

SOLO COMM

Professional Deep Water Culture (DWC) System



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SINGLE MODULE DEEP WATER CULTURE (DWC) SYSTEM

Current Culture H2O would like to thank you for purchasing a UC SOLO COMM DWC Deep Water Culture System. Follow these simple instructions and you'll be growing in no time!

PARTS



MULTI-MOD COMMERCIAL
GROWTH MODULE



MULTI-MOD COMMERCIAL LID
WITH PORT HOLE COVERS



CCH2O NET POT &
NET POT INSERT W/ COLLAR



DRAIN VALVE



AQUA-PORE XL BAR
AIR DIFFUSER



AIR PUMP ADAPTER



AIR PUMP



FLOAT VALVE KIT &
RESERVOIR ADAPTER

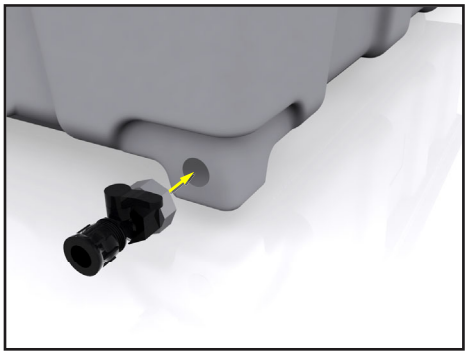


CULTURED SOLUTIONS
NUTRIENTS

ASSEMBLY INSTRUCTIONS

Unpack and identify all components. Place MULTI-MOD COMMERCIAL GROWTH MODULE on a flat surface for assembly.

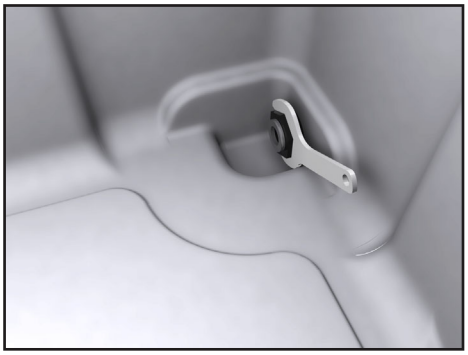
DRAIN VALVE INSTALLATION



Step 01:
Install DRAIN VALVE into the hole in the drain well.



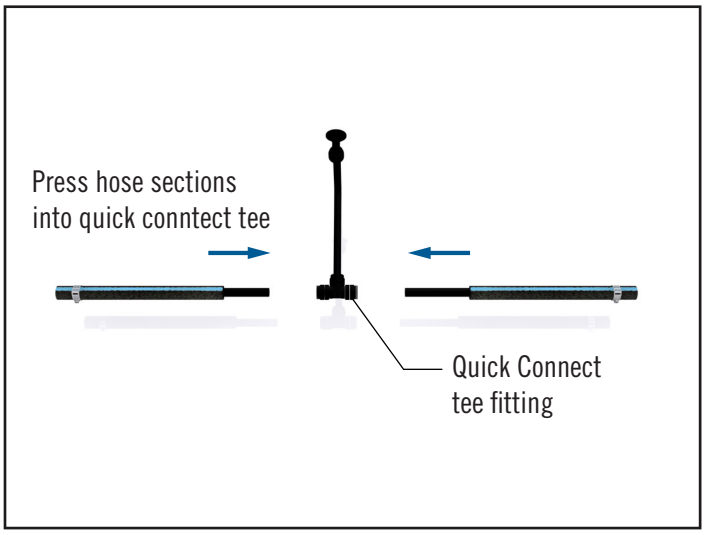
Step 02:
The flat gasket should be oriented outside of the module.



