WHY USE AN AQUARIUM FILTER?

The aquarium is a "closed" environment. By this we mean that the water in the aquarium is not constantly being replaced as in, for example, a stream or river. Any deterioration in the quality of the water can have a disastrous effect on the livestock in your aquarium.

There are a number of naturally occurring toxic compounds that can lead to an unhealthy aquarium if they are not treated by the filter. Your PF filter is equipped to deal with biological, chemical and mechanical filtration, thus providing a complete solution for your aquarium.

Mechanical filtration:

Mechanical filtration is the term used to describe the removal of particulate waste from the aquarium. This includes uneaten food, dead plant matter, fish waste and surfactants such as dust. In your PF filter, the plain foam performs the primary mechanical filtration.

Chemical filtration:

Chemical filtration takes place in the black foam of your PF filter. This foam is impregnated with carbon. Water is forced through this foam after having been pre-filtered by the plain foam/s.

The carbon will help remove odours, toxic heavy metals and chlorine, water discolouration and unwanted treatments. The carbon foam has a finite life span and should be replaced every 3-6 weeks. The carbon foam must also be removed if treatments are in use, as if present it will remove these treatments, rendering them ineffective. Once the treatments have run their course the carbon foam can be placed back into the filter.

Biological filtration:

Decaying plant matter, fish food, fish waste and other organics will break down into a highly toxic compound called "Ammonia". If untreated, ammonia is lethal to fish even in very small concentrations. Fortunately there are naturally occurring bacteria in the aquarium that will break down ammonia into less harmful compounds.

The bacteria (known as Nitrosomonas) require an oxygen-rich environment and a media with a very high surface area in order to flourish. Once they have broken ammonia down in to nitrite, a different type of bacteria (nitrobacter) breaks the nitrite down into a compound called nitrate, which is far less harmful to fish. Nitrate content can be kept at safe levels by performing regular, partial water changes (10% every 1-2 weeks).

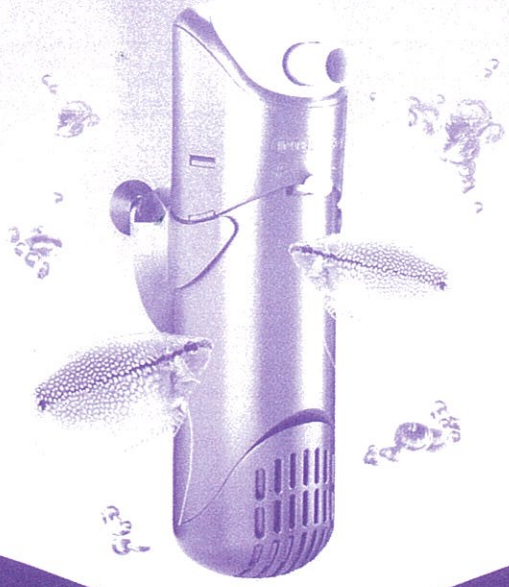
The bacteria mentioned above will thrive on the plain foam/s included with your PF filter. The plain foam/s must never be washed in tap water, as this would kill the beneficial bacteria. If it does require rinsing, this should only be done using a bucket of water taken from the aquarium. When you need to replace the foams ensure you do so using 50% old and 50% new to ensure a continual supply of bacteria.

For more useful information on maintaining a healthy aquarium ask your retailer for the "Tankmaster Guide to creating and maintaining water quality" book.

To monitor ammonia, nitrite and nitrate levels in your aquarium we recommend Interpet's liquid or tablet test kits. Ask your retailer for more information.

INTERPET

INTERNAL POWER FILTER



INSTRUCTIONS
for PF 1

PF FILTER FEATURES

The PF filter is packed with features for the benefit of you and your aquarium.

Interpet's patented "Aqua Valve" is the only valve system for internal filters that prevents waste from being returned to the aquarium. The valve operates by lifting as the power filter is working, allowing waste and water to pass through into the filter body. Once the power is turned off (for maintenance), the valve closes, sealing the aquarium waste and water in the filter. This allows you to remove the filter without returning dirty water back in to the aquarium.

