

EP21559

UV-C POND PRESS BIO FILTER

Instruction





INSTRUCTION FOR USE

Use these instructions to familiarise yourself with the device before you use it for the first time. It is imperative that you observe the safety guidelines on the proper and safe use of this device.

For safety reasons, children and young people under 16 years of age, as well as people who cannot recognize potential hazards or who are not familiar with these instructions, must not use the device.

Please keep these instructions in a safe place! In the event of a change of ownership, please pass these instructions on to the new owner along with the product.

SYMBOLS



Water inlet from the pump into the filter.



Water outlet from the filter into the pond.



Cleaning outlet from the filter into the sewerage system or onto a flower bed, for example.



Function switch setting "filter".



Function switch setting "clean".



UNPACKING

When unpacking, if external damage is visible which could impact the functioning of important parts of the equipment, please inform the carrier of the defects immediately, on the same day if possible, and insist on the facts being recorded in writing. Then contact your supplier who will take care of everything else.



PARTS SUPPLIED

1x CPF-180 pressure filter with integrated UVC

1x spiral stepped hose adapter 1 1/2" transparent

2x spiral stepped hose adapter 1 1/2" black

1x spiral stepped hose adapter 1 1/2" threaded, black

4x union nuts 1 1/2"

1x glass seal cover

4x flat seal

1x instruction with guarantee card

APPROPRIATE

The pressure filter with integrated UVC is sealed pressure filter system for biological and mechanical filtering of normal pond water with a temperature of +4°C to 35°C. This pressure filter is exclusively intended for private use for cleaning garden ponds with or without pond fish.



Safety guidelines

Dangerous ultraviolet radiation. The rays from the UVC lamp are harmful to your eyes and skin! Never operate the lamp of the UVC outside the casing!

The pressure filter with UVC should be placed at least 2m from the edge of the pond in order to prevent falling into the pond.

Before running the filter UVC the pump should turn on first. The UVC lamp must not be operated without water flowing through it.

Do not use the pressure filter UVC if the connecting lead, UVC lamp or casing appear to be defective.

Do not use the filter UVC when there are people in the water.

The built-in temperature monitor in the filter UVC automatically switches off the UVC lamp if it overheats. After it has cooled down, the UVC lamp is automatically switched back on again.

Never open the casing of the UVC or its accessories unless expressly directed to do so in the instruction.

The electrical data of the supply grid must correspond to the data on the type label.

Make sure that the filter UVC is equipped with a measured fault current not greater than 30mA via a fault current protection switch (FI or RCD).

Always disconnect the plugs of the filter UVC and of all devices that are in the water before you carry out any work on the filter.

For your own safety, contact an electrician if you have any questions or problems regarding the electrical connection.

Never immerse the device in water!

Never use installation, adapters, extension or connecting cables without a safety contact.

Mains power cables must have a cross-section not less than that of a rubber hose line with the code H05RN-F.

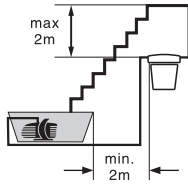
Electrical installations near garden ponds and swimming pools must comply with international and national installation guidelines.

Keep the connecting points dry.

Do not carry or pull the filter by its connecting lead! Protect the connecting lead from heat, oil and sharp edges.

Lay the hoses and connecting lead in such a way that they are not an obstacle and do not become damaged.





Never operate the filter with integrated UVC with a water pressure greater than 0.2bar(2mwh)!the height difference between the filter lid and the pressure-free outlet point can therefore be 2m max.the maximum delivery of the pump being used must not exceed 0.5bar (5mwh).

Only operate the filter with pressure hoses that are approved for at least 0.2bar,i.e.the maximum pressure of the pump.

Check and clean the water outlet to the pond on a regular basis.The outlet should always be clear ,as any blockage would result in the filter being operated at a pressure greater than 0.2bar.This in turn would lead to the risk of leaking and therefore of the pond emptying completely.

When the filter is being used in “filter” mode,the cleaning connection or any drainage hose connected to it must always be sealed with the sealing cap and inserted flat seal in order to prevent the pond from emptying .At the same time the sealing cap acts as a safeguard in case the function switch is accidentally set to “clean” .

Make sure that the function switch is always set to “filter” when the pump is in operation .the function switch may only be set to “clean” when cleaning the filter sponges with the handle function.