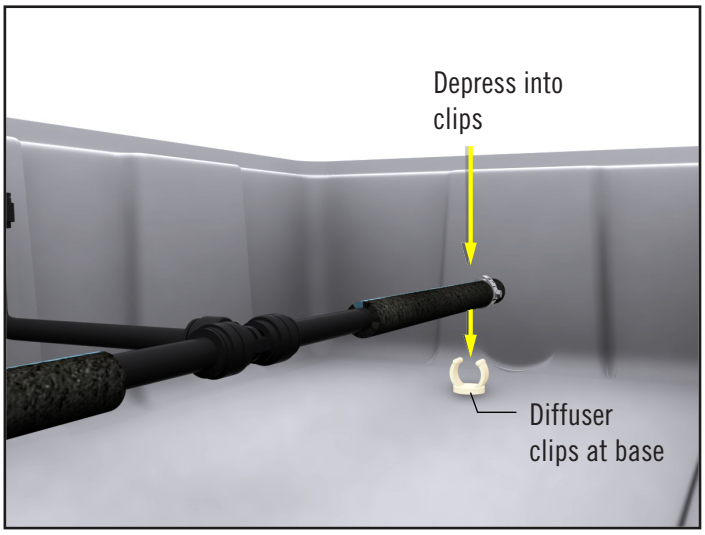
Step 03:
Tighten the nut on the inside of the module until secure. Use a light wait wrench if needed.

**Make sure the valve is closed before filling the system with water.

AIR BAR INSTALLATION



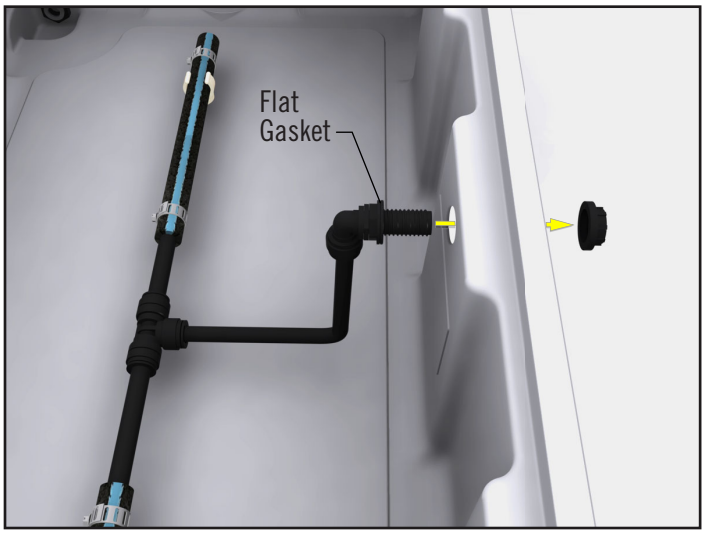
Step 04:
Assemble the AQUA-PORE XL BAR AIR DIFFUSER by pressing the (2) ½" hose sections into the quick connect tee fitting.



Step 05:
Install the assembled AQUA-PORE DIFFUSER into the clips at the base of MULTI-MOD COMMERCIAL GROWTH MODULE.

Orient the bulkhead towards the hole in the upper sidewall.

AIR BAR INSTALLATION

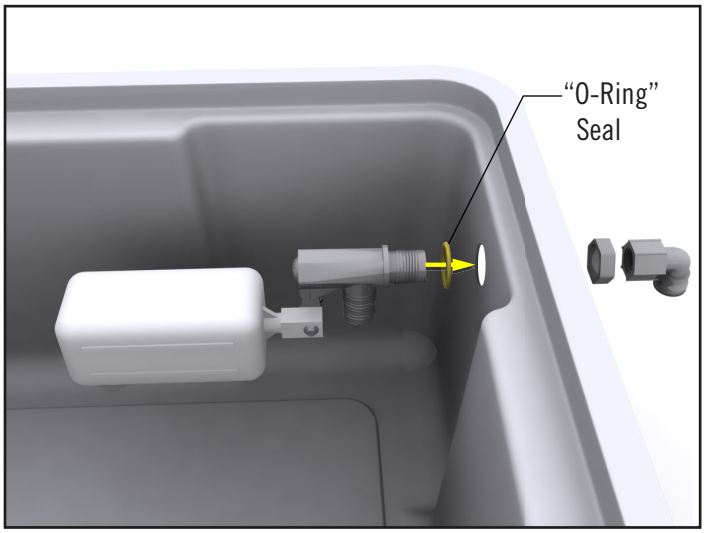


Step 06:
Insert the male threaded end of the bulkhead through the 7/8" hole in the middle section of the upper sidewall. The flat gasket should be oriented on the inside of the module.

