



# Power Filter

## All models

Instructions





## POWER FILTER RANGE SPECIFICATION

Code	1460	1461	1462	1463
Model	Power Filter 125	Power Filter 250	Power Filter 375	Power Filter 500
Max. Flow rate*	650 l/h	750 l/h	1250 l/h	1350 l/h
Max. Power	8.6W	8.6W	10.3W	13W
Voltage	220-240V / 50-60Hz			
Filter basket	2	3	3	4
Max. Head*	130cm	150cm	160cm	180cm
Inlet/Outlet	12mm / 16mm	12mm / 16mm	16mm / 22mm	16mm / 22mm
Dimensions	ø27 x H265mm	ø27 x H265mm	ø27 x H320mm	ø27 x H360mm
Recommended aquarium size (approx.)	Up to 125l 27 UK Gal 33 US Gal	Up to 250l 55 UK Gal 66 US Gal	Up to 375l 82 UK Gal 99 US Gal	Up to 500l 110 UK Gal 132 US Gal

## UK → EU

1.



2.



3.



## PART LIST

### Power filter 125 and 250



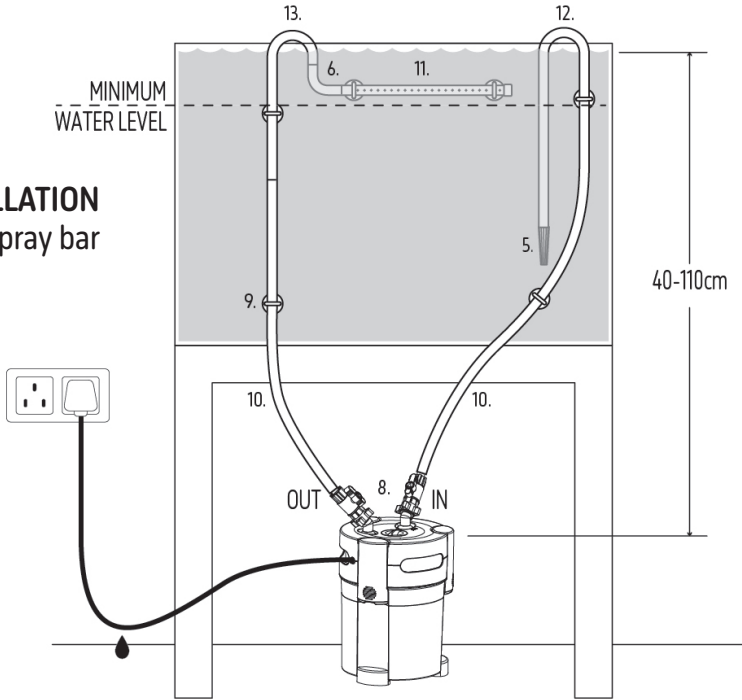
### Power filter 375 and 500



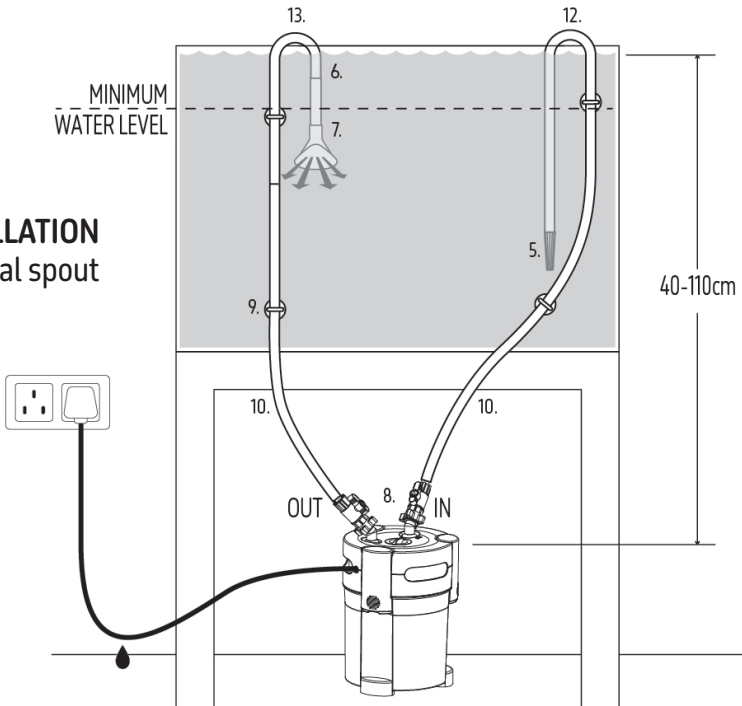
- |                      |                 |
|----------------------|-----------------|
| 1. Coarse sponge     | 8. Valve taps   |
| 2. Activated carbon  | 9. Suction cups |
| 3. Bio-Rings         | 10. Hose        |
| 4. Filter wool       | 11. Spray bar   |
| 5. Strainer          | 12. Inlet pipe  |
| 6. Elbows            | 13. Outlet pipe |
| 7. Directional spout |                 |

