Beam	5'-4"	1.625 m
Power - Recommend/Max	25/40 HP	18/30 kW
Hull draft at 765 lbs.	3"	7.62 cm
Material	Plywood Cored Epoxy Composite	
Building Method	Stitch and Glue	

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**Boat Builder Central** 

# Laguna Madre 18 – Study Plans DESCRIPTION

The LM18 (Laguna Madre Skiff 18) was designed to the request of several builders

interested in the FS18 but who asked either

for a tunnel boat or a wider poling skiff. We received many compliments on the FS18 design, some say it is the best poling skiff they ever used, superior to very expensive so-called "technical skiffs". The FS18 is just as stiff and light as a carbon fiber hull costing much more. Designed as a poling skiff first, she is narrow and has limited capacity but moves easily with a small motor.



Some builders wanted a slightly wider hull along the same lines, others wanted a tunnel. It is impossible to put an efficient tunnel in a hull as narrow as the FS18, but in a slightly wider boat it became a viable proposition.

The new hull is 10" wider and weighs a little more but the draft is the same. She will still pole properly but has more capacity and can take a larger engine. The name comes from a place where she will fit perfectly, the large flats of Texas, but she will do just as well in Florida or other places. She is designed for tiller steering; the plans show a grab rail, but she can be fitted with a small console. Do not overpower her, she is a light skiff. The outboard will fit on a bracket, no motorwell.

# BUILDER THREADS ON OUR FORUM

<u>Colemanfire</u>

## **BUILDING METHOD**

The construction method is stitch and glue. It makes for a very stiff and strong yet light boat. As with all our plans, no lofting is required. The LM18 is built the same way as our FS12 and FS14: upside down on a pair of 2x4's (jig). The hull panels are installed around the frames and we use the decks as a base. See the FS12/14 study plans for details. There is also a long thread on our forum showing the FS12 assembly with plenty of pictures and comments. The LM18 is built the same way.



## REQUIRED SKILLS

There is nothing difficult about building a skiff this way: a boat like this one goes together fast and easy. There are no plywood scarfs: we use very simple fiberglass splices. Our building method involves cutting plywood panels flat on the shop floor with moderate precision, from the dimensions give on the plans. Long panels are made of smaller pieces joined with fiberglass splices. We use standard plywood sheets only. No lofting, no calculations, no delicate beveling or scarfing. No woodworking skills or special tools are required.

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The standard version has the same efficient hull as the FS18, but there are two options: a tunnel and a lower sheer version. Those two options are shown in detail on the plans.

**Low sheer version**: Built the same way as the standard version but the deck is 5" lower. Freeboard is about 8". The standard sheer is designed for a 20" shaft, the low sheer takes a 15" shaft but it is easy to adjust the transom heights or add a motorwell. Very minor savings in the BOM.

**Tunnel Option:** The tunnel option has pros and cons. All tunnels, whatever their shape (and whatever the boat's brochure says), are going to handicap the performance of the boat. There is simply no way around it, just think of the water flow along the center line of the boat. The water that runs through the tunnel covers a longer distance than the water that runs along the side of the bottom, next to the tunnel. This creates a vacuum in the tunnel, and that vacuum pulls the stern down while the rest of the hull tries to lift, to get on, or stay on plane. In addition, the tunnel



reduces the lifting area in the stern. A tunnel creates suction that conflicts with the lift needed to plane. At the limit, in some boats, the suction may cancel the lift, and the boat will not get on plane. (This phenomenon is described by Dave Gerr in his book "The Nature of Boats".) In our larger, wider boats like the XF20, there is sufficient lifting area to compensate for the tunnel suction. In a narrow boat like our FS18, there isn't enough lifting area to afford a tunnel. The LM18 is just wide enough to accept a tunnel of moderate size.



**Rounded Chine:** This rounded chine is a simple transition from plywood sheet planking to strips, at the chine, close to the bow. No need to purchase strips, we cut 3-4 slits in each panel, topside and bottom, and round the corners of the two forward frames and that's all there is to it.

### LABOR

The average construction time for the hull is 70 hours ready for sanding and paint.

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")	6			
9 mm (3/8'')	6			
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.	120 yards	110 m		
Biaxial fabric 12 oz. 50" wide	36 yards	33 m		
Resin				
Ероху	9 gallons	36 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 are available in metric or US units.

- ▶ B320\_1: Specifications
- Mage B320\_2: Nesting of all parts on standard plywood sheets
- All B320\_3: Hull plates.
- Magazine B320\_4: Stations.
- Mail B320\_5: Stringers and Molds.
- B320\_6: Assembly on Jig.
- B320\_7: Construction.
- 🚈 B320\_8: Sole and Deck.
- 🔈 B320\_9: Typical Frame.
- 🚈 B320\_10: Fiberglass.
- 🚈 B320\_11: Tunnel.
- A B320\_12: Tunnel Jig.
- Mage B320\_13: Low Sheer Option.
- 🚈 B320\_14: Low Sheer Panels.
- Mage B320\_15: Low Sheer Stations.
- A320\_16: How to: Ring Frame.
- A320\_17: How to: Bulkhead.
- 🚈 A320\_18: How to: Above Sole Frame.
- 🚈 A320\_19: How to: Floor Frame.
- Me Specific building notes for this boat
- Melp files reference list and more.