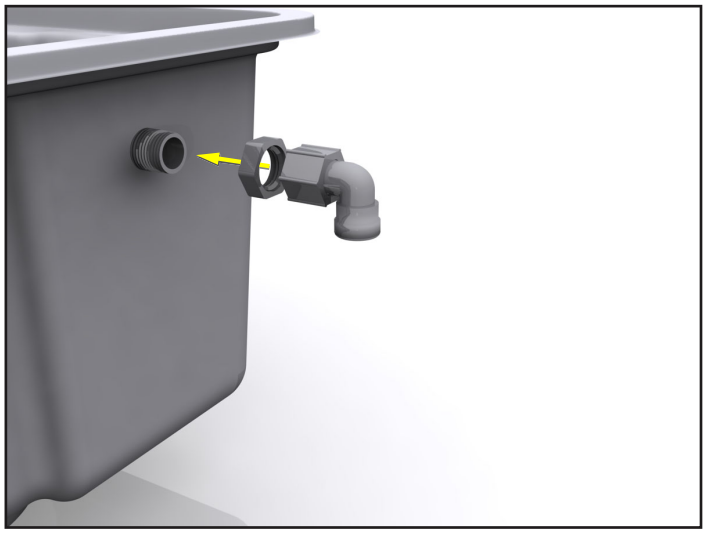


Step 07:
Thread the nut onto the male threads on the outside of the module until secure.

FLOAT VALVE INSTALLATION



Step 08:
Remove the nut from the float valve. Insert the male threaded end of the float valve through the 3/4" hole in the corner of the upper sidewall. The flat gasket should be oriented on the inside of the module.



Step 09:
Thread the nut onto the male threads on the outside of the module until secure. It may be necessary to use a wrench to fully secure the nut (not included). Install the quick connect elbow fitting onto the male threads.

*The float valve should be oriented with the apparatus facing up and the bulb hanging downward, parallel to the sidewall.

AIR PUMP INSTALLATION

Move the system to the growing area and place it in its final position.

Unpack the AIR PUMP and position it above the water level within 3FT of the air inlet bulkhead fitting. *Ideally on a shelf or stand.



Step 10:
Install the rubber elbow onto the AIR PUMP outlet (included with the pump), orient the elbow downward.



Step 11:
Install the AIR PUMP ADAPTER - Insert the barb end of the hose assembly into the rubber elbow on the AIR PUMP.





Step 12:
Insert the opposite end of the AIR PUMP ADAPTER (½" hose with elbow) into the bulkhead fitting already installed in the module sidewall

CONNECTING A TOP-OFF RESERVOIR

Q: Why do I need a Top-Off Reservoir?

A: As the plants grow, the nutrient solution will be uptaken and transpired into the environment. This will lead to the system volume reducing and requiring replenishing.

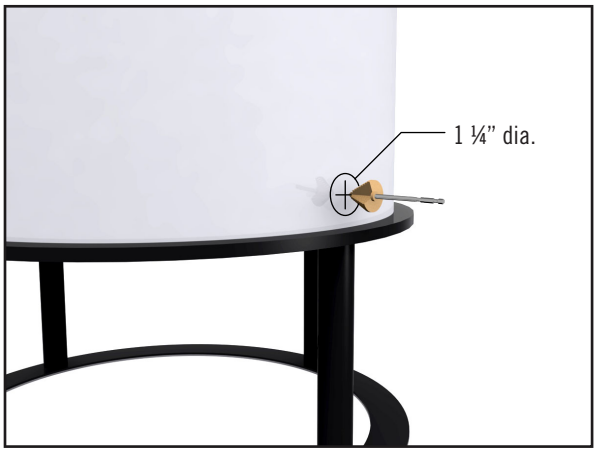
The Top-Off Reservoir is connected to the float valve and allows for a make-up solution to refill the system automatically, maintaining a more consistent water volume and chemistry.