# INSTALLATION GUIDELINES

## INSTALLATION using the spray bar

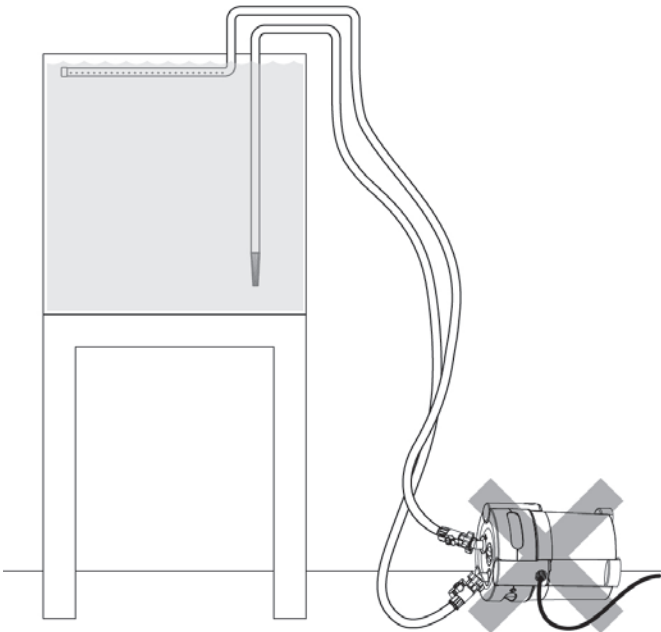
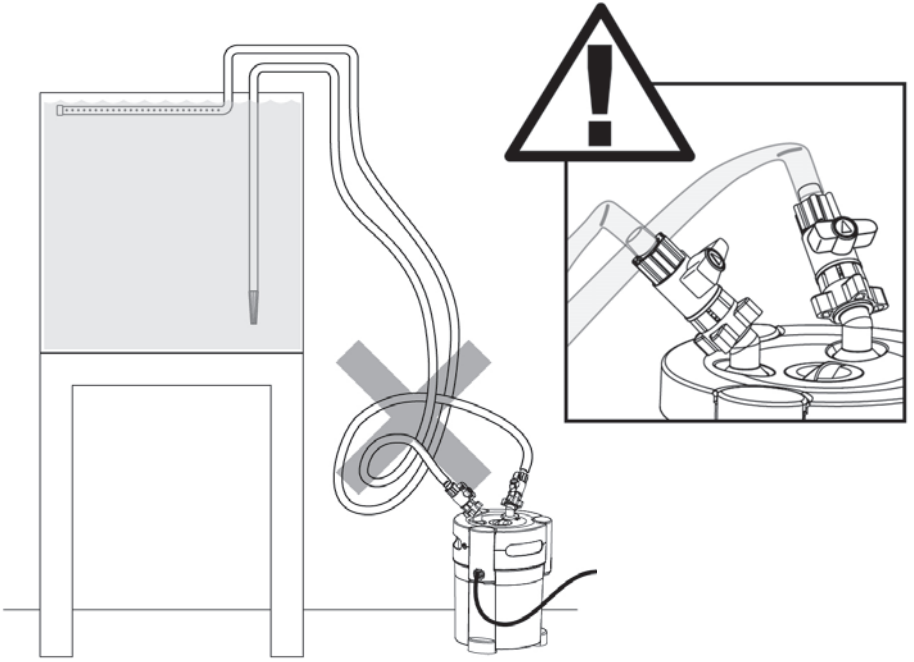


