Chiller Performance Tips

Drs. Foster & Smith Educational Staff

A good lighting system and the right chiller go hand in hand. Experienced hobbyists agree that the only way to provide enough lighting for vibrant corals without overheating your water is by investing in a compensation chiller.

Chillers play a vital role in temperature regulation in aquariums, particularly in heavily lighted reef systems. Higher water temperatures result in poor water quality, lower dissolved oxygen content, and increased production of waste materials resulting in stress and even fish loss. Consider the following to properly select and maximize the performance of your chiller.

Aquarium Size

A larger aquarium will require a more powerful chiller. Select one that is recommended for the amount of water you want to chill and capable of pulling down the temperature to the desired number of degrees.

Types to Consider

There are three basic types: thermoelectric, drop-in, and in-line/flow through. Thermoelectric chillers convert electric current directly into cooling power and are ideal for smaller aquariums. For larger aquariums requiring greater temperature pull down, the more powerful in-line/flow through chillers are better suited. These larger chillers use technology similar to refrigerators utilizing heat exchanger coils to effectively lower the temperature of a large volume of water. Drop-in chillers are available for small and large aquariums, utilizing either thermoelectric or evaporator coil technology, and are the easiest to install, requiring no additional plumbing materials or pump, merely space in a sump or aquarium for the cooling coil.

Maximizing Performance

- A slow flow rate past cooling elements will mean more efficiency.
- Good ventilation around the unit disperses chiller exhaust and minimizes transference of heat.
- Controllers accurately regulate temperature parameters and a back-up unit will provide added insurance.

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