

Bifarm AeroKit - Installation and Setup Instructions ver. I



The Bifarm AeroKit requires basic installation and setup before use. Please read and understand the instructions below before beginning this process.

Required tools:

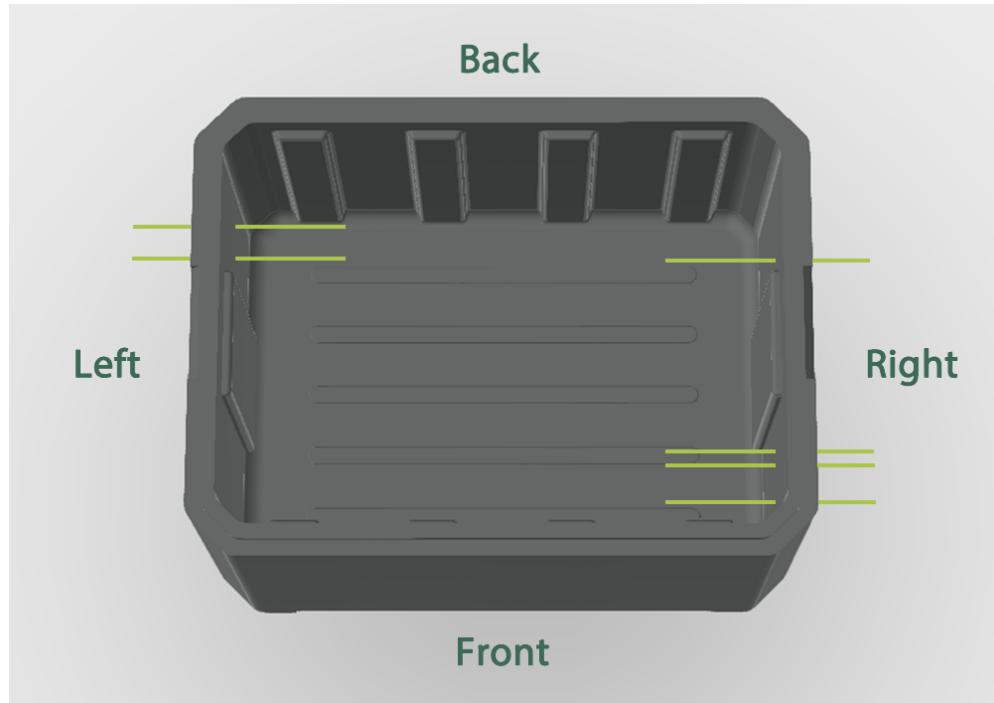
- Medium Philips head screwdriver
- Scissors
- Ruler

Please unpack and verify the various components from the parts list below:

Parts list:

| | |
|---------|--|
| Part 4 | Main Controller |
| Part 7 | Root Temperature Sensor |
| Part 8 | Habitat Temperature and Humidity Sensor |
| Part 9 | Power Supply |
| Part 14 | Wire Harness |
| Part 15 | Extension Cord for Level Meter |
| Part 16 | Temperature Controller Unit Wire Extension |
| Part 19 | Recycling Tube |
| Part 21 | Tube Insulation |
| Part 22 | Quick Connector Clips |

Orientate the root chamber correctly according to the following diagram:

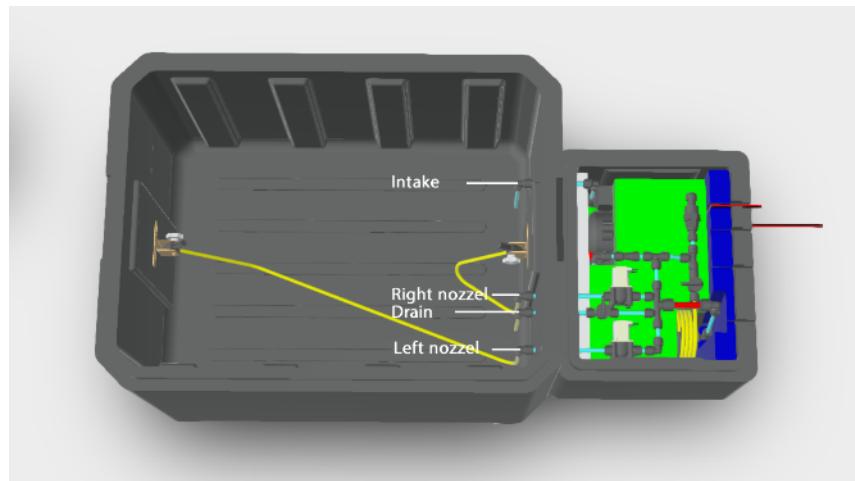


- The left side will have two capped ports
- The right side will have five capped ports

Attaching the pressure system:

The pressure system is contained within the smaller EPP container. It connects to the root chamber using four white tubes pressed through the root chamber wall using the pre-configured ports.