## INSTALLATION using directional spout



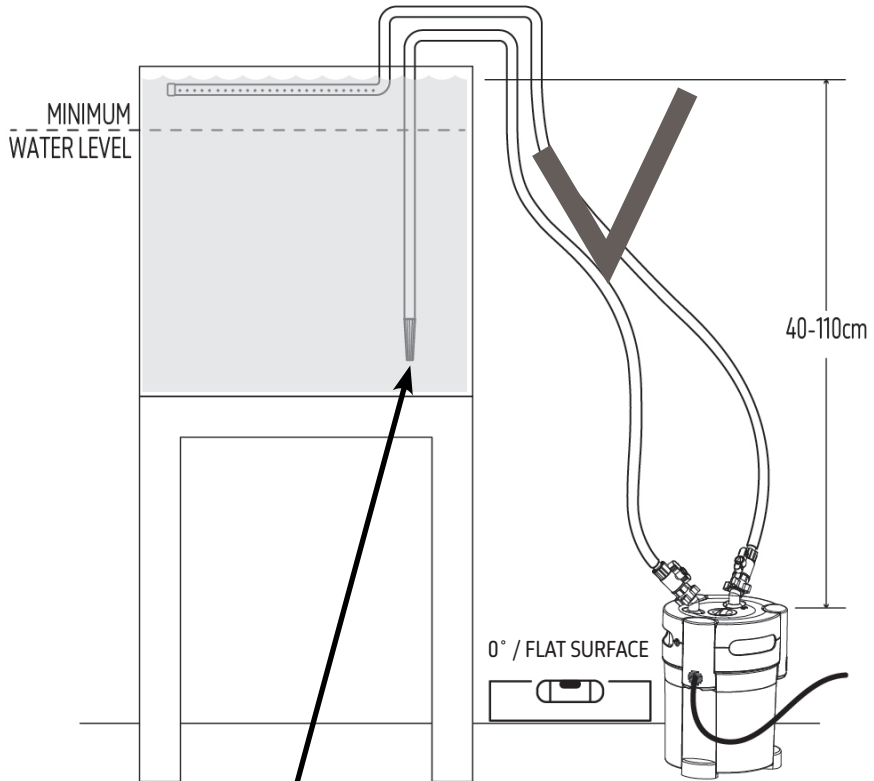
# INSTALLATION GUIDELINES

## DON'T



# INSTALLATION GUIDELINES

## DO



**PLEASE NOTE:** The water inlet pipe and strainer must NOT be adjusted to a length, or located in a position where sand, gravel or aquarium substrate could be drawn into the strainer as this will result in operating problems and damage to the pump and impeller.



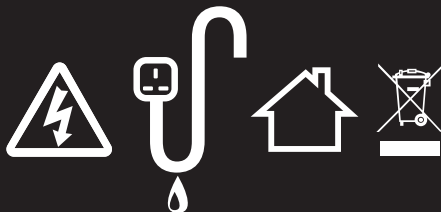


## INSTRUCTIONS FOR INSTALLATION AND USE

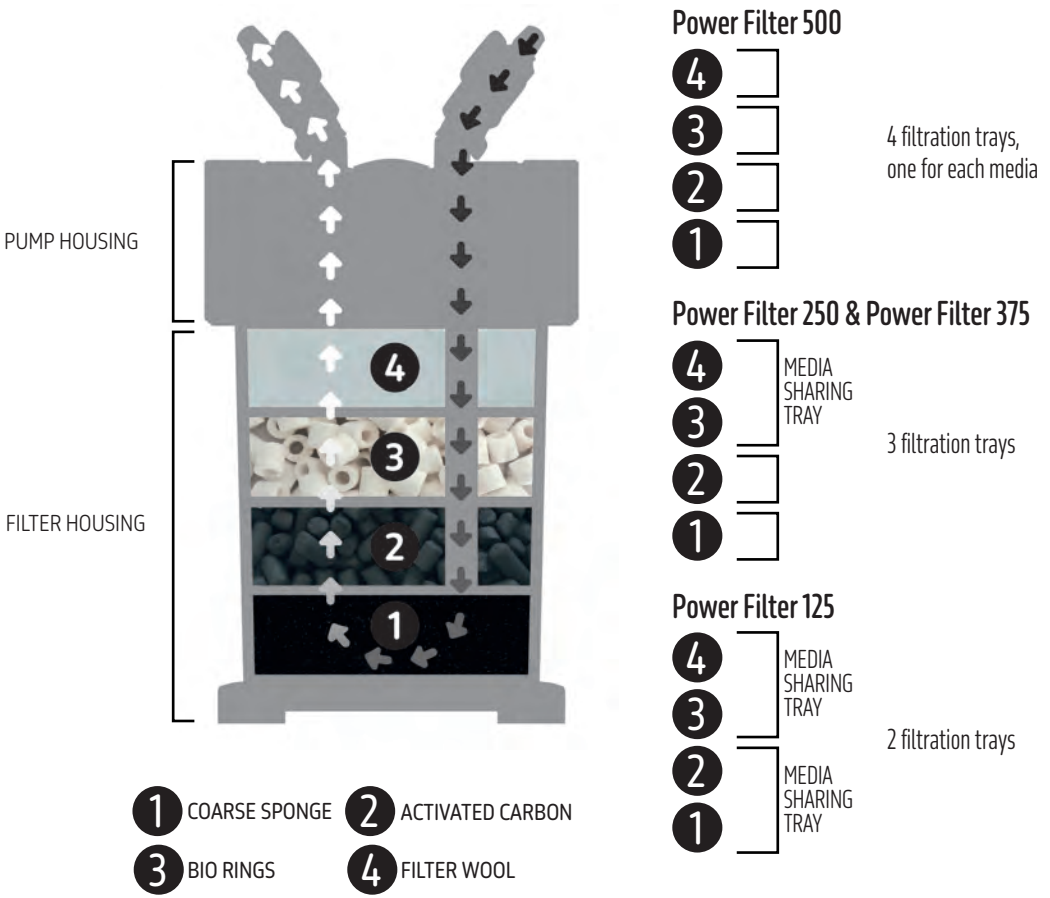
### Important Safety Information - Please Read Carefully

