

# KORALLIN

## Sulphur BioDenitrator S1502 / S3002 / S4002

The Korallin S-series Sulphur BioDenitrator is an efficient nitrate remover that does not require the use of an ORP controller or the feeding of the denitrifying bacteria. Thanks to its highly efficient recirculating design, nitrates are reduced quickly and minimal adjustments are required to keep the filter operating smoothly. Used in conjunction with the SupraPure sulphur media, the pure coral-skeleton media adds the benefit of buffering the effluent solution to keep the pH stable in the Aquarium.

**Instructions:** Thoroughly rinse the BioDenitrator with freshwater. Fill 50% (~5") the reaction chamber with SupraPure sulphur media (99.9% pure). Next, fill the reaction chamber with 2-3" of coral-skeleton media. Make sure to leave a minimum of 3" between the top of the media and the top of the reaction chamber so that the inlet tube does not become clogged during operation and that you are able to see any air bubbles forming or trapped at the top of the BioDenitrator. For freshwater tanks with lower pH (pH 7.0 or lower), the coral-skeleton media is not required.

Once the media has been placed inside the reactor chamber, close off the lid and tighten all screws. Secure the Eheim pump to the top of the BioDenitrator with the Nylon screw and nut provided. Attach the "Einlauf" (inlet) and "Ausgang" (outlet) assemblies to the top of lid and to the Eheim pump. Using the tubing provided, connect both the "Einlauf" (inlet) and the "Ausgang" (outlet) to the tank. Make sure that the tubing is fitted tightly to prevent leaks! With both the "Einlauf" and "Ausgang" lines submersed under water, open the "Entlüftung" and begin to manually siphon water up through the "Entlüftung" tube to fill the chamber. The BioDenitrator must be installed lower than the tank's, or sump's, water level (for installations where the BioDenitrator is higher than the water level in the tank or the sump, a separate feeding pump is required).

Once the reaction chamber is completely filled with water, close the "Entlüftung" valve. Elevate the "Ausgang" line so that it is about 1" above the water line: this will allow you to monitor the drip rate more easily. Open the "Ausgang" valve fully and start the Eheim pump. Let the BioDenitrator run for 2-3 hours then throttle back the "Ausgang" valve to about 2 drops per second (effluent drip rate). Allow the BioDenitrator to run at this rate for one week: the effluent drip rate can fall to about 1 drop per second without causing any adverse effects.

After one week, reduce the effluent drip rate to 1 drop per every 2 seconds. Now, measure the NO<sub>2</sub> (nitrite) level with a test kit. If the NO<sub>2</sub> (nitrite) level is 0 ppm, change the effluent drip rate to 1 drop per second. Allow the BioDenitrator to run for 24 hours then test the NO<sub>2</sub> level and NO<sub>3</sub> (nitrate) level: both in the aquarium and of the effluent. If the NO<sub>2</sub> level remains at "0" and the nitrate level of the effluent is lower than the nitrate level of your aquarium water, the BioDenitrator has begun reducing nitrate (NO<sub>3</sub>).

\* If the nitrite (NO<sub>2</sub>) level is higher than 0 ppm, there is no need to test the nitrate (NO<sub>3</sub>) level as the result would be incorrect.

It will take 4-6 weeks for denitrifying bacteria to fully colonize the media in the BioDenitrator. After this time, you can begin to tune BioDenitrator by adjusting the effluent drip rate to obtain the



maximum nitrate reduction rate. If the nitrate level is near zero, increase the effluent drip rate. If the nitrate level is high, reduce the effluent drip rate.

***By using this product, you have automatically agreed to use a 'Ground Fault Circuit Interrupter' in your main aquarium power line as well as to wear 'protective eyewear' for maximum safety. You should always handle this product with caution and keep it away from children & pets. We cannot be responsible for any personal & property damage resulting from the use of this equipment.***

**If you do not agree to the above, please send this product back to your Aquarium Dealer for a Refund.**

