

Float Tank Plans

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Tank Material list:

- 5 4x8 sheets 1/2" Plywood
- 5 4x8 sheets 1/4" Plywood
- 5 4x8 sheets 1 1/2" Rigid Styrofoam
- 24 8' 2 x 2's (1 1/2" x 1 1/2" actual dimensions)
- 1 Door Handle
- 3 4' 2 x 4
- 1 4' 2 x 6
- 1 1/2" wood screws
- 1 Piano Hinge for door
- 3 8' 2" x 1/2" cedar strips for liner
- 1 30 mil vinyl liner 42 1/2" by 90 1/2" by 18" high (available at swimming pool supply stores)
- 1 Waterbed Heater
(make sure heater has cord that plugs into Control box so it can be fed through hole in tank)
- 1 1/2 horse Jacuzzi Pump
- 1 Timer switch for pump
- 1 25 Square Foot Cartridge Filter
- 8' to 10' 1 1/2" PVC Pipe
- Various PVC fittings depending on your style of pump and filter
- 1 Ground Fault Interrupter (GFI) Breaker
- 1 Ground Fault Interrupter (GFI) Plug
- 1 Gallon High Grade Exterior Paint
- 1 Tube of Mould Resistant Silicone Caulking
- 2 2" round vent covers

Tank Construction

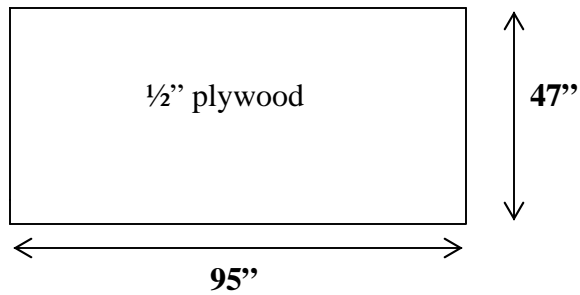
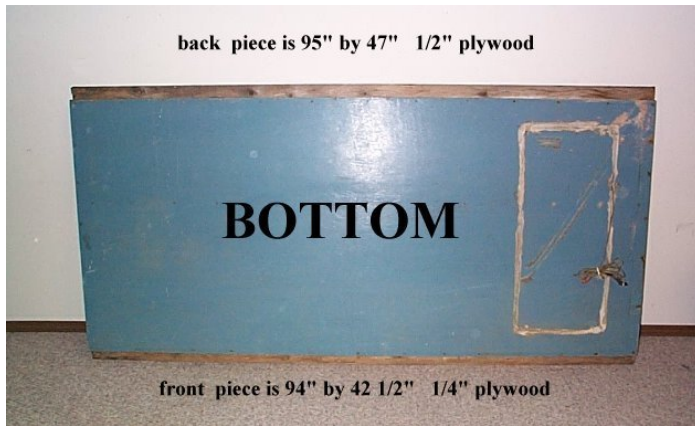
Tank consists of 7 Panels. Panels are all 2 ¼" thick. All Interior pieces will be ¼" plywood (blue pieces). All Exterior pieces will be ½" plywood. Make sure 2 x 2's are 1 ½" by 1 ½".

Bottom Panel, Left Side Panel, Right Side Panel, Back Panel, Top Panel, Lower Front Panel and Door Panel.

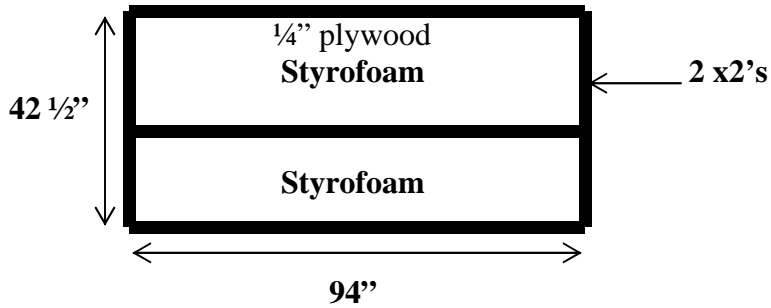
This tank was finished with tongue and groove Cedar. I floated with my head to the back opposite the door.



