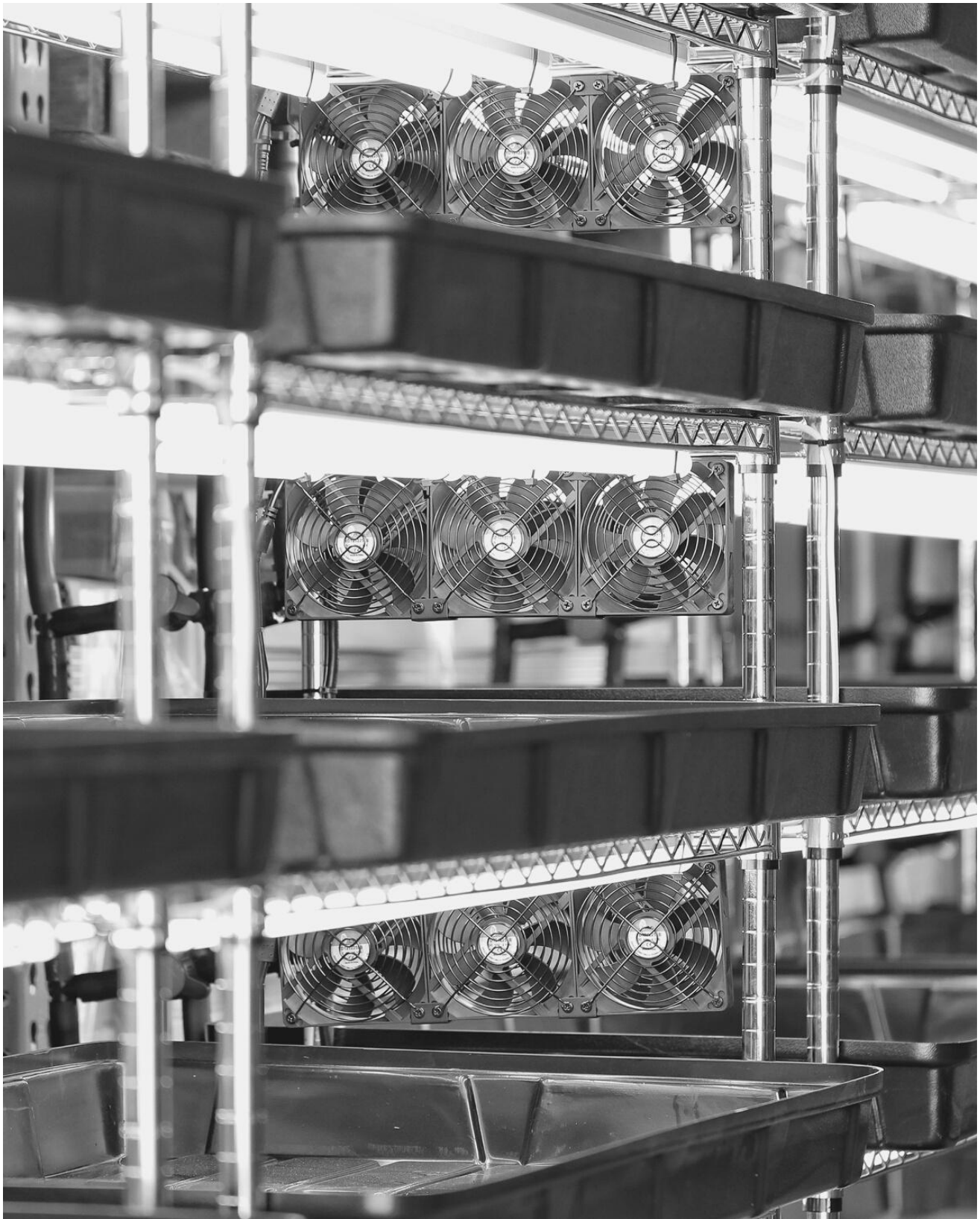


Bootstrap Farmer Automated Grow Rack



Last Revision 9/16/22



BOOTSTRAP FARMER

The Bootstrap Farmer Automated Grow Rack comes fully assembled and ready to grow. The rack can support microgreens, seed starting, fodder, edible flowers, and cut and come again herb production.

