**Target Consideration:**
Filter Tray(s) need to “Breath” (drain completely) once every 10 Minutes To enable proper Nitrification Cycle.

1. **Determine size of Fish Tank & gallons of water.**
2. **Keep density limited to one Fish per 3 gallons of Fish Tank water.**
3. **Size Airpump & Power Supply.**
4. **Size Air Pump, Exhaust & Muffler.**
5. **Determine volume of Filter Bed(s). Use one gallon of porous filter material volume for each gallon of Fish Tank water (multiple trays ok).**
6. **Size Syphon (vacume enables draining of Filter Trays).**
7. **Insure top of Syphon’s inner drain tube is at a level 2” below top of filter rock in Filter Tray(s) to prevent moss. Make bottom of Syphon container be at level lower than the bottom of the Filter Tray(s) to allow for complete drainage of Filter Tray(s).**
8. **Create one Sq. foot of Float Tray surface (approx. 2 gallons of Float Tray water) for each gallon of Fish Tank water.**
9. **Keep same level (if more than one tray, unless cascaded) & keep drain level above Fish Tank and below bottom of Syphon container.**

**NOTES:**
1. To view an animation showing how this process works, visit: http://microflow.com/aquaponics
2. Size of piping is determined by size of fish tank (3/4” minimum PVC).
3. Air pumps can pump solid waste if at a size piping can accomodate.