1 Aqua Valve

The Aqua Valve is not intended to be watertight, and we suggest you replace the valve 2-3 times per year. Periodic cleaning of the valve and valve cap is essential as part of the regular maintenance regime.

2 Venturi

The PF filter features a powerful venturi. This allows air bubbles to be added to the aquarium. In doing so you (a) induce oxygen into the water, (b) create a pleasing effect.

In order for the venturi to work, the venturi assembly must be slightly above the water level.To open the venturi, press the venturi cap backwards in the direction shown as "O" on the cap.

To close the venturi, simply press the cap forwards in the direction marked "I" on the cap.

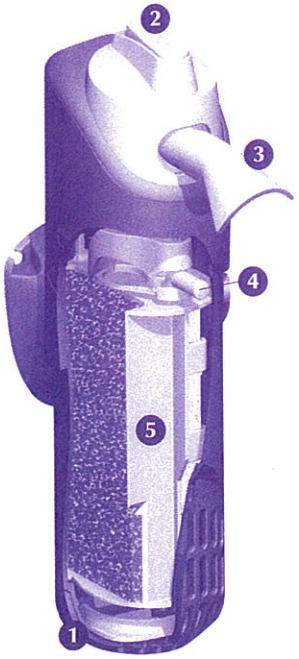
To minimise the noise level from the venturi, the cap should be positioned between the "O" and "I" points until the minimum noise level is achieved.

Please note that the venturi is not essential to operating a healthy aquarium. Any venturi creates noise, due to air being forced into the outflow under pressure. If you find this noise level distracting, simply turn the venturi off or lower the filter in the aquarium so the venturi does not operate. To ensure adequate oxygenation of the water without the venturi, simply use the flow deflector to point water upwards so the surface of the aquarium is agitated.

If the venturi stops working, it is probably time to clean the filter. The venturi needs good water flow in order to provide the correct level of pressure. When the foams become blocked, the flow reduces.

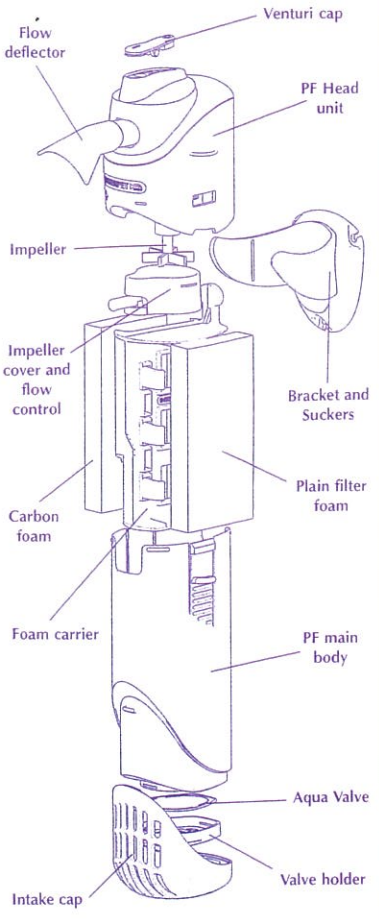
3 Directional Flow control:

The outlet nozzle of your PF filter rotates, allowing you to direct water flow in the desired direction. Simply grasp the venturi assembly and use it to turn the outlet assembly to the desired point.



PF Filter features

INSIDE YOUR PF FILTER



4 Output flow control:

Your PF filter features a flow control lever. This can simply be moved to the "+" position to increase water flow, or the "-" position to reduce water flow.

5 Foams & Foam carrier:

Your PF filter has 2 separate filter foams. The white foam provides the bulk of the mechanical and biological filtration. All the water entering the filter has to pass through this foam before continuing its path through the filter. This foam should be cleaned when dirty, in order to prevent loss of flow rate.

