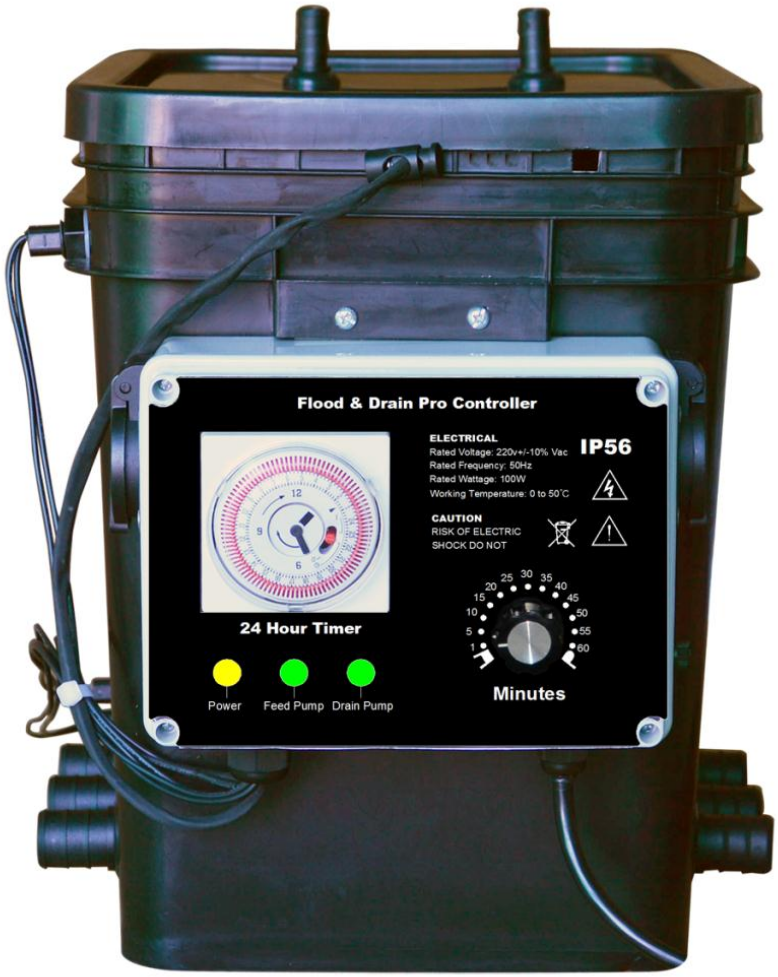
DEEP WATER CULTURE CONTROLLER (230V 50Hz)



INSTRUCTIONS

DWC CONTROLLER BUCKET SYSTEM

Thank you for purchasing the OKAYHYDRO deep water culture controller (230v 50Hz), the most efficient flood and drain intelligent Watering Systems on the European market. It is highly refined modular flood and drain set ups. Through this customizable growing system, you can set up an indoor garden that fits your needs and space requirements, as well as modify it at any time by adding or removing buckets.

WHAT'S IN THE BOX

1 – 7 Gallon/30 Liter Controller Bucket
1 – 7⁄8" Barbed Tee Connector
1 – 24Hours Machine Timer
2 – 1000L/h Pumps
2 – 1⁄2" Barbed Straight Connectors
6 – 7⁄8" Barbed Straight Connectors
2 – 1⁄2" Rubber Grommets
6 – 7⁄8" Rubber Grommets
1 – 20' length of 1⁄2" tubing
Depend on place style, you should need particular Barbed Tee Connectors or Barbed Straight Connectors, and extra water pumps.
Please contact us in advance.

USING THE GROW FLOW CONTROLLER

1. Plan the layout for buckets, controller, and reservoir. Choose an area where the controller can be within 10 feet of the reservoir. Make sure that controller bucket and grow sites are all on a flat, level surface.

Install straight connectors symmetrically around container and lid

2. Install two grommets in the reservoir lid. Depending on your reservoir, you may need to drill holes for the grommets.

3. Install six grommets in the holes on the side of the controller bucket. Install two grommets in the controller lid. Compress and twist the rubber to fit each grommet into place.

4. Place one or two of the submersible pumps into the reservoir. Secure the pump to the bottom of the reservoir with the pump's attached suction cups. *NOTE: An extension cord may be needed if reservoir isn't close to controller bucket.*

Two Unused outlets connected with tubing

5. Connect the pump inside the reservoir to the interior end of the vacuum break elbow fitting with a length of the included 1⁄2" tubing. For this and all subsequent lengths, cut the tubing as appropriate.

6. Connect the exterior end of the vacuum break to either of the barbed straight connectors on the lid of the controller bucket with a length of 1⁄2" tubing.

7. Place the other submersible pump in the controller bucket directly under the remaining barbed straight connector in the cover. The pump should be on the side opposing the lower float switches, so that it doesn't interfere with their operation. Connect the pump to the remaining barbed straight connector inside the controller bucket lid. The recommended length of 1⁄2" tubing for the connection is 10 1⁄2".

Three unused outlets connected with tee connector and tubing

8. Connect the exterior side of the remaining grommet to the grommet on the lid of the reservoir with a length of 1⁄2" tubing.

