

My version of the moving bed filter

A good few months ago I wanted to replace my floss type filters as I constantly had to change the floss also my air stones did not last long without getting blocked

I came across a product called K1 filter media

This type of media was developed for waste water treatment plants over 10 years ago

This then found its way into koi breeders and then into tropical fish breeders



K1 Media

K1 media is engineered in a wheel shape and is slightly positively buoyant. This near neutral buoyancy allows the media to circulate throughout the vessel with only a minimal water flow.

This flow is created with your air pump and air stones or diffuser etc

As the K1 Media moves within the filter, it causes the old dead bacteria on the outside to be displaced. This makes space for new younger heavier feeding bacteria to rapidly colonise. Within the wheel is a protected surface which enables colonies of bacteria to naturally follow their lifecycle, of maturing, dying and then fuelling the latter stages of the nitrification cycle

Unlike foam, matting, or other forms of static filtration media, the K1 media is designed to move freely within your filter. The constant chaotic movement of the air from your pump, causes the media to self clean and thus requires no maintenance. This allows the filter to reach optimum effectiveness without the disturbance of periodic cleaning, avoiding unnecessary loss of bacteria within the filter.

50 Litres of K1 Media will handle up to 250 grams of food per day

How I make my filters

I have started using plastic sweet jars these are low cost to buy and easy to use



These jars have a nice dome lid to help roll the K1 media with a small amount of air



I drill a 13mm hole into the top of the lid this is to let the water out



I then drill lots of hole around the base to let water in because my tanks are bare bottom this will suck all the waste to the filter



I drill two 8mm holes so I can attach suckers to help to keep the filter in place .you can add some marbles to weigh it down if you don't have any suckers





Suckers attached



I use irrigation drippers for the air these are adjustable to let more air out simply unscrew the red cap. if I use air stones they get blocked up quickly



The filters in use