Diagram:



Place each of the pressure tube assemblies through the correct port from the inside of the root chamber.

From the back to the front on the inside right side of the root chamber:

First, place the intake tube through the back-most port right inside wall of the root chamber.



Next, place the right nozzle tube through the next port, just to the front of the right nozzle.



Next, place the white tube portion of Part 19 - Recycling Tube (Drain) through the next port, just to the front of the right nozzle tube.



Lastly, place the left side nozzle tube through the front-most port.



Connect the pressure control box to the root chamber.

Place the pressure box next to the root chamber. Line up the four ports with the four tubes extending from the root chamber.



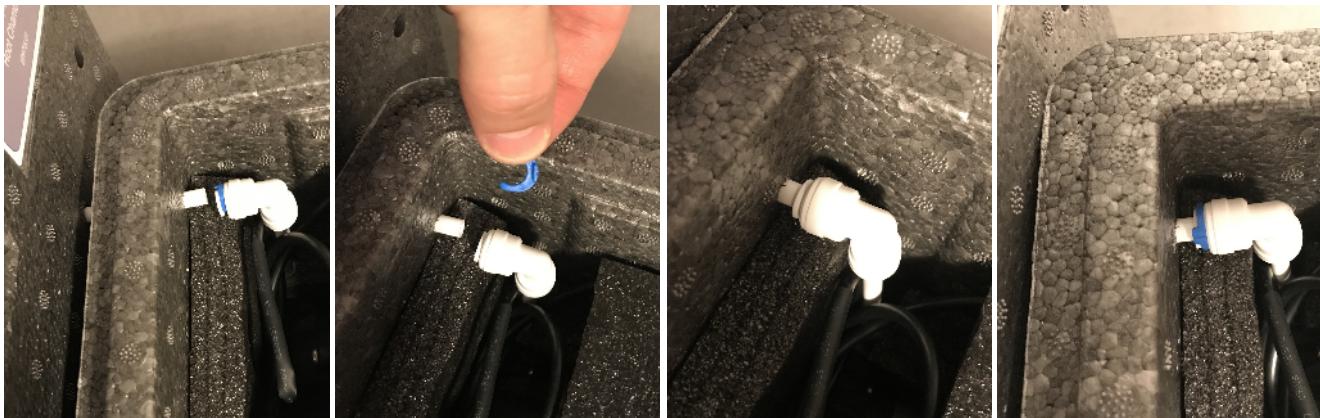
Note: the tube should line up exactly with the ports, if they do not change the orientation of the pressure system box as you may be using the incorrect side.

Carefully thread the tubes into the ports and push the chamber and box together. Each of the four tubes will be connected to their components using quick connectors inside the pressure box.

It is important that the connections are tight and secure. Follow the following steps when connecting. Press the tube all the way into the fitting. Insert a blue locking clip and squeeze firmly into place to secure the connection.

Secure each of the tubes:

- I. Starting from the back, the nutrient intake tube.
 - Remove the blue locking clip from the connector
 - Press the tube firmly and completely into the connector
 - Replace the blue locking clip



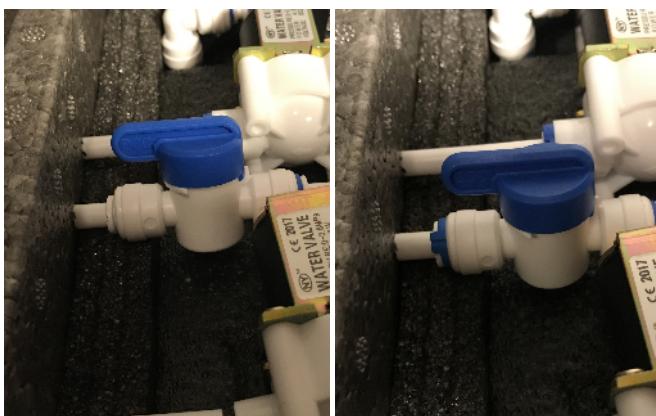
2. Next the right nozzle tube

- Press the tube firmly and completely into the connector
- Place a small blue locking clip onto the connector, Part 22 – Quick Connector Clips.



