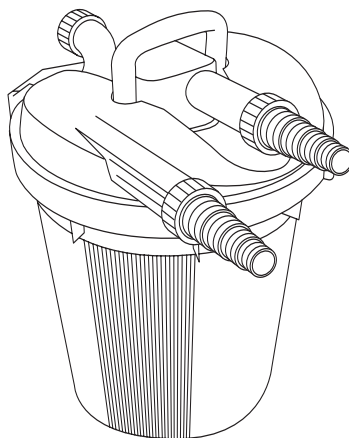


PF 6000 Art. 7901



PF 11000 Art. 7902

D **Gebrauchsanweisung**

Druckfilter

GB **Operating Instructions**

Pressure Filter

F **Mode d'emploi**

Filtre à pression

NL **Gebruiksaanwijzing**

Drukfilter

S **Bruksanvisning**

Tryckfilter

I **Istruzioni per l'uso**

Filtro a pressione

E **Manual de instrucciones**

Filtro a presión

P **Instruções de manejo**

Filtro de pressão

DK **Brugsanvisning**

Trykfilter

GARDENA Pressure Filter PF 6000 / PF 11000

Welcome to GARDENA aquamation...



Please read and follow these operating instructions carefully. Use the instructions to use the Pressure Filter correctly and observe the safety information.



For safety reasons, children and young people under 16 years of age and people who are not acquainted with these operating instructions should not use this Pressure Filter.

→ Please keep these operating instructions in a safe place.

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1. Range of Uses for Your GARDENA Pressure Filter

Purpose

The GARDENA Pressure Filter is intended for outdoor domestic use only, for cleaning garden ponds with and without fish.

Please note



The Pressure Filter is not suitable for industrial use or in combination with chemicals, food, easily combustible and explosive substances.

2. For Your Safety

Positioning the Pressure Filter

→ Place the Pressure Filter in a position where it is stable and will not overflow (even below the level of the pond).

The filter must be protected from falling into the pond/water.

The difference in height between the filter cover and the water discharge point (e.g. start of a stream) must not exceed 2 m.

If using the UVC Retrofitting Kit, position the filter at least 2 m away from the pond.

→ Please ask your electrician.

Bacterial activity

Extensive bacterial activity takes place from + 10 °C onwards.

New installations

The filter system is a biological system and therefore needs a few weeks to become fully effective in a new installation.

Permanent operation

If possible, the filter should be in permanent operation from Spring to Autumn and should not dry out.

Delivery pressure of the pump you are using

The maximum delivery pressure of the pump you are using must not exceed 0.5 bar (corresponds to a delivery head of 5 m).



Danger of bursting the container. The filter must not be connected to the water supply.

→ Connect the filter only to the pond pump.

Comply with anti-noise regulations

Please comply with local anti-noise regulations.

3. Pond and Filter Tip

Excess growth of algae

Garden ponds are not as deep as natural water features. The lack of depth means that a garden pond heats up and cools down much more quickly. These changes in temperature and environmental factors such as fertilisers, plant residues etc., are among the main causes of excess levels of nutrients and hence of growth of algae.

High density of fish stock

In garden ponds the density of fish stock per cubic metre is usually higher than in natural ponds. As the fish usually also receive more food than in their natural environment, the amount of pollution due to excrement is very high.

Level of nutrients

Excess growth of algae, as well as the high level of pollution due to fish excrement causes a lack of oxygen in your pond; its biological balance has been disturbed.

- Problem: the level of nutrients in your pond is too high.

The most effective solution to this problem is to decrease the level of nutrients available by means of a biological process and to remove excess nutrients while at the same time increasing the oxygen supply.

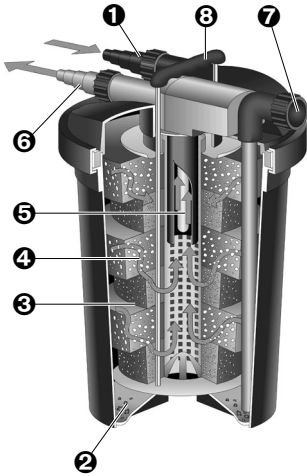
Installing a filter

The growth of algae can be restricted by installing a filter. Floating substances (e.g. floating algae), which cause the water to be murky, are filtered out and the water is purified. This helps the pond to regain its biological balance. However, existing algae (e.g. thread algae) visible at the time of installation must be skimmed off (e.g. with the GARDENA combisystem Pond Sieve, Art. No. 7933).