The rack can fulfill many farm functions including:

- Multi-media growing in soil mixes, rock-wool, and roll type microgreen mats
- Water level set at given heights
- Timed lights
- Timed Pumps
- Aeration
- Flush Valve for easy water reservoir cleaning
- Screens at each drain
- Full system micro screen
- Fully controllable valves at each shelf

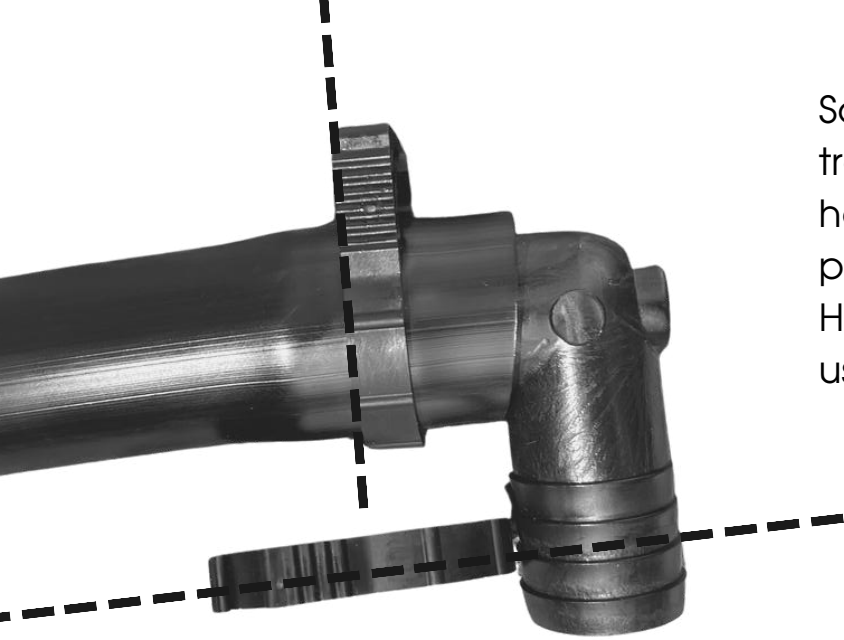
Set-Up Instructions:

Remove plastic shipping wrap and banding straps from the pallet.

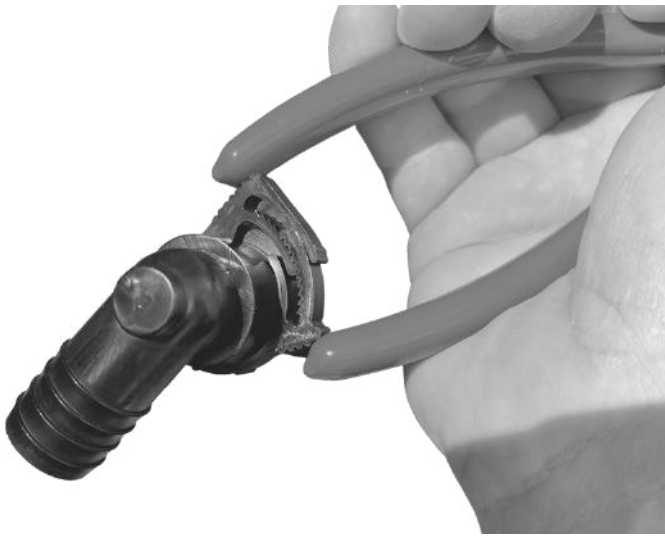
Un-lock wheels and roll into your grow area.

Please Note that during transit these racks can shift in ways that may initially cause small leaks in the line. These movements and developing leaks are similar to what you will encounter as regular maintenance in your harvesting and cleaning operations.

On the next page, we will give tips to correct these issues.



Some clamps may become loose in transit. For best leak-proof use place the hose all of the way onto the fitting and place clamp in the middle of the barb. Hand-click tight all of the way and then use the next tip below.



To tighten clamps all the way use a pair of pliers with a rubber-type grip to gain non-slip leverage for that extra click when tightening.

