

Adding a fan to a fishtank or a reptile enclosure is an effective way to keep your pets cool. Figuring out how to do it safely and efficiently is challenging. Below are our answers to the 8 most frequently asked aquarium questions.

If you need additional information please feel free to contact us.
Email your question or give us a call. 800-323-2439.

1.) Standard Fans are not waterproof however waterproof fans are available by special order. Standard AC units are tested at 95% RH at temperatures as high as 80C. They are not prone to corrosion. You must however make sure that they are protected from splashing water at all times. Our waterproof fans are IP55 rated and can withstand water jets sprayed from all directions.

2.) Calculating fan size for your tank. - There seems to be a tendency toward overkill as far as choosing fans for aquariums is concerned. The most commonly cited problem is that Halogens, HIDs, MH type lights produce a lot of heat which in turn heats the water in the fishtank to dangerous levels. When figuring the amount of cooling you will actually need you need to remember that you are NOT cooling the entire tank. When it comes to preventing heat buildup, you should only be concerned with the top few inches of space between the surface of the water and the light ballast. You must first determine the VOLUME of the air contained within this limited space. You can do this by multiplying the following:

(Length of tank in inches) x (Width of tank in inches) x (Distance in inches between the water surface and lid). Divide the result by 1728.

This gives you the number of cubic feet of air volume.

Assume that you want to replace this volume with fresh air a few times per minute. [This is more or less arbitrary because each tank is unique and requirements will necessarily vary.] It is not necessary in most cases to be precise. Using this data you can now look at our specification sheets and know whether you are looking a fan which is appropriate for your needs by checking the specification sheet column titled "CFM" (Cubic Feet per Minute).

3.) Noise Considerations - Since most fish tanks are usually placed in areas where they can be easily seen and enjoyed, noise is also a consideration when selecting a fan. Most of the fans that we produce are available in High, Medium and Low speed. There is a direct relationship between speed and noise. More airflow = More noise. It should be noted that having 2 fans does not double the amount of noise produced. There may in certain circumstances be an increase in noise intensity however. In a very small percentage of cases where 2 fans are used you may get a "harmonic wave" which essentially means that small variations in speed between units leads to wave propagation and an unacceptably loud system. (Don't panic... that sounded a lot more complicated than it is and it happens rarely.) This problem is solved by replacing one of the fans with a different unit of the same model number.

4.) Venting is also critical to maximizing the performance of your chosen fan. As a general rule you

should provide a vent area which is approximately 1.5x the area of the fan venturi. (The venturi is the big hole in the center of the fan that the impeller sits in.) Most fsh tanks are not sealed on top so this is generally something that is not a problem. Note that inadequate venting can cause fan noise to increase dramatically as well as curtail airflow severely.

5.) Airflow Direction - With any cooling problem there are usually several ways to solve it. Pushing fresh air into an application or Pulling heated air out of an application is mostly a judgement call in the case of fsh tanks. In cases where there is a large amount of heat generated some engineers will use a push-pull system which means that fresh air is pushed into an application on one side while another fan pulls heated air out the other. This is probably unnecessary in the context of aquariums.

Since the objective is to prevent heat buildup on the water's surface you must simply keep the air moving to achieve this goal. If I were building a setup that included a fan I would probably try pushing fresh air across the water's surface first while making absolutely certain that there was adequate vent area on the opposite side. If that did not do the job I would flip the fan around to try pulling the heated air out of the tank while making sure that I have adequate venting on the intake side. If this still does not lower the temperature enough an additional fan or a larger fan MIGHT be in order. Feel free to contact us if your fan is not doing the job you need it to do.

6.) Airflow Obstructions can cause fan noise to increase and can curtail fan life expectancy. When mounting your fan you must make sure that there are no significant airflow barriers within an inch or two of either the inlet or outlet side of the fan. This is a point that is related to static pressure.

7.) Power Connection. In most cases the best solution for connecting your 115VAC fan to an appropriate power source is with a fan power cord terminated with a standard 2-prong, AC plug. Fans are also available with lead wires which necessarily require the use of wire nuts or a direct solder connection. DC fans will come with wire leads.

8.) Guards and/or Fan Filters are recommended when there is ANY chance of fingers or other body parts contacting a spinning blade. There are many variations of guards and filters in our product section.