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# BIO-FILTERS

The first step in achieving better water quality is circulation. Any form of fountain or water fall will assist this by mechanically aerating the water. Circulation alone is usually insufficient, particularly for larger ponds with fish, therefore filtration becomes necessary. A lot of pond pumps available have pre-filters, but do not regard these as filters – they are only provided to protect the pump from debris and reduce wear on its impellor.

Biological pond filters are one of the most important part of your pond. A biological filter is best described as a miniature sewerage treatment plant. This works by using naturally occurring bacteria that feed on nutrients, toxins (ie ammonia) and suspended matter. These bacteria convert the algae, fish waste and biological matter into harmless by products that can be absorbed by the ponds plants. Bacteria convert ammonia into nitrite and other bacteria convert nitrite into nitrate. Nitrate is then absorbed by plants and escapes into the atmosphere as nitrogen resulting in a healthy pond and environment. Biological filters act to remove solids and to detoxify the water, and completely clear green water. This is from an ultra-violet clarifier in the bio filter. The clarifier causes the algae cells to clump together, which are of a suitable size to be removed by the biological filters in built sponge and bio media system

Biological filters must be treated like a living entity; if they are not provided with oxygen and food they will deteriorate and die. For this reason a biological filter must be run continuously, ensuring that the bacteria are provided with sufficient material to survive.

Here at Bruceworks we have a range of biofilters. Biofilters can be placed in the ground hiding it from sight or can be hidden behind plants. Installation of all these filters is easy and can be done with the minimum of effort. Please ask any of our team members for further information.