



Assembly of an F8 Hydroponic Tower

Congratulations on your purchase. Each Foody tower will provide years of fresh produce and healthy eating. Setup is not difficult however we do recommend reading through all of the directions before actually beginning. Also, it is helpful to have another person lend an extra hand when first stacking the units.



Before you begin: Pictured at left is a tower that has been set up inside of a 26" diameter pond liner. Doing this will help ensure that spilled water, leaves, etc. won't get on your floor. We found these at Lowes for around \$12.00 each. They may be available at your local garden store as well. Anyway, here's a link:

http://www.lowes.com/pd_93171-1569-PP2607___?productId=1112805&pl=1&Ntt=pond+liner

Step 1: Assemble the Growing Pods which come in 2 parts (lid and base) that snap together. Assemble each pod by pushing the lid firmly down onto a base unit. It takes *very* firm thumps with the palm of your hand as you work your way around the outer edge to get it to snap firmly together. (Note: when needed, the lid may be removed by inserting a standard screwdriver into the small rectangular slot between the lid and the base. Turn the screwdriver in the slot and the lid will pop back up.)



Step 2: Insert each piece of PVC pipe into a Growing Pod. Press the end with the grommet down into the center hole of each growing pod. If using Hydroton or Plant!t growing mediums one 40 liter bag is all that is needed per tower. (Plant!t may be purchased on Amazon for around \$28.) Important: Rinse off the growing medium to remove clay dust prior to placing into the growing pods. Fill each Growing Pod with growing medium up to within 4-5 inches of the top outer edge. It's important to cover the upper end of the PVC pipe with your hand while pouring the growing medium so that it won't go down inside the PVC pipe. (Please see notes about types of growing mediums on the "Hydroponics with a Foody" information sheet.) Ensure that the PVC section remains centered within the large center circle of each Growing Pod lid.



Step 3: The 8 small white net pots need a rope wick inserted into their base. Simply pull one end up of the brown rope up and through the base of each net pot and then back down through another hole. These are for use only in the lid of the base reservoir. The tails of the ropes will hang down into the water once the net pots are placed onto the Reservoir lid.



(When ready to plant, small plants may be placed into these net pots and then topped off with growing medium. (Note: gently wash as much soil as possible off of the plant roots before placing them into the net pots.) Then place the net pots into the holes in the Reservoir lid.

The 2" net pots are *only* for use in the base reservoir. No net pots are needed in the Growing Pod pockets.

Step 4: Set the base reservoir in your chosen location and fill with water to within a couple of inches of the top. Do *not* fill it to the top. The reservoir holds about 6 1/2 gallons when filled to within 1-2 inches of the top edge. We advise checking the initial pH of your water at this time. The ideal pH for obtaining proper nutrient

availability for plant growth is between 5.5 and 6.5 but don't adjust the pH until *after* you've added the liquid nutrients (step 5 below). General Hydroponics makes a pH Control Kit that comes with a liquid pH testing kit as well as pH Down and pH Up solutions for adjusting the pH. A digital pH meter may also be used to check pH. Remember to stir the water to mix in any added pH Down or Up solutions prior to re-testing. PH meters and pH Control Kits are available on our website as well as at any local nursery or hydroponic retail store. You will need to check the pH again after adding the liquid nutrients as specified below.

Step 5: Add Liquid Nutrients to the Base Reservoir:

The liquid nutrients, necessary for feeding the plants, may now be added to the water. We recommend Bontanicare Pro Grow and Pro Bloom or Flora Duo A and B by General Hydroponics. These work well, are easy to use, and are reasonably priced. (Alternatively, there are other types of liquid nutrient products that may be used instead and which may be purchased from your local hydroponics store.) You will need to purchase a Total Dissolvable Salts meter for measuring the levels of nutrients in the water. These meters are available on our website (www.foodyverticalgarden.com) or at your local hydroponic store.



A good range for salt ppm (parts per million) for plants is between 800 ppm and 1000 ppm but a good starting level for very young plants is 600 to 750 ppm. Add liquid nutrients according to directions on the bottle but remember add only as per the directions on the bottle and stir thoroughly prior to testing the levels with your TDS meter. We advise being very conservative and adding nutrients incrementally, gradually adding more until the proper level is obtained. After each addition it takes about 5 minutes for the nutrients to be thoroughly dispersed throughout the tower. Then recheck the salt level with your meter. It is best to use a small cup or glass to remove a small amount of water from the reservoir for testing purposes. You'll only need about 2" of water in the glass. Doing this will ensure more accurate readings for both pH and salt levels. Generally, it is good to check the salt levels once per week and the water level every 2-3 days; more frequently when plants are growing rapidly.

Note: When the salt level gets too low simply add more liquid nutrients. If the salt level gets too high the margins of the plant leaves may start to turn brown. In this case you may need to remove 3-4 gallons of water and replenish with new water. This may be done by shutting the pump off, pulling the emitter out of the end of the poly hose on the top growing pod and sliding the top growing pod off of the poly tubing. Then place a plastic container under the upper end of the poly tubing and turn the pump back on to pump water into that container. Dump that water and repeat the process until the water level in the base reservoir is just 3-4" deep. Then add new water into the base through one of the access doors in the reservoir lid. Fill it up to within 2-3" of the top. Stir and re-check the salt ppm. It should be back down at a lower level. If needed, add more liquid nutrients to bring the total levels of salts back up to the desired 800-900 ppm range. ALWAYS re-check the pH after adding nutrients.