Bottom Panel (floor)

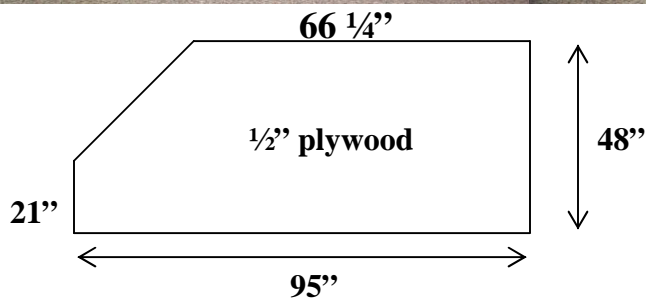
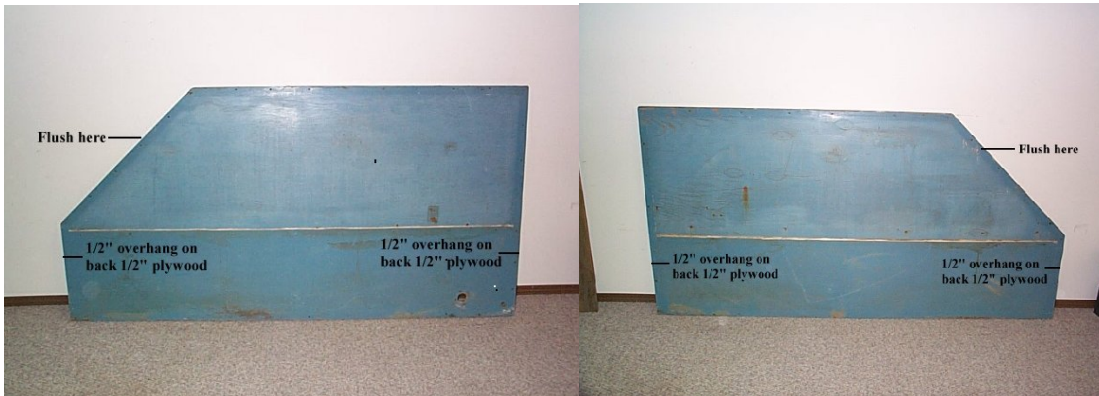


Cut sheet of 1/2" plywood to 95" by 47"

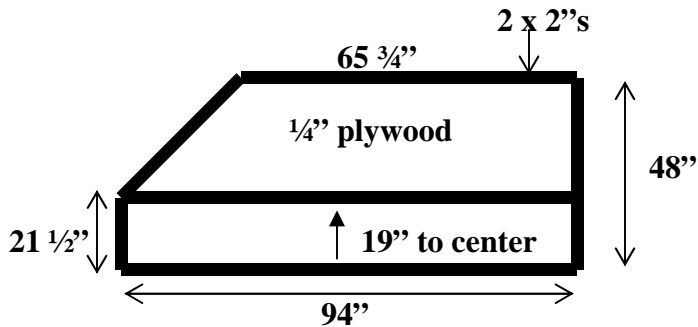


Cut sheet of 1/4" plywood to 94" by 42 1/2". Screw 2 by 2's to outside edges and through center of 1/4" plywood. Cut Styrofoam to fit. Screw to 1/2" plywood leaving 1/2" lip top and bottom and 2 1/4" lip on both sides.