Sizing the Top-Off Reservoir

A proper Top-Off Reservoir should be equal to the total system volume. This allows for the reservoir to be used to mix full batches of nutrient solution for the system. The UC Solo COMM holds approx 30-gallons when full.

Installing the Top-Off Reservoir

1. Position the reservoir within 4ft of the system, elevated above the float valve. *The reservoir should be placed outside the grow room for efficiency if possible.

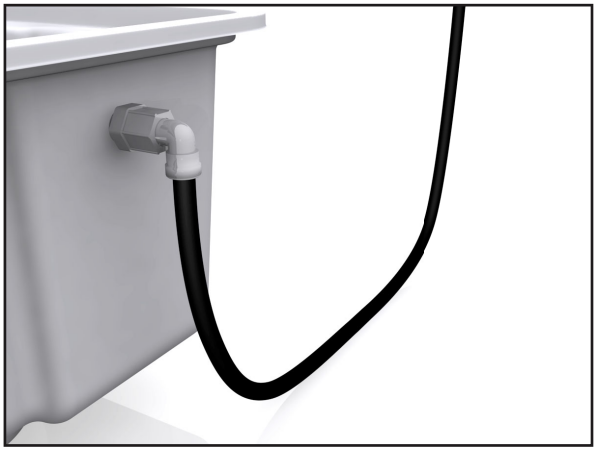


Step 02:
Drill a 1-1/4" hole near the base of the reservoir.
*We recommend using a stepped bit.



Step 03:
Install the UNISEAL and RESERVOIR ADAPTER fitting.





Step 04:
Connect the RESERVOIR ADAPTER to the FLOAT VALVE quick connect elbow with the reservoir hose.

5. Top-Off Reservoir and float valve are connected and ready for operation.

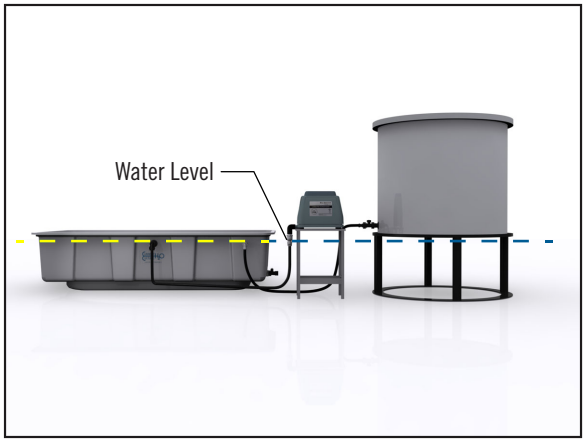
FILLING THE UC SOLO COMM WITH NUTRIENT SOLUTION

Always premix, pH balance and stabilize the nutrient solution in a reservoir or batch tank before pumping into the UC System.

Mix the total required volume of nutrient solution in a reservoir. This tank can act as your top-off and batching tank throughout the growing cycle. Follow the steps below to fill your system:

Hand Mixing Process for Top Off Tank

1. Fill the tank with pure water.
2. Begin recirculation in the tank. *Use a submersible or in line pump.
3. Follow the Cultured Solutions feeding schedule:
   a. Add recommended dose of UC Roots
   b. Add recommended dose of Cococal
   c. Add recommended dose of A Formula
   d. Add recommended dose of B Formula
   e. Add recommended dose of Bud Booster
4. Add recommended dose of Mycostop (dilution) as needed.
5. Allow recirculating for 15 minutes.
6. Check pH and EC to ensure the target is achieved.
7. Adjust pH as needed.
8. Allow recirculating for 1 HR and retest pH.



Once balanced and stable, the nutrient solution should be pumped directly into the system until the desired water level is reached. This can be done via the main Utility Pump.
Alternatively, the solution can be gravity fed through the float valve, but we recommend using a transfer or booster pump to fill the solution from the batch tank to the system.

INITIATING THE AIR PUMP

Always remove air stones from the nutrient solution before disengaging the pump.
Do not turn off air pumps while air stones are submerged. Doing so can result in a siphon action that will pull nutrient solution and debris into air stones rendering them less effective.