- Always isolate the filter from the mains electricity before installing or carrying out any maintenance.
- Power to the filter must be supplied through a Residual Current Device (RCD) with a rated residual operating current not exceeding 30mA.
- **PLEASE NOTE:** The Power Filter must NOT be allowed to run dry.
- To ensure the pump in the filter continues to maintain a steady water flow, it must be cleaned regularly to ensure it does not become clogged with debris or detritus or, in marine aquariums, a build up of salt and/or calcium deposits.
- Pump rating: 220-240V / 50-60Hz unless marked otherwise.
- Do not operate any appliance if it has a damaged cord or plug, if it is malfunctioning, or if it has been dropped or damaged in any way.
- This unit is designed to be used indoors and is not suitable for any outdoor applications.
- Ensure all connections are tightly secured and the unit is installed correctly before operating
- Always leave a drip-loop in the cable to prevent water running down the cable and reaching the power source [see picture below].
- Do not cover the filter in any way.
- The Power Filter must be installed on a stable, flat surface in a upright vertical position.
- **PLEASE NOTE:** During normal operation the taps on the water inlet and outlet hoses must never be fully closed whilst the filter is plugged in and operating as this causes back-pressure that can damage the pump.
- **CAUTION:** This product is heavy when full of water. Due care and consideration must be taken when handling.
- **PLEASE NOTE:** For optimum performance the Power Filter should be positioned so that the top of the unit is no less than approximately 40cm below the water level in the aquarium.
- **PLEASE NOTE:** The Power Filter should never be positioned any more than approximately 110cm below the water level in the aquarium as this could result in operating problems.
- **PLEASE NOTE:** The Power Filter should never be positioned above the water level in the aquarium.
- **Caution:** Sand, gravel, calcium deposits and free floating plant debris that enter the filter could cause damage to the pump and impeller.
- **PLEASE NOTE:** Clean the impeller housing and impeller regularly to ensure that it does not become clogged with debris, detritus or, in marine aquariums, a build up of salt and/or calcium deposits. Failure to do so could result in operating problems and damage to the pump and impeller.
- Impeller spares are available from your local supplier.

Dispose of this unit responsibly. Check with your local authority for disposal information



# FILTER MEDIA POSITION



**USEFUL TIP:** Soaking the activated carbon media in hot water until it stops "fizzing", before placing in the Power Filter, will improve the efficiency of the carbon.

**USEFUL TIP:** Replacement and alternative Power Filter filtration media is available from your local stockist.

## ASSEMBLY



1. Carefully open the 3 safety locks on the filter.



2. Carefully lift and remove the pump housing from the filter housing and then lift and remove the filtration tray cover underneath.



3. Carefully lift and remove the filtration trays from the filter housing.

**PLEASE NOTE: The activated carbon media must NOT be removed from the filtration media bags that it's supplied in.**



4. Ensuring that the filtration media is removed from any plastic packaging, gently rinse the filtration media in freshwater to remove any dust.



5. Return the rinsed filter media to the filtration trays and carefully place the trays back into the filter housing ensuring that the trays are correctly positioned and level to avoid damage to the pump and the risk of leaks.



6. Replace the filtration tray cover ensuring that it is correctly positioned on the top filtration tray and is level. Failure to do so will result in operating problems, damage to the pump and also leaks.



7. Re-attach the pump housing to the filter housing and carefully close the safety locks on filter.



8. Carefully connect and secure the water inlet hosetail to the water inlet which is marked "IN" on the top of the pump housing and ensure the tap is in the fully closed position.



9. Carefully connect and secure the water outlet hosetail to the water outlet which is marked "OUT" on the top of the pump housing.



**PLEASE NOTE:** The water inlet and outlet hosetails must be connected correctly and fully hand tightened. Failure to do so could result in operating problems and leaks.

**PLEASE NOTE:** DO NOT locate the water inlet pipe and strainer close to a source of air e.g. a venturi outlet or an outlet from an air pump e.g. air stone. Doing so will result in operating problems and damage to the pump.

**PLEASE NOTE:** The water inlet pipe and strainer must NOT be adjusted to a length, or located in a position where sand, gravel or aquarium substrate could be drawn into the strainer as this will result in operating problems and damage to the pump and impeller.

**USEFUL TIP:** To make it easier to connect the hosing to the water inlet and outlet pipes either lightly moisten the inlet and outlet pipes, or briefly immerse the end of the hosing in hot water before sliding onto the inlet or outlet pipes.



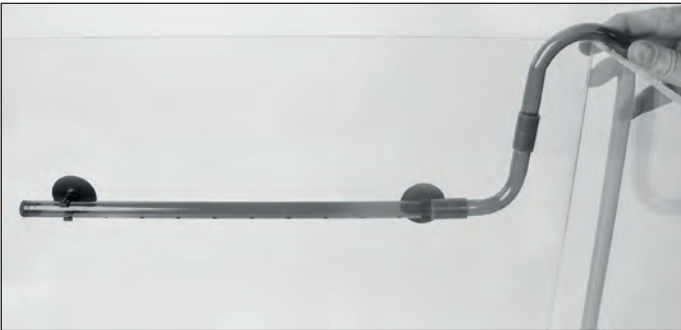
10. Attach one end of the hosing to the water inlet pipe and ensure that it is pushed on as far as it can go. Failure to do so could result in leaks or operating problems.



11. Assemble the water outlet spray bar assembly to your required length ensuring that the end piece of the spray bar is the capped piece.



12. Connect the spray bar to the water outlet pipe 90° elbow ensuring that the holes in the spray bar are angled slightly downwards. Failure to do so could result in water spraying out of the aquarium when the filter is switched on.



