



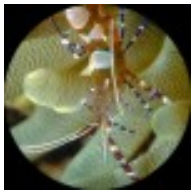
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Wet-Dry Filter Design



Not all wet-dry filters are alike.

Here are a few notes about wet-dry filtration design to help you select a good system for your needs. A wet-dry filter should be solidly constructed of acrylic which is easy to drill and adapt for various pumps and protein skimmers. The filter should have a large reservoir for housing heaters, sensing probes, etc.. Because wet-dry filters are usually kept inside aquarium cabinet stands where temperatures can get quite warm, the acrylic should be 1/4" thick or more and braced to prevent warping. **The "dry" section should be designed so that at least 2/3 of the biological material is not submerged when the filter is operating.** If this filter will be the only filter on the tank, it should have an area for post filtration or chemical media which the water must pass through before it reaches the sump where the pump intake is located. The filter should also have a covered reservoir to help prevent evaporation and to protect against airborne contaminants.

A word on integrated wet-dry filters:

Some wet-dry filters are built into aquariums. These integrated filtration systems (I.F.S.) are great for smaller reef aquaria where a cabinet stand isn't practical, but beware of these systems on larger aquaria. Our experience has shown that most of these systems are too small when installed in larger aquaria over fifty gallons. Many of these systems also incorporate a protein skimmer into the design. The problem with these skimmers is that they are restricted in size by the width of the filter, and they don't work well at all. Unless space is an issue, filtration schemes that use separate components work better.

Those magic all-in-one wet-dry designs:

What if you could buy one filter that would have everything in one easy-to-install package? Well you can! . . . but there's a catch! Some wet-dry filtration systems on the market incorporate everything into one unit including integrated de-nitrifying, protein skimmer, chemical, and mechanical filtration. Looking at one of these systems in a magazine or on a showroom display, it's easy to become entranced with all the cool-looking tubes, modules and moving parts. The trouble with these systems is that each function they serve to accomplish is diminished by the size limitation of the overall system. The other problem is that these systems are difficult to service if they're located in a cabinet stand. Here's where we like to use the stereo equipment analogy: An integrated stereo system will never sound as good as a component system. Why? Because component systems devote more space for each function served. For example, a separate tape deck has more room for better circuitry and more features. Once again, using high-quality separate components for aquarium filtration will ensure you are using the most effective filtration possible.

Wet-dry filters are not just for marine aquaria:

Freshwater aquariums can also benefit from the use of wet-dry filtration. The aquatic environment will have greater oxygen content and a better oxygen/CO₂ exchange. Using a wet-dry filter in a planted aquarium means the root systems will not be impaired by the flow of an under gravel filter system.