Frequently Asked Questions.

1. How often do I add nutrient? What is "topping-off"?
Add nutrient every time you drain your system. "Topping-off" is a term that describes adding water to the system. Remember, during hot spells plants transpire excessive amounts of water leaving behind nutrient salts. These salts can cause ppm levels to sky-rocket creating a toxic environment for your plants. Keep your ppm at a lower level during these times of extreme transpiration.

2. How often should the water be changed?
That depends upon the growth (stage and rate) of your plants. When plants are seedlings every three weeks should suffice. Once the plants start to approach maturity it is best to change the nutrient mixture completely every two weeks, or even more often for better results. Between nutrient changes it is important to "top-up" the reservoir with fresh water. Add more nutrient only if the conductivity or ppm drops. Generally the conductivity (nutrient strength) should be maintained between 800 to 1,200 ppm (parts per million).

3. Should I invest in a ppm or conductivity meter?
Yes, a conductivity meter is an essential tool for measuring nutrient strength. By knowing the conductivity level for a specific variety of plant, the grower can adjust nutrient strength to meet specific crop needs.

4. When should I adjust the overflow tubes up or down?
When plants are small and their roots are not well developed, the overflow tubes should be at the maximum height to allow nutrient rich water to reach the bottoms of the net cups. Once the roots have grown in length and are immersed within the flowing stream of nutrient, the overflow tubes can be pushed down to increase oxygen within the nutrient and growing chamber.

5. Can I turn off my system for any length of time?
Generally it's best for the system to run 24 hours per day – always on. However, many people do put their AeroFlo^2 systems on a timer to save electricity. The AeroFlo^2 stays on during the light cycle and turns off for the night cycle, except for an hour of spray in the middle of the night cycle.

6. What is the optimal temperature range for the nutrient solution?
Optimal temperature is generally between 65º and 75º F.

7. At what pH level should my system be maintained and why?
pH levels should be between 5.5 and 6.5 because at this pH level, nutrients are more readily available for the plant.

Ordering parts and supplies
To order Grow Cups, nutrients, Hydroton, or parts for your AeroFlo^2 system, see your General Hydroponics retailer, or call General Hydroponics, Inc. for listings.
1-800-374-9376 Monday thru Friday, 9 am to 4:30 pm, PST.

GENERAL HYDROPONICS
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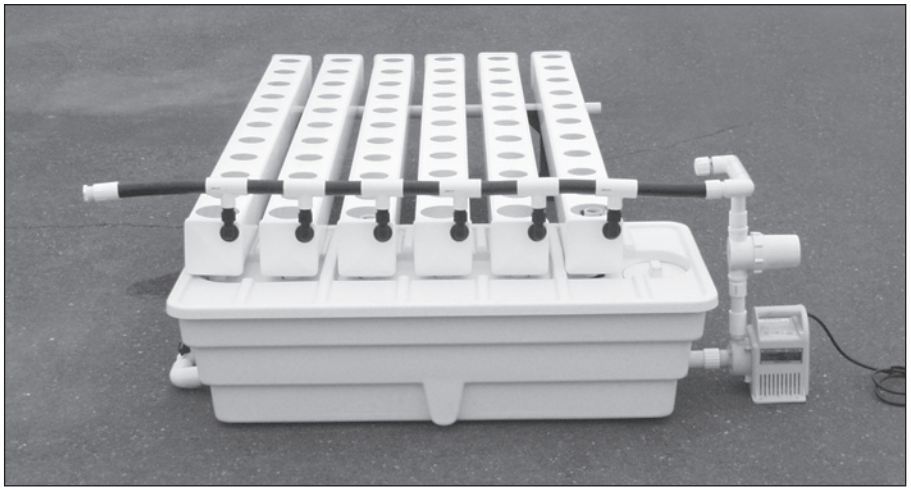
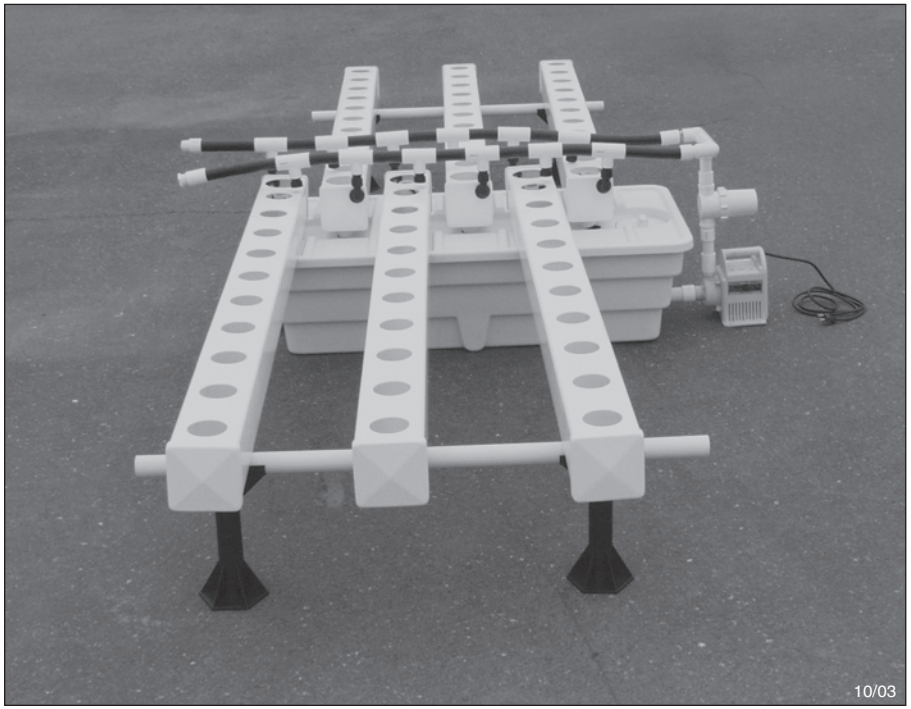
AeroFlo^2 60™