LEAK CHECKING THE UC SOLO COMM

1. Fill the system with water.

2. Check for any obvious leaks and address them by tightening associated fittings.

3. Check again for any leaks and address them by tightening associated fittings.



**Additional tightening may be needed once the system is completely full of water. If a leak is discovered that you're unable to fix it, email tech@cch2o.com for support.

The system is now leak-tested and ready for planting.

Install the LID onto the MULTI-MOD COMMERCIAL GROWTH MODULE. Place PORTHOLE COVERS into the corresponding holes in LID.

TRANSPLANTING INTO THE CCH2O NET POTS

Transplanting should not be performed in the grow room, but instead in a clean, purposed area for transplantation. Once transplanted, planted cuttings should be placed immediately into the awaiting UC Solo COMM System to ensure hydration and reduce transplant shock.

When transplanting into a new environment, be sure to match as many of the environmental and water chemistry conditions with those of the previous environment to minimize transplant shock.

**Only utilize bare root or rockwool propagated cuttings for best results. Do not transplant cuttings or juvenile plants from soil into the UC System as this may lead to CROP FAILURE.

Transplanting bare-root cutting into a porous stone media:

1. Rinse grow rocks/stones thoroughly, if possible, soak 24 hours in a pH 5.5 solution.
2. Fill the net pot with porous stone media to be level with the planting deck.
3. Place the bare-root cutting gently above the planting deck and carefully backfill the media until filled just above the root crown (most upper roots on the stalk of the cutting).
4. Place the planted Net Pot immediately into the UC System Lid to ensure proper hydration.

Transplanting rockwool cutting into a porous stone media:

1. Rinse grow rocks/stones thoroughly, if possible, soak 24 hours pH 5.5 solution.
2. Fill the net pot with porous stone media to be level with the planting deck.
3. Place the rockwool cutting gently above the planting deck and carefully backfill the media until filled just above the root crown (most upper roots on the stalk of the cutting).
4. Place the planted Net Pot immediately into the UC System Lid to ensure proper hydration.

Transplanting bare-root cutting into the CCH2O Net Pot Insert (NPI):

1. Locate CCH2O Net Pot Insert Collar.
2. Gently place the stalk of cutting, just above the root crown (most upper roots on the stalk of the cutting) into the NPI Collar.
3. Place NPI Collar into the recessed portion of the NPI, seated atop the Net Pot.
4. Place the planted Net Pot immediately into the UC System Lid to ensure proper hydration.

Transplanting rockwool cutting into CCH2O Net Pot Insert (NPI):

1. Locate CCH2O Net Pot Insert Collar.
2. With NPI nested atop the Net Pot, rest the rockwool cutting gently above the planting deck. Once stabilized, gently place the stalk of cutting, just above the root crown (most upper roots on the stalk of the cutting) into the NPI Collar.
3. Place the planted Net Pot immediately into the UC System Lid to ensure proper hydration.

TRANSFERRING TRANSPLANTS INTO THE UC SOLO COMM

Plants do not require additional top feed irrigation (hand watering) once they've been transplanted. Always assure transplant roots are fully immersed in the solution and there is no need for additional watering. Plant roots in solution enable plants to hydrate and maintain health during the transition.

Before transferring the transplants into the UC System, check all room equipment and parameters to assure the environment and water chemistry are suitable for plant growth.

CULTIVATION

Stages of the cycle:

Beginning Veg
Transition to Flower
Throughout Flower
Bi-Weekly Flower

Q: What should be done to maintain the UC Solo Comm system during the planting cycle?

A: Listed below is a series of basic considerations and observations that should be made on a daily basis. In some instances, the steps should be carried out less frequently once reliable patterns become apparent.

Following this is a checklist for reference that can be used to log observations to help establish data points to cross-reference with results.

Q: Will plants begin to grow immediately, once moved into the system?

A: Generally it takes the transplants a few days to adapt to the UC System and a new environment. The more care and detail put into a smooth transplant and transfer, the faster the plants will adapt into the UC System and begin to flourish.