Left Side and Right Side Panels

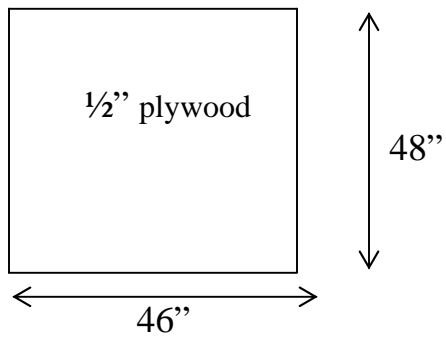


Cut 2 sheets of $\frac{1}{2}$ " plywood to 95" by 48"...Measure 66 $\frac{1}{4}$ " at top and 21" from bottom on left side and cut.

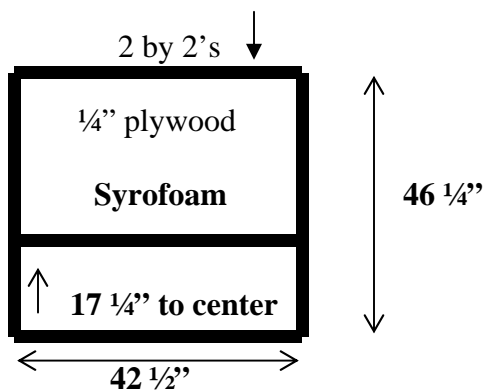


Cut 2 sheets of $\frac{1}{4}$ " plywood to 94" by 48"...Measure 65 $\frac{3}{4}$ " at top and 21 $\frac{1}{2}$ " from bottom on left side and cut. Screw 2 by 2's to outside edges of both sheets of $\frac{1}{4}$ " plywood making sure $\frac{1}{4}$ " sheet will be on the inside of tank (these 2 panels will be exact opposite). Measure 19" from bottom. This will be center of middle 2 x 2. Locate it here so there will be backing for liner. Cut Styrofoam to fit. Screw to $\frac{1}{2}$ " plywood making it flush top and bottom and $\frac{1}{2}$ " lip on both sides. It will be flush on angle. *MAKE SURE THESE 2 PANELS ARE EXACT OPPOSITE.

Back Panel



Cut sheet of 1/2" plywood to 48" by 46".



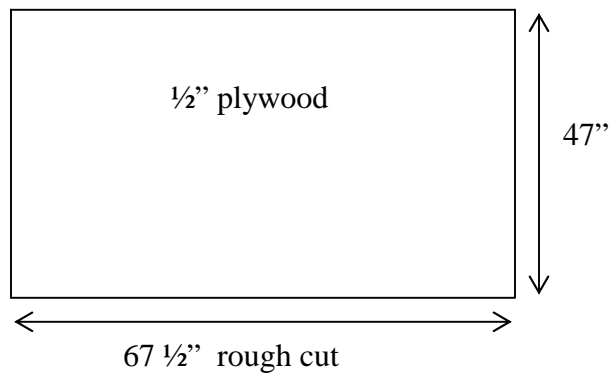
Cut sheet of 1/4" plywood to 46 1/4" by 42 1/2". Screw 2 by 2's to outside edges. Measure 17 1/4" from bottom. This will be center of middle 2 x 2. Locate it here so there will be backing for liner. Cut Styrofoam to fit. Screw to 1/2" plywood making it flush on top and 1 3/4" lip on both sides and bottom. Save leftover plywood from this panel for door piece.

Top Panel

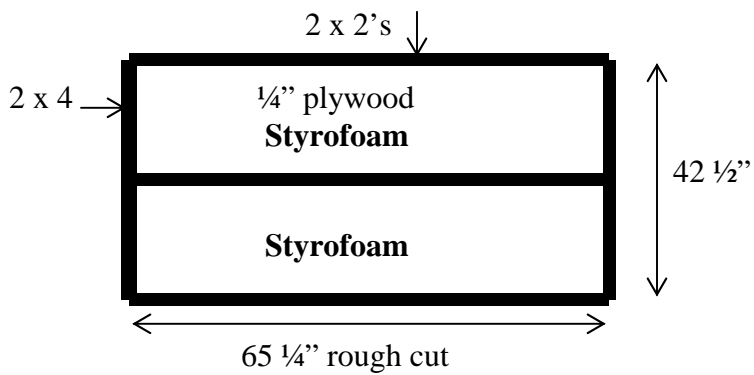


70° angle

This piece has a 70° angle on the front side so we will make it bigger, assemble panel and then cut the excess off.