The black foam is carbon impregnated Carbon is used to remove discolouration, toxins, pesticides, heav metals and odour. It will also remove treatments and must therefore be taker out if treatments are being used.

Carbon has a finite effective life and should be replaced every 3-6 weeks.

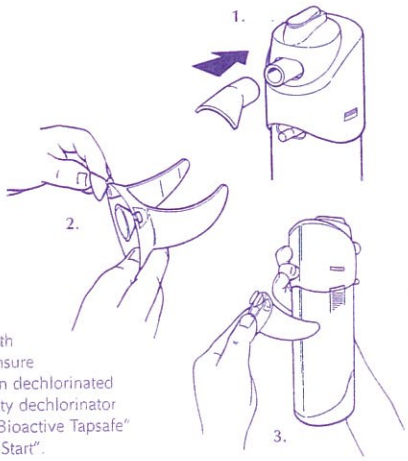
Both foams are fitted into the foam carrier to make them simple to remove and clean. When replacing the foams, ensure the carbon foam is fitted to the side of the carrier with "carbon" stamped into the side.

Optional super-fine filter pads are available to remove even the smallest of particulate waste from an essentially clean aquarium. The filter pad should be placed next to the carbon foam in the carrier.

INSTALLATION

Your PF filter is set up for immediate operation.

1. Add the flow deflector to the outlet nozzle.
2. Attach the suckers to the support cradle and fix firmly to the back of the aquarium.
3. The PF filter can now be turned on and the filter will begin operating.



IMPORTANT:
Before stocking your aquarium with fish you should ensure the water has been dechlorinated using a high quality dechlorinator such as Interpet "Bioactive Tapsafe" or Interpet "Fresh Start".

MAINTENANCE

The Interpet PF filter has been designed to give high performance with low maintenance, giving you more time to enjoy your aquarium. However, regular maintenance is an essential task if your aquarium fish are to remain healthy. Before maintaining your filter, you should turn the power off and disconnect from the mains.

Once the filter's power has been turned off, remove the filter body from the head. This is done by simply pushing the finger indents on either side of the top of the filter body, whilst pulling the head at the same time (Diagram 1).

Once the head is removed, pull the foam carrier out to clean the foams (Diagram 2). Tip away any water trapped in the filter, as this will have waste material in

The foams can be thoroughly washed in a bucket containing aquarium water. The carbon foam will require replacing every [illegible]

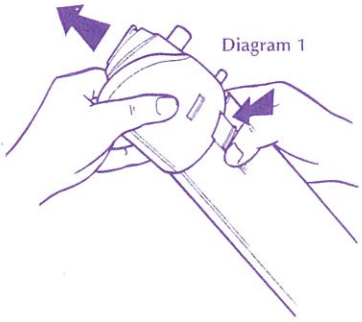


Diagram 1

The Aqua Valve is quick and easy to access, and should be cleaned every 6-8 weeks (Diagram 3). When it becomes brittle or retains an upward shape, it should be replaced. (see spares list)

Once every 6 months clean the impeller

To do this, remove the head unit from the filter (Diagram 1).

Then remove the impeller cover

You can now access the impeller.

Pull the impeller cover away from the head unit (Diagram 4), and carefully remove the impeller for cleaning (Diagram 5). Use a small, soft brush or cloth for this. The impeller is precision made and should be handled with care. If there is any sign of wear to the impeller blade or magnet, they should be replaced

Over time, the suckers of the aquarium bracket may become brittle due to calcium in the aquarium water. If the suckers stop performing correctly, they can be replaced (see spares list).

