# Guarantee

- This card ensures quality service for products purchased from our company.
- The warranty period is 2 years, starting from the date of the sales invoice (or the purchase date). Please fill in the date on this card.
- Quick-wear parts of the pump are not covered under the warranty.
- Damage resulting from improper use or intentional damage is not covered by the warranty.

**WARRANTY CARD(Leaf For Retailer)**

| | | | | | |
|---|---|---|---|---|---|
| Model No. | | | Date of purchase | | |
| User | | | Address | | |
| Zipcode | | Phone | | Contact person | |
| Retailer | | | | | |

# PMF Series

## Automatic Pressure Filter Instructions



www.Pond-Magic.com
5921 LOWER YORK RD.
NEW HOPE, PA 18938

POND MAGIC
PUMP UP THE MAGIC, FILTER OUT THE MESS!

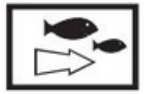
# Instructions For Use

Please read the operating instructions and ensure you are familiar with the equipment before using it. Safe and proper operation of the system requires strict adherence to the safety guidelines. For safety reasons, this device must not be used by children or individuals under 16 years old, those unable to recognize potential hazards, or those unfamiliar with these instructions.

## Symbols



**Water goes through the pump to Filter**



**Water goes through filter back to pond**



**Water from backwash goes to away from pond**

## Usage

The pressure filter with integrated UV is a sealed pressure filter system designed for biological and mechanical filtration of standard pond water within a temperature range of 39°F to 95°F. This pressure filter is intended exclusively for private use to clean garden ponds, with or without fish. Never filter any liquids other than water.



# Safety

- Electrical installations must comply with local regulations.
- Extension cables and adapters must be suitable for outdoor use to prevent water splashing.
- The electrical specifications of the supply must match the data on the label.
- UV radiation is dangerous; it can harm your eyes and skin. Never operate the UV lamp outside its designated container.
- If the connecting cable, UV lamp, or housing is damaged, do not operate the product.
- Do not operate the product when someone is in the water.
- Do not open the equipment or any accessories, except as specified in the manual.
- Always disconnect the power before performing any operation on the equipment.
- The equipment, connectors, and plugs are not waterproof, so do not install or lay them underwater.
- Keep the equipment dry.
- A pump is required for the operation of this product. The maximum pump head should not exceed 0.4 bar (4 meters).
- The internal pressure of the product should not exceed 0.4 bar (indicated by the red buoy floating in the middle of the function switch, which means the internal filter sponges should be cleaned).
- Ensure the function switch is set to "filter" during normal operation. Only set it to "clean" during cleaning.
- Before starting the filter, check that the hoses and clamps with safety latches are correctly secured.
- If it's a freezing day, remove the filter.
- Install the filter in a locationnot exposed to direct sunlight.

# How It Works

The pressure filter with integrated UV is a sealed system designed for the biological and mechanical filtration of pond water.

A. Water Inlet- The pump connects to the water inlet via a hose.

B. Vortex System- Gravity aids in separating suspended solids and mud.

C. Mechanical Filter- As the water passes through the filter sponge into the interior, dirt particles are captured on the surface of the sponge.

D. Biological Clarification- The filter sponge pores create a large surface area for microorganisms to colonize. The yellow and blue filter sponges differ in size and density. These variations create zones with different water flow speeds. High flow speed zones (blue sponges): Favor the colonization of microorganisms that convert ammonium to nitrate through nitrification. Low flow speed zones (yellow sponges): Support the growth of anaerobic microorganisms that reduce nitrate to nitrogen (denitrification).

E. Pond Water Clarification- As the water exits, it briefly passes under the UV lamp where it is exposed to ultraviolet radiation. This kills germs and bacteria and inhibits algae growth. The water then flows in a circular pattern from the edge back into the filter.

F. Water Outlet- The clarified water is returned to the garden pond through the outlet, via a pressure hose or watercourse.