13. Attach the suction cup clips to the water outlet spray bar assembly and securely fasten the water outlet spray bar assembly to the inside back or side of your aquarium.

14. Attach one end of the second length of hosing to the water outlet pipe and ensure that it is pushed on as far as it can go. Failure to do so could result in leaks or operating problems.

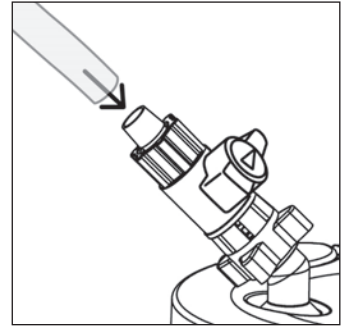
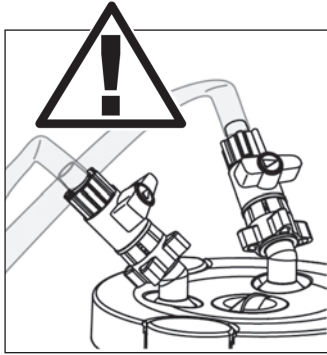


15. Adjust the water inlet pipe to your required length and securely fasten to the inside back or side of your aquarium in a position opposite to the water outlet spray bar assembly filter.



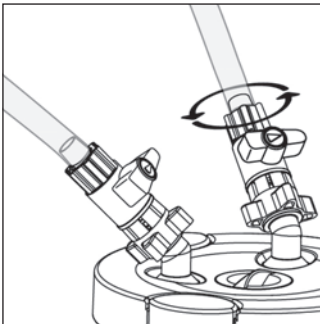
16. Carefully measure and cut the hosing to the correct length for connecting to the water inlet and outlet hoses on the filter without any kinking or sagging and ensuring that it is long enough to allow some slack so that the filter can be moved if necessary during maintenance.

Failure to do so could result in leaks or insufficient water flow through the filter which will cause damage to the pump.



17. Identify the hosing connected to the water inlet pipe and attach the other end of this hosing to the water inlet hose tail marked "IN" on the top of the pump housing, ensuring that the hosing is pushed onto the water inlet hose tail as far as it can go.

**CAUTION: Regularly check and ensure that the water outlet spray bar assembly and suction cup clips are securely fastened and that the holes in the spray bar are angled slightly downwards. Failure to do so could result in leaks or operating problems.**

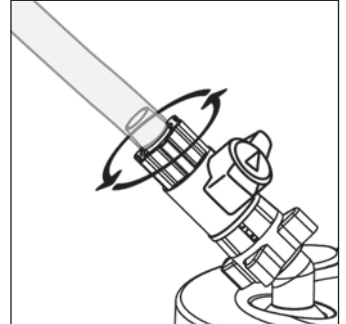


18. Carefully turn the locking nut on the water inlet hose tail in an anti-clockwise direction until it is fully hand-tightened [but not over-tightened] and the hosing is secured.

Failure to do so could result in leaks or operating problems.

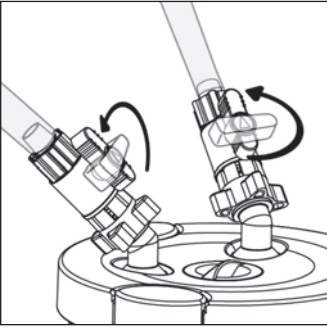


19. Identify the hosing connected to the water outlet pipe and attach the other end of this hosing to the water outlet hose tail marked "OUT" on the top of the pump housing, ensuring that the hosing is pushed onto the water outlet hose tail as far as it can go.

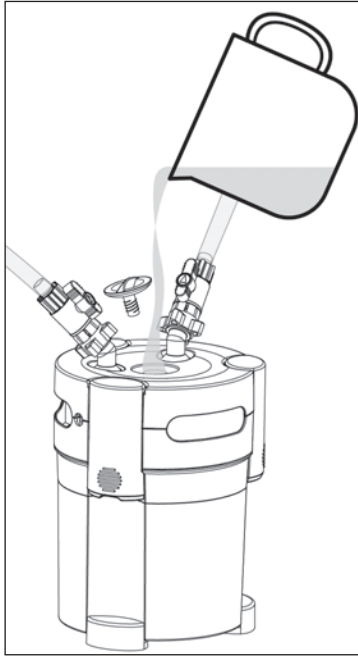


20. Carefully turn the locking nut on the water outlet hose tail in an anti-clockwise direction until it is fully hand-tightened [but not over-tightened] and the hosing is secured.

## PRIMING THE FILTER



1. Ensuring all connections have been made correctly and are secure, carefully open the taps on both the water inlet and water outlet hoses so that they are in the fully open position.



2. Open the cap and fill with water, then replace cap and fully hand tighten.



3. Once the filter is full of water, ensuring that your hands are dry, plug in the filter to your power supply and switch the filter on.

Once the filter has been running for a short time, check again to ensure that all connections are secure, there are no leaks and the filter is operating correctly.