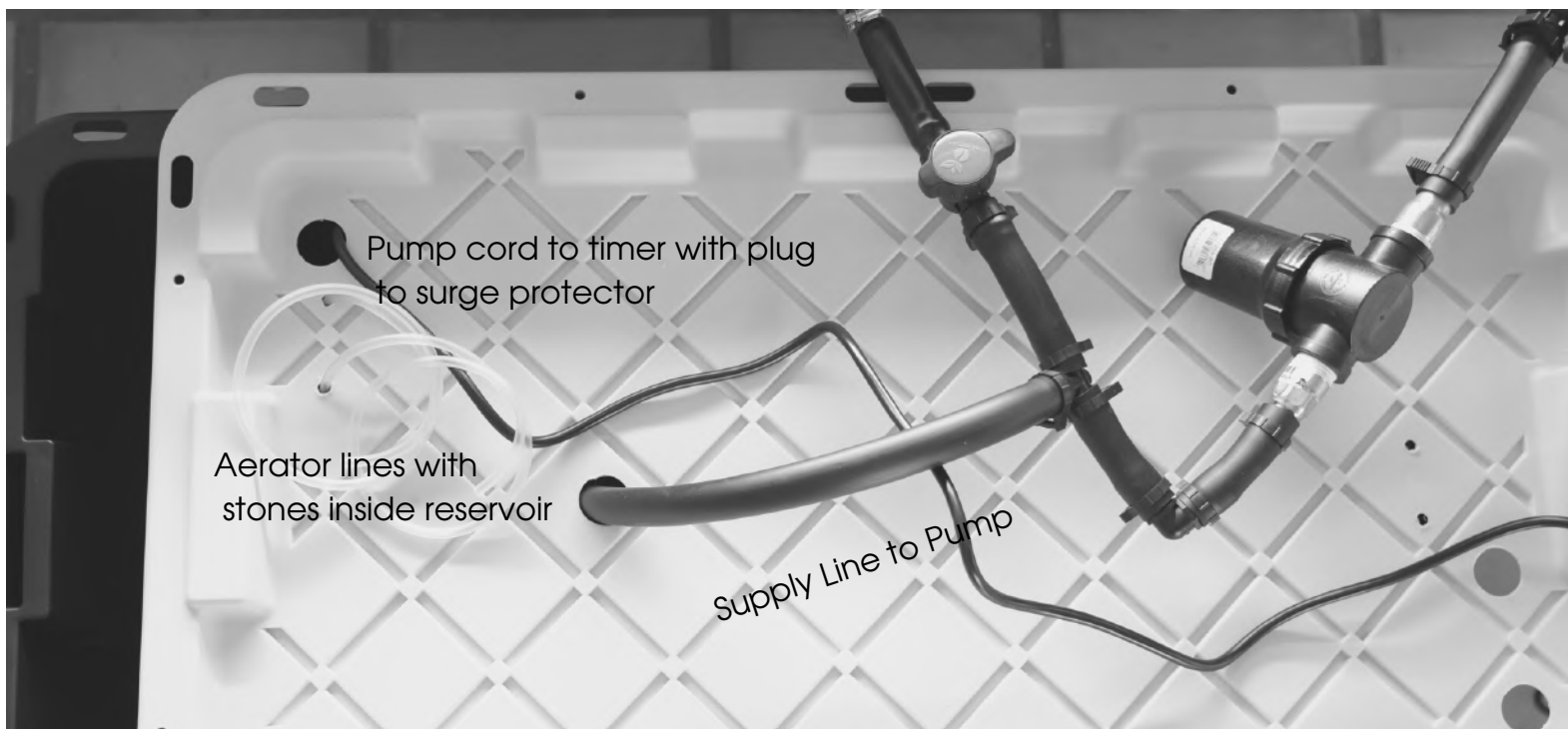
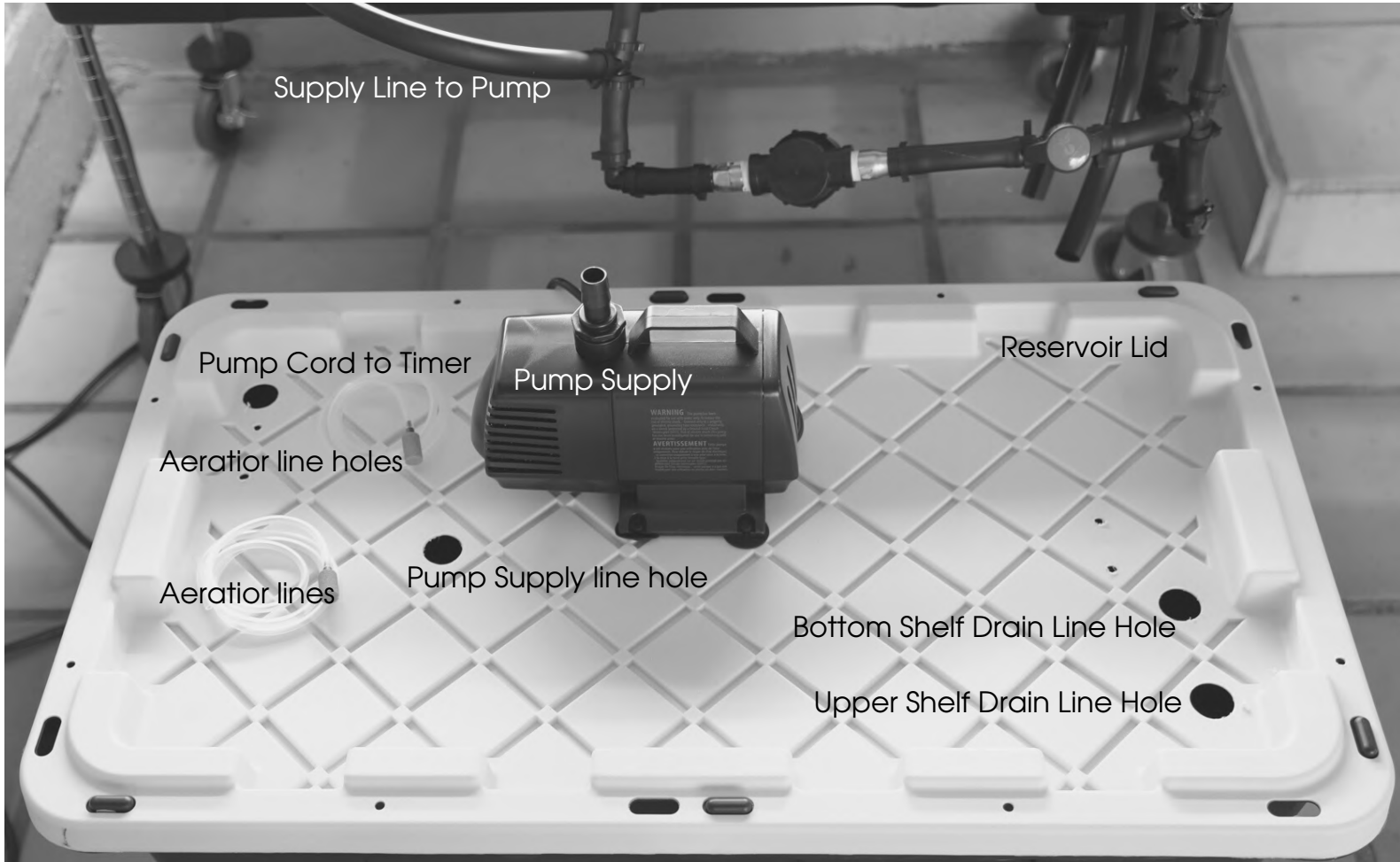


