

Automated Microbial Bioreactor System Setup

30 -Minutes



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English

Let's Get Started



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Tote & Equipment Requirements

Before you install your Living Water Automated Microbial Bioreactor, please make sure you have a clean, flat-bottom 275-gallon IBC tote ready for use. The tote must be thoroughly rinsed and free of any chemical residues, contaminants, or prior product buildup to protect the integrity of the live microbial culture. The bioreactor is designed to fit directly into the top of this tote for optimal performance. In addition, an injection pump equipped with an Injection Check Valve is required to properly regulate microbe flow into your irrigation system. Both the injection pump and check valve are available for purchase through your Living Water distributor if not already on site.



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Tote & Bioreactor Preparation

- Place the tote on a level surface to prevent slope alteration over time.
- It is recommended that you **soak the air stones** for one hour in water.
- Before inserting the bioreactor into the tote, carefully lower the air stones (attached to the blue hoses) through the tote opening, ensuring they rest securely at the bottom of the tank. The blue hoses should remain outside the tote. Lay them **securely across the top** edge of the tote to prevent them from slipping back inside the tote.
- Next, carefully lower the circulation pump, which is attached to the clear hose, into the tote through the top opening. Make sure both the clear hose and the electrical cord remain outside the tank and **do not fall into the tote**.
- Feed the blue air stone hoses, the clear circulation tubing, and the electrical cord up through the opening in the bottom of the bioreactor lid, making sure all lines extend completely out the top of the bioreactor for proper connection and operation.
- While holding all tubing and cords securely, carefully lower the bioreactor into the tote, ensuring no lines are pinched or tangled. Once positioned correctly, screw the lid down firmly to create a proper seal.



Airstones
& Air Pump



Circulation
Pump & Hose



Insert Tubes
& Cords



Insert the
Bioreactor
into the tote

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Circulation Pump Setup

- With the clear tubing from the circulation pump extending out of the top of the bioreactor lid, carefully insert the tubing into the small hole on the lid so that it extends approximately 3–5 inches into the tote (see image for reference).
- **⚠ Important:** Do not plug in the circulation pump power cord until the final step of the setup process (**see Step 6**).



Continue Setup



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Air Pump Setup

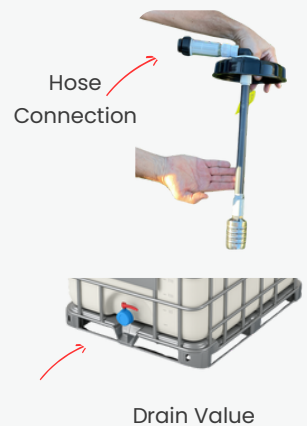
- Put the Air Pump on top of the tote near the bioreactor and attach the two blue hoses to the metal nipples as seen in the image.
- For further security, feel free to add zip ties around each blue hose at the nipple.
- ⚠️ **Important:** Do not plug in the circulation pump power cord until the final step of the setup process (**see Step 6**).



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Water Source & Hose Connection

- With the bioreactor now installed inside the tote, you can connect the garden hose to the bioreactor filter connector on top of the tote cap.
- Ensure the tote drain valve (**see image**) has been closed at the bottom of the tote. Do not open this valve unless you plan on using your own inline injection connection hose to the tote drain valve (Fittings are not included by Living Water).
- The closed-loop automation system is now set up, and you can proceed to fill that tank by activating the water source.
- Leave the water source in the open position, as it will now be controlled (on/off) by the float valve controller within the bioreactor system. Do not shut off the water source unless an emergency occurs.



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Bioreactor Activation

- Once the tank has filled up and the water source has been automatically shut off by the float valve controller, confirm that the air stones and circulation pump are completely submerged in the water. You can do this by looking into the hole of the bioreactor lid. Additionally, confirm the clear hose from the circulation pump is above the waterline inside the tank.
- You can now proceed by plugging in the circulation and air pumps to the power source. You should see water flowing through the clear hose and bubbles coming from the air stones inside the tote.
- Allow the tank to run for 1 hour to ensure the air stones are saturated prior to adding the microbes.



Continue Setup



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Introducing the Microbes into the System

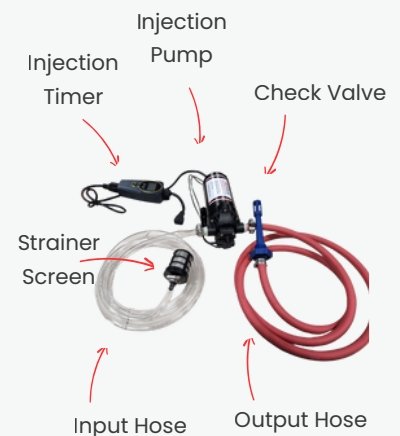
- Now that the automated Living Water closed-loop system is installed, you can add the initial package of microbes included with your package. Simply pour the microbes into the open hole of the bioreactor lid. Feel free to use a funnel to make the process easier.
- Allow the microbes to propagate in the tote for 12-24 hours before the inoculation process starts (**Start Step 8 While Waiting**).



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Injection Pump Connection

- You can start the process of installing the Living Water injection pump input hose into the tote. Take the strainer screen and drop it into the open hole in the cap of the bioreactor. You should let it drop down into the water, but do not let it sit on the bottom of the tank.
- Next, you will take your output hose and check valve and install them in the appropriate location at the pivot irrigation source.
- We highly recommend that you secure your injection pump to the IBC tote or another location that is off the ground (you can secure the pump with zip ties).
- Based on your acreage subscription, the desired flow rate of your Living Water injection pump control method will be preprogrammed (you should not have to change any settings).
- Plug in your injection pump and you are now ready to Inoculate, Stimulate, Regenerate... Every Time You Irrigate!
- **Note:** Contact your distributor or our team if you plan to use your own injection pump setup for recommendations on how to install the system.



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Maintenance and Finishing Touches

- Install and secure the Living Water tote cover to assist in cooling the tote and protecting it from the elements. Use the flap on top to access the bioreactor for visual inspections or to add microbe recharge packs.
- As part of your Living Water subscription, you will receive a microbe recharge pack every 30 days. Simply pour the contents into the open hole of the bioreactor lid.
- Should you need any replacement parts, contact your distributor or our team.



Have Questions or Comments?

If you run into any issues while setting up your Living Water Automated Microbe Bioreactor System or need help along the way, our customer support team is ready to assist you. Whether it's questions about installation, water and power connections, injection system configuration, or troubleshooting, simply contact us by phone or email, and we'll get you up and running quickly with expert guidance.

For a comprehensive, step-by-step visual guide, we also offer a detailed setup video that walks you through the installation and operation process of your bioreactor. This video covers everything from tote preparation and system integration to microbe activation and ongoing maintenance. You can access it anytime at <https://tinyurl.com/LWSetup>.

At Living Water, we are committed to making soil restoration effortless and efficient. Our patent-pending bioreactor system is designed for seamless automation, ensuring farmers can maximize soil health and nutrient delivery with minimal effort. If you have any questions or need guidance, we're here to help so you can focus on growing healthier, more productive crops.

Contact Us

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