# Instruction manual

# SunSun CPA Pressure Pond Filter

**51627–51633**

Illustration similar, may vary depending on model

Please read and follow the operating instructions and safety information prior to initial operation.

Technical changes reserved!
Illustrations, functional steps, and technical data may deviate insignificantly due to continuous further developments.



Our postal address is:

WilTec Wildanger Technik GmbH
Königsbenden 12
52249 Eschweiler Germany

To return your goods for exchange, repair, or other purposes, please use the following address. Attention! To allow for a trouble-free complaint or return, it is important to contact our customer service team before returning your goods.

Retourenabteilung
WilTec Wildanger Technik GmbH
Königsbenden 28
52249 Eschweiler Germany

E-mail: **service@wiltec.info**
Phone: +49 2403 55592–0
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## Introduction

Thank you for choosing to purchase this quality product. To minimise the risk of injury, we ask you to always take some basic safety precautions when using this product. Please read this operating manual carefully and make sure that you understand it.
Keep these operation instructions in a safe place.

## Safety instructions

**Caution!**
In and near standing water, garden ponds, and swimming ponds, the use of this device is only allowed with a fault current protection switch with a triggering nominal current up to 30 mA (according to VDE 0100 Article 702 and 738).

The device is not suitable for use in swimming pools, paddling pools of any kind or waters in which people or animals may stay during operation. Operation of the device with people being in the danger area is not permitted. If you have doubts or questions concerning the operation, contact an electrician.

The device is not intended for use by persons (including children) with impaired or limited physical, sensory, and mental abilities or lack of experience and/or real knowledge, unless they are supervised by a person responsible for their safety or follow the instructions made by this person on how to correctly use the device. Children should be supervised to ensure that they do not play with the device.

**Attention!**

- Perform a visual inspection of the device before every use. Do not use the device if the safety appliances are damaged or worn out. Never override safety regulations.
- Only use the device accordingly to the intended purpose stated in this manual.
- You are responsible for the safety of the working zone.
- If the cable or the plug is damaged due to external influences, the cable must not be repaired, but must be replaced with a new one. This work can only be carried out by an electrician.
- The voltage of 230 V AC indicated on the nameplate of the device must match the existent mains voltage.
- Never lift, carry, or fix the device by using the power cable.
- Make sure that the electrical plug connection is protected from flood and moisture.
- Pull out the plug before maintaining.
- Avoid exposing the device to direct jets of water.
- The user is responsible for complying with local safety and mounting regulations. If necessary, ask a qualified electrician.
- The user must take appropriate measures (e.g., installation of an alarm system, a reserve pump, etc.) to prevent damage caused by the flooding in case of device malfunctioning.
- In case of device failure, repairs can only be carried out by an electrician.
- The device must never run dry or be operated with its suction line fully closed. The manufacturer's warranty is void for damage to the device caused by dry running.
- Do not use this device to operate swimming pools.
- This device must not be integrated into any kind of domestic water circuit meant for potable water.
- The device must always be installed out of the water.
- The minimum distance between the device and the pond is 2 m.
- It must be ensured that the device cannot fall into the water.
- Install the device so that it is not exposed to direct sunlight.
- The device is to be mounted horizontally on an appropriate mounting spot using screws.
- The universal-hose stepped tails can be shortened according to the hose diameter if necessary.
- Attach hoses with hose clamps.

- Although ultraviolet radiation is the lowest in energy of all types of ionising radiation, it can be harmful to human beings and other organisms. Even UV radiation with a bigger wavelength is already able to destroy chemical bonds of organic molecules. It is therefore advisable to use technical UV sources responsibly.
- Only operate the tube inside a closed and intact housing.

**Warning!**
**Read all safety precautions and instructions.** Failure to obey the safety precautions and instructions might cause an electric shock, a fire, and/or severe injuries.
Keep all safety precautions and instructions for future use.

### Resistance

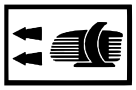
- The maximum temperature of the pumped liquid should not exceed +35 °C in continuous operation.
- The pump must not be used to pump flammable, gassing, or explosive liquids. The pump must not be used to pump other liquids, especially motor fuels, cleaning agent, or other chemical products.