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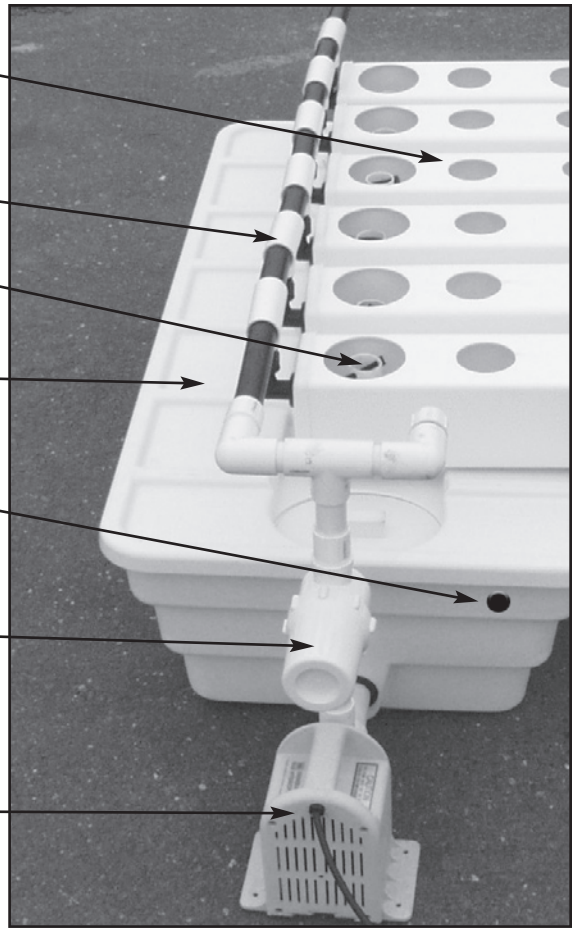
AeroFlo^2 Model 60



Includes: General Hydroponics™ FloraKit Nutrients
Hydroton ™
Grow Cups with CocoTek™ Liners
Drain Tube Lubricant
Drain Valve
Optional Equipment (Sold Seperately):
- *AeroFlo^2 60 Extension, Doubles Your Growing Capacity.*
- *Float Valve, For automatic refilling.*

Assembly
Plants can be grown almost anywhere using an AeroFlo^2 system. Greenhouses, patios, and even indoors under lights, make great locations. An AeroFlo^2 can be installed where there is warmth, light and fresh air. Choose a clean and level place to set up your system.

Cleaning between crops
Drain the whole system, brush out the growing chambers and, if necessary, unclog the spray holes in the beige spray lines mounted inside the growing chambers. Sponge off all parts to disinfect. You can use General Hydroponic's Flora Shield™ or another disinfectant. Rinse everything thoroughly. Refill it with water and run it for a few hours, then drain again before introducing a new crop. Clean filters frequently. Simply unplug pump and remove reusable filter. Rinse filter under hot water to clean..