Using the GARDENA UVC Retrofitting Kit, Art. No. 7903 (optional)

The growth of algae is reduced by using the GARDENA UVC Retrofitting Kit, Art. No. 7903 (optional). The algae clump together and germs which cause disease are killed (especially in fish ponds).

4. Mode of Operation



1 Water intake

Universal connection for the pressure hose of the pump in the pond.

2 Vortex-System

Suspended solids and bio-sludge are precipitated out by centrifugal force and the effects of gravity.

3 Mechanical filtering

Mechanical contamination is held back by the large outer surface of the foam filters.

4 Biological treatment

Biological treatment takes place in two different areas inside the foam filters:

- **In zones where the water has a high flow speed (blue foam filters):**

This promotes the growth of micro-organisms which guarantee the conversion of ammonia into nitrate via nitrite (nitrification).

- **In zones where the water has a low flow speed (black foam filter):**

This supports the growth of anaerobic micro-organisms which promote denitrication (reduction of nitrate to nitrogen).

In both zones, the inner surface of the foam filters forms a particularly large growth areas for micro-organisms.

5 UVC-radiation, Art. 7903 (optional)

The pond water, which has already undergone preliminary treatment, is subjected to short wave UVC-light (ultraviolet rays). During this process, the algal growth is reduced and germs which cause disease in fish ponds are killed.

6 Water discharge with contamination display

Universal connection for returning the treated water with contamination display for simple recognition of the need for cleaning.

7 Backwashing connection

For cleaning the filter without opening it.

8 Mechanical cleaning device (only PF 11000)

Washes out the filter sponges by pulling the handle.

Bacterial activity



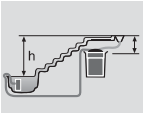


Extensive bacterial activity takes place from + 10 °C onwards.

New installations

The filter system is a biological system and therefore needs a few weeks to become fully effective in a new installation.

5. Initial Operation

Table for determining the type of pump and hose.

Pond size and water quality		Height difference h	Hose	Remarks	Pump type
Slightly contaminated	Heavily contaminated (e.g. caused by fish)	Water return flow above the surface of the pond			
			PF 6000		
up to 6.0 m ³	up to 3.0 m ³	max. 0.5 m	1 x PF 6000	1"	FSP 5500 Duo
up to 4.0 m ³	up to 2.0 m ³	max. 1.5 m	1 x PF 6000	1"	FSP 5500 Duo
up to 2.0 m ³	up to 1.0 m ³	max. 2.0 m	1 x PF 6000	1"	FSP 5500 Duo
up to 10.0 m ³	up to 5.0 m ³	max. 1.0 m	2 x PF 6000	1 1/2"	FSP 8000 Duo
up to 6.0 m ³	up to 3.0 m ³	max. 2.0 m	2 x PF 6000	1 1/2"	FSP 8000 Duo
PF 11000					
up to 11.0 m ³	up to 5.5 m ³	max. 0.5 m	1 x PF 11000	1 1/2"	FSP 8000 Duo
up to 9.0 m ³	up to 4.5 m ³	max. 1.0 m	1 x PF 11000	1 1/2"	FSP 8000 Duo
up to 7.0 m ³	up to 3.5 m ³	max. 1.5 m	1 x PF 11000	1 1/2"	FSP 8000 Duo
up to 5.0 m ³	up to 2.5 m ³	max. 2.0 m	1 x PF 11000	1 1/2"	FSP 8000 Duo
up to 16.0 m ³	up to 8.0 m ³	max. 1.0 m	2 x PF 11000	1 1/2"	FSP 8000 Duo
up to 8.0 m ³	up to 4.0 m ³	max. 2.0 m	2 x PF 11000	1 1/2"	FSP 8000 Duo
up to 10.0 m ³	up to 5.0 m ³	max. 2.5 m	1 x PF 11000	1 1/2"	FSP 15000 Duo
up to 8.0 m ³	up to 4.0 m ³	max. 3.0 m	1 x PF 11000	1 1/2"	FSP 15000 Duo
up to 6.0 m ³	up to 3.0 m ³	max. 3.5 m	1 x PF 11000	1 1/2"	FSP 15000 Duo
up to 18.0 m ³	up to 9.0 m ³	max. 2.0 m	2 x PF 11000	1 1/2"	FSP 15000 Duo
up to 12.0 m ³	up to 6.0 m ³	max. 3.0 m	2 x PF 11000	1 1/2"	FSP 15000 Duo

Recommended connecting hoses:

Example – determining types:

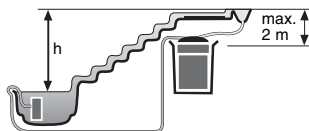
GARDENA Pond Hose 1", Art. 7891
 GARDENA Pond Hose 1 1/2", Art. 7893

You have a pond 4,5 m³ in size with fish in it and the water intake for the filter is 1 m above the surface of the pond.