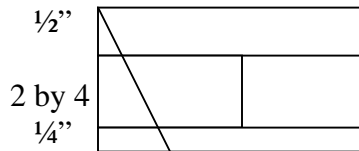


Cut sheet of 1/2" plywood 67 1/2" by 47".



Cut sheet of 1/4" plywood 65 1/8" by 42 1/2".Screw 2 x 4 to left outside edge making sure ends are flush with top and bottom.

Screw 2 x 2's to top, bottom and right side outside edges and through center. Cut Styrofoam to fit. Screw to 1/2" plywood leaving a 2 1/4" lip on top, bottom and right side. Left side should be flush or close. With 1/2" side facing up, Measure 66 1/2" from side with 2 1/4" overhang (cut side that is flush) and snap a line with chalkline or draw one with straight edge. Set your Circular Saw blade at 20° and cut along line making sure the 1/2" plywood is the longer.

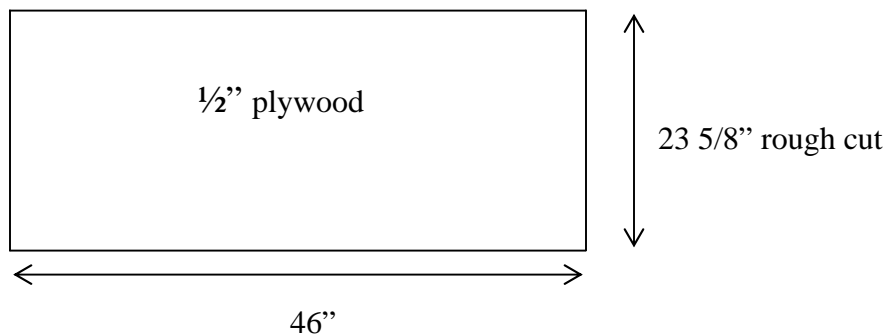


When finished there should be a 2 1/4" overhang on the other side and on the top and bottom. Save leftover plywood from this panel for bottom front piece.

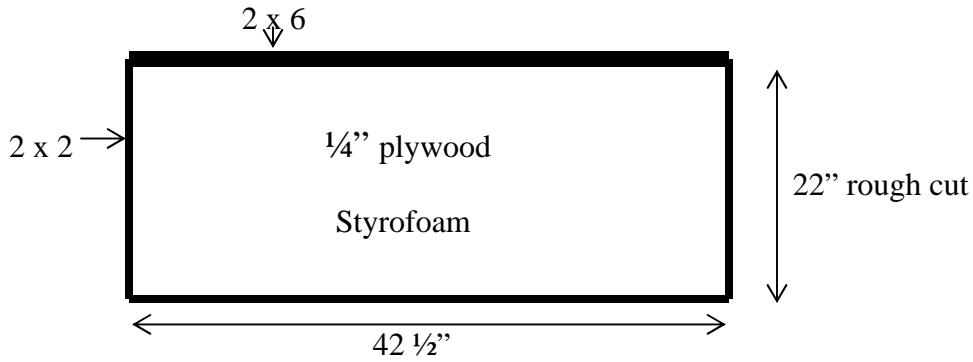
Lower Front Panel



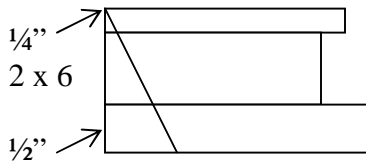
This piece has a 50° angle on the top so we will make it bigger, assemble panel and then cut the excess off.



