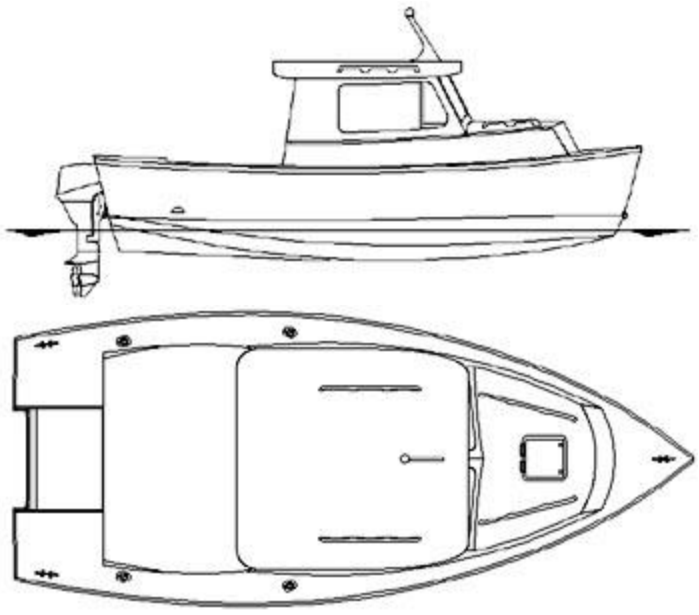


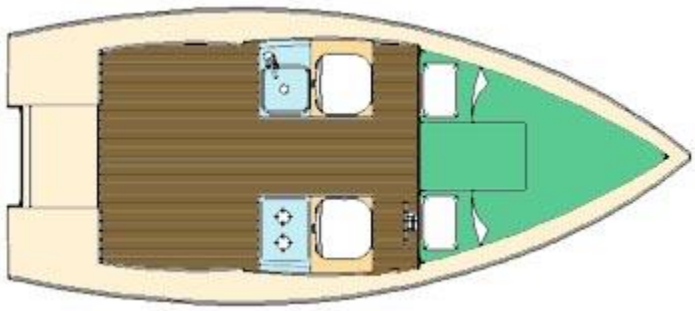
Small but able outboard cruiser based on a dory style hull.

Specifications:		
LOA:	18'-5 "	5,62 m
Max. Beam:	7'-10"	2,39 m
Hull draft:	12"	318 mm
Hull Only Weight:	1,055 lbs.	480 kg
Displacement at DWL:	2,400 lbs.	1,091 kg
PPI at DWL: <	370 lbs.	168 kg
Recommended. HP	10-15	
Material:	Stitch & Glue	

The HMD19 is another evolution of the popular HM19. It uses a true displacement hull that is suited for lower speed and has low power requirements. What we kept from the original hull was the high bow and a very similar nice classic sheer line.

Performance:
This is a displacement hull and will never plane. Maximum HP is 25, but that will be a bit too much for this moderate size boat. Better propulsion options are 4 stroke outboards in the 8-15 HP range, especially those engines that have high reduction ratio gearboxes and slower turning propellers. Cruising speeds will range from 5-6.5 knots, depending on engine selection. She will be fuel efficient and comfortable in rougher conditions, compared to her faster sister ships.

Layout:
One can't offer standing headroom in that size boat without compromising stability and looks. An ugly boat is not worth building. Some believe that boxy hulls have hidden qualities or are easier to build: not true. Looks and behavior go together: if she is pretty, most of the time she will handle well. If she is a bad boat, she usually looks like it. The pilothouse is just right: one can sit with good clearance above his head but see above it when standing in the cockpit. The cabin is almost the same, with the addition of about 1' on the aft end to give a bit more room for galley counters.



