

Choosing A Heater

A heater is a basic component of any fish tank. Even in the summer months there are reasons to keep a heater running on your tank. Most fish are comfortable in temperatures from 70 - 82 degrees. In their natural environments the temperature seldom changes much over the course of a day (although there are exceptions to this). Large bodies of water change temperature much more slowly than the surrounding air.

The water temperature in a fish tank can vary much more than a fish's normal environment. This is where a heater comes in to use. There are several types and many sizes available. Most heaters are made up of a thermostat and a heating coil in a glass tube.

The simplest heaters hang on to the rim of the tank and only the glass tube extends into the water. A screw type adjuster is located on the top. There is a pilot light in the tube that glows when the heater is on. Adjustment is made by turning up the heater until the pilot light comes on. If the temperature in the tank is correct, back off the adjuster just enough to put out the pilot light. If a higher temperature is desirable, turn the heater up (just a little). Watch the pilot light and a thermometer. If the pilot goes out before the proper temperature is reached, repeat the process. Work in small increments to prevent a fish fry!

A second type of heater is the submersible. The whole unit is sealed and may be put completely into the tank. Most brands have suction cups to hold the unit in place. This allows more freedom in positioning the heater and makes it easier to hide. Adjustment is done in the same manner as the hang on type.

The newest type of heater is a submersible where the adjustment has a calibrated scale. You can directly set the heater to specific temperature. This eliminates playing with adjustments until the setting is right.

There are different sizes of heaters available in all types. A heater that is too small will have trouble maintaining the proper water temperature if the surrounding air temperature drops quickly. A heater that is too large will quickly boil the tank if the thermostat should ever stick.

Heater output is measured in *watts*. The rule of thumb for selecting the correct size heater is 3 - 5 watts per gallon. There are two main factors in deciding whether to go to the low or high end of the guideline.

The first consideration is the surroundings. A living room that is kept at a constant temperature year round doesn't require as large a heater as a tank that will be exposed to large temperature fluctuations.

Some tanks, even though in a living area may require a good size heater. An example would be a household where you turn off the air conditioning when you leave for work and put it back on when you get home. Here, in Florida, that could mean a change in room temperature of more than 20 degrees!

Tank size has a great effect on how susceptible the water is to rapid temperature change. The larger the tank, the more water it holds (a simple concept!). The more water, the greater its ability to hold heat and maintain temperature. Thus, a smaller tank requires more wattage per gallon to sustain a constant temperature than a large tank.

Sometimes, even if the tank doesn't get cold, a heater is still necessary. A quick way to determine if you need a heater is to make note of the water temperature in the morning, afternoon, evening and night. If it varies more than a degree or two, use a heater.

If you have a situation where the room temperature fluctuates up and down frequently, use the following method to set the thermostat. Check the temperature of the tank when it is at its warmest. If this is within the safe range, set the heater to maintain this. This eliminates any fluctuation in the tank's temperature.

We'll finish here with a suggestion on placement of the heater. In tanks with standard filtration (undergravel filter and/or power filter) place the heater somewhere in the flow of water. Locations near the U.G. filter outlets or the power filter returns are ideal. In wet/dry systems the heater can be placed in the sump or in the tank near a return line. This provides even temperature throughout the tank.

We must keep in mind the fact that the fish don't have the chance to change their clothes to keep up with changes in the weather. The simple addition of a heater can keep the inhabitants of our tanks happy.