→ Line 2 of PF 11000:

You need a 38 mm (1 1/2") hose with 2 appropriate hose clips and a GARDENA pump FSP 10000 in single filter operation.

Setting up your Pressure Filter:

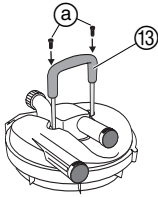


The difference in height between the filter cover and the water discharge point (e.g. start of a stream) must not exceed 2 m.

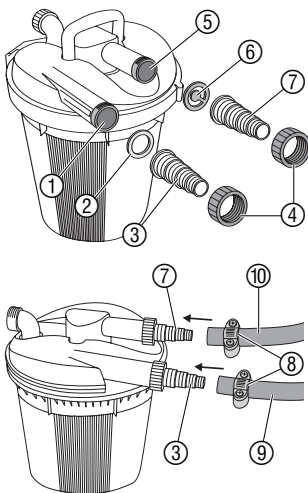
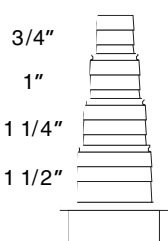
If the height of the return flow h is more than 2 m above the surface of the pond, the filter must be set up above the surface of the pond.

The filter can be buried in the ground up to the lower edge of the clamping ring.

**Mounting the cleaning handle
handle
(for PF 11000 only):**



**Connecting the
Pressure Filter:**



→ Fit the cleaning handle 13 on both rods and secure in place with the screws a.

The universal connections 3 and 7 permit the following hose sizes to be connected:
19 mm (3/4"), 25 mm (1"), 32 mm (1 1/4") or 38 mm (1 1/2").

1. Determine the pump and hose to be used from the table above.
2. Depending on the hose, cut off the parts of the universal connections not required along the guide groove using a saw. *Otherwise loss of performance may occur.*
3. Push a threaded ring 4 over both universal connections 3 and 7.
4. Screw the universal connection 3 into the pressure hose of the pump 9 and the tighten hose clip 8.
5. Screw the universal connection 3 with the sealing ring 2 and threaded ring 4 onto the water intake 1 of the pressure filter.
6. Screw the universal connection 7 into the return hose 10 and tighten the hose clip 8.
7. Screw the universal connection 7 and green contamination display 6 with the threaded ring 4 onto the water outlet 5 of the pressure filter.
8. Set up the pressure filter a maximum of 2 m below the water return flow (e. g. hidden behind bushes) on firm, flat ground or bury it in the ground up to the lower edge of the clamping ring.
9. Switch on the pump.
10. If using the UVC Retrofitting Kit:
Plug the UVC light into a 230 V AC current socket.
11. After setting up the pressure filter check all the connections for leaks and retighten if necessary..

Return flow tip:

We recommend that you lay the return flow in such a way that the purified water is reintroduced indirectly e.g. via a short stream. This enriches the purified water with additional oxygen.

Two filter operation:

1. Push T-piece on to the pump (available from GARDENA customer services).
2. Connect both outputs of the T-piece to one GARDENA pressure filter respectively via two hoses.

6. Maintenance

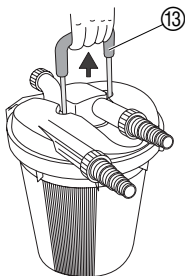
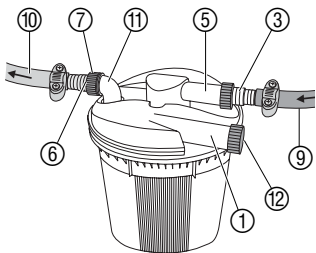
GARDENA pressure filters are largely maintenance-free but must be cleaned when necessary.



Danger of bursting the container. The filter must not be connected to the water supply.

→ Connect the filter only to the pond pump.

Removing coarse dirt:



If the green contamination display ⑥ is not completely visible when the filter is operating and therefore a lower throughput is indicated, the filter should be backwashed.

(Only PF 11000: The mechanical cleaning device assists the cleaning action.)

