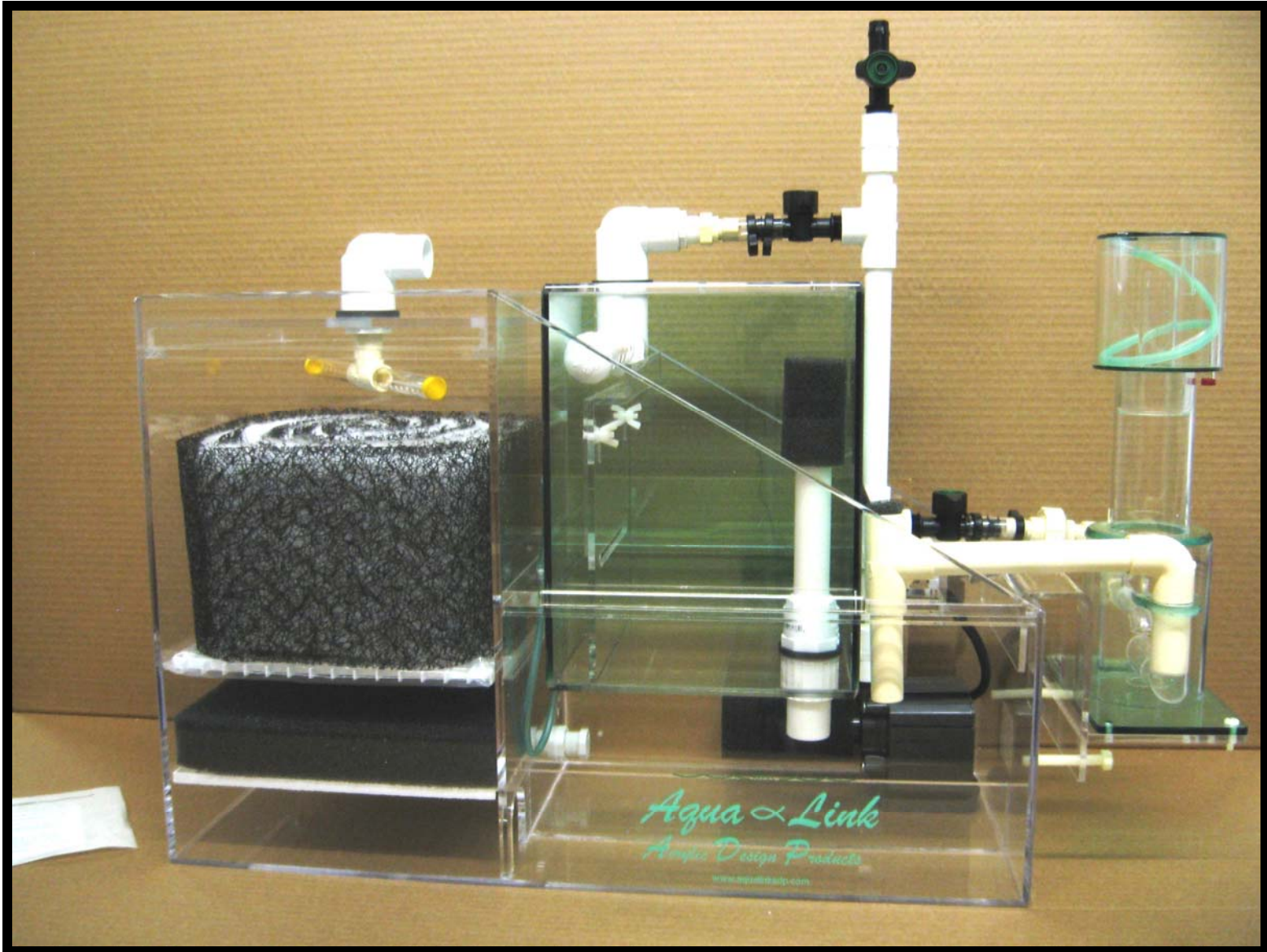


2010 EXT Nitrogen Cycle Package (Sump Mount) Set-Up Instructions

Important Note;

The following instructions are basic, and only one of many possible plumbing configurations. The water pump and Return Line Manifold depicted in the instruction photos are not normally included as standard equipment with the "Nitrogen Cycle Package" The functional characteristics of these items may differ dependent on many variables and choices of other optional equipment desired by the consumer. Therefore; these items are available, but they are sold separately to be tailored to the end users particular needs.

