

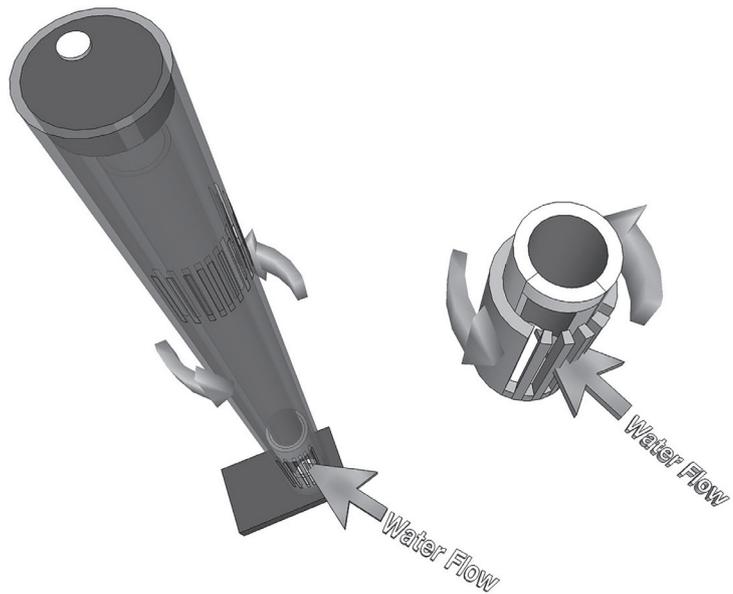
## ELOS Quiet DRAIN manual addition

### Notes for the installation and regulation of the new Quiet Drain Overflow.

The New ELOS Quiet Drain is design to manage an high water flow to the Sump, while keeping the noise level very low.

In order to perform correctly it needs few key adjustments. Please follow the instruction included in your aquarium and connect the DRAIN and return tubes of your main tank, as indicated in the manual.

Pipes connections between the main tank and the SUMP does not differ from our Classic Line overflow.



### **DIFFERENCE BETWEEN CLASSIC AND QUIET DRAIN OVERFLOW:**

The main difference between the normal Overflow and the Quiet Drain is the possibility to adjust the water flow to your needs.

In the instruction below it is supposed that your aquarium is equipped with a variable flow pump. If you do not intend to use a variable flow pump, adjustment of the Quiet drain may be difficult.

ELOS Systems are supplied with ELOS SILENT FLOW DC pumps wich perfectly matches the design of the ELOS Quiet DRAIN. Nevertheless any similar pump with a variable flow between 4.000-8.000 lt/hr can work correctly.

The drain provided with our Smaller System (System MINI and System MIDI) is tuned to work with pumps with a maximum water flow of 4.000 lt/hr pump (1000 gal/hr) whether our bigger Systems are tuned to work with pumps with a maximum flow of 8.000 lt/hr (2000 gal/hr). Shall you need an higher water flow, it is available an upgrade kit that consist in a bigger drain set and an upgraded overflow grid.

## OPERATION:

- 1) Fill the aquarium and the sump as per instruction.
- 2) FULLY open the drain by turning the MAIN KNOB counterclockwise (picture A).
- 3) Start the pump and adjust its flow to 60-70% (4.000-4.500 lt/hr)
- 4) PARTIALLY CLOSE the drain by slowly turning the MAIN KNOB clockwise until the water level inside the overflow chamber reaches the mark indicated by the water mark on the outside of the overflow. (picture B)

This should be the most quiet position in relation to the water flow. Reducing the water flow and consequently CLOSING the drain may reduce the noise of the overflow. Please note that with low water flow the overflow may become instable thus creating more noise.