Before starting up the filter ,check that the connected hoses ,the sealing cap and the tension ring with safety latch are sitting correctly.

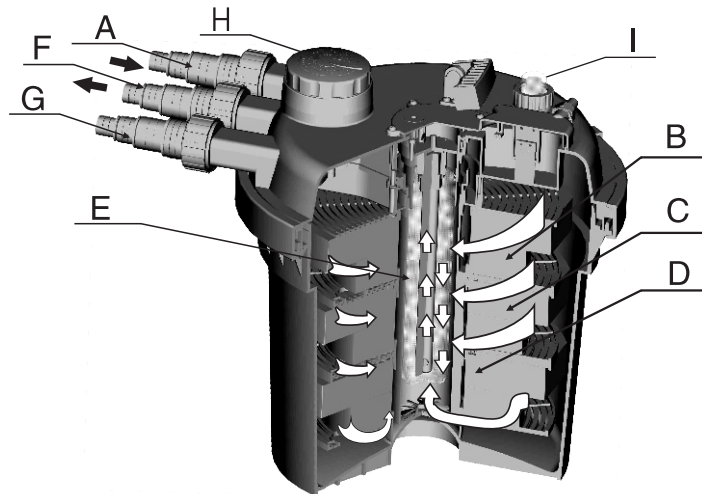
Never filter any liquids other than water.

If it is a frost day,you must remove the filter.

Install the filter where it will not be exposed to direct sunlight.

How the pressure filter works.

The pressure filter with integrated UVC is a sealed filter system for the biological and mechanical cleaning of pond water.



A、 water inlet

The pump is connected to the water inlet with a pressure hose.

B、 vortex system

Suspended matter and bio-sludge are precipitated by the centrifugal effect and gravity.

C、 mechanical filter

Dirt particles are trapped by the outer surface of the filter sponges before the water flows the entire height of the filter from the edge into the inner chamber of the filter.

D、 Biological clarifying

The pores of the filter sponges from a large inner surface which microorganisms can colonize .The yellow and blue filter sponges differ in size and density. This creates zones in which the water can flow at different speeds.Zones with a high flow speed(blue filter sponges)favour the colonization of microorganisms which convert ammonium to nitrate via nitride(nitrification).Zones with a low flow speed(yellow sponges)support the colonization of anaerobic microorganisms which reduce nitrate to nitrogen (denitrification).

E、 pre-clarifying of pond water.

As the water flows out ,it is briefly exposed to ultraviolet radiation under the uvc lamp .This kills off germs and bacteria and inhibits algae growth.The water subsequently flows from the edge into the filter in a circular fashion.

F、 water outlet with flow indicator

At the water outlet ,the clarified water is fed back into the garden pond via pressure hose or a watercourse etc.

G、 cleaning connection

When cleaning the filter ,a drainage hose can be connected to the cleaning connection which diverts the dirty water into the sewerage system or onto a flower bed.

H、 function switch

The function switch is used to switch between normal water discharge into the pond “filter” and the cleaning connection “clean” .and press it to wash the filter sponge.

I、 turbidimeter

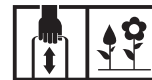
when the dirty on the sponge is too much, the turbidimeter will become the yellow from the green .it means the sponge need to be washed.

Definition of clear water.

Clear water is achieved if the fish or stones at the bottom of the pond can be seen at a depth of 1m.

Selecting the right system

Please select the filter system using the following table(selectioncriteria: pond size and with /without fish population).



Criteria: pond size and with /without fish population).

Pump's Flux	Pressure Pond Filter Pump	
	Pond with light pollution/No fish	Pond with heavy pollution/With fish
EP21559	EP21559	EP21559
3500L/h	4000L	2000L
5500L/h	6000L	3000L
8000L/h	8000L	4000L
12000L/h	11000L	5500L

The filter system with integrated UVC must be running permanently , 24 hour a day.

The uvc lamp must be replaced after 8,000 hours of operation in order to ensure that the filter uvc continues to operate with optimum effectiveness.

The filter system must be cleaned regularly.

Pressure loss due to height difference

The selection table allows for a maximum height difference of 1 m between the surface of the water and the highest point of the filtering system .if the height difference is greater than 1 m, you should use a correspondingly more powerful pump.

For hoses that are longer than 4 m, please always use hoses that correspond to the upper value of the scale.