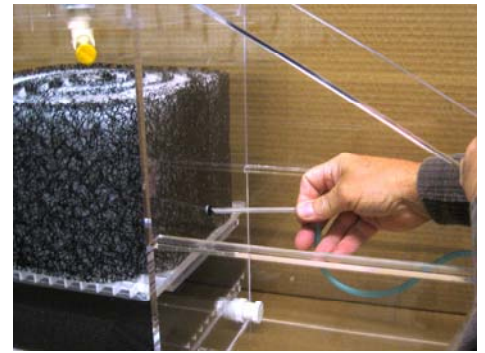
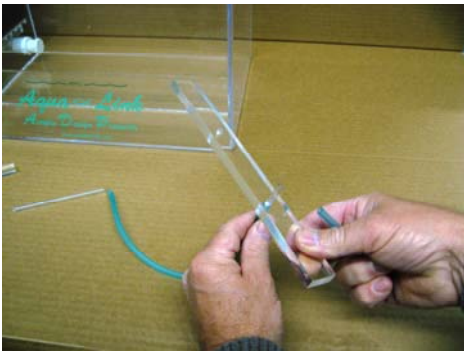


Also See Related Instructions;

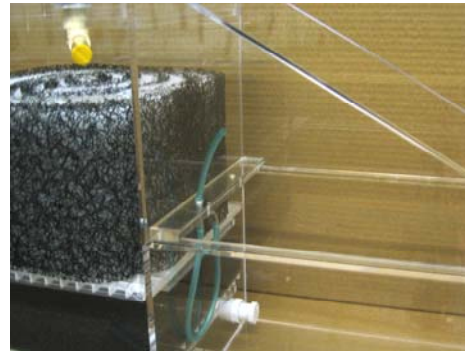
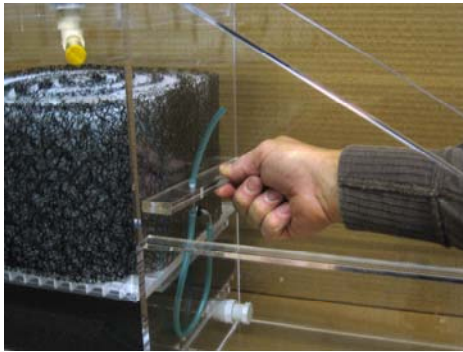
- Preparing the Wet Dry Filter.
 - Rotating spray Bar Assembly and installation.
 - Optional Drip Plate conversion.
- Preparing a submersible water pump. (to align "Return Line" with Aqua-Link ADP Wet Dry Filter)
- Installing Refugium Light Fixture.

Insert air Injector line through sump spacer.

Insert the long sharp end into the rubber grommet through the center panel and into the primary Bio-media



Install spacer on sump rails and push against center wet dry filter panel.



Prepare water pump to place in Wet Dry Sump



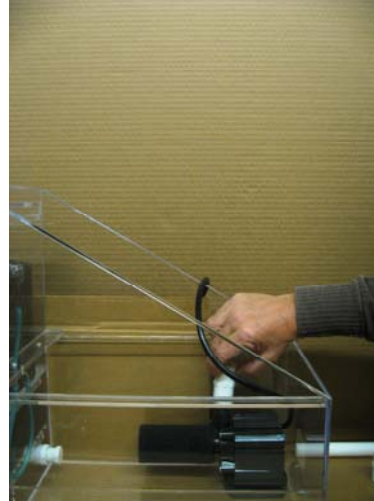
Manifold Assembly

NOTE: All return line manifold fittings connected to the out put of the water pump will be pressurized therefore;

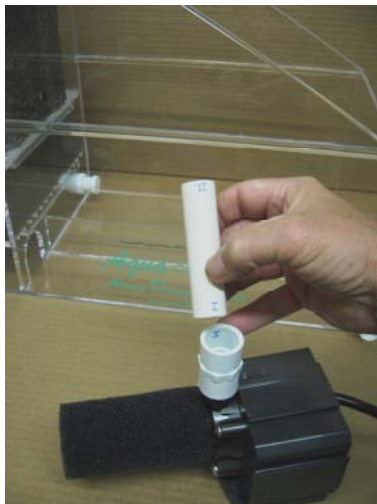
Run a trial assembly of all connections to equipment first, for direction and proper alignment then;

- All slip fittings should be bonded into place.
- Threaded fittings must be taped with Teflon tape then tightened only enough to achieve a seal.
- Vinyl hose slip connections should be secured with appropriate clamps.

