

# DAS Aquarium with H29 & H39 Operating Instructions

## Installation of the aquarium

The aquarium must be on a firm level base. We suggest that the aquarium be placed 2 inches from the wall for proper air ventilation. If you purchased the aquarium with a DAS manufactured stand, you will need a 1/2" wrench and a level. Screw the levelers at the bottom of the stand all the way into the stand to start, and adjust it from there. If no level is available fill tank about 2 inches with water and use the waterline as your level, check front to back and left to right. You may wipe the inside of the aquarium with a damp cloth or paper towel. Never use soaps or cleaning agents to clean the inside of the tank. Now you can fill the filter and then the aquarium with water. Check aquarium level again due to sinkage into carpet or flooring with the added weight of the water.

## H29 Internal Filter

Specifically designed for Freshwater and or Brackish water aquariums. Its 3 chamber design allows for a multitude of options. The H29 is Ideal for live plants.

### Operation

The water is drawn into the **Heater Chamber (1)** through the intake comb which pulls water from all levels of the aquarium to avoid stagnant areas. A heater (not supplied) can be housed here providing optimal water contact for a stable temperature. Then the water enters near the top of the **Media Chamber (2)** traveling downward. In this chamber you can put carbon or other media. Always use a **Carbon Box (2a) (optional)** or nylon filter bags to hold the media used. The water exits at the bottom of the **Media Chamber (2)** into the **Bio Filter (3)**. This chamber uses a double layer foam spool topped with a circulating **water pump (3a)**. Bacteria grows here to remove the waste. The water is then returned via the water pump and outlet piping. **WARNING: never let the water pump run dry!** It may damage it and void the warranty.

## H39 Patented Internal Filter

Designed to use for a Saltwater Reef aquarium but can also be used as a Saltwater Fish only or a Freshwater aquarium

### Operation

Water enters the filter through an overflow comb falling into a flow canal, this removes proteins and floating debris from the surface of the water. The water then enters the **Heater Chamber (1)**. A heater (not supplied) can be housed here providing optimal water contact for a stable temperature. The water then goes into the **Protein Skimmer Chamber (2)**. Water enters into the top of the skimmer traveling down to the bottom to exit. The **Skimmer Stick (2a)** holds the wooden **Air Stone (2b)** that makes the foam. (Rheostat Air Pump not included). Bubbles rise & water falls crossing each other and coating the bubbles with proteins. The proteins are then deposited into the **Skimmer Collection Cup (2c)**. Adjust the foam thickness, with the rheostat on the air pump, to get a dark stinky liquid. If it is too watery there's too much air. Change the **Air Stone (2b)** monthly. From here the water travels into the **Bio Filter (3)**. Here the water passes through a double layer foam spool where bacteria grows which consume ammonia and nitrite to less toxic nitrate. The water is then pumped back into the aquarium via the pump and outlet piping. A small amount of water is sent to the nitrate filter through the valve and tube seen on the **return pipe (3a&3b)**. Water then drips into **Chamber (4)** where the **Denitra Bag (4a)** is housed. The drip should be set at 10-15 drops per 10 seconds. The **Denitra Bag** should first be checked for leaks by blowing into it and listening for air escaping. Fill the **Denitra Bag (4a)** with 1/5 of the **Denitra Fluid (4b)**. You then place the bag into **Chamber (4)**. Place the bag here when nitrates begin show which is about 6 weeks. The bag is gas permeable which allows the **Denitra Fluid** which is food for the bacteria, into the chamber. More is not better so never overfill and never place the bag in the filter without the stopper securely in place. Water and fluid then move from the bottom of chamber (4) into chamber (5). **Chamber (5)** houses another bio spool with a pipe down the middle. Another type of bacteria grows here on the spool. This form of bacteria needs oxygen like others but with such a slow water flow passing through here, there is not enough oxygen in the water itself, so it steals it from the nitrate (No<sub>3</sub>) leaving nitrogen gas to dissipate into the air. Water leaves down the pipe in the center going back into the **Heater Chamber (1)** where it repeats the cycle. To use carbon in the aquarium, purchase a **Carbon Box** (sold separately) Fill it with fresh carbon and hang it inside the **Protein Skimmer (2)**. We suggest using fresh carbon 3-5 days every 6 to 8 weeks.