3. Next the Recycling (Drain) Tube

- Remove the blue locking clip from the connector
- Press the tube firmly and completely into the connector
- Replace the blue locking clip

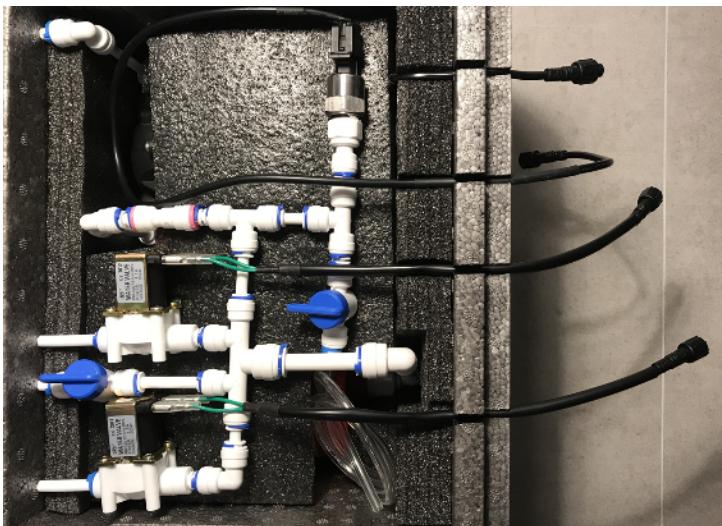


4. Lastly the left side nozzle tube
 - Press the tube firmly and completely into the connector
 - Place a small blue locking clip onto the connector, Part 22 – Quick Connector Clips.



The pressure control box cables need to be extended outside of the box. There are four cables, one for each of the two solenoids, one for the digital pressure sensor and one for the pump.

- For each of the cables extend the screw to the end cap
- Press each cables completely down under the lid lip where the wall has been cut according to the photo.
- Replace the pressure control box lid



Attaching the Temperature Controller

Place the temperature controller on the stand.

- Orientate the stand onto the bottom of the controller



Note: The temperature controller needs to be placed at the same level as the root chamber. Do not place this unit elevated or lower than the root chamber.

Connect the temperature controller

First remove the caps covering the intake and output ports from the left side of the root chamber.



Connect the intake tube

- Using one of the two Tube Insulation (Part 21), feed the smaller inner tube into the back-most port on the left side chamber from the outside



- Firmly attach from the inside the intake tube adapter connected to the red filter



- From the other side of the Tube Insulation, attach the inner tube to the Temperature Controller's IN adapter



Connect the output tube

- Using the remaining Tube Insulation (Part 21), feed the smaller inner tube into the remaining port on the left side chamber from the outside



- Firmly attach from the inside the output tube adapter connected to the blue hand pump (Part 20)



- From the other side of the Tube Insulation, attach the inner tube to the Temperature Controller's OUT adapter



Connect the Temperature Controller Unit Wire Extension (Part i6). The cable fastener can be put in backwards! Carefully line up the triangles on both the cable and the Unit to assure the correct orientation when inserting the cable.



Install the nutrient level sensor

The pressure based sensor is used to determine the fill level of the reservoir.

Identify the Pressure Level Sensor:



This sensor will be installed on the back right corner of the root chamber.

There may be a port (hole) already in the correct location. If there is not you should make one. Using a medium screwdriver (thinner than the tube used on the sensor) carefully and slowly punch a port through the chamber wall 10.5 inches from the floor.



Separate the sensor tube from the elbow adapter closes to the sensor by disconnecting the tube that extends from the sensor form the quick connect on the elbow. Press the blue ring of the adapter back toward the corner of the elbow and pull out the tube.



Mount the sensor.

From the outside, push the tube connected to the sensor through the port in the chamber
Use the correct screws (verify using photo) to secure the sensor to the corner of the chamber



From the inside, reconnect the tube into the adapter by inserting the tube pressing firmly.



