

# Protein Skimmers - What, Why, & Which One?

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Many aquarists feel that a [protein skimmer](#) is an absolute necessity for saltwater aquarium systems, especially those that are heavily-stocked. A protein skimmer is an excellent supplemental filtering device that works by creating tiny bubbles in a reaction chamber. These bubbles propel proteins in the water up to the surface of the reaction chamber. As the bubbles burst, they expel the proteins upward into a collection cup or discharge tube. Skimmers remove proteins before nitrifying bacteria break them down into nitrates. With less waste to process, the bacteria consume less oxygen. Higher oxygen levels and low nitrate levels mean better health for your aquarium inhabitants.



Protein skimmers differ in several ways. First, skimmers can be driven in one of three ways:

- [Air-driven](#) - These are in-aquarium countercurrent models, powered by air pumps, which create bubbles inside a reaction chamber.
- [Venturi-driven](#) - These are driven by water pumps, and mix water with air under high pressure in the reaction chamber, creating more "crash" than countercurrent models. Most venturi-driven skimmers are safe to use with ozonizers.
- Turbo-driven - These are driven by water pumps, and take water and air and pump them both through the impeller to mix them, creating bubbles in the reaction chamber. Turbo-driven skimmers should not be used with ozonizers.

Skimmers also differ in where they are located in your system. Some models can be placed directly in your filter's sump, while others are considered free-standing and can be located right next to your filter. Still others can be hung on the back of your aquarium or installed directly inside the aquarium. The location for your skimmer depends on your tank size, filter type, and available space.

Not sure which skimmer is right for you? Use our [Protein Skimmer Selection Guide](#) as a guide in choosing the model with the features you need. The two most important considerations to keep in mind are:

1. Strive to install the biggest skimmer possible that fits within your space and budget. This will increase the skimmer's effectiveness and make maintenance easier.
2. Always make sure to keep the top of the reaction chamber and the collection cup clean. This means dumping out the collection cup at least once per day. On models that utilize a direct discharge rather than a cup, make sure the outlet hose remains clean and clog-free.

If you choose your protein skimmer wisely, and keep it clean and well-maintained, your aquarium inhabitants will be treated to better water - the single most important factor for good health.