Step 6: Pump installation:

Check to ensure that the Flow Control Knob on the end of the pump is in the fully open position (turned to the "+" side). Take the 1/2" size adapter barb (smallest in package included) and screw it onto the top of the pump. (The other pump adapter fittings and air attachment hose fitting are not needed.) Push one end of the black poly tube hose over the barb of the adapter on the pump. Insert the Pump into the Base Reservoir and lay it on its side as shown in photo at right. (Doing so allows you to easily re-position the pump if needed later.)



Step 7: Placing the lid onto the Base Reservoir. You'll notice two notches in the underside of the white reservoir lid (photo of notch shown on left). When placing the lid onto the reservoir align the notched areas so they will fit down over the two slightly protruding areas on the inside



of the reservoir. (Photo on right shows one of those protruding areas.) Doing so will correctly position the lid and help it to fit more securely on the reservoir.

Route the black poly tube hose up through the large center hole of the lid. The pump's electrical cord should be routed out through the corner hole in the access lid of the reservoir lid.



Carefully place the stainless steel ball bearings (from the included small plastic dispenser bottle or bag) into the groove around the edge of the center hole. The ball bearings are mandatory to use if you have purchased the auto-rotation motor & gear. They ensure easy rotation of all of the Growing Pods at the same time. (Note: until the Rotation Trumpet is placed over the ball bearings they can escape very easily. Don't worry if one or two fall into the water below.) Now, carefully slide the round Rotation Wheel (has teeth on

its outside edges) down so that the water hose comes up through its center hole. It sits on top of the ball bearings (as shown). If you purchased the auto-rotation motor you'll need to gently push down on the Rotation Trumpet to get it to slide past the worm gear that's attached to the rotation motor.

Step 8: Take one of the Growing Pods and thread the black poly hose up through its center pipe. Then set it down onto the Rotation Trumpet in the center of the reservoir lid. Then you may stack up the remaining growing pods after first threading the water hose up through each of their center pipes.

Step 9: After the uppermost Growing Pod has been set in place use scissors to trim off any extra 1/2" diameter tubing. (It's best to leave about 2-3" of extra tubing sticking above the PVC so that the emitter can be easily inserted and removed as needed.)

Place the large white washer onto the neck of the 1/2" barb adapter that has the emitter on it. Insert the barb into the poly tubing hand tight. You may then push the poly tubing back down so that the white washer and emitter rest on the top end of the PVC (as shown in photo).



Note: It may be necessary to put one hand through an access lid in the base reservoir and slide the pump to one side in order for the slack in the hose to be taken up. (Hopefully, the pump was laid on its side as mentioned in Step 7 above.) Note: If the poly tubing has been shortened too much it may not come fully up through the top-most piece of PVC during re-assembly in the future. A small pair of needle nose pliers may help reach the hose in the PVC and pull it on up so that the emitter may be re-inserted.

There is a 6" solid white plastic cover that may be placed into or over the large center hole of the topmost growing pod. This cover protects the emitter and ensures that water from the nozzles stays inside of the growing pod. (See photo on right.) The cover may be removed at any time as needed for checking the emitter.



Planting Note: Most Hydroponic growing mediums will not grow plants from seeds. We suggest either purchasing small plants (2-4" in height) and gently washing off 80%-90% of the soil before placing them into the growing medium in your growing pods or grow from seeds in grow plugs such as Rapid Rooter (made of composted tree bark). Once the plant roots grow through the bottom of the plugs, you may place them into the growing medium inside the growing pods. (Photo on right shows young plants in Hydroton growing medium.) Additional growing



medium may then be placed up and around each plant. Place those plants that will be the largest in the lowest positions on the tower. This will keep the tower from becoming overly top-heavy.

Step 10: The 8 white net pots are for use only in the lid of the base reservoir. Place small plants or rooting plugs with plants into each net pot and fill up around them with a small amount of growing medium. We recommend hand watering all Net Pots and Growing Pods the first time after planting to ensure that the growing medium is thoroughly wet.

The TIMER: A 15 minute incremental indoor/outdoor timer is provided for use with the pump or the optional auto-rotation motor. If using growing mediums such as Hydroton or Plant-it! it is advisable to run the pump constantly the first few days. Once the plants are growing well the pump may be run in cycles of 15 minutes "on" followed by 30 minutes "off". It's important to observe your plants and adjust the watering cycles to best suit their needs.

Auto-rotation motor option: (only for indoor use if desired) The optional auto-rotation unit rotates the growing pods ensuring that all plants receive light when the tower is placed near a large south facing window, glass door, or artificial grow lights. It turns very slowly...just 8 rotations per hour so it may be difficult to notice it turning at first glance. It should only be run during daylight hours and may, with a timer, be set to run for just 15 minutes two or three times per day. *Be sure that the auto-rotation motor is timed to shut off at the end of each day.*



Troubleshooting

Pump filter may be plugged and/or insufficient water is coming out of the emitter:

- Check to make sure that there is not a kink in the water supply hose in the lower reservoir. Lift the access door lids and check with your hands running along the hose. Reposition the hose and/or pump slightly to remove the kink.
- If the nutrient solution being used has a high sediment content it may plug the filter on the pump. Turn the pump off. Reach into the reservoir with both hands and pull the cover off of the foam filter on the end of the pump. Clean the filter, re-install, and snap the plastic cover back over it.
- The pump may be removed from the base reservoir through either of the access doors if needed. Turn the pump off, insert both hands through the two access doors on the top of the reservoir and pull the water hose off of the adapter on the pump and unscrew the hose adapter. (Or unscrew the adapter with the hose still attached which can also be done.) Then lift the pump out through one of the access doors...it will be a bit tight but it does come out:)
- We suggest also checking to insure that nothing such as a piece of Hydroton or growing medium has accidentally gotten into the water hose.

Welcome to the **Foody** family! Please email or call us if you've any questions.
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