In order to avoid pressure loss, cut the spiral stepped hose adapter at the relevant points for each hose.

Avoid unnecessary corners and bends which contribute to further pressure loss.

Installing and connecting the pressure filter

Choose a suitable location for the pressure filter. please note the installation guidelines regarding the clear water guarantee as well as the following guidelines:

Install the filter so that it is safe from flooding. Secure your filter so that it will not fall into the pond .it should be placed at least 2 m from the edge of the pond.

Place the filter on a firm and level base, e.g. on a slab. The filter can also be dug in up to the step on the filter box.

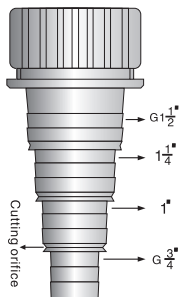
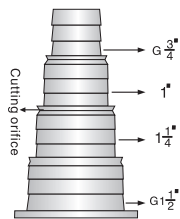
Please make sure that there is unhindered access to the lid in order to be able to carry out work on the filter, e.g. cleaning the filter sponges.

Connecting hoses

Decide which hose diameter you need based on the selection table. only operate the filter with pressure hoses that are approved for a pressure of 0.2bar, i.e. the maximum pressure of the pump .

We recommend warming the hose with hot water, pushing it onto the spiral stepped hose adapter and securing it with a hose clip. This makes the connection more watertight.

To avoid pressure loss ,cut the spiral stepped hose adapter at the relevant point to fit each hose.



Conection at water inlet

Push the union nut onto the black spiral stepped hose adapter. Push / twist the hose on the secure with a hose clip. Insert the flat seal into the union nut and screw tight onto the water inlet nozzle.

We recommend diverting the cleaned water via a small watercourse, for example, instead of feeding it directly back into the pond. This enriches the water with additional oxygen.

Connecting to cleaning connection You can have a drainage hose permanently connected to the cleaning connection. This allows you to drain the dirty water directly into the sewerage system or onto a flower bed.

Starting on the pressure filter

Before each start-up, you should check that the connected hoses, the sealing cap and the tension ring with safety latch are sitting correctly .the function switch must be set to the "filter" symbol. It is imperative that you read and follow the safety guidelines before start-up.

1, first switch on the pump

Caution! The uvc lamp must not be operated without water flowing it.

2, after starting up the pump, check that all the connections are watertight. improve those that are not.

3, plug the filter into the mains. The power indicator lights up with a blue shimmer.

In the case of a new installation , the pressure filter only reaches its full biological cleaning effectiveness after a few weeks. Extensive bacterial activity only starts at temperature of +10°C or above.

Cleaning and maintenance of the filter

The pressure filter is largely maintenance-free. The filter sponges should , however, be cleaned regularly.

Suspended matter and dirt are deposited in the filter sponges over time. These deposits reduce the effectiveness of the filter, so the filter sponges should be cleaned regularly, e.g. every two weeks.

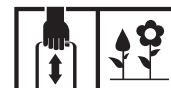
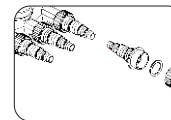
The filter sponges should be cleaned when cloudy or even dirty water flows out of the water outlet and back into the pond when the dirty on the sponge is too much, the turbidimeter will become the yellow from the green .it means the sponge need to be washed. .

1, twist off the sealing cap at the cleaning connection or at the drainage hose that is connected to the cleaning connection. There will be a small flow of water.

2, turn the function switch to clockwise until it clicks into the "clean" position.

3, press the function switch hard . This squeezes the filter sponges and cleans them mechanically.

4, the filter will now be rinsed .As soon as only clean water could be seen through the transparent spiral stepped hose adapter at the cleaning connection, turn the function switch to anti clockwise until it clicks into the "filter" position.



5, screw the sealing cap with the inserted flat seal tightly onto the cleaning connection or the drainage hose that is connected to the cleaning connection.

6, the filter is now operating again. Check the water flow into the pond.

Washing the filter sponges

If the water flow is too small due to dirty filter sponges and cannot be improved through cleaning with the handle function. The filter sponges must be washed or replaced.

Pls do not use any chemical cleaning agents so as not to kill off the microorganisms in the filter sponges.

1, disconnect the mains plug of the filter.

2, switch off the pump and ensure that it cannot be switched on unintentionally.

3, remove all hoses by unscrewing the union nuts.

4, Remove the tension ring. To do this, open the tension ring.