Hydroton
We have had many years of excellent results working with Hydroton clay pellets for plant support. We recommend that you rinse new Hydroton thoroughly to remove the fine sand which builds up from abrasion during shipping. Between crops it is good to wash the Hydroton well, removing all organic debris. An effective method is to boil or steam used Hydroton in a large pot. This sterilizes and dissolves away any accumulated salts. Caution: Do Not rinse Hydroton with bleach (chlorine).

Nutrients
Nutrients are the lifeline to your plants. Since you are providing the plants with all their nutritional needs we recommend you feed them the best. General Hydroponics™ offers a wide variety of plant foods. We have had great success using our Flora series 3 part system (FloraGro™, FloraBloom™ and FloraMicro™).

1 Fill the reservoir with fresh water. If you are in an area with poor-quality water (over 200 ppm Total Dissolved Solids), we recommend that you use purified water (Reverse Osmosis and/or rain water). General Hydroponics has a new **Hardwater FloraMicro™** nutrient formula available.

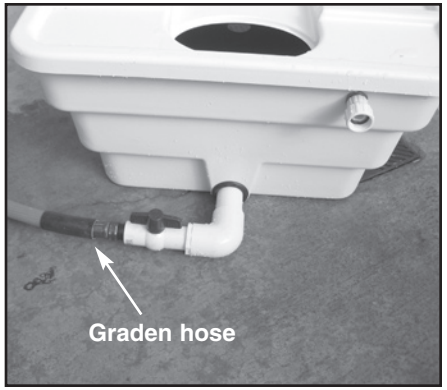
2 Add nutrients as per instructions on label. Stir in FloraMicro first then add FloraBloom, and FloraGro. Never pre-mix nutrient concentrates. This may cause nutrient "lock-out".

3 Adjust the nutrient solution pH between 5.0 and 7.0 (see instructions with the General Hydroponics pH Control Kit).

Notes
Nutrient mixes can be adjusted in both strength (conductivity) and "flavor" (ie: the ratios of Nitrogen, Phosphorus, Potassium, Calcium, Magnesium, Sulfur & Microelements). To adjust these factors mix different combinations of FloraGro,FloraBloom and FloraMicro with water.

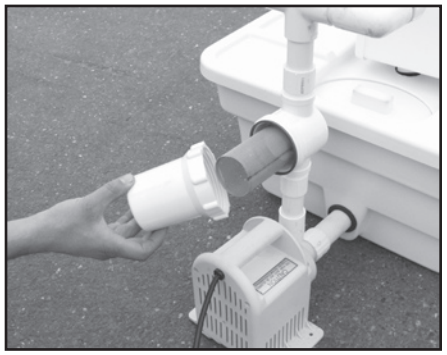
- To enhance vegetative growth, use more FloraGro and less FloraBloom.
- To enhance flower growth use less FloraGro and more FloraBloom.
- To enhance fruit production use equal amounts of FloraGro, FloraBloom and FloraMicro.
- To provide more Calcium or Iron (for green, leafy vegetables), use slightly more FloraMicro.
- Many growers follow the 3-2-1 mix: **For vegetative growth:** 3 parts FloraGro (ie, teaspoons per gallon), 2 parts FloraMicro plus 1 part FloraBloom. **For flowering:** 1 part FloraGro plus 2 parts FloraMicro plus 3 parts FloraBloom. **For fruiting:** 2 parts FloraGro plus 2 parts FloraMicro plus 2 parts FloraBloom. These units are ratios, not absolute quantities, and are only a *suggested* starting point. Use a conductivity meter to determine total nutrient strength.

Turn pump off. Connect a garden hose to the black fitting on the drain valve. Open the blue valve handle and drain the reservoir. As the reservoir is draining, remove the drain/overflow tubes from growing chambers sequentially while the reservoir level drops. Don't pull the tubes out too fast or the reservoir may overflow.



