

GEO NR-418

Sulfur Denitrifying Reactor

User Manual

Installation and positioning:

Your Geo NR-418 can be positioned in your cabinet, or beside your aquarium. The outflow $\frac{1}{4}$ inch line that comes from the lid of the reactor should be positioned to drip in a highly aerated area of the sump, such as the intake area of your protein skimmer. The lower $\frac{1}{4}$ inch inflow line should be submerged in your sump and attached to the output of an AquaLifter pump to be used as a feed system for the reactor.

Reactor Assembly:

Initially you will need to disassemble the top plumbing assembly of your reactor to fill and prepare it for operation.

- 1. Loosen the union fitting on the upper plumbing assembly, and allow the sleeved Maxi-jet intake nozzle to slowly turn within the clamped sleeve tube to a resting position against a surface, or remove it completely by pulling the intake nozzle free.**
- 2. You should now be able to easily access and remove the lid by loosening the thumb screws until you are able to rotate the lid counter clockwise and lift the lid free.**
- 3. At this point you can carefully rinse the inside of the unit to remove any debris, and prepare to add the media.**

- 4. Place one of the two enclosed sponges at the bottom of the reactor unit and add sulfur to an approximate height of 6 inches of actual media.**
- 5. Place the second of the enclosed sponges on top of the sulfur media, and add an approximately equal amount of Calcium Carbonate media. There is no need for another sponge, due to the unique design of the reactor lid.**
- 6. At this point you should use some silicone lubricant, or petroleum jelly to lubricate the O-rings in the lid assembly and union joint before reassembling the unit.**
- 7. Carefully fill the unit with water from your system until the unit is about $\frac{3}{4}$ full. (Be sure to reconnect and raise the loose union pipe to prevent the water from draining)**
- 8. Reassemble the unit using the union and the thumb screws, being cautious not to tighten more than hand tight and damage the unit (be sure the hose clamps are tight around the maxi-jet as well).**
- 9. Position the unit in the desired location with the feed line secured in an optimal location to the output of the Aqua-Lifter pump, and the output line secured to flow into a highly aerated area.**
- 10. Plug the Aqua-Lifter in at this point to supply flow to the reactor.**
- 11. Be sure the unit is at least $\frac{2}{3}$ of the way full of water and plug in the Maxi-jet recirculation pump (this will assist in priming the unit).**
- 12. Adjust the micro valve at the end of the output line until you achieve a drip rate of approximately 1 drop per second, and the unit is now fully operational.**

General Maintenance:

As the media is dissolved in your reactor you will need to periodically take the reactor off line to add more. The media will break down at a different rate on every system, and the sulfur media will degrade at a slower rate than the aragonite. We recommend cleaning and changing out the media around a period of approximately 6 months to ensure optimal operation.

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Courtesy of :
Premium Aquatics
(317) 895-9005

Written by:
Joshua Vetter