

Operation Manual

Bio Pond Filter CBF-350, CBF-350B, CBF-350C 50107, 50108, 50114



Illustration similar, may vary depending on model

Read and follow the operating instructions and safety information before using for the first time.

Technical changes reserved!

Due to further developments, illustrations, functioning steps, and technical data can differ insignificantly.

Updating the documentation

If you have suggestions for improvement or have found any irregularities, please contact us.



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Introduction

Thank you for purchasing this quality product. **To minimise the risk of injury we urge that our clients take some basic safety precautions when using this device. Please read the operation instructions carefully and make sure you have understood its content.**

Keep these operation instructions safe.



Attention:

- Visually examine the device before every use. Do not use this device if any safety measurements have been damaged or are worn-out. Never overrule any safety components.
- Only use the device for its purpose described in this manual.
- You are liable for the safety in the workspace.
- The device must not be installed in drinking water cycles.
- The device can only be used outside of water.
- It needs to be ensured, that the device cannot fall into water.
- Place the device away from direct sunlight.
- The stepped hose adapter needs to be shortened to match the diameter of the hose.
- Hoses should be connected with hose clamps.



Warning:

Read all safety instructions and notes. Store all safety instructions and notes for future reference.

Resistance

- The maximum temperature of the pumped liquid should not exceed +35 °C during constant operation.
- The filter is only to be used for the filtration of garden pond water.
- The filter is not suitable for the filtration of water above 40 °C or under 8 °C.
- Do not use the device with oils, petrol, or lubricants. The filter is not frost-resistant! Thus, we recommend that the filter be not used in winter.
- The filter may not be used under water.
- The filter needs to be placed at least 2 m away from the pond.



Technical Data

Model	CBF-350	CBF-350B	CBF-350C
Item number	50107	50108	50114
Dimensions (mm)	415×515×395	830×515×395	1280×540×400
Max. flow rate (½h)	8000	10,000	10,000
Tube inlet sizes (mm)	20–40 (¾"–1½")	20–40 (¾"–1½")	20–40 (¾"–1½")
Outlet sizes (mm)	40/51/72 (1½"–3")	40/51/72 (1½"–3")	40/51/72 (1½"–3")
Number of filter mats	1	2	3
Number of thick filter sponges	2	4	8
Number of thin filter sponges	2	4	4
Suitable for fishponds up to (ℓ)	6000	15,000 (koi) 30,000	20,000 (koi) 40,000
Suitable for decorative ponds up to (ℓ)	12,000	60,000	90,000
Connection to UV lamp (optional)	CUV-2–3–6 series (18 W)	CUV-2–3–6 series (24 W)	CUV-2–3–6 series (36 W)

Depending on the use of the pond, the ideal cycle depends on various factors, such as fish stock, water plants, exposure to the sun, required water clarity, etc. Of course, further components of the filtering cycle need to be adjusted to each other.

Basically, a distinction is made between two different ways of determining the optimal filter size and water circulation. Both types, the optimal circulation of the pond and the retention time of the water in the filter, are discussed below.

Optimal pond cycling

The cycling of the pond describes how often the entire amount of pond water is directed into the filter within a specific amount of time (cycle per hour).

The guideline can be as follows:

- **Koi/fish pond:**
1 cycle in 3 hours with little fish stock
2 cycles in 1 hour with high fish stock and no plants
- **Garden/plant pond:**
A pond without any fish stock does **not** require any cycles. Any water/marsh plants are adequate replacement for a filter system.
- **Swimming ponds:**
The cycle strongly depends on the plants and own requirements with this type of pond. The upper limit is once per 2–3 h, the minimum is no cycle at all.

Duration of the Water passing through the filter/filter volume

The main interest is the actual volume of the used filter with **pressureless systems**:

- 50107 (CPF-350) = approx. 85 ℓ
- 50108 (CPF-350B) = approx. 170 ℓ
- 50114 (CPF-350C) = approx. 250 ℓ



After a period of 2–3 weeks, nitrifying filter bacteria will collect inside the filter sponges. These will require some time to have an effect on the water. The pursued time that the used pond pump needs to fill the filter once entirely, is about 1.5–3 minutes with the filter volumes named above. A well running filter thus does **not** require cycles of 2–3 times per hour. Depending on the size of the pond, cycles of 1–2 per 10 hours are sufficient.