DO NOT USE ANY CLAMP OTHER THAN THE CLAMPS SUPPLIED!

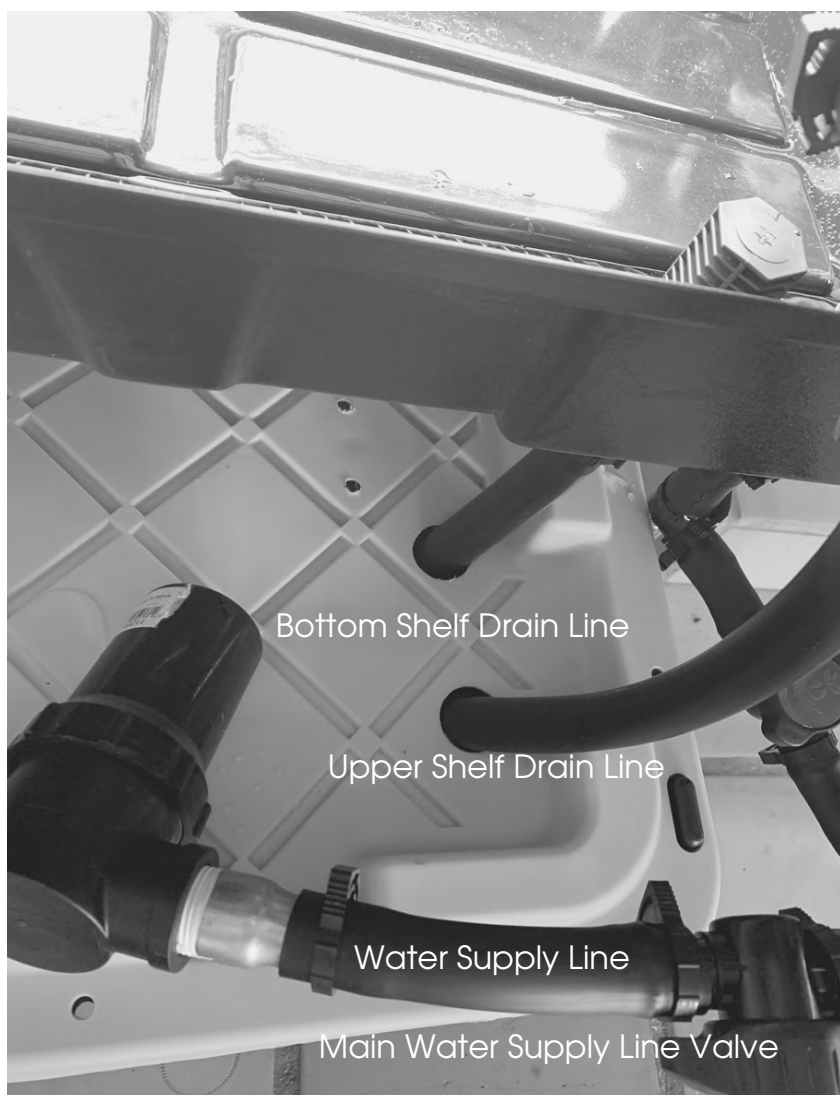
The hose, fittings, and clamps are all from the same vendor and are made to work together. Believe us when we tell you we tested dozens of companies before choosing this supplier.