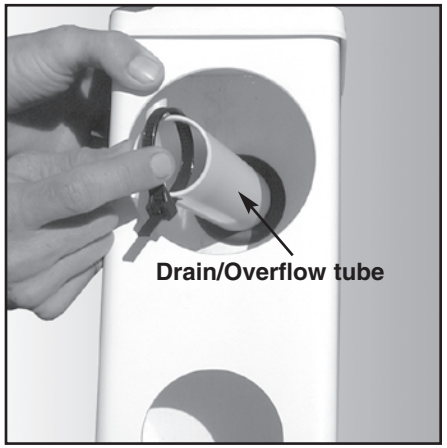
Cleaning the filters

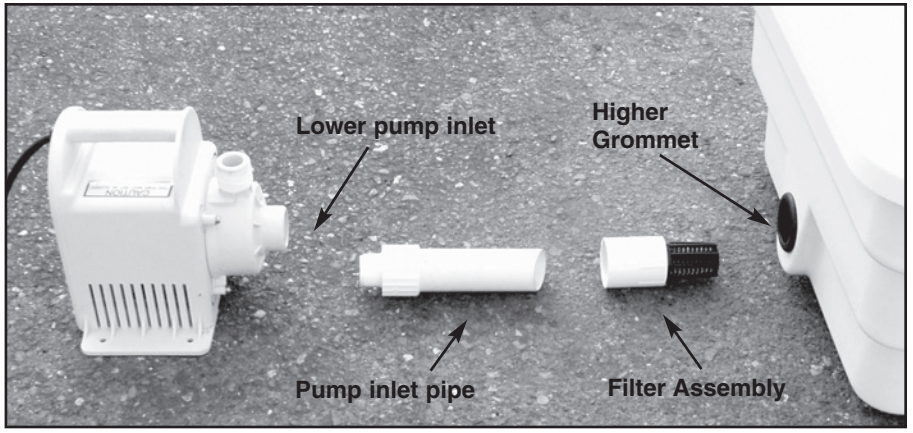
Unplug the pump and unscrew the filter housing. Remove the screen and clean by placing filter under hot water to remove all organic debris.



High level, low level

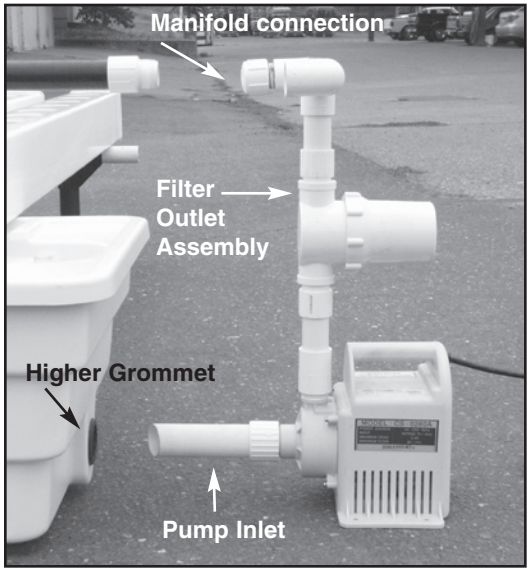
The growing chambers can be operated with a high nutrient solution level, which submerges the bottoms of the growing cups to moisten the Hydroton for new transplants. As the plants grow and develop strong roots, press the drain/overflow tubes to the bottom position in the growing chambers to lower the nutrient level. This will create an "air gap" below the bottom of the growing cups. This process will increase the total amount of oxygen in the rooting zone and reduce the moisture in the Hydroton. Keep the reduced water capacity in mind when you mix nutrient.





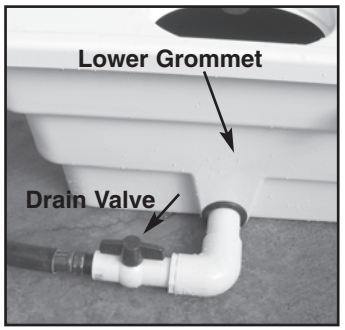
Step 1

Screw the pump inlet pipe into the lower pump inlet. Apply a thin coat of lubricant onto the pump inlet pipe and push the pipe through the grommet at the pump end of the reservoir. The black Filter Assembly goes **inside** the reservoir and attaches onto the end of the pump inlet pipe.



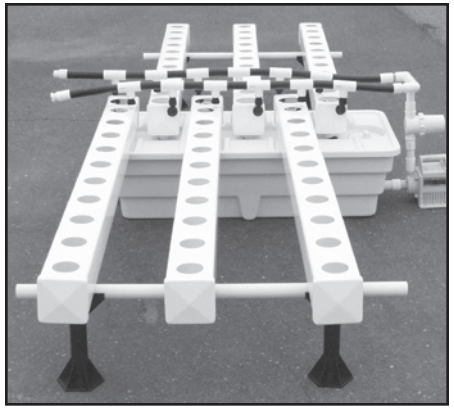
Step 2

Screw the threaded Filter Outlet Assembly onto the pump outlet.
Slip Pump Inlet into **higher** grommet using a twisting motion.
Slip Drain Valve into **lower** grommet on the opposite end of the reservoir using a twisting motion.