9. Optional: Reduce drain cycle related noise from reservoir by connecting the interior side of the grommet to a length of 1⁄2" tubing long enough to end just above the bottom of the reservoir.

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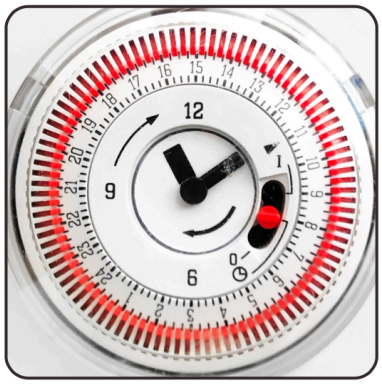
10. Attach 6 to 48 buckets with tubing to the outlets near the bottom of the controller bucket. Note: If some of outlets is left unused, connect them to each other with a piece of tubing. For a lone outlet left unused, put a short piece of tubing on it and crimp it shut, preferably with a zip tie. An even distribution of buckets per outlet decreases fill/drain time and increases the system's efficiency.

11. Plug the system's power cord into a power source. The green LED on the up left marked "POWER" should come on. As soon as If the water level is above the bottom water sensor, the drain pump should drain the water out let the water level below the sensor.

12. Test the system by filling the reservoir with regular water (no nutrients or media). Set the timer to the desired fill/ drain cycle. To set fill times, pull out the increments – which are 15 minutes each – with a pen or fingernail.
    Let the system complete one fill and drain cycle for a duration of 60 minutes.

13. Place transplants no less than 5" from the top of the bucket, to allow water to feed the roots.

OPERATE SWITCH ON THE TIMER

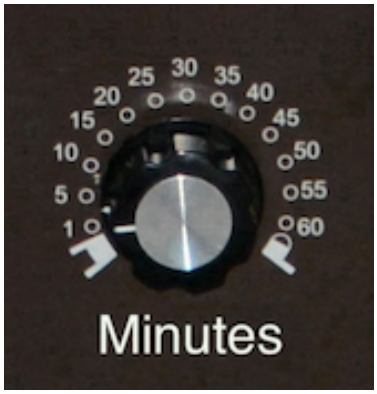


1. To set the time, remove the clear front cover from the timer and rotate the minute hand until you are the correct time of day. Please ensure that the front cover is refitted correctly.

2. The timer has a three position override switch:
   In position 'I' the output sockets will be turned on at all times regardless of the timer settings.
   In position 'O' the output sockets will be turned off at all times regardless of the timer settings.
   When the clock is in position, the output sockets will be turned on or off in harmony with the timer settings.

3. The time that sockets are required to be switched 'ON' when in the clock position is set by moving the tappets to the outer position for the required period.

4. The timer just only determines the system start time.



5. The feed pump will works in the knob time, and the feed pump indicator light is on. when the water level reaches the upper water level sensor switch, the feed pump stop working.

6. When the knob time is over (within 60minutes), the down water level valve sensor switch control the drain pump work, and the drain pump indicator light is on, the container of water will into outside. The bucket will be empty state.The system will work by the next signal of timer.
   If the feed pump cannot fill the bucket in 60 minutes, please use a large water pump or increase the number of pumps.

7. ***Even if the timer is set to conduction all time, it is just a signal that the system only works once. So The timer setting interval time should be longer than the knob setting time.***

INSTRUCTIONS

TIPS

- The Okayhydro controller is for indoor use only.
- Setup buckets, controller, and reservoir all on the same flat, level surface. Make sure all tubing going to the grow sites is flat along the same level surface.
- Don’t move the buckets while they are filling/draining, as this may cause flooding.
- Don’t fill reservoir while the buckets are filling/draining. Add to the reservoir only after drain cycle has finished (controller and buckets are empty).
- Use a 220-240V, 50Hz power source with this system.
- Change nutrient solution in reservoir every seven to10days.
- Clean out pump filters and the vacuum break elbow fitting hole, as well as check float switches for obstructions as needed.
- Regularly in spect all tubing for kink sand cracks.
- Move pump around while submerged to remove air bubbles at the impeller.

ROUBLESHOOTING	
PROBLEM	**SOLUTION**
The buckets are overflowing	Make sure all buckets, controller bucket, and reservoir are on the same flat level surface. Make sure the vacuum break is installed correctly. You can tell it is working if water drips back into the reservoir during the fill cycle.
The bucket fittings are leaking	Make sure rubber washers are installed correctly, and fittings are tightened down adequately. If the fitting hole in the bottom of the outer bucket isn’t smooth, clean up with a deburring tool.
The buckets won’t fill	Check fill pump for proper operation. Check screens inside buckets. Check for blockages, replace tubing if necessary
Drain pump stays on	Move drain pump away from lower floats, make sure it isn’t preventing them from fully engaging.

Warrantee and Liability

Timer Relay units carry a 2-year warrantee (valid to our terms and conditions) with exception to faulty fuses and units that have been tampered with. In the unlikely event that you find any fault with your unit, please do not hesitate to get in touch.

The manufacturer shall not be responsible for any damage caused by operation of the unit, be it incidental or consequential; or of any type; including, without limitation, damage or injury, caused to other products, machinery, or buildings. Nor will responsibility be accepted for loss of time or profit, loss of finished product, or for any inconvenience caused in any way whatsoever.