If you use metal clamps it crushes the fittings and gives them an oval shape.

Connect Pump & Aerator Lines

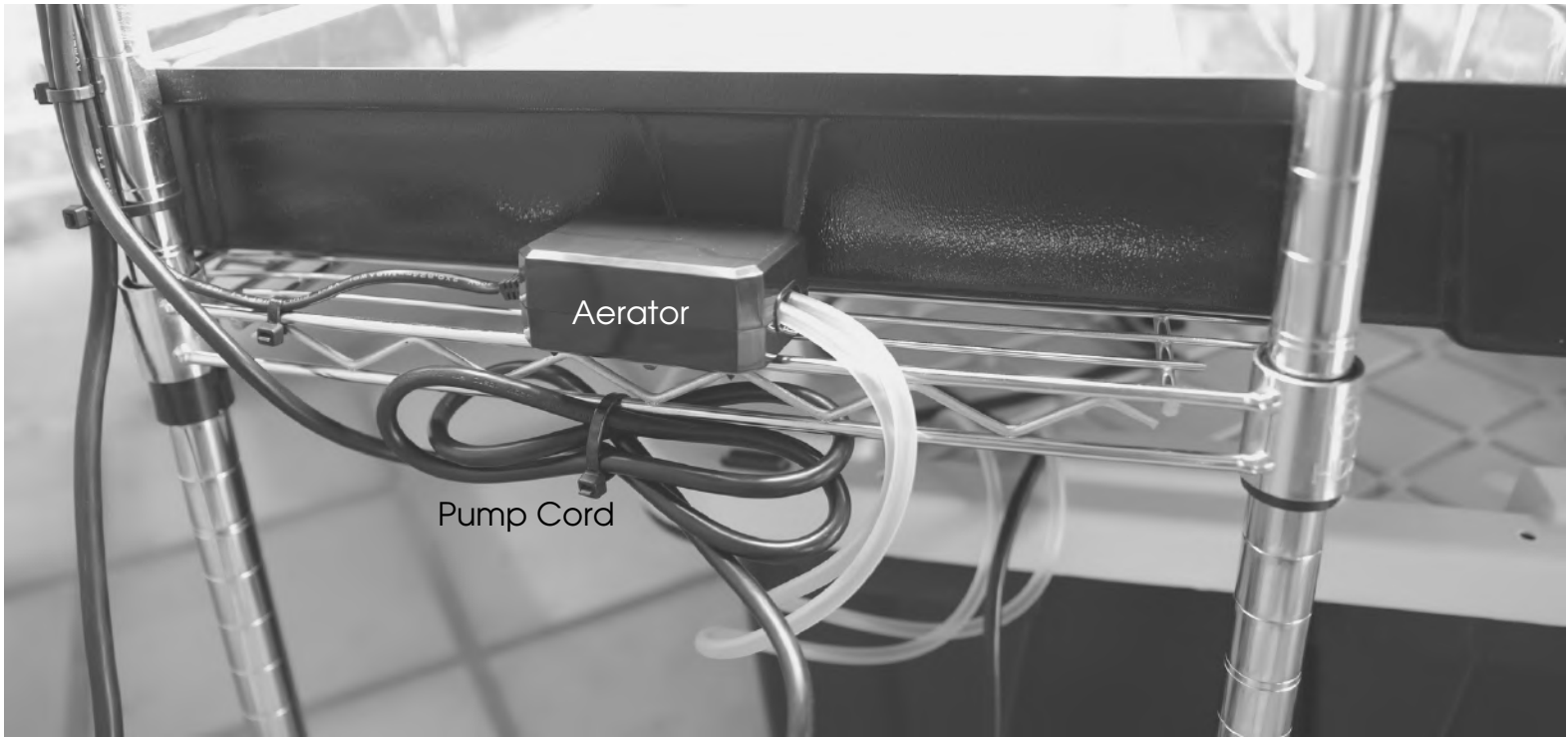


1. Place pump under supply line hole.
2. Run the plug through the hole in the corner.
3. With the aerator stones on the inside of reservoir, run the clear lines up through the small holes under the pump cord hole.
4. After running the pump supply line down into the reservoir through the pump supply line hole, insert the supply line over the pump supply at the top of the pump. Secure with provided 3/4" clamp.
5. Place lid on reservoir and slide under rack.
6. Align right side drain holes under drain lines on the right of the rack.
Note that these lines are flexible and purposefully fit just inside of lid hole.