Calculation sample: A pump filters **10,000 %**. This means that an example pond with **100,000 l volume** needs to be filtered once entirely per 10 hours. Thus in 24 hours, the pond water needs to be filtered 2.4 times by running through the pond filter. As the filter holds **250 l** of water and **10,000 l** can be pumped through the filter per hour, this means that the filter is filled approximately **40 times per hour** with water. Therefore, the filter is filled entirely with water **every 1.5 min**. This means the water is processed by the bacteria for 1.5 min, allowing for the water to be cleared and be released as clean water.

It is advisable to find a good compromise between these two calculations and your individual needs for the pond to be filtered best.

Intended use

Products of this series are ideally suitable for the cleaning/purification of garden and fish ponds. If properly used, the pond water will be effectively cleaned. Environmentally biodegradable filter materials clean the water by means of mechanical filtration of bacteria and waste.

Features (partially optional)

- Water is cleaned more efficiently using a UV lamp before filtering it.
- The bio filter works especially strong due to its big filters and the multi-chamber system and has an easy installing and cleaning thanks to its modular structure.
- The special water flow design that guides the water into the filtering chambers reduces the pressure on the filter sponges and additionally lowers the maintenance requirements.
- The optimal design of the filter device enables an easy cleaning.
- Dirt indicator
- Temperature indicator

Commissioning

1. Open the **top cover (1)**, remove the **bio filter sponges (7)**, and wash them.
2. Wash the **filter mat (8)**, too.
3. Place it back into its exact position.
4. Place the filter at least 2 m away from the pond edge, on a solid surface if a UV lamp is in use. The filter must stand horizontally to prevent any overflow happening.
5. The outlet hose of the water cycle needs to be placed into the pond and the hose for the polluted water to run away from should be placed into a sewage drain or into a flower bed with a slope for the water to run off.
6. Saw the **stepped hose adapter (20)** to the required diameter.
7. Then place the hose onto the **stepped hose adapter (20)** and secure it with a hose clasp.
8. Place a **gasket (19)** on the thread of the **stepped hose adapter (20)**. Then push the thread of the **stepped hose adapter (20)** through the water outlet, and place another **gasket (19)** onto the thread and screw the **outlet nozzle (18)** onto the thread.
9. Connect the other end of the hose with the pump.
10. For normal filter operation, leave the **sealing cover (17)** closed with a **gasket (15)**. If you wish to install a 2-inch hose permanently, remove the sealing cover and install the hose.
11. Install the top cover.
12. Connect the pump to electricity. The filter will start working then.

**Note:**

A bio filter is a biological filter system and needs, if newly installed, some weeks until it reaches its full biological efficiency.