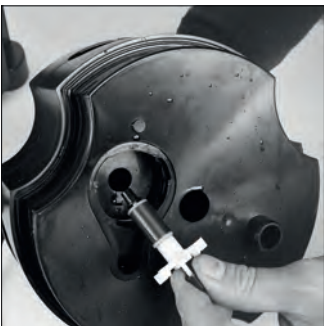
**PLEASE NOTE:** Due to the possibility of trapped air in the filter and/or hosing, it may take a few moments for the water to be pumped properly and correctly through the filter. It may also take some time for all of the trapped air to be cleared from the filter and hosing. This is perfectly normal.

**PLEASE NOTE:** During normal operation, the taps on the water inlet and outlet hoses must never be fully closed whilst the filter is plugged in and operating as this causes back-pressure that can damage the pump.

**PLEASE NOTE:** To operate efficiently, the filter must be in use 24 hours a day.

## MAINTENANCE

**USEFUL TIP:** When carrying out any maintenance to the filter, we recommend that a plastic sheet or something similar is placed underneath the filter to catch any water that may be spilt during maintenance.



1. The Power Filter filter should need very little adjustment and maintenance once set up correctly. However, due to factors such as organics, detritus and, in marine aquariums, salt and calcium levels it is common for deposits to build up in the filter, in the water inlet and outlet pipes, water outlet spray bar and connecting hosing. Therefore, to ensure optimum performance and water quality, it is recommended that all parts of the filter are cleaned periodically and the filter media and filtration components are cleaned or replaced as required.
2. Regularly check and make sure all connections are tightly secured and the filter is functioning properly.
3. Ensure that the water inlet pipe, water inlet pipe strainer, water outlet pipe, water outlet spray bar assembly and all connecting hoses are clean and free of blockages. Failure to do so will result in operating problems, leaks and damage to the pump.
4. When carrying out routine maintenance ensure that the pump housing 'O' ring is correctly positioned, is free from any dirt, detritus, salt and/or calcium deposits and is checked for any signs of degradation and replaced accordingly. Failure to do so could result in leaks. Spare pump housing 'O' rings are available from your local stockist.
5. During your routine maintenance it is advisable to check the impeller and impeller housing to ensure that they have not become blocked with debris, detritus or, in marine aquariums, a build up of salt and/or calcium deposits and that the impeller housing cover 'O' ring is checked for any signs of degradation and replaced accordingly. Failure to do so could result in operating problems and damage to the pump.

Spares are available from your local stockist.



## OPENING THE FILTER



1. Carefully close the tap on the water inlet hose tail so that it is in the fully closed position.



2. Carefully close the tap on the water outlet hose tail so that it is in the fully closed position.



3. Immediately after closing the two taps, turn off the power supply to the filter.



**CAUTION:** After closing the taps the power supply must be switched off **IMMEDIATELY** as failure to do so will damage the pump and cause operating problems.



4. Carefully disconnect the water inlet and outlet hose tails from the pump housing.



5. Gently open the safety locks.

**PLEASE NOTE:** There may be some water remaining in the inlet and outlet hose tails so, to avoid spillages, special care should be taken when disconnecting these parts from the pump housing.

**CAUTION:** To avoid spillages, when removing the pump housing from the filter housing ensure that you carefully lift it vertically and allow any water remaining in the pump housing to drain back into the filter housing.

## CLEANING IMPELLER AND IMPELLER HOUSING AND REPLACING IMPELLER

During your routine maintenance it is advised that the impeller and impeller housing are checked to ensure that they have not become blocked with debris, detritus or, in marine aquariums, a build up of salt and/or calcium deposits.

**PLEASE NOTE: We recommend that you carry out this check approximately every four weeks. Failure to clear any blockages will result in operating problems, damage to the pump and impeller.**

To access the impeller housing and impeller simply follow the instructions below:



1. Carefully remove the impeller housing cover by turning the cover in an anti-clockwise direction.



2. Carefully remove the impeller and clean the impeller and impeller housing accordingly.



3. Return the impeller to the impeller housing and replace the impeller housing cover as required.

**CAUTION: Ensure that the impeller and impeller housing cover are re-positioned correctly and are secure. Failure to do so could result in operating problems and damage to the pump and/or impeller.**

**PLEASE NOTE: The impeller will wear out over time. For best results and optimum performance of the filter it is recommended that the impeller is checked for any signs of wear during routine maintenance and replaced approximately every 12 months or before if required.**

**USEFUL TIP:** It is also advisable to ensure that the impeller housing cover 'O' ring is correctly positioned, free from any dirt, detritus, salt and/or calcium deposits and is also checked for any signs of degradation and replaced accordingly. Failure to do so could result in operating problems and damage to the pump. Spares are available from your local stockist.