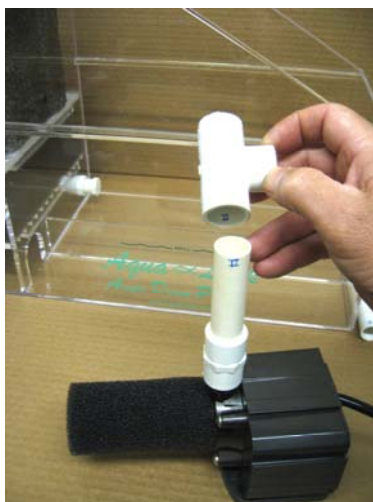
Thread female adapter onto water pump output



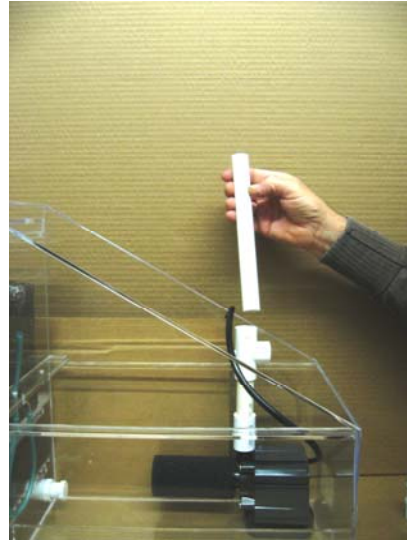
Insert 3¼" length section of ½" PVC Pipe (I) into female adapter (I)



Slip threaded Tee (II) over 3¼" length section of ½" PVC Pipe (II)



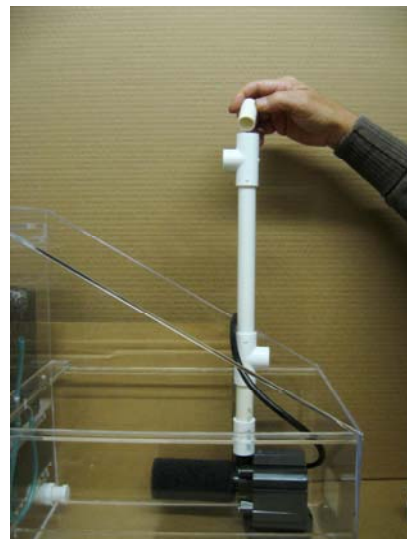
Insert 8¼" length section of ½" PVC Pipe (III) into ½" Tee (III)



Slip threaded Tee (IV) over 8¼" length section of ½" PVC Pipe (IV) Tee pointing toward reaction chamber



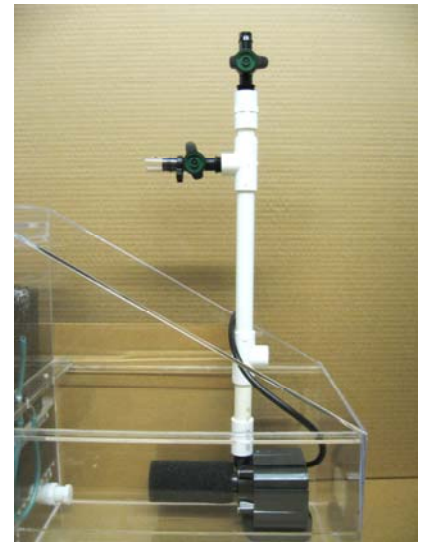
Insert 1½" length section of ½" PVC Pipe (V) into ½" Tee (V)



Slip female adapter over (VI) over 1½" length section of ½" PVC Pipe (VI)



Thread ½" MPT control valves into tee & top adapter. Slip 2½" section of vinyl hose over valve then secure with hose clamp.



Prepare Refugium Influent spray bar and install over dam wall with threads UP and spray holes toward Left outside wall



Insert threaded nipple through unit top and into spray bar elbow. Lightly tighten with putty knife.



Install flat rubber washer over threaded nipple and thread on the 90° street elbow to seal.



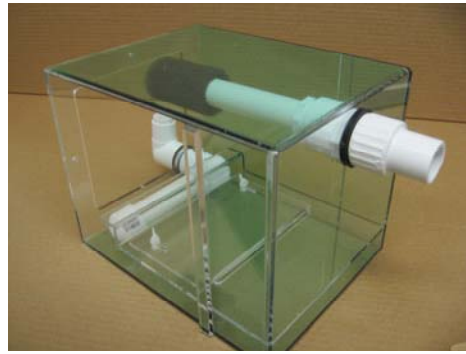
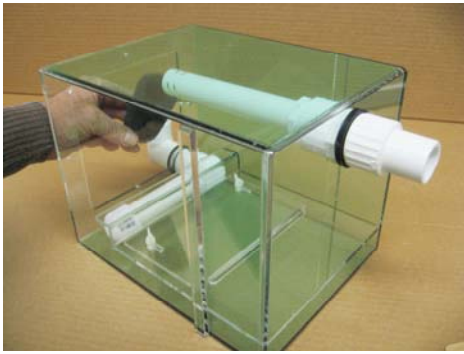
Prepare drain stand pipe. Insert stand pipe into reducer fitting, then insert into male adapter



