

# SOMETHING FISHY, INC.



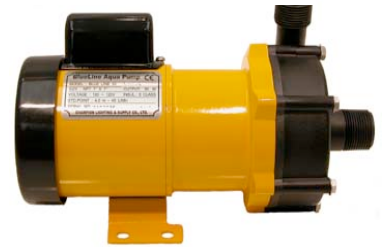
## Something Fishy University Extension Courses Pumps 101



### What type of pump does my aquarium need?

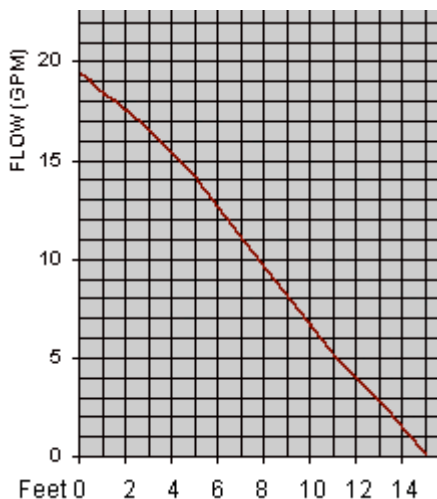
The type of pump used is dependant of a few factors: aquarium size, desired turnover rate, installation application, and capacity of a systems overflow. There are three main pump classifications:

- External Circulation Pumps: Best used for larger applications. Less heat transfer to water, ease of removal for maintenance, higher flow rates with less electrical use.
- Submersible Circulation Pumps: Lower cost, meant to be run submersed in water, flow rates from very small statuary sized pumps up to large pond pumps.
- Power heads: Usually used to create extra water motion in aquaria, several types using different water motion techniques, can be hooked up to a wave maker.



### What size of pump does my aquarium need?

The size of the pump should be selected based upon the over all design of the aquarium. Factors to think about are: desired turnover rate, overflow capacity, head loss due to height or run, installation technique.



### What is a flow curve?

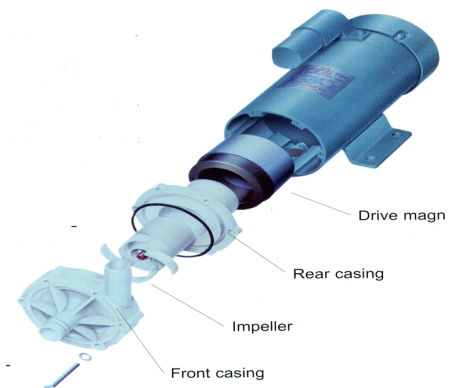
A flow curve is a chart that shows the flow rate relative to head pressure. The higher or longer a pipe run is, the harder a pump has to work, the less flow you will get out of the pipe at the end. Every pump should have a flow curve that will help estimate what your flow rate will be at a given head height. Frictional loss should be considered after head height is established. Using the flow curve to the left, view the results of the examples below:

- Example 1: If your pump is located under the tank in the stand, we estimate the total head height at 5 feet, then our flow rate would be 14 GPM.
- Example 2: If the pump is located in the basement and your tank is on the first floor, we estimate the total head height at 13 feet, then our flow rate would be 3 GPM.

### My pump is not working? What's wrong with it?

The first thing to do would be to open the pump up and inspect all of the parts. This should be done pro-actively on a regular, bi-annual routine, to limit problems arising in the first place. Things to look at include:

- Damaged or out of round impellers.
- Debris stuck in the impeller blades, volute/front casing, or intake.
- Burring of the impeller or its socket/casing.
- Broken, rusted, or bent impeller shaft



For further assistance please ask a retail  
associate

My Aquarim Type is \_\_\_\_\_

It requires a turnover rate of \_\_\_\_\_

My Pumps is a \_\_\_\_\_

It has a flow rate of \_\_\_\_\_

It has: 1/2" 3/4" 5/8" 1" 1-1/2" 2" - I.D. O.D - Threaded Inputs and outputs

### Checklist:

Check Valve

Ball Valve

Barbed Adapters

Hose Clamps