**Ideal water flow is 4.000 - 6.000 lt/hr.**



PICTURE A

## IMPORTANT:

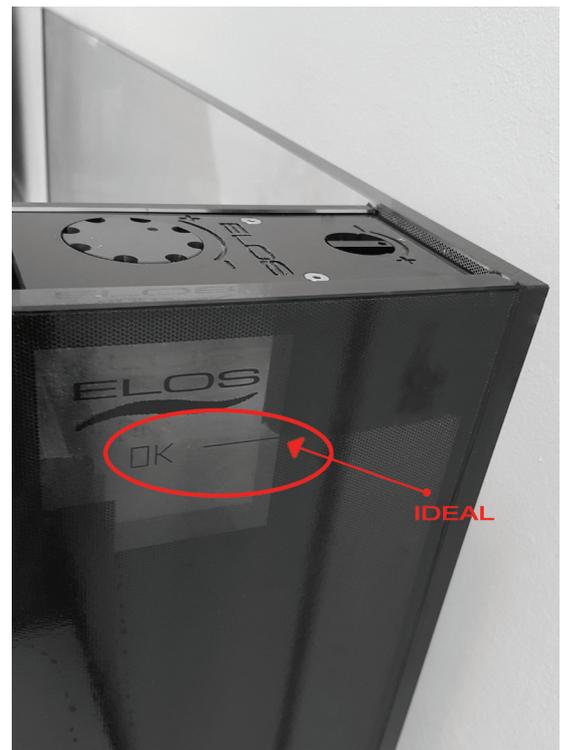
Let the system to settle for about two weeks. A slime coat will build up inside the overflow tubes and the overflow will become more stable and even less noisy.

## USING THE ELOS QUIET DRAIN OVERFLOW WITH BIGGER WATER FLOW

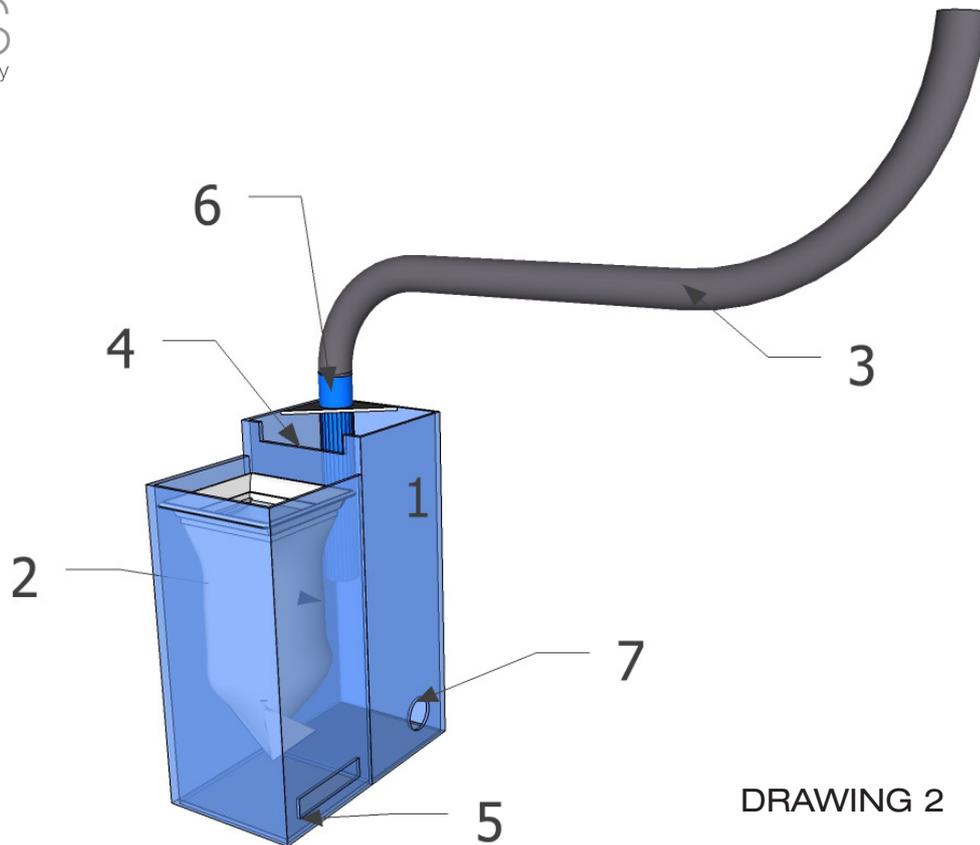
The drain is designed to work well with a flow around 4.000-8.000 liters/hr. It is possible to use bigger flows (up to 11.000) but it is necessary to upgrade the grid and the drain, to a different model design for higher flow. Shall you need further information please contact your supplier.

### Water flow balancing

It is possible to use the second return (placed on the bottom of the overflow) to create a water flow into the aquarium. The balance tap provide an adjustment so that the flow can be diverted more to the top, or bottom pipe (picture A, small knob).