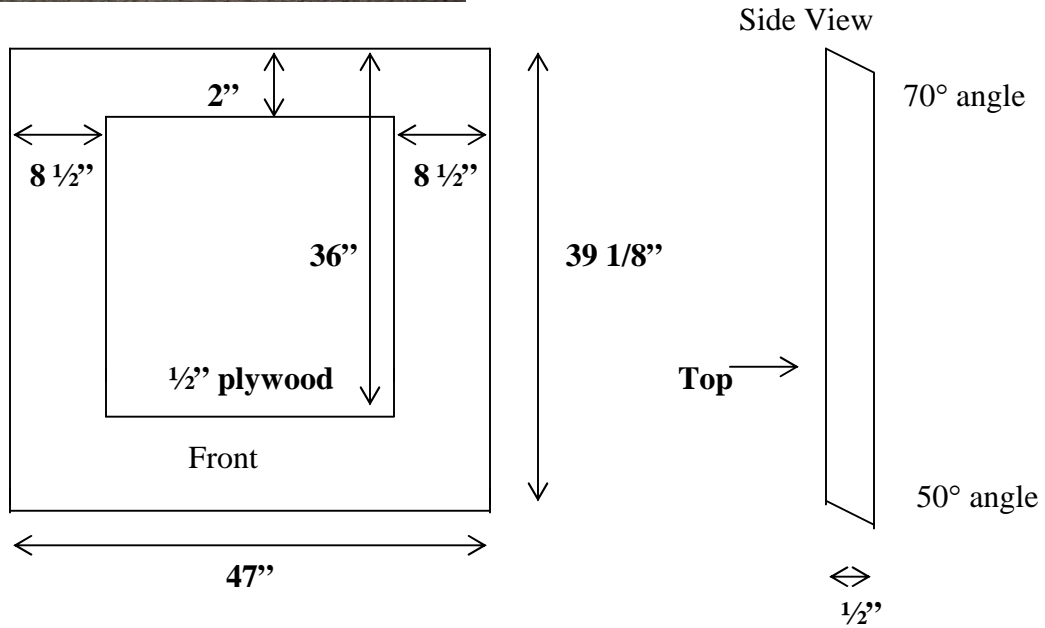
Cut sheet of 1/2" plywood 46" by 23 5/8".



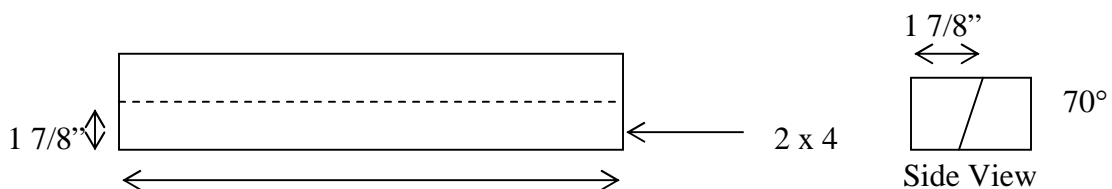
Cut sheet of 1/4" plywood 42 1/2" by 22". Screw 2 x 6 to top outside edge making sure ends are flush with both sides. Screw 2 x 2's to bottom edge and both sides. Cut Styrofoam to fit. Screw to 1/2" plywood leaving a 1 3/4" lip on bottom and both sides. Top should be flush. With 1/4" side facing up measure up 21" from bottom and draw a line with a straight edge. Set your Circular Saw blade at 40° and cut along line making sure the 1/4" plywood is the longer. If blade does not cut right through you may have to flip panel and make another cut on 1/2" plywood. The measurement will be 21" up from bottom of 1/2" plywood.