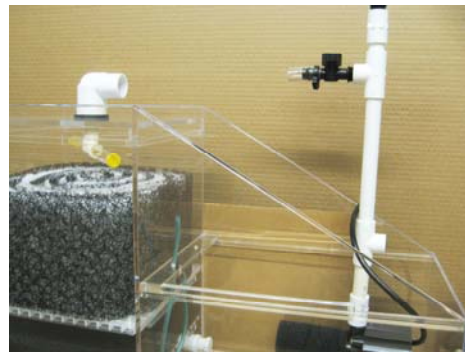
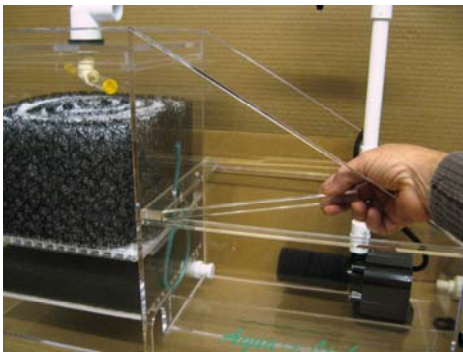
Install threaded end of the stand pipe assembly through bottom hole of the refugium tank.
Install flat washer on the OUTSIDE. Thread on the SPG fitting



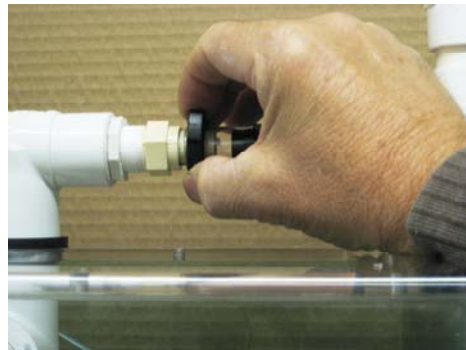
Install foam filter cylinder



Install centering spacers and rest refugium on sump guide rails with clear panel facing toward front.



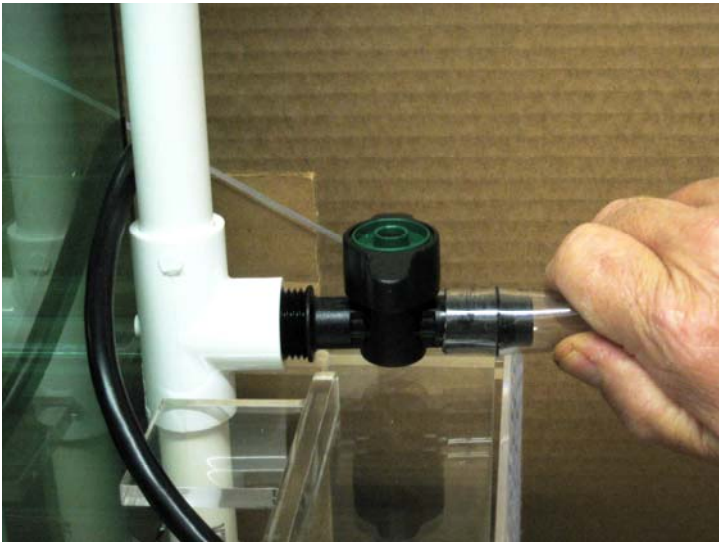
Slide vinyl hose from manifold valve over refugium intake fitting then secure using plastic hose clamps.



Install ½" MPT x 16mm barbed control valve into lower manifold. Then install sump lid.



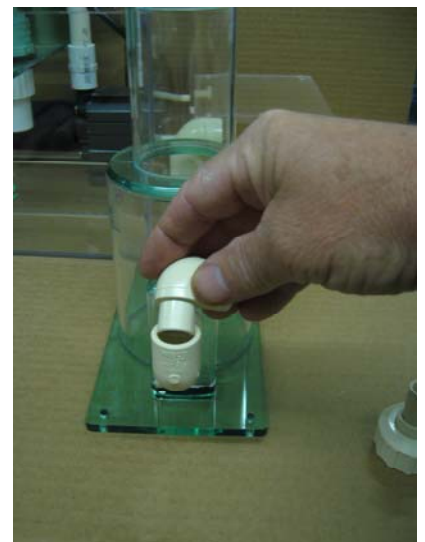
Slip 2½" section of vinyl hose over lower valve then secure with hose clamp



