



## The Aqua-Farm 2

### Instructions for Assembly

Thank you for purchasing the Aqua-Farm 2 recirculating system. Whether you are new to the world of "aquaculture" or are a seasoned veteran, the Aqua-Farm 2 can be a valuable learning tool.

The use of recirculating systems is increasingly popular in the classroom. Biology, design/engineering, math, chemistry, business and physics are just some of the many important learning experiences that students can gain from the study of aquaculture.

### About Your System

The Aqua-Farm 2 is a small scale recirculating system. This system has three main parts; 1) fish culture tank, 2) water pump, 3) filter system. The Aqua-Farm 2 has a 300 gallon fish culture tank. This tank is flat bottomed and does not require any additional stands or support. The water pump that's used in a recirculating system must be reliable! If the water pump fails, the entire system shuts down and a fish loss is likely! We have chosen a reliable, continuous duty pump for this system. This pump is energy efficient and very dependable. For the filter system a bio-tube filter is used. These filters are the finest method of filtration currently available on the market. This system comes with all the necessary items needed for assembly except for some PVC pipe and teflon tape. All fittings and valves are included. The filter has its own assembly instructions and should be assembled first.

#### Aqua-Farm 2 Parts List

Quantity	Description
1	300 gallon culture tank - this tank is shipped from the manufacturer to you by truck, not UPS
1	Water pump
1	Bio-tube filter
1	Water intake screen - labeled part #1, this goes inside the culture tank
1	Bulkhead valve/union assembly - labeled part #2,
1	Union, 1" flex PVC assembly - labeled part #3,
1	Outlet from filter back to tank - labeled part #4



# Assembly Instructions

## Step 1:

Open filter box, following the enclosed instructions - assemble the filter. Attach all three unions to inlet/outlet ports on filter (inlet, outlet and backflush).

## Step 2:

You will need to drill one hole in the tank. The hole is for the pump intake line. This hole needs to be  $1\frac{3}{4}$ " in diameter and should be centered  $7\frac{1}{2}$ " up from the bottom on the outside wall of the tank. Insert the black bulkhead in the hole, making sure that the bulkhead and the rubber gasket are installed from the inside and the nut is tightened from the outside. Tighten the nuts good and firm but do not overtighten and crack the plastic. The water intake screen (part #1) can be installed inside the tanks into the larger bulkhead fittings. These fittings should not be glued! Adjust the angle of the bottom intake screen so the holes in the screen are facing into the planned current or rotation of the water in the tank.

## Step 3:

The valve and union assembly (part #2) connects the bulkhead fitting to the pump. You will need to use PVC glue to attach the valve to the bulkhead fitting coming out of the tank. This valve allows you to turn off the water in case the pump needs to be removed from the line. Use Teflon tape on the threads of the pump inlet (the fitting in the end of the pump) and then screw on the union fitting (part #3). The other side of the union will attach to the valve. This will complete the bulkhead to pump assembly.

## Step 4:

Apply Teflon tape to the outlet of the pump. Thread the union fitting to the outlet of the pump. Apply Teflon tape to the threads of the male adapter and thread into the union. Glue the 1" PVC pipe into the male adapter. The length of the 1" pipe can be modified if needed before gluing into reducer bushing. Glue the bushing into the union of the filter. Make sure to attach to the "pump" side of the filter.

## Step 5:

The last step is to assemble the plumbing from the filter back to the tank. Glue the reducer bushing into the "return" union. Glue the 1" pipe into the reducer. Extend the pipe over the side wall of the tank. Do not glue the 45 degree elbow onto the pipe. This can be turned as needed to direct the water in a circular motion, which will help to carry any solid waste to the center of the tank where it will be sucked up into the intake line.

Glue the smooth end of part #4 into the union on the filter labeled "return". This assembly goes through a tee which splits the water back to both tanks. Again a valve is included on each side to control water flow or to isolate one tank.

*It is recommended to attach the return water pipe to the tank to keep it from accidentally falling out of the tank. Drilling a hole in the top lip of the tank and securing with a cable tie or rope is recommended.*



## Finishing Up

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Your Aqua-Farm system should be complete. You can now fill the system with water. Once full, run the pump and test the system. If fish are going to be introduced right away, you will need to “seed” your filter with bacteria. Bacteria will occur naturally in three to four weeks but needs to be added if fish are added before that. Ideally a few fish (five to ten) would be added after one week, then left for two weeks before adding more fish. Also be sure to use dechlorinator if tanks are filled with city water!

*Check out our full line of EasyPro brand Water Treatments*



# Options To Make Your Life Easier

We offer several optional items that you may need or find helpful in using your fish system.

- Thermometers
- Dipnets
- Fish Food
- Ultraviolet Sterilizers
- Aeration Systems
- Water Treatments
- Water Test Kits



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