Door Panel



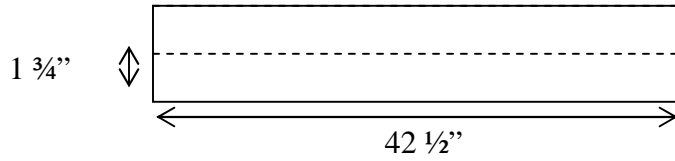
Cut $\frac{1}{2}$ " plywood 47" wide. Set Circular saw at 20° and cut 70° angle at top. Cut will have long side up. Measure down $39 \frac{1}{8}$ " and draw line. Set saw at 40° and cut on line. Cut will have short side up. Measure door opening and cut out. This will be easier if you use a jigsaw in the corners. The piece you cut out will be used to make the door. Cut 2 x 4 $42 \frac{1}{2}$ " long. Measure in $1 \frac{7}{8}$ ". Set saw to 20° and cut 70° angle on 2 x 4. Screw this piece flush onto back top of $\frac{1}{2}$ " plywood leaving a $2 \frac{1}{4}$ " lip on both sides.



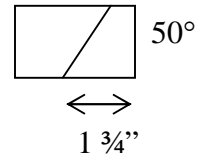
42 1/2"

Cut 2 2 x 2's 33 3/4" long. Screw them (going up and down) to the 1/2" plywood leaving a 2 1/4" lip.

The bottom 2 x 4 will have a 50° angle.



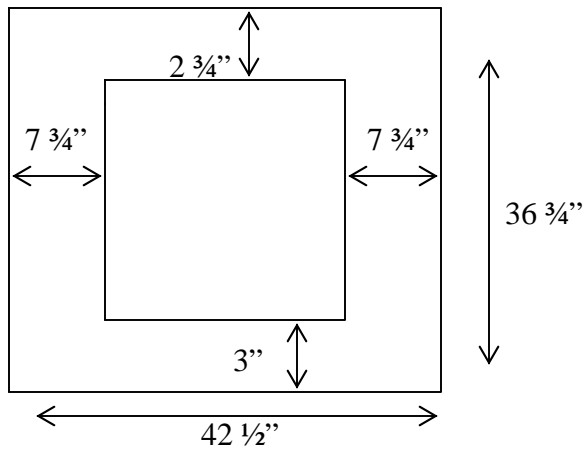
Side View



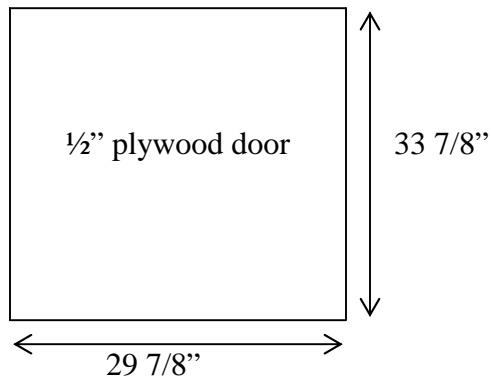
Cut 2 x 4 42 1/2" long. Measure in 1 3/4". Set saw at 40° and cut 50° angle. Screw to 1/2" plywood with the angle cut facing towards bottom of plywood. Top of 2 x 4 should be flush with door opening.



Cut 2 more 2 x 2's to fit flush with door opening. Cut Styrofoam to fit.



Cut $\frac{1}{4}$ " plywood $42 \frac{1}{2}$ " by $36 \frac{3}{4}$ ". Cut out door opening. Screw to $\frac{1}{2}$ " plywood. Don't worry about cutting any angles just make sure to center. This will leave a $1 \frac{1}{2}$ " lip on door opening. Glue $1 \frac{1}{2}$ " x $1 \frac{1}{2}$ " Styrofoam on lip all around door opening. This acts as a door stop.



Cut $\frac{1}{2}$ " plywood $33 \frac{7}{8}$ " by $29 \frac{7}{8}$ ". This will be the door. Install in opening with piano hinge and fasten door handle. Paint panels with a good grade exterior paint.