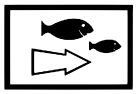
### Electrical connection

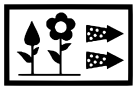
The electrical connection is made to an earthed socket 230 V ~ 50 Hz. Fuse protection at least 6 A.

**Caution!**
- The UVC filter should be placed in such a way that no water may reach it. The minimum distance between the device and the pond is 2 m. The lamp is not suitable of underwater operation.
- The power supply of the UVC filter must not be switched on before water circulates inside the device.
- Place the UVC filter in a safe and stable place, as the sleeve of the filter is made of very fragile quartz glass.
- Do not switch on the power before all parts of the device are completely assembled.
- In case the quartz glass sleeve and the upper part of the UVC filter are damaged, the device cannot be put into operation.
- The UVC filter must not be used if people are in the water.
- Make sure that the existing mains voltage and frequency match the specifications on the filter.
- While installing the device, local and national installation prescriptions must be obeyed.
- Do not pull on the power cord. Keep the cable away from heat, oil, or sharp edges.
- Make sure that the upper part is only exposed to a pressure below 0.3 bar.
- Remove the filter with frost announced.
- When installing the UV filter, do not expose it to direct sunlight.
- A dirty quartz crystal glass tube affects the efficiency of the device; thus, regularly clean it.
- For the device to keep its efficiency, the UV glass sleeve should be replaced after 8,000 hours of operation.
- UV radiation is harmful to eyes and skin. Do not directly look into the UV light and do not expose your skin to UV light.
- When installing or maintaining the device, switch off the power supply of the lamp and pump.
- The product must be mounted horizontally, the feet pointing downwards. For safety reasons, it is not allowed to install the device in another way.

## Symbols


Water inlet from pump to filter

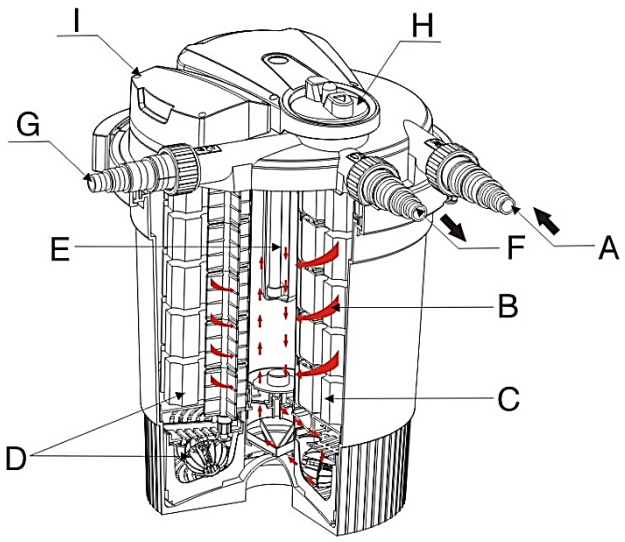

Water outlet from filter to pond


Cleaning outlet from filter to sewers or flowerbed

## Use

- The pressure pond filter with integrated UV clarifier is a pressure filter system for biologically and mechanically filtering normal pond water with a temperature between +4 °C and 35 °C. This pressure pond filter is only intended for private use for cleaning garden ponds with or without fish.
- Only water may be filtered!