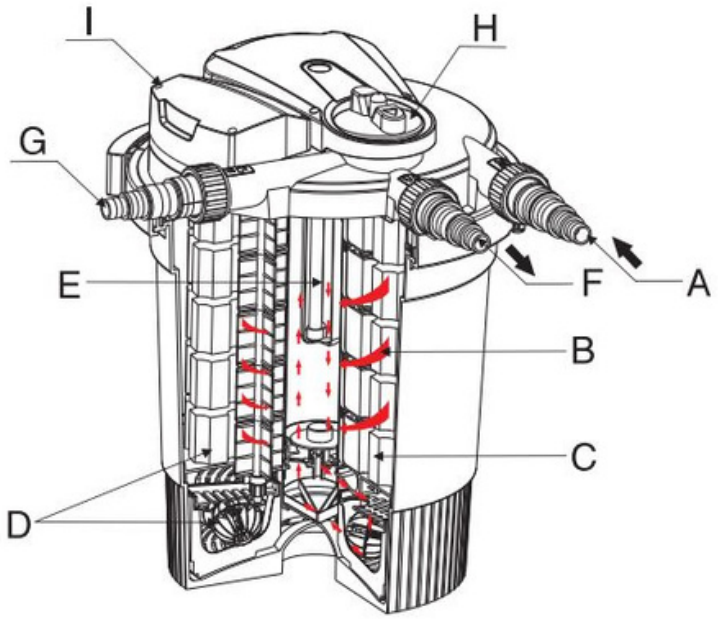
G. Cleaning Connection- To clean the filter, connect a drainage hose to the cleaning connection to divert the dirty water into a sewage system or onto a flower bed.



# How It Works

H. Function Switch- The function switch allows you to toggle between normal water discharge into the pond ("filter") and cleaning mode ("clean").

I. Motor- When the function switch is set to "clean," the UV light will turn red, and the cleaning cycle will begin. After three minutes, the filter will emit a sound to indicate that cleaning is complete. At this point, switch the function back to "filter" mode.



# How It Works

Clear water is defined as water in which fish or stones at the bottom of the pond are visible at a depth of 1 meter.

Installation of the Filter

Install the filter in a location safe from flooding. Ensure the filter is secured to prevent it from falling into the pond. It should be placed at least 2 meters away from the pond's edge.
Dig a hole beside the pond and install the filter below the ground level. Alternatively, place the filter on a stable, smooth surface.
To make maintenance easier, ensure that the filter lid can be opened without obstruction.
For pumping heights (vertical height from the outlet to the pond water) over 1 meter, select a correspondingly more powerful pump.

Connecting Hoses

We recommend warming the hose with hot water before attaching it to the spiral stepped hose adapter. Secure the connection with a hose clip for a more watertight fit.
Use hoses with a larger diameter to connect the filter.
For hoses longer than 4 meters, always use hoses that match the upper value of the scale.
To avoid pressure loss, cut the spiral stepped hose adapter at the appropriate points for each hose size.

Cleaning Connection

- The cleaning connection allows you to directly drain the dirty water into the sewage system or onto a flower bed.



# How It Works

Starting the Pressure Filter

Before starting the filter, ensure you check that the connected hoses, sealing cap, and clamp with safety latch are properly seated. The function switch should be set to the "filter" symbol. Always read and follow the safety guidelines before starting up.

- Switch on the pump. Caution! The UV lamp should not operate without water flowing through it.
- Check all sealing connections. If there are any leaks, adjust them as necessary.
- Connect the filter to the power supply.
- The filter system with integrated UV must run continuously, 24 hours a day.
- Replace the UV lamp after 8,000 hours of operation to maintain optimum effectiveness.
- The filter system requires regular cleaning.

Note: After a new installation, the pressure filter reaches its full biological cleaning effectiveness after several weeks. Significant bacterial activity starts at temperatures of +50°F (+10°C) or higher.

Washing the Filter Sponges

Over time, suspended matter and dirt collect in the filter sponges, reducing the filter's effectiveness. To maintain the system, clean the filter sponges regularly (e.g., every week) when the water flow becomes cloudy or dirty.
The filter sponges need cleaning when the red indicator in the function switch floats.