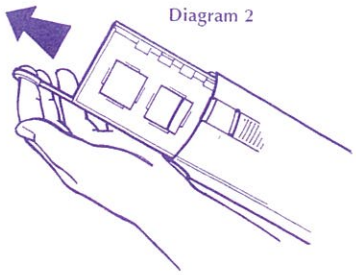


Diagram 2

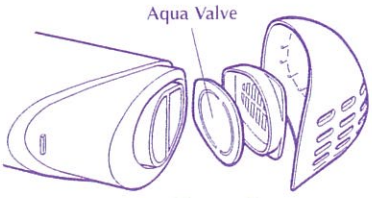


Diagram 3

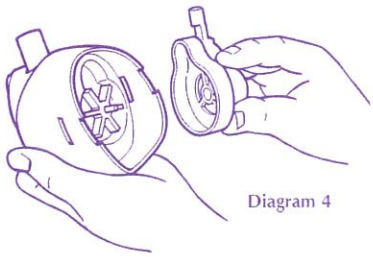


Diagram 4

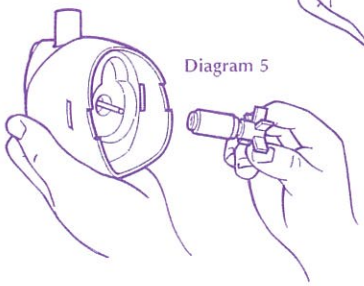


Diagram 5

SPARES & ACCESSORIES FOR PF 1 FILTER

VENTURI CAP

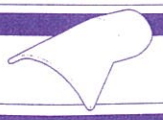
Product code 2185

AQUA VALVE

Product code 2216

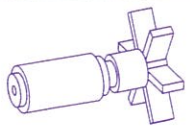
FLOW DEFLECTOR

Product code 2186



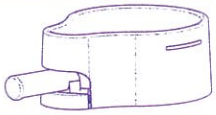
IMPELLER

Product code 2187



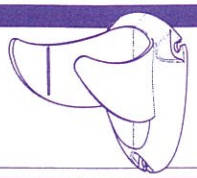
IMPELLER COVER & FLOW CONTROL

Product code 2188



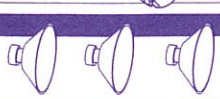
BRACKET

Product code 2195



SUCKER SET FOR BRACKET (x3 PCS)

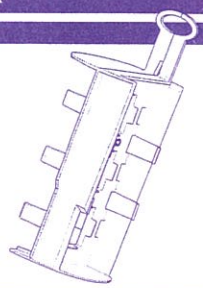
Product code 2194



SPARES & ACCESSORIES FOR PF 1 FILTER

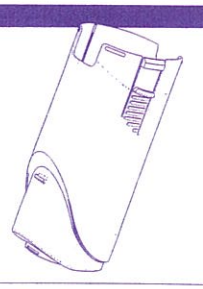
FOAM CARRIER

Product code 2190



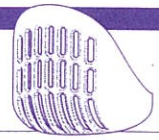
FILTER BODY

Product code 2191



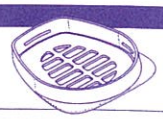
FILTER INTAKE CAP

Product code 2192



VALVE HOLDER

Product code 2193



REPLACEMENT FOAMS

Filter Foams	2232
Carbon Foams	2233
Super-Fine Filter Pads	2240

TROUBLESHOOTING

Problem 1: PF filter flow rate drops considerably.

Solution: Check for blockages to the filter inlets. Ensure fibrous material such as plant matter has not formed an obstruction. Remove the filter foam carrier and clean the foams if blocked. If the foams have lost their shape, they may be fully blocked and will need replacing.
If this does not resolve the flow rate problem, check the impeller (see problem 2)

Problem 2: PF filter is noisy

Solution: First, please be aware that operating the venturi will create unavoidable noise as air is forced into the water flow under pressure. If this noise is disturbing, the venturi can either be turned down or the filter can be lowered so the venturi is submerged. In this instance, use the flow deflector to ensure the water flow ripples the surface of the aquarium to provide adequate aeration of the aquarium. If the noise does not emanate from the venturi, the impeller of the pump may need cleaning/replacing.