## Working principle



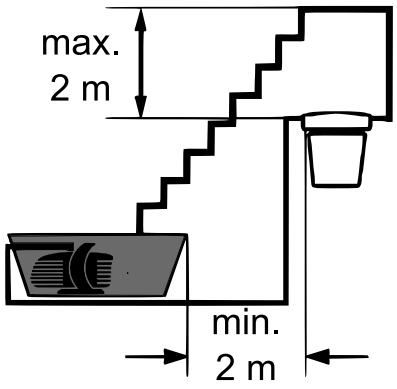

| | |
|---|---|
| **A** | **Inlet**<br>The pump is connected to the inlet via a pressure hose. |
| **B** | **Vortex system**<br>Gravity is used to separate suspended and muddy particles. |
| **C** | **Mechanical filtering**<br>Dirt particles are absorbed at the surface of the filter sponges before the water reaches the inner part of the filter. |
| **D** | **Biological cleaning**<br>Microorganisms settle on the pores of the filter sponges. The blue and yellow filter sponges are different in size and density. Therefore, zones form where the rapidity of the water flow is different. In high-speed zones (blue filters), microorganisms settle that convert ammonium into nitrate. In zones where the water flow rate is slower (yellow filters), mainly anaerobic microorganisms gather that convert nitrate into nitrogen. |

| | |
|---|---|
| **E** | **Cleaning the pond water**<br>When outflowing, the water is shortly exposed to ultraviolets rays emitted by the UV lamp. Thus, germs, bacteria, and algae are eliminated. The water circulation in the filter is from outward inwards. |
| **F** | **Water backflow**<br>The cleaned water flows back into the pond through a pressure hose. |
| **G** | **Cleaning outlet**<br>For the filter to be cleaned, a drain hose can be connected that directs the dirty water to the sewers or a flowerbed. |
| **H** | **Functional switch**<br>With the help of the functional switch, you can switch from “filter” to “clean” mode. |
| **I** | **Motor**<br>The motor drives the automatic cleaning mode. |

**Definition:** *Clear water*

We speak of clear water when you see the fish and pond bottom at a depth of 1 m.

**Installing the filter**




1. Install the filter so that it is protected against flooding and cannot fall into the pond. It should therefore be placed at a minimum distance of 2 m from the pond.
2. Dig a hole near the pond and appropriately fix the filter.
3. Make sure that the cover of the filter can be opened.
4. With a lifting height of more than 1 m being required, you should perhaps use a more powerful pump.

**Hose connection**

We recommend that you heat up the hose with warm water before attaching it to the stepped hose tail and fixing it with a hose clamp; thus, it cannot come off.

- Use a hose with the largest possible diameter.
- With hoses longer than 4 m, it is advisable to use a hose tail with the largest possible diameter.
- To minimise pressure losses, cut off the parts of the stepped hose tail that you do not need.

**Cleaning outlet**

You can direct the dirty water directly to the sewers or a flowerbed.

## Operating the pressure filter

Before operating the pressure filter, always check gaskets, connections, and clamps for correct assembly. Adjust the switch to the “filter” position. Do not fail to familiarise yourself with the safety regulations before commissioning.

- Switch on the pump.
  **Attention!** Never operate the UV lamp without water flowing past it.
- Check the connections for possible leaks.
- Connect the device to the power supply.
- The filter system with integrated UV lamp must operate 24/7.
- Replace the UV lamp after 8,000 hours of operation in order that the device keeps its highest efficiency.
- The filter sponge must regularly be cleaned.
  **Attention!** After reinstallation, the pressure filter will reach its full biological cleaning efficiency after a few weeks. The bacteria can only work at best at a temperature of +10 °C.

## Cleaning the filter sponges

Suspended and dirt particles collect in the filter sponges. These accumulations reduce the efficiency of the filter; thus, the filter sponges need to be cleaned regularly, e.g., every week.

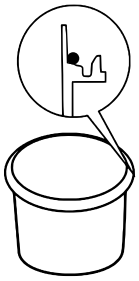
Furthermore, the filter sponges should be cleaned whenever the water is muddy or dirty (whenever the red control lamp blinks).

1 Clockwise adjust the switch to the “clean” position.
2 The filter will automatically switch to cleaning mode.
3 The filter is rinsed. As soon as clear water flows through the transparent stepped hose tail, counter-clockwise turn the switch to the “filter” position.
4 The filter is now operational again. Check the water flow towards the pond.