ASSESSING PLANT HEALTH

Check general plant health on a daily basis to stay ahead of any possible issues that may develop. Keep an eye on leaf tropism, turgidity, morphology, and luster for reference. Check plants regularly for pests and diseases.

MONITORING NUTRIENT SOLUTION

pH, EC/PPM, ORP and water temp should be monitored on a daily basis. Generally, EC/PPM should drop gradually while pH rises slightly. If this isn't the case, there may be a need to adjust water chemistry. Record the observed conditions in a cultivation log.

PH & PPM/EC ADJUSTING

Q: Why can adjusting my pH frequently be harmful to the health of my crop?

A: Frequent or abrupt pH adjustments destabilize the nutrient solution, interrupting solution uptake, and in some cases, stressing plants, causing damage and potential crop loss.

Adjustments should be made infrequently and in a gradual fashion.

pH generally increases by +/- 0.1 per day, with a target range of 5.7-6.3. This range allows for full availability of macro and micro minerals throughout.

Hitting a specific target is not necessary and making daily adjustments in an effort to do so can destabilize the nutrient solution and interrupt plant growth.

EC generally declines in a healthy system, requiring fertilizer to be added back into the solution to maintain targets. This is best accomplished by diluting the required fertilizer concentrates into solution in a tank, and allowing it to replenish the system via the float valve. Calculations can be made to assist in this replenishment.

During this top-off event, pH can also be manipulated if necessary.

Cautions

Avoid disrupting water chemistry, especially when plants are young. Allowing the young plants to acclimate will ensure nutrient uptake and hydration occurs spurring growth. Check system function to assure air and water pump are operational, as well as any supporting equipment such as chillers and meters.

NUTRIENT SOLUTION CHANGE-OUTS/ PURGES

Q: How often should a nutrient change-out take place?

A: CCH2O recommends a nutrient solution change-out be performed every 7 days. This 7 day cycle corresponds with contemporary weekly feed schedules affording the solution chemistry to stay in step with feeding schedule recommendations.

Q: Should the entire system volume be drained and replaced when executing a change out?

A: No. CCH2O recommends 50% of the total system capacity be drained and replaced. This partial change-out allows the stabilized solution to remain, while the refreshed solution is topped-off back into the system. The partial change-out conserves the solution and allows for a more rapid transaction to minimize plant root exposure while the nutrient change is taking place.

Nutrient solution change-outs aid in removing roots exudate build-up in the system and replenishing macro and micronutrients in the solution.

Maintaining stability during these exchanges is important to avoid any associated stresses due to the solution change.

For this reason, we recommend a nutrient change out to be 50% of the total system capacity. This partial change affords a stabilized solution remain, while the refreshed solution is topped off back into the system. As well, it allows for a more rapid transaction to minimize plant root exposure while the nutrient change out is taking place.

**PRO Tip: To minimize stress on crops, perform this nutrient change out during the crop's night cycle, or right when the lights come on.

Nutrient Solution Change-Out Process:

1. In a reservoir or batch tank, prepare a balanced nutrient solution to be topped back into the system. This should be made up based on the feed chart recommendation for the week the crop is moving into ie. prepare week 7 if plants are currently in week 6.

2. Using the drain valve or circulation pump on the UC System, drain away 50% of the system volume.

3. Using a booster pump connected to the mixing tank, transfer the contents of the balanced tank into the UC System until desired fill level is achieved.

ROOT PRUNING

Properly executed root maintenance procedures and techniques can help mitigate root obstruction issues that may be encountered.

Root pruning is the process of trimming apical and leader roots to promote new growth and maintain proper root structure.

This technique encourages lateral root growth which will contribute to a healthy root structure. A single root when pruned will split into multiple feeder roots, resulting in increased root surface area.

Root Pruning Process:

1. Pruning should only be done as needed with no more than 10-15% of the root mass pruned at any one time.
2. Examine the root structure and look for uneven growth. Using a sterilized pair of scissors, prune the most peripheral roots to maintain a compact and uniform root mass.
3. Generally, begin root pruning when plants are just beginning to develop roots. Identify roots that are growing disproportionately and trim them to stay even with the adjacent root mass.
4. It is important to only prune the outermost root mass to ensure optimum root health. Root pruning should cease once in the flowering cycle.