# How It Works

- Turn the function switch clockwise until it clicks into the "clean" position.
- The filter will automatically enter cleaning mode, where the cleaning gear squeezes the sponges for mechanical cleaning.
- The filter will now rinse. Once clean water is visible through the transparent spiral stepped hose adapter at the cleaning connection, turn the function switch counterclockwise to return it to the "filter" position.
- The filter is now operating again. Check the water flow into the pond.

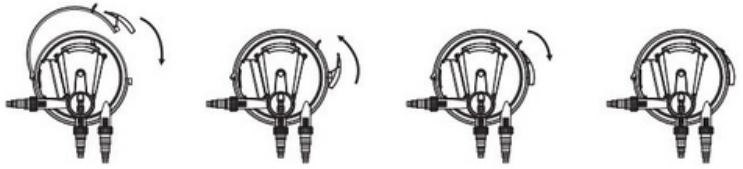
Replacement of Filter Sponges
If the water flow is too low due to dirty filter sponges and cannot be improved through automatic cleaning, the sponges must be washed or replaced.
Do not use chemical cleaning agents as they may harm the microorganisms in the filter sponges.

- Disconnect the mains plug of the filter.
- Switch off the pump and ensure it cannot be unintentionally switched on. Remove all hoses by unscrewing the union nuts.
- Remove the protective buckle and open the clamp.
- Lift off the lid with the filter sponge assembly and place the lid upside down on a clean surface. The filter sponges will be facing up.



# How It Works

- Remove the diversion pipe by turning it anticlockwise, and then remove the screws on the gear and separate the plate.
- Remove the filter sponges for replacement or clean them
- Plus the sponges off and rinse them under running water and squeeze them out thoroughly.
- Clean the container, O-ring, and the edge of the container by spraying them with a hose.
- Reassemble the filter sponges by placing them on the separate plate, fixing the cleaning gear set, and fastening the diversion pipe.
- Place the O-ring on the upper edge of the container (wetting it will make it easier to fit). Press down on the lid.
- Reattach the clamp, pull the pull-tab, and push the safety latch in.



- Fasten all hoses with flat seals or flow vanes to the corresponding connections by tightening the union nuts.
- Start the pressure filter again.

# How It Works

Cleaning the Quartz Tube and Replacing the UV Lamp

- Unscrew the four screws on the lid.
- Remove the UV head to access and clean the quartz glass tube with a wet cloth.
- Remove the fixing nut from the quartz glass tube.
- Pull out the quartz glass tube, then replace the UV lamp if necessary.
- Inspect the quartz glass tube for damage, and replace it if broken.
- Reassemble the filter as before and start it up again.