The sensor tube need to be secured to the back chamber wall using the two tube clips provided.
Please carefully attach the tube to the wall the correct way to assure correct reservoir level readings.



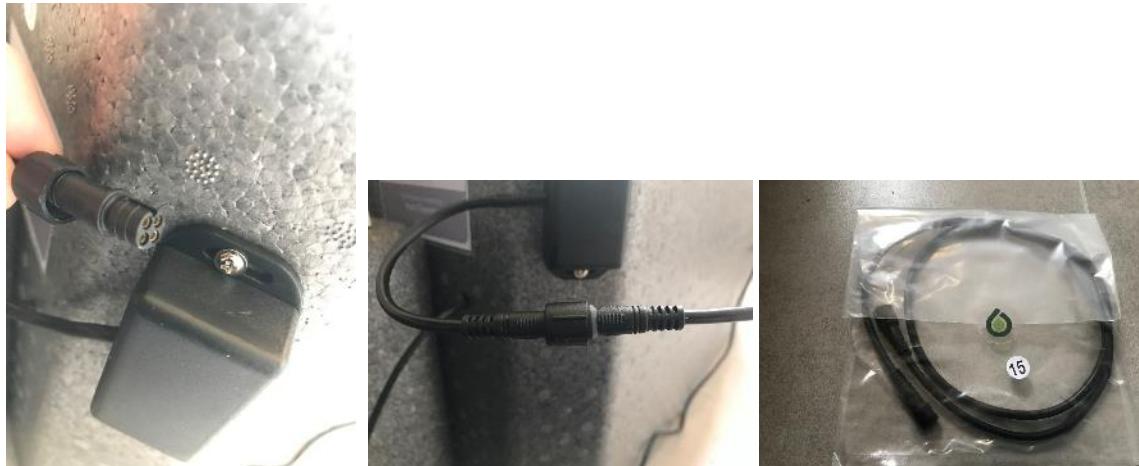
The elbow closes to the tube end needs to rest on the bottom of the root chamber. Follow the photo.



Note:

The first clip should secure the tube horizontally and the second vertically. The second elbow adapter should be touching the bottom of the chamber and the end tube should be running parallel to the bottom. Adjust the tube to match the photos.

Attach the Extension Cord for Level Meter (Part 15) to the sensor cable. Press cables together and use screw to secure



Install the Root Temperature Sensor (Part 7)

- First remove the cap covering the sensor port from the right side of the root chamber



- Insert the metal end of the sensor from the outside into the chamber port



- Press the sensor complete through the hole. Pull enough so that the tip of the metal touches the inside bottom of the chamber.



Setting up the controller

Connect both the Wire Harness (Part 14) to the Main Controller (Part 4) matching Cable A to the Port labeled A and the same for B.

Place the Main Controller on top of the pressure control box.

Note: The cable harness numbering is as followed:

From left to right on the controller.

First harness is A and counts down cables from 14 to 1

Second is harness B and counts down from 9 to 1



Verify the number of pins match and the correct cable are being connected.

Firmly press cables together and use the screw lockdown to secure

Connect the following components to their correct cable on the Harness:

| Name | Cable Number | Pins |
|--|------------------|------|
| Atomizer 1 | connects to A 1 | 2 |
| Atomizer 2 | connects to A 2 | 2 |
| Pressure Pump | connects to A 5 | 4 |
| Pressure Sensor | connects to A 11 | 3 |
| Temperature control unit | connects to A 12 | 4 |
| Root Temperature Sensor | connects to A 13 | 3 |
| AC Power Switch (light control) | connects to B5 | 3 |
| Temperature and Humidity Sensor (Part 8) | connects to B8 | 3 |
| Nutrient Level Sensor | connects to B9 | 4 |

Note:

The cables coming out of the pressure box from the back to the front are the Pump, Pressure, Atomizer 1 and 2

Setup the power supply

The power supply has two plugs. Connect one to the controller and one to the temperature manager.

Status Light Key

| Light status | Operation mode |
|----------------------------|-------------------|
| Fade in | Booting |
| Solid | On registered |
| Slow blink | On not registered |
| Fast blink | Identify unit |
| Fade out | Maintenance |
| Cycle fast blink and solid | Warning |