## REPLACING OR CLEANING THE FILTER MEDIA

To ensure optimum performance and water quality it is recommended that all filter media is replaced or cleaned periodically:

- Filter wool/Coarse sponge      Every 4 weeks\*
- Activated carbon pack      Every 4 weeks
- Bio Rings pack      Every 12 months\*\*

**CAUTION: Never replace all biological media at one time, as valuable colonies of beneficial bacteria would be lost.**

**\*\*CAUTION: Biological media such as the Bio Rings pack can also be periodically rinsed, but it must be rinsed with aquarium water, and NOT tap water.**

**CAUTION: Never use soap or detergents or any other cleaning products to clean or wash the filter or filter components as this could damage the filter and components and also harm livestock.**



**\*USEFUL TIP:** The filter sponge and filter fleece can be rinsed and washed by simply running them under tap water. However, after rinsing and washing them once or twice it is advised that these components are then replaced.

**USEFUL TIP:** To ensure optimum performance and water quality it is recommended that all filter media is replaced or cleaned periodically.

1. Having removed the pump housing, carefully lift and remove the filtration tray cover and filtration trays from the filtration housing.
2. Empty any water that may remain inside the filter housing.
3. Clean or replace the filter media as required and return the filter media to the filtration trays. Carefully place the trays back into the filter housing ensuring that the trays are correctly positioned and are level. Failure to do so will result in operating problems, damage to the pump and also leaks.
4. Replace the filtration tray cover ensuring that it is correctly positioned on the top filtration tray and is level. Failure to do so will result in operating problems, damage to the pump and also leaks.
5. Re-attach the pump housing to the filter housing and carefully close the safety locks on the filter.
6. Carefully connect and secure the water inlet hosetail to the water inlet which is marked "IN" on the top of the pump housing.
7. Carefully connect and secure the water outlet hosetail to the water outlet which is marked "OUT" on the top of the pump housing.

**PLEASE NOTE: The water inlet and outlet hosetail taps must be connected correctly and fully hand-tightened. Failure to do so could result in operating problems and leaks.**

8. Ensuring all connections have been made correctly and are secure, carefully open the taps on both the water inlet and water outlet hoses so that they are in the fully open position. Failure to do so will cause operating problems.
9. Fill the pump housing.
10. Once the filter is full of water, ensuring that your hands are dry, plug in the filter to your power supply and switch the filter on.
11. Once the filter has been running for a short time, check again to ensure that all connections are secure, there are no leaks and the filter is operating correctly.

## TROUBLE SHOOTING

### **Problem: The filter is not successfully priming**

1. **Possible Cause:** The hosing is too long, or is kinking or sagging. **Solution:** Cut the hosing to a suitable length ensuring that it does not kink or sag.
2. **Possible Cause:** The filter has been incorrectly positioned above the water level in the aquarium. **Solution:** Re-position the filter ensuring that it is installed below the water level in the aquarium and according to the Power Filter general installation guidelines.
3. **Possible Cause:** The taps on the water inlet and/or the water outlet hoses are in the closed position. **Solution:** Check the taps on the water inlet and water outlet hoses and ensure both are in the fully open position.
4. **Possible Cause:** The inlet and outlet hoses have been connected incorrectly e.g. the inlet hosing has been connected to the water outlet hose and the outlet hosing has been connected to the water inlet hose. **Solution:** Check and re-install the hosing correctly.
5. **Possible Cause:** The water inlet pipe strainer may be blocked with debris, detritus or, in marine aquariums, a build up of salt and/or calcium deposits. **Solution:** Check and clean accordingly.
6. **Possible Cause:** The water inlet hose and/or water outlet hose and hosing may be blocked with debris or detritus. **Solution:** Check and clean accordingly.
7. **Possible Cause:** Air is trapped inside the filter and/or hosing.  
**Solution:** Ensure that the water level in your aquarium is above the connection joint on the telescopic water inlet pipe and that all connections are tight and secure so that air is not being drawn into the filter.  
**Solution:** Re-prime the filter [see page 15].  
**Solution:** To help release any air that may be trapped inside the filter, either gently tilt the filter to one side, or just leave the filter running as any trapped air in the filter or hosing should eventually be expelled.
8. **Possible Cause:** The water inlet pipe and strainer have been located close to a source of air e.g. a venturi outlet or an outlet from an air pump such as an air stone, and air is being drawn into the filter. **Solution:** Re-locate the water inlet pipe and strainer or relocate the source of air.

## **Problem: The filter is not working and is not pumping correctly**

- 2. Possible Cause:** The filter has not been primed successfully and air is remaining inside the filter and/or hosing. **Solution:** Re-prime the filter [see page 15].
- 2. Possible Cause:** The filter is not plugged in. **Solution:** Ensure the filter is connected to the power supply and is switched on.
- 3. Possible Cause:** The impeller and/or impeller housing may have become blocked with debris, detritus or, in marine aquariums, a build up of salt and/or calcium deposits. **Solution:** Check and clean impeller and/or impeller housing accordingly [refer to CLEANING IMPELLER AND IMPELLER HOUSING AND REPLACING IMPELLER on page 18].
- 4. Possible Cause:** The impeller may be worn or damaged. **Solution:** Check impeller and replace accordingly.
- 5. Possible Cause:** The filter media e.g. the filter sponges or filter fleeces, may have become blocked with debris, detritus or, in marine aquariums, a build up of salt and/or calcium deposits. **Solution:** Check and clean or replace the filter media accordingly [see replacing or cleaning filter media section].
- 6. Possible Cause:** The water inlet pipe strainer may be blocked with debris, detritus or, in marine aquariums, a build up of salt and/or calcium deposits. **Solution:** Check and clean accordingly.
- 7. Possible Cause:** The water inlet hosing and/or water outlet hosing and connecting hosing may be blocked with debris or detritus. **Solution:** Check and clean accordingly.

