Aquariums and Stands: Selection Guide

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With a little research and planning, the aquarium hobby can be an exciting and rewarding experience. There are endless possibilities and many different biotopes that can be created and enjoyed by the whole family in the comfort of your home. The first step to getting into the hobby is to develop a budget, and work within that budget to decide where the aquarium is to be installed; the size and style of aquarium, stand, and canopy; and where you are going to purchase the set-up.

Budget

When planning a budget for the aquarium, the considerations that need to be made include the cost of the initial set-up, maintenance items, and energy consumption. The initial set-up cost is going to be determined by the type and size of fish and plants that you are planning on keeping as well as the cost to decorate the aquarium. There are many costs involved other than the initial set-up. It is important to include maintenance items such as food, light bulbs, filter media, and medication. Also, the monthly costs, which are reflected in your electricity bill may be minor in a small system, but need to be considered when dealing with the more powerful pumps and lighting associated with a large aquarium. For more information on this subject see the article titled, The Cost of Owning an Aquarium.

Location

The aquarium should be situated in a place where it is out of the main traffic flow, but still in a place where it can be seen and enjoyed. Direct sunlight should be avoided because of the possibility of unwanted algae growth and the heat that would be added to the aquarium. Windows, doors, and heating/cooling vents are other variables that need to be avoided due to the possibility of temperature fluctuations within the aquarium.

The weight of the aquarium has to be taken into consideration when choosing a location. A good rule of thumb is to estimate the total weight of the aquarium as 10 pounds per gallon. So, a 75-gallon aquarium will weigh approximately 750 pounds. To avoid sagging your floor system, it is ideal to place the aquarium against a weight-bearing wall. If you are unsure about loading your floor system and the correct placement, it is wise to consult a contractor in your area.

The last consideration to make concerning the location of the aquarium is its proximity to a water source and drain. Water changes are the most important aspect of maintenance, so the aquarium should be in a place where it is convenient to fill and drain. A second story location with no water supply would be a poor choice because of the labor involved in carrying buckets up and down the stairs. Typically, the more hassle involved in the maintenance of the system, the less often it will be performed. The frequency of water changes is a large factor in the success of the system, so it is wise to limit the time needed by installing the aquarium in the proper location.

Aquarium size

The size of the aquarium is going to be determined by the budget that has been allotted for the system and the location where the aquarium is going to be placed. Now that you have determined both your budget and location for the aquarium, you can decide the size of aquarium that you will install. It is true with aquariums that bigger is better. A large aquarium will give you a much broader range of species of fish and invertebrates that you can successfully keep. Not only will your options of livestock be greater, but the system will also be healthier for the inhabitants with a larger water volume. With more water volume, the system is less likely to go through sudden changes. These changes in water chemistry can occur due to overfeeding, unnoticed death, and temperature fluctuations in the room where the aquarium is placed.

Tank Capacity (Gallons)	Tank Size (Inches; LxWxH)
10	20x10x12
15	24x12x12
15 High	24x10x18
20 High	24x12x16
20 Long	30x12x12
29	30x12x18
30	36x12x16
55	48x13x20

It is a common mistake when entering the hobby to be drawn in by a certain species of fish, and not make the decisions concerning the setup based on your budget and location requirements. The result with this common mistake is either buying an aquarium that is within your budget and is too small for the species, or using the species to make your buying decisions and not being able to afford either the maintenance items or quality equipment in the beginning. In either case, the end result will be an unsuitable environment for the fish and will greatly reduce your chances for success. In other words, if you are planning to get into the fish keeping hobby, use your budget and

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location requirements to choose the right aquarium, not what species you have an interest in.

75	48x18x20
90	48x18x24
125	72x18x22
150	72x18x28
180	72x24x24

Glass or acrylic?

There are basically two types of aquariums on the market today, glass and acrylic. Each type has advantages and disadvantages. Glass aquariums are less expensive in the small to medium sizes and are more readily available. Also, glass tends to be more resistant to heat, and does not scratch as easily as acrylic. The downside to glass aquariums is that they are considerably heavier, and have silicone seals in the corners that need replacement with time.

There is a broader range of design possibilities with acrylic. Acrylic can be bent and molded into just about any shape imaginable, and is considerably cheaper in the large size aquarium. Besides the design possibilities, acrylic is clearer than glass, and it can be repaired easier if it does get scratched.

In both types of aquariums, there are specialty systems available. Some of these systems include the complete filtration either in the hood or the back of the aquarium. Other systems, like the "reef ready" aquariums have the overflows for the filtration built into the back corners of the aquarium. When comparing different aquariums, it is important not only to compare prices of the different units, but also the quality of craftsmanship and especially the warranty periods that are included with the system.

Choosing the right stand

The stand is an integral part of the aquarium system, and there are a few considerations to make when choosing this component. The stand serves the basic function of holding the aquarium in place, as well as concealing equipment and supplies below. There are two types of stands commonly available on the market, iron and wood. The iron stands are going to be the least expensive, and do not offer any cabinetry for concealing equipment. Besides the lack of storage, these stands are typically not very sturdy, and they tend to rust easily when exposed to saltwater.

Wood stands are available in a variety of styles and finishes, which makes it easy to find one that will match the furniture in your home or office. When comparing different models, take some time to look at the craftsmanship, and place the stand on a level surface and test for stability. A stable aquarium is very important, especially if there are children and pets in the house. Aquariums are very top heavy and pose a definite risk of injury to anyone around if they are knocked over. Try to avoid stands made primarily out of particle board. Particle board does not hold up well in high moisture conditions, and if allowed to get wet repeatedly, will end up falling apart.