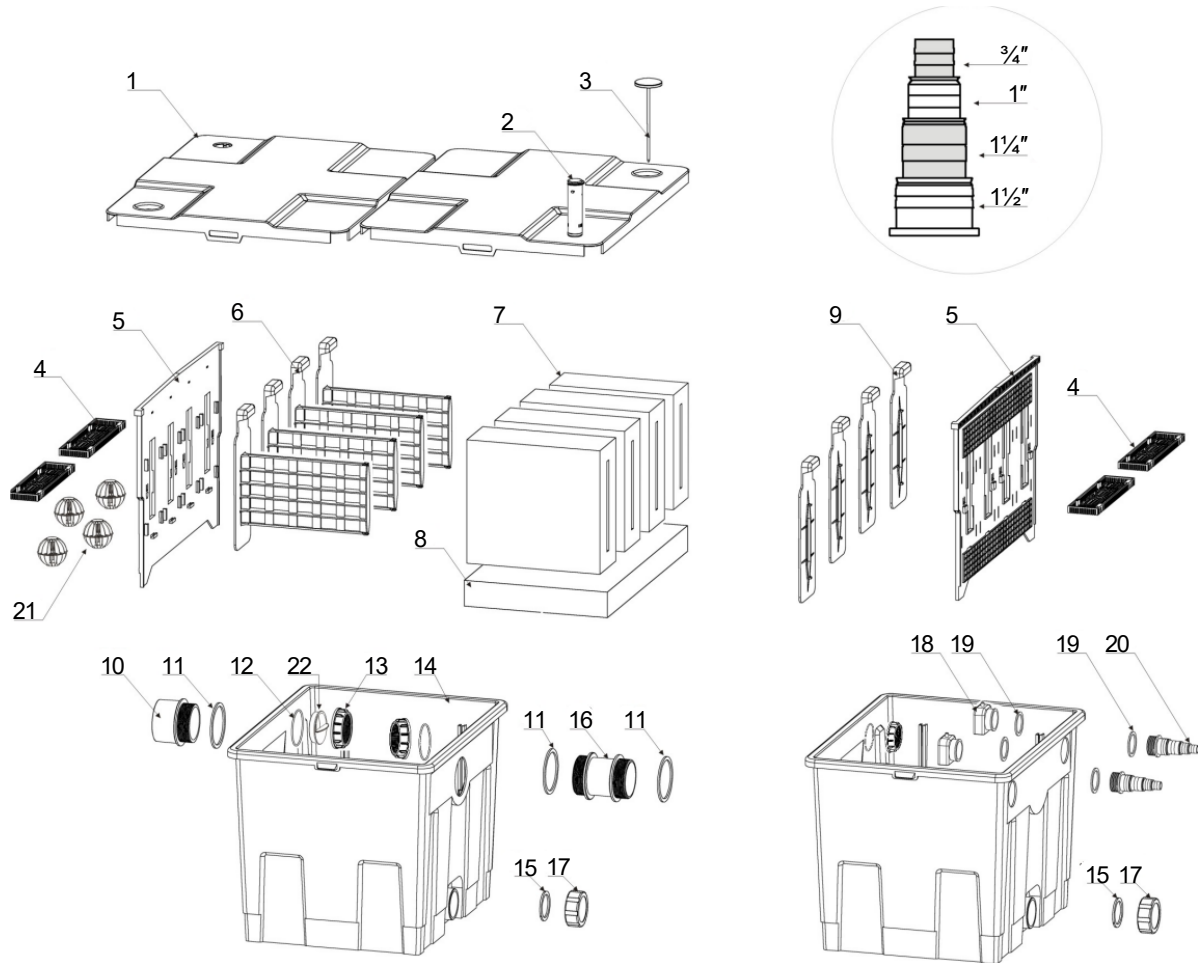
Cleaning and maintenance**Attention! Before carrying out cleaning or maintenance work always disconnect the device!**

The device should be cleaned only if required – see the amount of pollution via the **dirt indicator (2)**. Chemical cleaning agents must not be used because the bacteria in the filter sponge can be destroyed. As soon as the float of the dirt indicator is visible, disconnect the device and open the head cover. Remove the filter sponges from the **frame holder (6)**. Press the filter sponges carefully together several times against their **frame (6/9)**. If necessary, rinse the filter sponges with clean tap water. Open the cover of the dirt outlet till the water has completely drained off.

The device may not when temperatures reach values below 8 °C or above 40 °C! In this case, empty the device and carry out an effective cleaning. Remove all filter materials to dry them. In winter, keep the filter materials in a dry place, where according parts will not rust. Cover the filter housing so that no rain water can reach it. Empty all hoses, pipes, and connections, if possible.

When starting up again, reinstall the filter with the open side facing the exit.

Explosion view and parts list



No	Name	No	Name
1	Top cover	11	Outlet O-ring
2	Water level/dirt indicator	12	Outlet O-ring
3	Thermometer	13	Screw cap
4	Water guide	14	Housing
5	Frame holder	15	Gasket
6	Sponge frames	16	Connection piece
7	Fine and coarse sponges	17	Sealing cover
8	Filter mat	18	Oxygen feed/outlet nozzle
9	Sponge frames	19	Inlet O-ring
10	Outlet	20	Stepped hose adapter

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