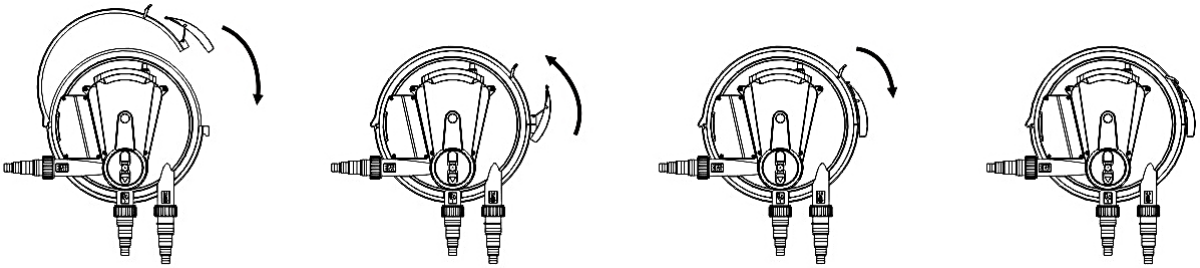
## Replacing the filter sponges

If the water flow is too low due to dirty filter sponges and cannot be improved by automatic cleaning, the filter sponges must be cleaned or replaced.

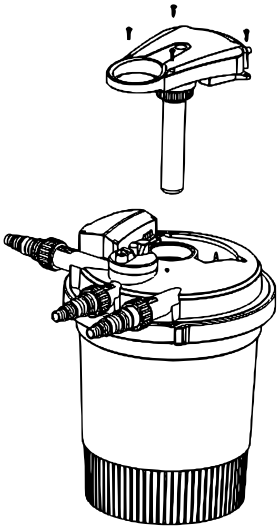
Do not use any chemical cleaning agents for not to destroy the microorganisms settled in the filter sponges.



1. Pull out the plug of the filter.
2. Switch off the pump, making sure that it cannot unintentionally be switched on again. Remove all hoses by unscrewing and removing the connecting nuts.
3. Remove the protective cover and open the clamp.
4. Remove the lid and place it upside down on a clean surface.
5. Turn the inlet connection counter-clockwise and unscrew the screws.
6. Replace the filter sponges.
7. Remove the filter sponges, clean them under running water. Wring them out well!
8. Clean the container, filter sponges, O-ring 3, and container edge with the help of a hosepipe.
9. Place the sponge on a separate surface and fix the tube inlet.
10. Replace O-ring 3 on the upper container edge (wetting it beforehand). Press the lid down.
11. Fix the clamp to the correct spot, push the safety latch forward.
12. Attach all hoses with gaskets to the appropriate connections points and tighten the connecting nuts.
13. Switch on the pressure filter.



**Cleaning the quartz glass sleeve and replacing the UV lamp**



1. Unscrew the 4 screws on the lid.
2. Remove the UV unit and clean the quartz glass sleeve with a damp cloth.
3. Remove the screw on the quartz glass sleeve.
4. Replace the UV lamp.
5. Check the quartz glass sleeve for cracks.
6. Place the filter, switch on the device.

**Troubleshooting**

| Problem | Possible cause | Proposed solution |
|---|---|---|
| **Muddy water** | The device has not been used for long. | Full biological cleaning efficiency will be reached after a few weeks. |
| | Insufficient pump power | Switch off pump, then switch it on. |
| | Extremely dirty water | Remove algae and leaves from pond or change water. |
| | Too much fish | Guideline: approx. 1 kg fish to 1000 m³ pond water. |
| | Dirty filter sponges | Clean filter sponges. |
| | Dirty quartz glass sleeve | Clean quartz glass sleeve. |
| **UV lamp does not work** | Main plug of UV filter not plugged in | Plug in power plug. |
| | Damaged UV lamp | Replace UV lamp. |
| | Bad connection | Check electrical connections. |
| | Filter overheated | UV lamp is switched on again after cooling down. |
| **No water discharge** | Switch in “clean” position | Adjust switch to “filter” position. |
| | Main plug of pump not plugged in | Plug in power plug of pump. |
| | Pond inlet blocked | Clean pond inlet. |