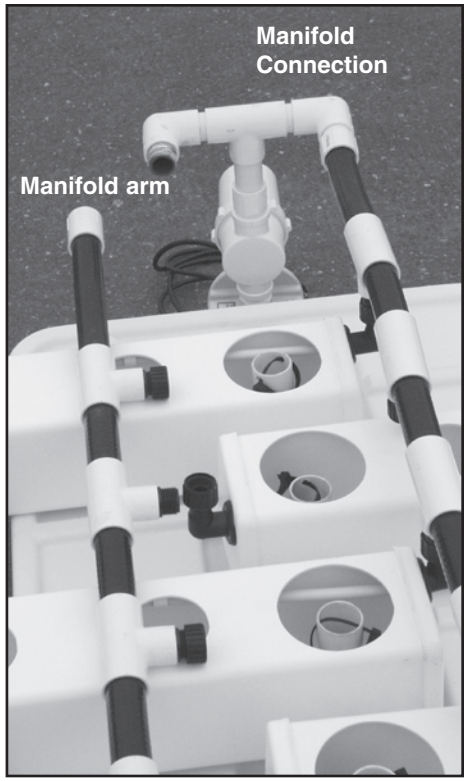


Step 3

Assemble support structure (see enclosed instructions).
Arrange the growing chambers on top of the reservoir with the end of the chambers placed on the support structure(s). The growing chambers' drain fittings are centered over the drain/overflow holes in the reservoir. The chambers may be oriented in either direction or staggered (see cover).

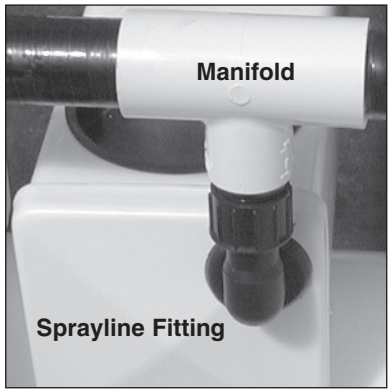


AeroFlo² 60 Extention: If you have also purchased the optional AeroFlo² 60 Extention (sold seperately), at this point you should connect the Extention to your AeroFlo². Refer to the Extention Assembly Instructions for a detailed, step-by-step guide.



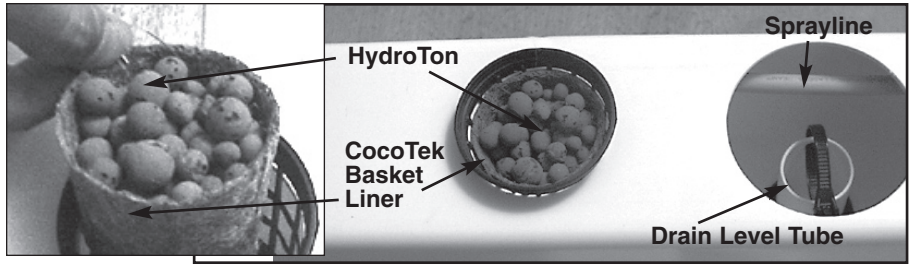
Step 4

Screw the flexible manifold arm(s) into the manifold connections. Only one manifold arm is necessary if you choose to orient the chambers in only one direction. Cap the unused manifold connection with the supplied cap.



Step 5

Screw the sprayline fitting attached to the chambers onto the flexible manifold.



Step 6

Apply a thin coat of lubricant (supplied) onto the drain tubes. Install the drain/overflow tubes into the growing chambers' drain holes. The overflow tubes are adjustable allowing for greater flexibility in water height.

Step 7

Rinse Hydroton to remove all debris. Insert the CocoTek Basket Liner and fill the growing cups with Hydroton. Insert them into the growing chambers. Your AeroFlo² 60 is now assembled.

Step 8

Fill the reservoir with water and add nutrient. You're ready to plant!

Startup

Before filling your system with water it is essential that you understand the system capacity. The reservoir should be drained first before draining the growing chambers. This will prevent overfilling of the reservoir and possible flooding.

	Low stage	Flooded stage
Each Chamber	**1.0 gallons**	**4.0 gallons**

Reservoir capacity is 40 gallons. This means that the total system capacity is approximately 64 gallons in the flooded stage (overflow tubes set high), or 46 gallons in the low stage (overflow tubes pressed to the bottom).
Fill the reservoir with water. Turn on the pump. The pump will drive water into the growing chambers. Note: It may be necessary to adjust the angle of the Laser Spraylines so that they are spraying at a 45° angle from the chamber bottom. When the growing chambers are full, fill the reservoir to about 3/4 full, do not overfill. If you choose to use a timer so that your pump runs in the daytime and is off at night, or if there is a power failure, there must be sufficient reservoir capacity to capture the run-off from the chambers during the "off stage".

Draining the system