5, lift off the lid with the filter sponge assembly. Place the lid upside down on another clean surface. The filter sponges are lying with filter plat facing up.

Wear marking

The filter sponges are pre-stressed. The filter sponges can fall apart due to the mechanical strain and due to normal ageing. This can result in a short-circuit in the filter.

To check the filter sponges, the distance between the sponge and distance between the sponge and filter pad can not be more than 5mm, 6, please circumvolve the filter pad which with the arrow in opposite direction to get out the pad.

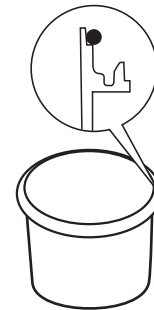
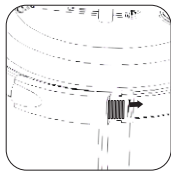
7, pull off the filter sponges and clean under flowing water. Give the filter sponges a good squeeze.

8, with the same way of 6-7, to get out other filter pad and sponge..

9, clean the filter box, the lid with lattice pipe, both filter plates and the tension ring by spraying them with a water hose.

10, lift the bypass valve slightly and clean the inlet comb of the Filter (see illustration)

11, clean the lid sealing ring and the edge of the filter box.



12, push one filter plat, with the collar facing up, onto the lattice pipe and the cleaning rods.

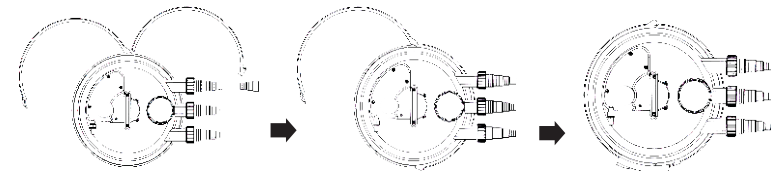
13, the filter sponges are pushed on from the casing lid, starting with a large blue filter sponge and always alternating with a small yellow filter sponge. The cleaning rods lie in the two openings of the large chamber of the filter sponges.

14, put the filter plate with the collar facing down, Fasten the cleaning rods flush to the filter plate using the two screws.

15, place the lid seal onto the upper edge of the filter box. (in order to easy to fit you should make the seal ring wet.)

16, press the lid with the filter sponges assembly onto the filter box.

17, place the tension ring onto the edge of the filter box and lid, press down on the lid and click the fastening into place. Push the safety latch in.



18, fasten all hoses with flat seals or flow vane to the corresponding connection by screwing the union nuts on tight.

19, start the pressure filter up again.

Replace uvc lamp

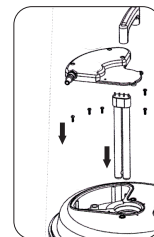
The uvc lamp must be replaced after 8,000 hours of operation in order to ensure that the filter continue to operate with optimum effectiveness.

1, unscrew the eight screws of the filter cover and handle. Pull the lamp from the lid of the filter.

2, pull out the UVC lamp and replace it.

3, insert the filter uvc in the lid of the filter and screw the eight screws.

4, start the pressure filter up again.



FAULT	POSSIBLE	MEASURES
Water not getting clear	Unit not been used for long Inappropriate pump capacity water is extremely dirty. Fish and animal population too large Filter sponges are dirty quartz tube is dirty.	Full effectiveness of biological cleaning is only reached after a few weeks. Reset pump capacity Remove algae and leaves from the pond, change the water. Guideline: approx 1kg fish to every 1000 cbm of pond water. Clean the filter sponges Remove the filter uvc and clean The quartz tube.
Uvc lamp indicator is not on	Mains plug of filter uvc not connected Defective uvc lamp Faulty connection Lamp has no uvc putput Protective tube not fitted Filter uvc overheating	Connect the mains plug of the filter UVC Replace the uvc lamp Check the electrical connection The lamp should be replaced after approx 8,000 hours of operation See replace uvc lamp After cooling down, uvc switched on automaticlly
No water discharge from pond inlet	Function switch set to “clean” Mains plug of pump not connected. Pond inlet blocked	Reset function switch to “filter” Connect the mains plug of the pump Clean pond inlet

Wearing parts

1, uvc lamp 13 watte

2, spare filter set(3X yellow sponges 3x blue sponges).

3, spare set of seals(outer diameter 60x3.1 and outer diameter 346x8 O ring)