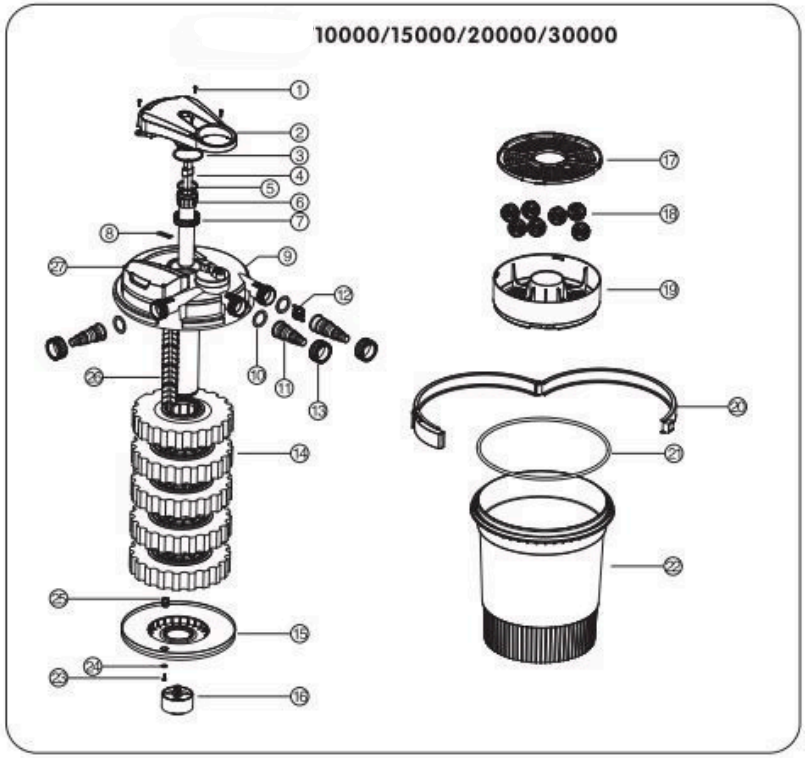




# Parameters

| Model | PMF2500 | PMF3600 | PMF4800 | PMF7200 |
|---|---|---|---|---|
| Voltage | 110-120V - 60Hz | 110-120V - 60Hz | 110-120V - 60Hz | 110-120V - 60Hz |
| Max Flow | 2,641 gal/hr | 2,641 gal/hr | 3,170 gal/hr | 3,170 gal/hr |
| Recommended Pump | PMP5800B | PMP8000B | PMP10000B | PMP12000B |
| Hose Adapter | ¾", 1", 1 ¼", 1 ½" | ¾", 1", 1 ¼", 1 ½" | 1 ¼", 1 ½", 2" | 1 ¼", 1 ½", 2" |
| Pond Size Light Fish Load | 2,500 Gallons | 3,600 Gallons | 4,800 Gallons | 7,200 Gallons |
| Pond Size Heavy Fish Load | 1,250 Gallons | 1,800 Gallons | 2,400 Gallons | 3,600 Gallons |
| Power Of UV | 11 Watt | 18 Watt | 36 Watt | 55 Watt |
| Filter Volume In Gallons | 6.6 Gallons | 10.04 Gallons | 13.21 Gallons | 19.81 Gallons |

# Parts List




| | | | | | |
|---|---|---|---|---|---|
| 1 | Screw 1# | 10 | Gasket | 19 | Filter basket |
| 2 | UV head | 11 | Inlet&Outlet | 20 | Clamp |
| 3 | O–ring 1 | 12 | Flow wing | 21 | O–ring 3 |
| 4 | UV lamp | 13 | Inlet&Outlet fixing nut | 22 | Container |
| 5 | O–ring 2 | 14 | Sponge | 23 | Screw 2# |
| 6 | Quartz glass tube set | 15 | Sponge plate | 24 | Washer |
| 7 | Fixing–nut | 16 | Diversion pipe | 25 | Down bearing |
| 8 | Rubber seal | 17 | Filter basket cover | 26 | Clean gear set |
| 9 | Lid | 18 | Bio ball | 27 | Motor |



# Troubleshooting

| FAULT | POSSIBLE REASON | MEASURES |
|---|---|---|
| Water not getting clear | 1、Unit not been used for long.<br>2、Inappropriate pump capacity.<br>3、water is extremely dirty.<br>4、Fish and animal population is too much.<br>5、Filter sponges are dirty.<br>6、Quartz glass tube is dirty. | 1、Full effectiveness of biological cleaning is only reached after a few weeks.<br>2、Reset the power of the pump.<br>3、Remove algae and leaves from the pond, or change the water.<br>4、Guideline:approx 1Kg fish to every 1000 cbm of pond water.<br>5、Clean the filter sponges.<br>6、Clean the quartz glass tube . |
| UV lamp indicator is not on | 1、Main plug of filter UV not connected.<br>2、Defective UV lamp.<br>3、Faulty connection.<br>4、The filter is overheating. | 1、Connect the mains plug of the filter.<br>2、Replace the UV lamp.<br>3、Check the electrical connection.<br>4、UV switched on auto–matically after cooling down. |
| No water discharge from pond inlet | 1、Funnction switch set to “clean” .<br>2、Mains plug of the pump is not connected.<br>3、Pond inlet blocked. | 1、Reset funnction switch to “filter” .<br>2、Connect the mains plug of the pump.<br>3、Clean the inlet of pond. |