Note: This is flexible tubing, even after installation it may sag and twist vs. the straight connection you would see when using a pipe or PVC to plumb in the system. Because of all of the things that can happen in transit, small leaks in connections can occur. Some clamps may need tightening or drains may require some extra turns. These tasks are all part of the regular maintenance of a flood and drain system.

7. Fill Reservoir with water hose through the upper shelf drain line hole. (After temporarily moving drain line). Fill to about 2 1/2" from the bottom of the lid. Please note to keep the lid snapped on when filled with water.
8. Connect Aerator lines

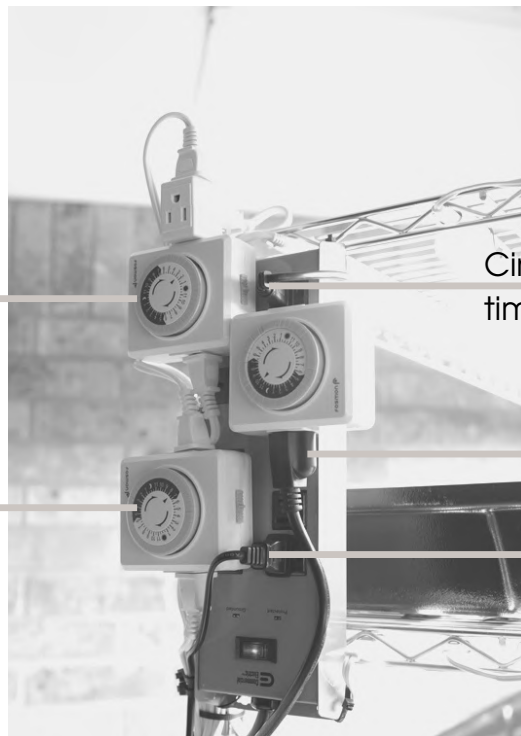


9. Run Pump Power cord to Pump Timer and zip tie cord to rack.

Adapter only for 5 tier racks

Light timers

Light timers



Circulation Fans. Option 24/hr non-times, or when pump is on.

Pump Timer & Cord

Aerator (Non-Timed)

10. Set timers to current time.



Example: This timer is set at 3 PM.
Note black arrow.
Adjust by turning circular dial.



Timer pins pushed in turn lights/pump on.

Pins pulled out means the timer is off.
One pin is 30 minutes.

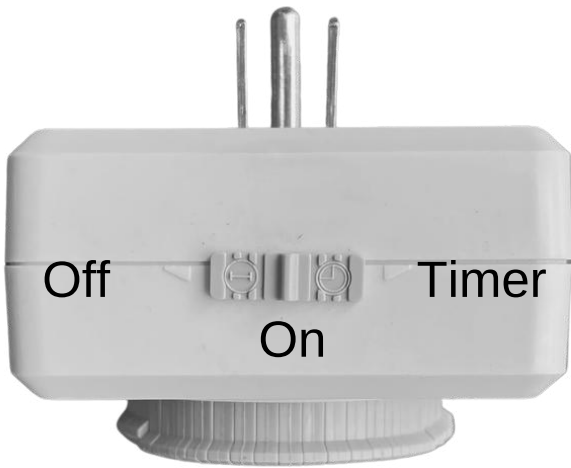
Time will be dictated by your farm and crop's needs.

Most farmers begin with 12 hrs on/12 hrs off for the lights.

Watering schedule should be one 30 minute pin per cycle with most operations starting at once per day depending on environment.



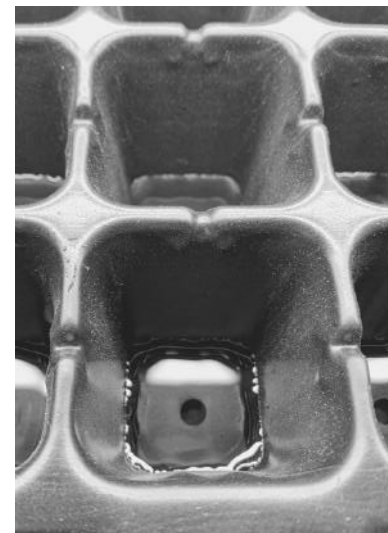
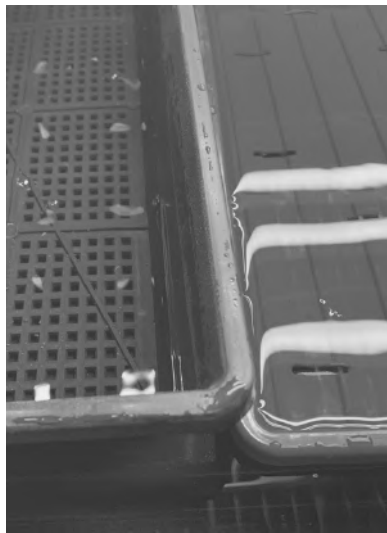
This shelf switch is in the "ON" position. If your lights do not come on please check these switches.