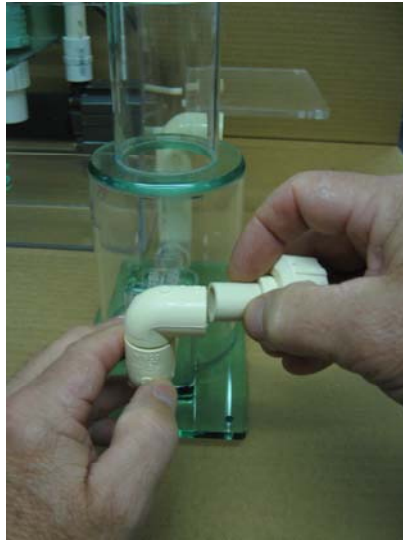
Insert threaded half union portion into ½" section of vinyl hose then secure with hose clamp



Prepare Venturi Protein Skimmer influent parts in numerical order.
Insert 1st street elbow into intake facing upward, and the 2nd facing right.



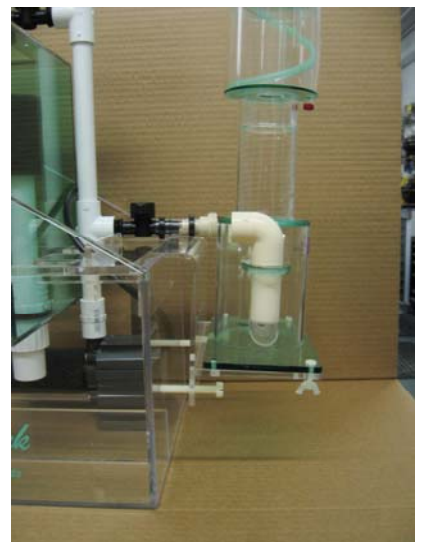
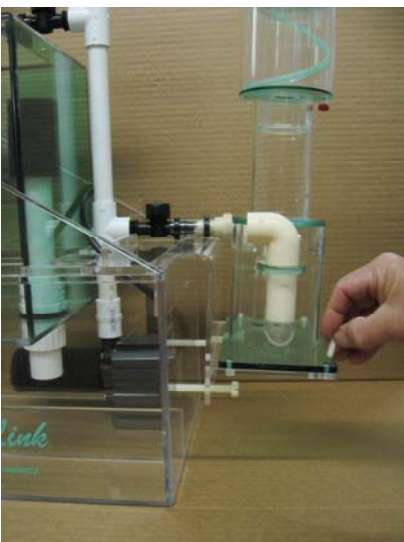
Install nut section of union. Be careful not to loose rubber seal inside.



Hang HO shelf with protein skimmer on sump side of the Wet Dry, turn fittings to face toward filter unit.



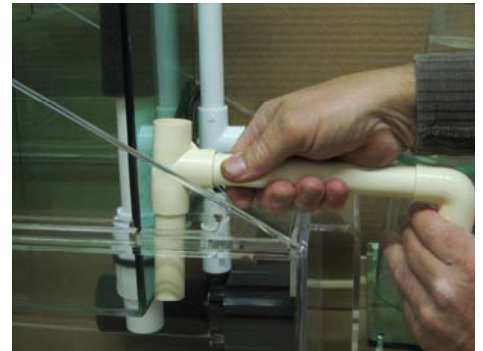
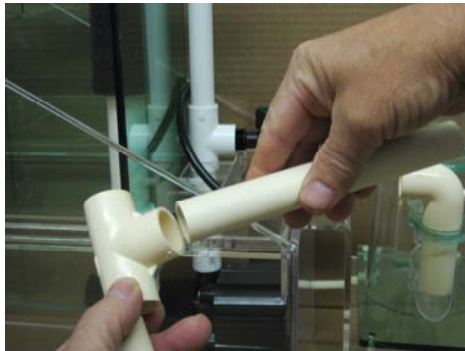
Secure Protein Skimmer to HO bracket using nylon screws and wing nuts.



Twist nylon adjustment bolts to level and align Protein Skimmer.
Secure protein skimmer influent line to manifold using a union fitting.



Assemble and install Effluent CPVC (Tan) plumbing from skimmer effluent to drain into wet dry filter sump.
NOTE: Effluent parts are NOT pressurized so it may not be necessary to bond unless a problem arises.
Connect A to A, B to B, C to C, D to D



Insert foam splash arrester flush with top



Connect ridged 90° air line into skimmer cup lid, then the straight end into the top of the venturi block.
The connection into the venturi block is a tight fit, bonding is not advisable.