1. If the UVC Retrofitting Kit, Art. 7903, is used, unplug the mains plug of the UVC Retrofitting Kit.
2. Switch off the pump.
3. Unscrew all threaded rings and remove both universal connections and the sealing cap.
4. Connect the universal connection ③ to the pressure hose of pump ⑨ and screw onto the water outlet ⑤.
5. Screw the sealing cap ⑫ onto the water intake ①.
6. Connect the universal connection ⑦ to the return flow hose ⑩ and screw onto the flush return flow ⑪
– or – connect a separate flush hose to the third universal connection (supplied with the pressure filter) and screw onto the flush return flow ⑪.
7. Switch on the pump. The filter is flushed.
You can direct the water flushed out of the pressure filter to a flowerbed, for example.

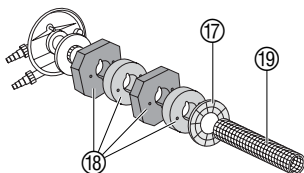
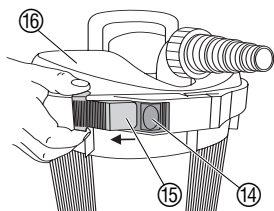
For PF 11000: Pull the cleaning handle ⑬ several times during the flushing procedure.

The filter foam elements are pressed together and cleaned mechanically.

8. Switch off the pump when the water flushed out of the pressure filter is clear.
9. Put the pressure filter into operation as described in section 5. Initial Operation “Connecting the pressure filter”.

For even more thorough cleaning, in addition to backwashing, the foam filters can be cleaned to remove fine dirt.

Removing fine dirt:



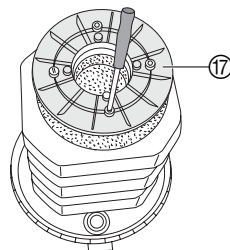
Do not use any chemical cleaning agents as these will kill the bacteria.

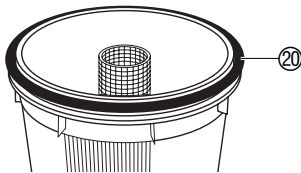
1. Pull the retaining device ⑮ backwards, push button ⑭, remove clamping ring and open the cover ⑯.

For PF 11000:

Unscrew foam filter holder ⑰.

2. Clean the foam filter elements ⑱ and the filter pipe ⑲ under running water.
Squeeze the foam filter elements together during this process.
3. Spray the filter container clean using a hose.





4. Before replacing the cover 16 roll the sealing ring 20 up to the upper edge of the filter conveyor.
5. Fit the cover and reassemble the filter in the reverse order.

7. Trouble-Shooting

Fault	Possible cause	Remedy
The pond water does not become clear.	The pump has the wrong capacity.	→ Check pump capacity shown in the table in "5. Initial Operation".
	The pond is extremely dirty and rich in nutrients.	<ol style="list-style-type: none"> 1. Check nitrate concentration (e. g. using the GARDENA pond set, Art. No. 7920). 2. Change the water if necessary.
	Too many fish and creatures in the pond.	Guide value: max. 80 cm length of fish to 1 m ³ pond water.
The quantity conveyed has decreased.	The foam filters are dirty.	→ Remove coarse and fine dirt (see "6. Maintenance").

If any other faults occur, please contact GARDENA Service.

8. Winter Storage

Over-wintering:



Ensure the filter is "dry" before storing over the winter.

1. Empty filter container.
2. Empty or remove all connection.
3. Store filter foam in a frost-free place.

9. Accessories

**GARDENA
UVC Retrofitting Set**

The growth of algae is reduced and germs causing disease in fish ponds are killed.

Art. No. 7903

→ **When using the UVC Retrofitting Kit please follow the safety instructions and warnings in the Retrofitting Kit operating instructions.**

10. Service

Warranty

GARDENA guarantees this product for 3 years (starting from the date of purchase). This guarantee covers all serious defects of the unit that can be proved to be material or manufacturing faults. Under warranty we will either replace the unit or repair it free of charge if the following conditions apply:

- The unit must have been handled properly and in keeping with the requirements of the operating instructions.
- Neither the purchaser or a non-authorised third party have attempted to repair the unit.

Foam filters and the seal are wearing parts and are not covered by the guarantee.

This manufacturer's guarantee does not affect the user's existing warranty claims against the dealer/seller.

If you have any problems with your pump, please contact our Customer Service or return the defective unit together with a short description of the problem directly to one of the GARDENA Service Centres listed on the back of this leaflet.

Product Liability

We expressly point out that, in accordance with the product liability law, we are not liable for any damage caused by our units if it is due to improper repair or if parts exchanged are not original GARDENA parts or parts approved by us, and, if the repairs were not carried out by a GARDENA Service Centre or an authorised specialist. The same applies to spare parts and accessories.

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