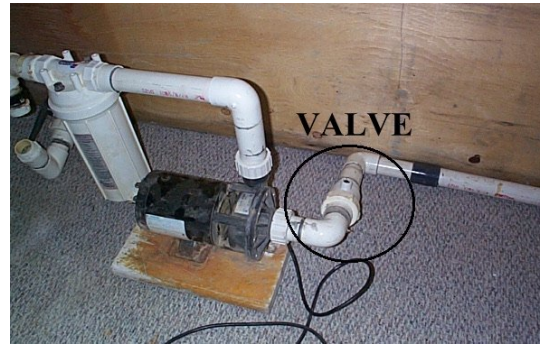
Tank Assembly



If you are putting this tank on a cement floor it would be a good idea to put a sheet of Styrofoam insulation under it for extra insulation.

Screw 2 side pieces and back piece to floor and to each other. Screw top on.
Set Waterbed Heater up towards back. Drill small hole in left side panel at back and push heater cord out to Heater Control. From the outside push copper heat sensor in and tape to floor about 6" out from side keeping it away from heating pad. Make sure sensor is taped at any points that could pierce liner. Mount control on outside of tank where it will be accessible. Caulk edges and all screws. Drill 2 2" vent holes in tank and cap with vent caps. These can be in the back panel or wherever they work best for your setup. Leave door panel off until liner is installed.

Plumbing



Plumbing Instructions will be completely dependant on the pump and filter you use. I used a ½ horse pump and a 25 Square Foot Cartridge Filter. Drill a hole in side of tank towards back end and one in front panel making sure you are below water level (water will be 9” deep). The size of the hole will be dependant on your fitting. The one I used required a larger hole in exterior and Styrofoam and a smaller hole in interior plywood. Small ring with a gasket went inside and screwed to larger fitting with gasket making a waterproof seal. If using same setup drill holes for screws before installing liner. Make sure and install a valve on both sides of pump and filter set up so you can do maintenance on filter and pump.

Wire Timer switch to Panel box using a Ground Fault Interrupter(GFI) Breaker. Wire pump to timer. Install GFI plug in room for Waterbed Heater.

Install Liner and screw cedar strips to wall keeping liner in place. Caulk strips and screws. Screw the two interior rings and gaskets to exterior plumbing fixtures. Extra caulking can be used. Once rings are in place carefully cut vinyl that is inside ring.



Cedar Strips



Timer Switch

Door Panel



Screw door panel to tank. Install door if not already done.

All pictures in this instruction book are from a tank that has been disassembled for quite a while so it is showing some wear. The exterior was finished in Cedar boards. Also you might want to build an access box to cover Pump and the rest of plumbing. The more visually inviting the tank is the better the experience.

Extras

The Book Of Floating by Michael Hutchison (excellent book on the subject)

Battery Operated Intercom System

Battery Operated Light

Hook for towel

Audio Speakers (Transducers)



To install Transducers (Underwater Speakers) cut an access hole in floor of tank where your head will be positioned. Cut Styrofoam to fit Transducers in and reinstall access panel and Caulk. Feed wiring out same hole as waterbed cord. The Transducers I used looked like rubber hockey pucks. You can get some here:
<http://www.richtechenterprises.com/>

Filling Tank

1. Using garden hose put 3" of very hot water in tank.
2. Add 800 lbs Epsom Salt (Magnesium Sulfate).
3. Fill with more hot water to 9" deep.(run pump until water is clean)
4. Heat water to 93.8 – 94 Degrees
5. Keep buoyancy at a gravity of 1.275 to 1.30

Use a hydrometer to check gravity and top up salt as needed.

Use thermometer to fine tune water temperature(waterbed control might show higher or lower temperature).

I run pump and filter for 15 minutes a day plus 15 minutes directly after floating.

Check ph on a regular basis with inexpensive ph kit that can be purchased at spa store.

Spa store will be able to provide you with information and chemical to maintain proper ph. and sanitation.

Clean filter on regular basis.

Good luck and Happy Floating