From stern to bow:
Large lockers on each side of the motorwell can be used for storage or bait well. The self-bailing cockpit sole is high enough to stay above the waterline until the displacement reaches 3,300 lbs.
Under the cockpit floor, we show a fixed fuel tank, ideal for a four-stroke engine but if you need more range, there is room for a second tank. The fuel tank fittings end up under the motorwell to make connections and access to a fuel filter as easy as possible: no need for chase tubes, easy installation of all hoses. A fixed fuel tank is not required: portable tanks can be installed under the seats or secured in the cockpit. Also under the sole is provision for a fresh water tank.
Under the nicely cambered pilothouse roof, the rear frame of the pilothouse doubles as a grabrail. There are storage boxes/galley counters behind the helm chairs that are large enough for a sink and 2 burner stove.

The skipper will find enough room in front of the wheel to mount electronics and we use the extension of the cabin roof as a dashboard. The same surface on the port side can be a small chart table.
Access to the cabin is through an open companionway but feel free to install a sliding hatch.
The vee berth is 6' 6" long and a Porta-Potti slides under the mid section. On deck, the 8" wide gunwales extend all along the pilothouse and cabin side. Handrails on each roof helps circulation forward. A small toe rail runs all long the sheer line.

Building method:
The HMD19 is built the stitch and glue way but don't let the name confuse you. 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 HMD19 is engineered as a composite boat. Most of the planking is made of a plywood-epoxy-glass sandwich in which the plywood is only a core: 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 but lighter.

Required Skills:
As all our stitch and glue boats, the HMD19 is easier to build than plywood on frame or fiberglass boats. There is no wood framing, no delicate assemblies with tight fits, no need for special tools. Since the strength comes from the fiberglass, small gaps between parts are recommended: a 1/4" cutting mistake becomes a blessing!

Options:
There is room for a bench in the rear if one needs more seating.
Under the gunwales, the frames can be cut to act as rod holders. There is ample storage room in the seat boxes: they extend all the way to the hull sides. With the proper foam insulation, a seatbox can be used as an ice box.
The pilothouse can be partially or completed closed with Plexiglas or Lexan but builders should keep the size of the boat in mind and not make the topsides too heavy or excessively increase windage. Framed or hinged windows are possible but keep them light.
We show a small hatch in the roof for light and ventilation, no portholes but they are easy to add.
The HMD19 can be made unsinkable with expandable buoyancy foam under the sole while foam sheets glued under the gunwales will guarantee upright floatation.

Bill Of Materials:
(Excerpts from our BOM)
The BOM list materials based on our standard layout and includes a 15% waste factor for fiberglass. For plywood, we use standard sheets 4' x 8' (122 x 244 cm). Please read the building notes and see the plans for detailed specifications. Meranti 6566 is an inexpensive type of marine ply ideal for stitch and glue construction. It cost, on the average, less than $20.00 a sheet in 1/4" (6 mm). Okoume or Meranti marine can also be used and cost starts at less than $50 per sheet (1/4").

Plywood 4x8' (122x244cm)		
1/4" (6mm)	6	
3/8" (10mm)	17	
1/2" (12mm)	4	
Fiberglass (totals)		
Biaxial tape	150 yards	135 m
Woven tape	150 yards	135 m
Biaxial fabric	16 yards	15 m
Resin		

Epoxy, total	15 gallons	60 liters

Cost:
See our kits and add the cost of plywood bought locally.

Labor:
The hull can be build in 50 hours but a finished boat will require 250 hours or more depending on the level of detail and the skills of the builder.

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

Plans Packing List:

10 detailed drawings with all dimensions required to cut the all the panels from bottom to cabin parts and windshield from flat plywood sheets: no lofting, no templates required.

Nesting drawings for the best plywood layout, all parts nested.

- Drawings list:
- B_HMD18_1: Plan and Profile
- D_HMD18_2: Layout
- D_HMD18_3: Nesting
- E_HMD18_4: Expanded Plates
- D_HMD18_5: Frames
- E_HMD18_6: Construction
- D_HMD18_7: Nesting Diagram 2
- B_HMD18_8: Lamination Schedule
- B_HMD18_9: Details
- B221 Typical Small Boat Electrical
- Detailed notes of the building process with the bill of materials
- Help files reference list and more