TRAINING & TRELLISING

During this veg phase of growth, training is generally necessary, though trellising is not. We would recommend sourcing a cultivation guide that addresses the various training methods and associated details.

Below is a general approach to consider, though keep in mind, techniques and results vary based on varietal characteristics.

1. Start by identifying the height of the side branches.
2. Pinch and bend the main stem over your finger level to the side branches. This technique will promote lateral growth and ensure an even canopy.
3. Repeat the process throughout the vegetative stage until the desired canopy is achieved.
4. When the desired canopy is met, cover the canopy with a trellis.

The trellis can be used in multiple layers to provide support for the branches and stabilize the plant.

PRE-HARVEST

Assessing Flower Maturity

Base your target harvest date on the stated flowering period of the genetics, as well as physiological indicators. For more specific information, reference a guide outlining your crop's genetic tendencies and markers for maturing.

Drying Area

Assure your drying area has sufficient space and apparatus to house the entirety of the crop being harvested.

It's generally necessary to use environmental controls and HVAC to maintain ideal drying conditions. A drying space kept at 60F with 60% RH is a common target condition for drying and curing.

POST-HARVEST CLEANING & SANITIZATION

Internal Cleaning Process

1. Remove plants, root masses, and all debris from the system. Avoid dropping any additional biomass into the solution as this will make cleaning more difficult and may contribute to potential issues.
2. Remove lids and net pots, set aside for additional sanitization protocol (listed below).
3. With air pump(s) running, pull the air diffuser from the system and set it aside for a separate disinfection process.
4. Once all air stones have been removed, turn off the air pump(s).
5. Drain away solution volume down to a level just above the bulkheads. Be sure the tops of the bulkheads are submersed to ensure contact with the sanitation solution.
6. Add the recommended volume of a cleaner such as Zerotol HC concentrate.
    a. Recommended dosage: ZeroTol HC – 108 mL/gal (1 : 35 ratio)
7. For the sanitizing solution to be effective, it should be left to rest so allow to sit for 30 minutes before draining.
8. After the sitting period, use a non-abrasive cloth or sponge to wipe down the inside of the module above the waterline as needed to loosen any debris.
9. Using a stream of clean water, rinse the residual into the sanitizing solution.
10. Drain the system completely.
11. Drain out system contents and wet vac away any remaining solution as needed. After use, this non-toxic sanitization solution can be sent down municipal drains. The solution breaks down into oxygen and water.

External Sanitizing Process

1. Clean/remove all loose debris and organic matter.
2. Prepare a dilute sanitizing solution using ZeroTol HC – 38 mL/gal (1 : 100 ratio)
3. Using a pump sprayer or foamer apply the sanitizing solution to the outside of the module, if cleaning the system in a water-sensitive area, use a damp cloth to perform this process.
4. Using a non-abrasive damp cloth, wipe down the outside of the growth modules, water hoses, epicenter, and adjacent plumbing if untouched by spray application.
5. Allow the system to air dry.
6. Process complete, the system is now ready for use.

CCH2O Lid and Net Pot Sanitization

1. Remove plants, root masses, and all debris completely from lids and net pots.
2. Fill a large soaking chamber with water.
3. Add ZeroTol HC – 150 mL/gal (1 : 25 ratio)
4. Allow lids and net pots to soak for 12-18 hours.
5. Allow to air dry or wipe down with a damp cloth as needed.

Air Stone Sanitization

1. *Caution* - SaniDate/ZeroTol will damage UC Solo Comm Aqua Pore air diffuser.
2. Rinse the diffuser in freshwater, gently wiping away any roots or debris.
3. Let diffuser air dry.