PICTURE B



### **TURBULENCE inside the SUMP**

Our SUMPs are design to reduce the turbulence thus providing a clean flow back to the aquarium (reduce micro bubble, reduce noise).

### **HOW TO REDUCE TURBULENCE/NOISE INSIDE THE SUMP**

If you use a different SUMP than an ELOS model, it may be necessary to create a “soft” flow of the water from the drain connection at the bottom of the Tank, back to the SUMP by creating an “S shaped” curve with the corrugated drain tube from the tank drain (normally top right) to the SUMP (bottom left).  
(see Drawing 2.3)

### **DEGASING CHAMBER:**

ELOS SUMP are normally supplied with a de-gasing chamber. In case you use a different sump, it’s good practice to provide a degassing chamber in order to reduce micro-bubble and noise due to high water flow into the sump.

In the “degasing” chamber (Drawing 2), the main flow coming from the drain pipe (3) is “filtered” somehow in the degassing chamber (1) before the water flows into the mechanical filter (2).

Note that the air that builds up into the sump is not coming from the aquarium (as just

little air should go into the drain) but is building inside the corrugated tube. To reduce the air the “secret” is in the drain tube (keep the path smooth. A straight path may generate noise).

If you can't install a de-gassing chamber, it is possible to reduce turbulence into the SUMP by adding a tap at the end of the drain tube, just before entering the SUMP and close it so that the drain runs totally full of water. This will help reducing the excess air into the DRAIN in case your SUMP does not include a DE-GAS chamber.

### **Description of the DE-GAS chamber**

1: De-gas chamber - the water goes into it from the drain tube (3) that is “softly routed” from the MAIN tank to the SUMP.

6: Drain pipe - it is immersed into the water. The water coming to it generates a lot of bubble that goes to the top of the chamber.

Some water is sent to the SUMP chamber through the hole/tap (7).

7: It is good practice to install a tap at hole (7) in order to adjust how much water goes to the sump and how much goes to the filter sock (2) through the slot (4).

5: It is good practice to adjust the water flow at point (5) to keep the sock partially submerged thus avoiding high PO<sub>4</sub> to build up.

The “keys” are:

- 1) De-Gas chamber with some water going out of (7) and some from (4)
- 2) Drain tube immersed
- 3) path of Drain tube “softly routed” from the MAIN tank to the SUMP and not straight!

### **ONLY IN CASE THE OVERFLOW IS STILL NOISY**

In case, despite the adjustments indicated above, the overflow (not the SUMP) is still noisy, there is the possibility that, due to a mis-alignment of the Safety drain (the inner tube of the drain), the overflow is running in “Safety mode”, siphoning the water rather than just draining it.

In this case, and only in this case, the position of the inner tube (Safety drain) placed inside the main DRAIN tube, can be adjusted. This tube is not fixed (glued) thus permitting “fine” adjustment (+- 5 mm).

Please proceed as following:

- 1) remove the top plate



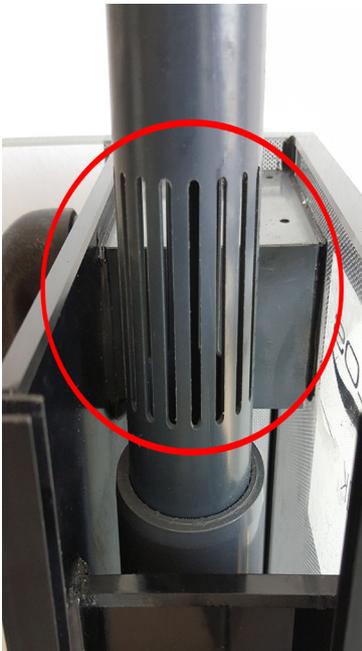
PICTURE C

- 2) remove the Main Drain tube by sliding it out (picture D)
- 3) adjust the position of the inner tube (safety drain) (picture C).

It is important that, during normal operation, only a tiny quantity of water flow through the Safety drain.

## MAINTENANCE

Regularly clean the overflow tubes under hot water thus removing salt creeps and keeping the slots on the MAIN DRAIN tube (picture D) and the safety hole (picture E) clean. If the safety hole is obstructed, the overflow can become noisy and will start siphoning the water from the overflow chamber.



PICTURE D



PICTURE E