In this photo, it is 2:30 PM and the timer is set for 15 minutes at 6 AM and 6 PM. This is a typical schedule to set the pump to and adjust as needed.

11. Begin Growing.

Water levels are set for all trays with no adjustments needed and will automatically drain

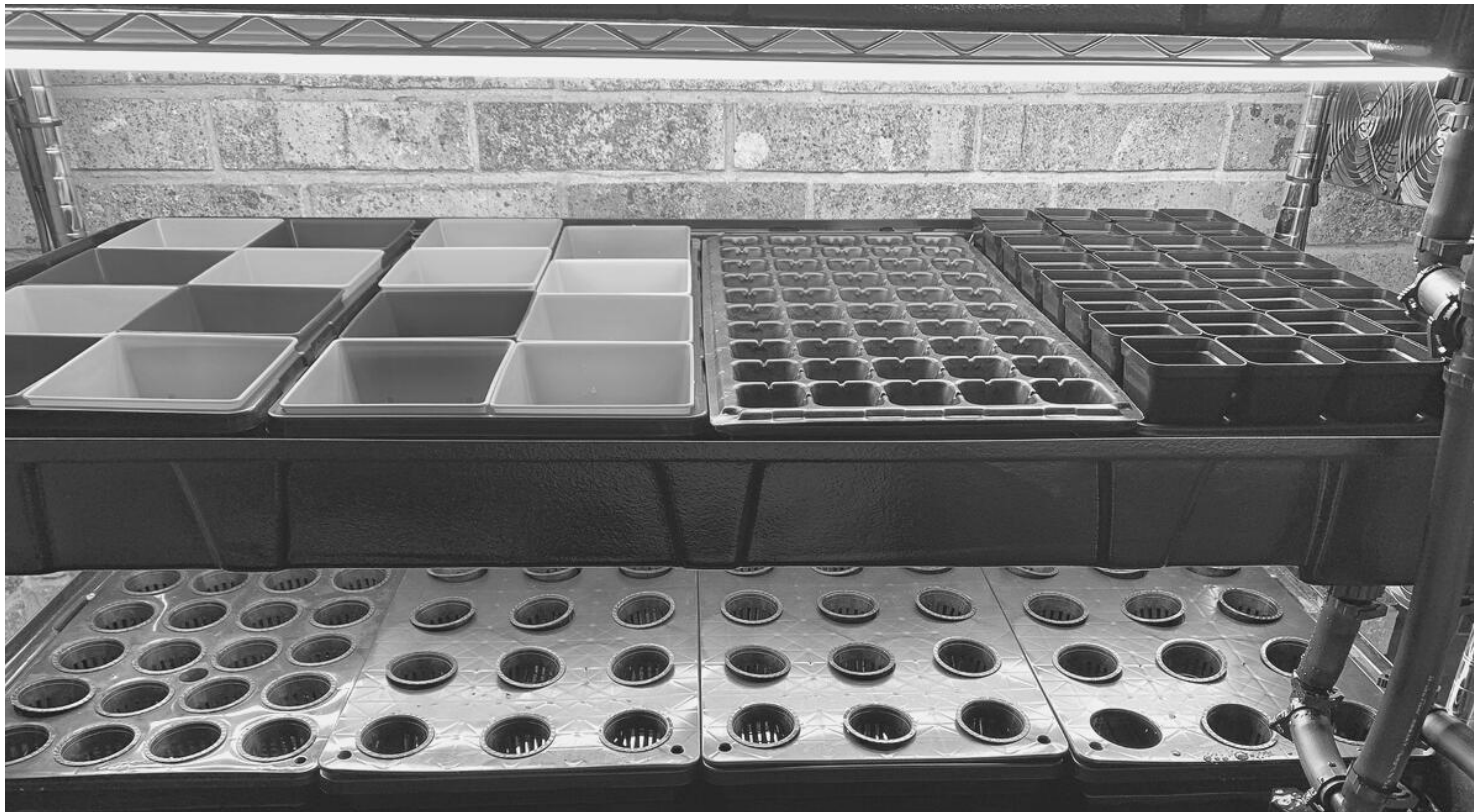


Shallow
Microgreen
Tray 1" deep
Mesh & With Holes

32 Count cell insert
with 2.5" pots

5x5 trays in a 1020
tray w holes or
mesh bottom

Cell inserts in 1020
tray w holes or
mesh bottom



Mixed use Bootstrap Farmer Trays

Top Shelf left to right: 5x5's in 1020 trays with mesh bottom or holes

Cell inserts in 72, 128, or 200 count cells in 1020 trays with mesh bottom or holes

Bottom Shelf 32 count and 18 count net pots with net pot inserts in
1020 trays with mesh bottom or holes

Maintenance:



Get Started

1. Unplug System
2. Clean main system filter screen cleaned weekly by unscrewing base and washing screen off under running water.