You can also design and make your own stand, or have the aquarium built into the wall. There are many different materials from which a stand can be built, concrete blocks being the most common. I have seen some spectacular stands built out of decorative concrete blocks. There are many different colors and textures of concrete blocks available on the market, which can be incorporated into any interior design. The advantage to blocks is the strength and durability. For stability, it is best if the blocks are stacked on bond; this means the joints between the blocks are staggered every row. Remember, though, blocks will add considerable weight to the system and this needs to be taken into account when determining the location of the aquarium.

An aquarium built into a wall can be a spectacular display without the added furniture or obstacles in the home or office. Typically, a wall with a closet behind it is needed in order to do this. Unless you have the carpentry experience, it is wise to consult a contractor in designing this type of display. As in choosing an aquarium, it is important no matter what type of stand that you choose that it be structurally sound, be of good craftsmanship, and have a reasonable warranty accompanying it.

Choosing the right canopy

The canopy serves many purposes other than just covering the aquarium. It is designed to cut down on evaporation, keep aquatic life from escaping the aquarium, and it houses the lighting system. There are three basic types of canopies; plastic, glass, and wood. The plastic canopies available on the market are an all in one unit, which incorporates everything needed including the lighting system. They are the least expensive of the canopies, and they provide us with the least amount of options. Also, the plastic canopies do not seal an aquarium very tight which allows more evaporation, making them a poor choice for a saltwater aquarium due to the excess amount of salt creep.

Glass canopies are the best choice for limiting evaporation and keeping jumping fish in the aquarium, making them a must for the saltwater aquarium. They can be used by themselves with a common type of strip light placed on top. The glass canopy is versatile, and allows the most flexibility in lighting types and configuration.

The last type of canopy is made from wood, which is usually built to match the design of the stand. They are the most visually appealing canopies as well as the most expensive. The wood canopy is basically just a box that has been built to fit on top of the aquarium and is used to hide all of the lighting equipment. To limit the amount of evaporation from the aquarium, it is still necessary to use the glass canopy inside of the wooden frame. Using this style of canopy set-up will give you the most options

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when it comes to designing your lighting system on both saltwater reef and freshwater planted aquariums. A retro-fit lighting system can be simply mounted to the top of the wooden canopy and holes can be drilled in the sides for installing fans. It is necessary with the more powerful lighting systems to provide this type of air circulation to dissipate the heat created by the bulbs.

You will need to have an idea of what type of livestock that you are going to keep in the aquarium prior to purchasing a canopy for the system. Again, the glass canopy is the most versatile of the three. And, if you are not sure or are thinking that you may switch the type of species you are going to keep in the future, the glass canopy can always be used.

Where to buy the aquarium

There are many options as to where you can buy your new aquarium, and there are more considerations than just who has the best price. Your options are going to be dependant on your geographical location, but may include the local pet store, department store, mail order, custom acrylic company, or buying the aquarium used. The first choice that comes to mind is the local pet store. Your local pet store which specializes in fish and aquariums will typically have knowledgeable staff that can assist you in your choices, but may not have the best price. The advantages to dealing with your local store is that you should receive good service as well as good advice in setting up your system, and solutions if there are any difficulties in setting it up. General pet stores and department stores are going to offer better pricing, but both the products and the service may not be of the highest quality, and the staff may not be as knowledgeable.

The different on-line sites and mail order catalogs offer a huge selection of products at competitive prices, but you have to pay the shipping. These companies are great for the equipment and supplies, but because of the bulky and fragile nature of aquariums, they typically do not offer a wide selection of aquariums. Many of them, however, have very knowledgeable staff who can help with decisions on choosing an aquarium and equipment.

If the aquarium that you have in mind is either very large or of a special design, your best option may be one of the many custom acrylic companies. Most of these companies require a down payment of fifty percent of the total aquarium price prior to building your aquarium. So, it is wise to get a number of different quotes as well as references from their past customers.

The last option is to purchase an aquarium used from a private owner. If you do choose to go this route, make sure that the aquarium is structurally sound and does not leak. Look at the silicone seals in the corners to see if they are peeling away from the glass or if they have been cut in any way. Make sure that the brace on the top of the aquarium is not damaged or been repaired, and look to see that the glass is not scratched. Aquariums take a lot of abuse with the different ornaments, such as rocks and gravel, and from improper cleaning. Because of these reasons, a used aquarium may not be the best choice. It is important that wherever you decide to purchase your aquarium, you inspect the aquarium for any cracks, scratches, or blemishes of any kind prior to purchase.

Installing the aquarium

Once you have purchased your new aquarium and have decided on a structurally-sound location, it is time to install the stand. Before placing the stand, you need to determine the space that is required between the aquarium and the wall. This space is required for hang-on filters, overflow boxes for a wet/dry filter, and for other hoses and wiring. If there are young children or pets in your home that may try pulling or climbing on the aquarium, it is wise to mechanically fasten the stand to the wall behind it. Place the stand at the required distance from the wall and check the stand for levelness. Use shims made of wood or other suitable materials to level the stand prior to placing the aquarium. Now that the stand is level, you can use either blocks of wood or metal strapping to secure the stand to the wall. It is important that these main ties are either nailed or screwed into the wall in a location where it will penetrate a stud and provide the necessary stability. Once this has been accomplished, the aquarium is now ready to be placed in position on the stand.

Hopefully, the guidelines explained in this article will help you be successful in the fish keeping hobby. Again, the most important part of planning your new aquarium is setting a realistic budget, and staying within that budget without settling for inferior products. Your new aquarium should be an enjoyable and educational experience for the whole family. The more research that you can do on the different types of aquariums, equipment, lighting, and most importantly the type of livestock that you plan to keep, the more successful you will be, and the more you and your family will enjoy the hobby.

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