HYDROPONICS WEEKLY LOG SHEET

Room #/Name:	
System #/Name:	
Stage of Growth:	Clone I Mother I Veg I Flower
Week:	_____ of _____
Variety/Strain:	
Light On (time):	
Lights Off (time):	

Date	__/__/____	__/__/____	__/__/____	__/__/____	__/__/____	__/__/____	__/__/____
Day	M T W T F S S	M T W T F S S	M T W T F S S	M T W T F S S	M T W T F S S	M T W T F S S	M T W T F S S
Time							
Nutrient Solution							
pH							
EC							
Water Temp							
ORP							
DO							
System Parameters							
Aeration Level (IWC)							
Water Level (%)							
Water consumed/added (gal)							
Air Pump Function (Y/N)							
Water Pump Function (Y/N)							
Inline Filter Check							
Environment							
Temp							
Humidity							
VPD							
CO2							
Light Levels							
Plant Care							
Root Health							
Root Pruning							
Foliar Applications							
Nutrient Adjustments/Additions							
Additional Adjustemnts Made							
Observations/Notes							

CURRENT CULTURE H2O LIMITED 3-YEAR WARRANTY

This limited warranty applies only to full systems manufactured at Current Culture H2O in Fresno, CA.

Warranty Includes

- All individual components manufactured by Current Culture H2O come standard with a THREE year limited warranty.
- All Air & Water pumps are covered by their specific manufacturer's warranty. Manufacturer instructions and warranty information booklets are provided with each pump. If any issues with these units covered within their individual warranties should occur, please contact the manufacturer for repair or replacement.

Warranty Excludes

- This limited warranty excludes any components considered to be expendable (i.e. hoses, air diffusers, net pots,seals, etc.). These items should be replaced periodically to ensure proper system functionality.

Warranty Returns & RMA

Current Culture H2O will replace the product, repair the product or send a replacement part or issue a refund (at our option) when the consumer provides a proof of purchase (either a bill of sale, receipted invoice, or other proof that the product is within the warranty period), along with a full description of the defect, to: Current Culture H2O, 4333 S. Minnewawa Ave #101, Fresno, CA 93725, (559)266-4769, info@cch2o.com

Current Culture H2O reserves the right to request photographic proof of product defect, and request that the defective product in question be shipped to Current Culture H2O to verify the defect or to aid in quality control efforts.

All warranties must be preceded by an authorized RMA form. If a replacement is issued, Current Culture H2O does not cover the cost of shipping replacement items. Customer will be notified of shipping charges for approval and payment information prior to issuing replacement items.

Legal Info

Misuse, or use other than for horticultural purposes is not covered by the limited warranty. In addition, damage caused by: insects, animals or rodents, use of force, incorrect handling, inappropriate use, abuse, neglect, accidents, impact from foreign objects, vandalism, pollutants, set-up on an un-level foundation, alteration, painting, fading, assembly not in accordance with the System Assembly Instructions, or damage caused as a result of storage above the capacity limits of the Product, are not covered by this limited warranty.

This limited warranty does not apply to damage resulting from "acts of nature" such as, but not limited to: wind, hail, storm, tornado, hurricane, heavy snow, ice, blizzard, extreme heat, freezing, flood, fire effects.

This warranty is void if structural parts and/or components not supplied by Current Culture H2O are used.

This warranty does not apply to "Normal Weathering". "Normal Weathering" is defined as exposure to sunlight and extremes of weather and atmosphere, which will cause any colored surface to gradually fade, chalk, or accumulate dirt or stains.

CURRENT CULTURE H2O MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE. IN NO EVENT SHALL CURRENT CULTURE H2O BE LIABLE FOR INCIDENTAL OR CONSQUENTIAL DAMAGES. Legal rights vary from state to state, so the above limitations may not apply to you if precluded by local law.

Determination of coverage under this warranty shall be made at the sole discretion of Current Culture H2O.

DISCLAIMER

This system operates by storing and circulating water.

Water is heavy. Water is wet. Water freezes. Water and electricity could lead to electrocution.

It is the responsibility of the user of this system to make sure the surface upon which the system is installed is capable of supporting SUBSTANTIAL weight and is waterproof, and that all electrical components are install so that they will not get wet.

Current Culture H2O will NOT be responsible for any damage caused by improper installation or consequential damage to person or property caused by the use of this product even if it is determined to be defective.

Please take these warnings into consideration when planning your installation.

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