## **Problem: The water flow from the filter is very weak**

- 1. Possible Cause:** The filter has not been primed correctly and air is remaining inside the filter and/or hosing. **Solution:** Re-prime the filter [see priming on page 15].
- 2. Possible Cause:** The filter media e.g. the filter sponges or filter fleeces, may have become blocked with debris, detritus or, in marine aquariums, a build up of salt and/or calcium deposits. **Solution:** Check and clean or replace the filter media accordingly [see replacing or cleaning filter media section].
- 3. Possible Cause:** The water inlet pipe strainer may be blocked with debris, detritus or, in marine aquariums, a build up of salt and/or calcium deposits. **Solution:** Check and clean accordingly.
- 4. Possible Cause:** The impeller and/or impeller housing may have become blocked with debris, detritus or, in marine aquariums, a build up of salt and/or calcium deposits. **Solution:** Check and clean impeller and/or impeller housing accordingly [refer to CLEANING IMPELLER AND IMPELLER HOUSING AND REPLACING IMPELLER on page 18].
- 5. Possible Cause:** The impeller may be worn or damaged. **Solution:** Check impeller and replace accordingly.
- 6. Possible Cause:** The taps on the water inlet and water outlet hoses may have been adjusted and water flow restricted. **Solution:** Check and re-adjust accordingly.
- 7. Possible Cause:** If the filter has been connected to other equipment, such as a chiller or UV steriliser, the resulting water flow will be reduced. **Solution:** If higher water flow rates are required do not connect to other equipment such as a chiller or UV steriliser.
- 8. Possible Cause:** The filter has been incorrectly installed and not according to the Power Filter general installation guidelines. **Solution:** Ensure that the filter is installed according to the Power

## **Problem: The filter is leaking**

- 1. Possible Cause:** The safety locks and/or slide locks have not been correctly closed and secured.  
**Solution:** Check and close and secure accordingly.
- 2. Possible Cause:** The water inlet hosetail and/or water outlet hosetail have not been correctly connected and secured to the pump housing. **Solution:** Check and reconnect and secure accordingly.
- 3. Possible Cause:** The filter housing may have been damaged or cracked during maintenance.  
**Solution:** Check and replace accordingly.
- 4. Possible Cause:** The hosing may not have been correctly secured to the water inlet hosetails, water outlet hosetail and/or the water inlet pipe and water outlet spray bar assembly. **Solution:** Check all connections and secure accordingly.
- 5. Possible Cause:** The pump housing 'O' ring is dirty, might not be correctly positioned or could need replacing. **Solution:** Check and clean as required and ensure the 'O' ring is positioned correctly and is not showing any signs of degradation. Replace if necessary.
- 6. Possible Cause:** The filtration trays and/or the filtration tray cover have not been correctly positioned in the filter housing. **Solution:** Check and reposition if necessary.

## **Problem: The filter has become noisy**

- 1. Possible Cause:** The impeller and/or impeller housing may have become blocked with debris, detritus or, in marine aquariums, a build up of salt and/or calcium deposits. **Solution:** Check and clean impeller and/or impeller housing accordingly [refer to cleaning impeller/ impeller housing & replacing impeller section].
- 2. Possible Cause:** The impeller may be worn or damaged. **Solution:** Check impeller and replace accordingly.
- 3. Possible Cause:** The water inlet pipe strainer may be blocked with debris, detritus or, in marine aquariums, a build up of salt and/or calcium deposits. **Solution:** Check and clean accordingly.
- 4. Possible Cause:** The water inlet hosetail and/or water outlet hosetail and connecting hosing may be blocked with debris or detritus. **Solution:** Check and clean accordingly.
- 5. Possible Cause:** The taps on the water inlet and/or the water outlet hosetails have been closed. **Solution:** Check the taps on the water inlet and water outlet hosetails and ensure both are in the fully open position.
- 6. Possible Cause:** There may be air remaining inside the filter and/or hosing. **Solution:** Re-prime the filter [see priming section above].
- 7. Possible Cause:** The water level in your aquarium may have dropped below the connection joint on the telescopic water inlet pipe so air is being drawn into the filter. **Solution:** Check water level and adjust accordingly.
- 8. Possible Cause:** The water inlet pipe and strainer has been located close to a source of air e.g. a venturi outlet or an outlet from an air pump such as an air stone, and air is being drawn into the filter. **Solution:** Re-locate the water inlet pipe and strainer or the source of air.

**USEFUL TIP:** Further improve your filtration set up and water quality by incorporating a TMC Vecton UV or TMC Vecton Titan UV Steriliser, the perfect partner for the Power Filter. Please ask your local aquatic stockist for details.



[www.tropicalmarinecentre.com](http://www.tropicalmarinecentre.com)



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