Flush Valve to drain reservoir.

1. Turn main supply line valve off. (see bottom of 3rd page)
2. Open flush line valve. (shown in closed position)
3. Connect a water hose and run outside or to drain.
4. Plug in pump to purge water. Unplug when finished emptying reservoir.
5. Wipe down reservoir walls and rinse.
6. Fill back up with fresh water.
7. Turn off flush line valve. Open main supply line.
8. Plug system back up & check timers.

Notes:



Valves are set at our warehouse to fill flood trays as evenly as possible. The first tray will fill first.

You can turn off an entire shelf at a time if needed. Just adjust the valve as shown to produce enough water flow without affecting other shelves' operation. You will never have a shelf valve wide open.



Screens prevent debris from entering and clogging supply and drain lines. Smaller particles will be caught by the pumps pre-filter and the system screen filter which can both be cleaned.

The extension and screen on the drain line sets the water level. Note: at this level approximately 5 gallons of water is in the flood tray when in operation with an additional 8-10 gallons in the supply and drain lines. Please keep reservoir completely full at all times to ensure proper pump water levels.

Growing Tips and FAQ:

Growing in a Bootstrap Farmer Automated Grow Rack is like any other farming venture. Each situation is dictated by your ability to control the environment including humidity, temperature, temperature fluctuations, pest pressure, sanitary conditions, quality seed sources, water quality, and user experience and flexibility.

These racks may be a little different than your current growing conditions. We suggest allowing a cycle to see how your crops grow within your rack's growing environment.

Your rack is compatible with all of our trays with mesh bottoms or holes as well as various specialty tray sizes, pots, cell inserts, and humidity domes.

Soil-less media as well as soil mixes are welcome in your grow rack. However, note that some soil mixes may release more particles and dust than others. With soil-based growing operations expect more cleaning maintenance.

For more growing tips visit our Bootstrap Farmer YouTube channel as well as our resource pages at:

<https://www.bootstrapfarmer.com/pages/product-guides>

For additional assistance or troubleshooting email contact@bootstrapfarmer.com with specific questions and a good phone number, we can call you back on.

Specs:

Ship dimensions on pallet: 51" x 41" x 83"

Ship weight: 3 tier 165 lbs, 4 tier 175 lbs, 185 lbs*

* Note: fully filled water reservoir will weigh approximately 384 lbs

In use foot print: 34" deep x 48" wide x 77" tall

Distance between bottom of lights and top of flood tray:

3 tier: 13.5" 4 tier: 8.5" 5 tier 6.5"

Amperage per unit: 5 tier - 6.8 amps 4 tier - 5 amps 3 tier - 3.5 amps

Disclaimer: Each rack has an electrical draw that can add up. Please consult with an electrician when considering multiple racks on a single circuit.

Do not plug racks into another rack's surge protector if you are running multiple racks.

LED LIGHT SPECS

18W +- 10% Color Temp 6500K

Ra 80 Lumens Efficiency 100 LM /W Lumens 1800 LM

Beam angle 120, PF 0.9 Voltage AC 85-27 7V

Compatible tray and crop guide:

5 Tier Fits 20 flats for sprouting & microgreens

4 Tier Fits 16 flats for germination, propagation & microgreens

3 Tier Fits to 12 flats for herbs, fodder & wheat-grass

Will work with Bootstrap Farmer Heavy Duty

- Bootstrap Farmer 1020 microgreen shallow trays with mesh bottom or holes
- Bootstrap Farmer 1020 deep trays with mesh bottom or holes
- Bootstrap Farmer 1010 microgreen shallow trays with mesh bottom or holes
- Bootstrap Farmer 1010 deep trays with mesh bottom or holes
- Bootstrap Farmer 5x5 in 1020 shallow or deep trays with mesh bottom holes
- Bootstrap Farmer 32, 72, 128, and 200 cell inserts in 1020 deep trays with mesh bottom or holes
- 18 and 32 count net pot inserts in Bootstrap Farmer 1020 deep trays with mesh bottom or holes