The impeller should be removed. The impeller should be carefully cleaned using a soft cloth. A small brush or cloth may be inserted into the impeller chamber, removing any debris inside. Once the impeller has been cleaned the magnet should be inspected for any damage such as cracks or pieces missing. If the impeller magnet is damaged in any way, the impeller should be replaced.

Problem 3: Air flow (venturi) slows or stops

Solution: Ensure the venturi is not submerged. It can only work if the venturi inlet is above the water surface.

Solution: Ensure there are no blockages in either the pump outlet or the venturi pipe. Venturi failure is usually caused by poor flow from the pump. This may be caused either by a blockage in the impeller chamber, or by blockages in the filter body. If the latter is the case, it is suggested that you clean the inside of the filter body, washing all the foams thoroughly in aquarium water. If the foams have collapsed due to prolonged use, they will need replacing.

Problem 4: Powercut

Solution: Any interruption of more than 2-3 hours of the water supply through the filter will cause the bacteria in the filter to die. Should this occur, do not simply re-start the filter. You must thoroughly clean ALL the filter material and start the filter again. In an aquarium fully stocked with fish, this may lead to water quality problems. The filter should be seeded with Interpet Filter Start. Regular checks should be made on the ammonia levels, and if they reach detectable levels, we recommend the use of Interpet Ammonia Remover.

Problem 5: Water will not stay crystal clear

Solution: If the aquarium does not contain large, messy fish it is recommended that you add an Interpet PF fine filter pad. This can be placed next to the carbon foam so that water passes through the plain foam, carbon foam and then the fine pad. Additionally you may consider using Interpet's Filter Aid which clumps together fine particles and allows them to be removed more effectively by the filter foams. Additionally cut down on feeding levels for two to three days and ensure you regularly perform partial water changes.

NB: Adding the fine filter pad will increase cleaning frequency.

SAFETY PRECAUTIONS

1. Connecting of the Pump to Mains Supply.
   a) Check that the voltage of the mains supply corresponds to the voltage shown on the pump.
   b) It is recommended for safety that all aquarium equipment is best connected through an earth leakage circuit breaker (RCD).

NOTE: connection to the mains can be made directly via the plug as fitted.

2. This apparatus is fitted with a 13 amp (BS1363) plug with a 3 amp fuse. With this or any other type of plug an ASTA 3 amp or 5 amp fuse to BS1362 must be fitted either in the plug or adapter, or at the distribution board.

3. Replacement of Plug

   IMPORTANT: This apparatus is double insulated and does not have a third (earth) wire. The wires on the lead should therefore be connected as follows: The BLUE lead should be connected to the NEUTRAL terminal on your plug or cable tidy. This terminal may be marked with an 'N' or coloured blue or black. The BROWN lead should be connected to the LIVE terminal on your plug or cable tidy. This terminal may be marked with an 'L' or coloured brown or red.

   DO NOT CONNECT EITHER WIRE TO THE EARTH TERMINAL.
   If in doubt consult a qualified electrician.

   THE FLEXIBLE CABLE IS NOT REPLACEABLE, AND IN THE EVENT THAT IT IS DAMAGED THE APPLIANCE SHOULD BE SCRAPPED.

WARRANTY

This product is warranted as free from defects in materials and worksmanship for a period of 2 years from the date of purchase. The warranty covers only any defects caused during normal use and operation of the filter, in accordance with the instructions enclosed.

It does not apply to any unauthorised modifications or misuse, improper or inadequate maintenance, or operations outside the product specifications. In case of defect within the stated warranty period, the product should be returned, with proof of purchase, to the point of purchase.

Neither Interpet nor the manufacturer are liable for any direct, indirect, special, incidental or consequential damages arising from a defect in this product.

CONSUMER ADVICE CONTACT DETAILS

Interpet Consumer Advice Department
Vincent Lane, Dorking, Surrey, RH4 3YX

Telephone: 0845 226 7437 (Monday to Friday, 10am to 4pm except Bank Holidays)
Fax: 01306 876712
E-mail: customercare@interpet.co.uk