## Exploded views and parts lists

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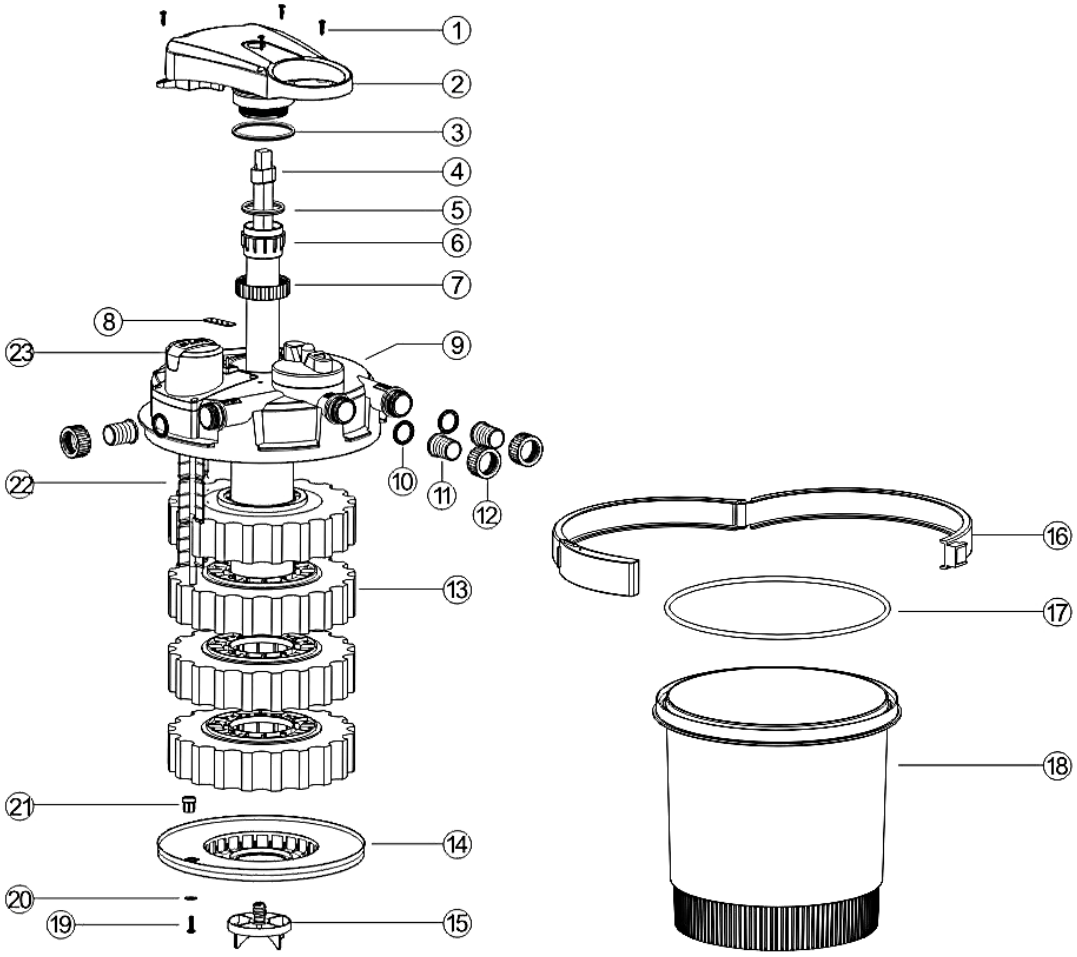


| № | Name | № | Name | № | Name |
|---|---|---|---|---|---|
| 1 | Screw 1 | 9 | Lid | 17 | O-ring 3 |
| 2 | UV unit | 10 | Gasket | 18 | Container |
| 3 | O-ring 1 | 11 | Inlet and outlet | 19 | Screw 2 |
| 4 | UV lamp | 12 | Connecting nut for inlet and outlet | 20 | Washer |
| 5 | O-ring 2 | 13 | Filter sponge | 21 | Bearing |
| 6 | Quartz glass sleeve set | 14 | Filter sponge inset | 22 | Cleaning set |
| 7 | Cap nut | 15 | Filter-holder | 23 | Motor |
| 8 | Rubber seal | 16 | Threaded ring | | |

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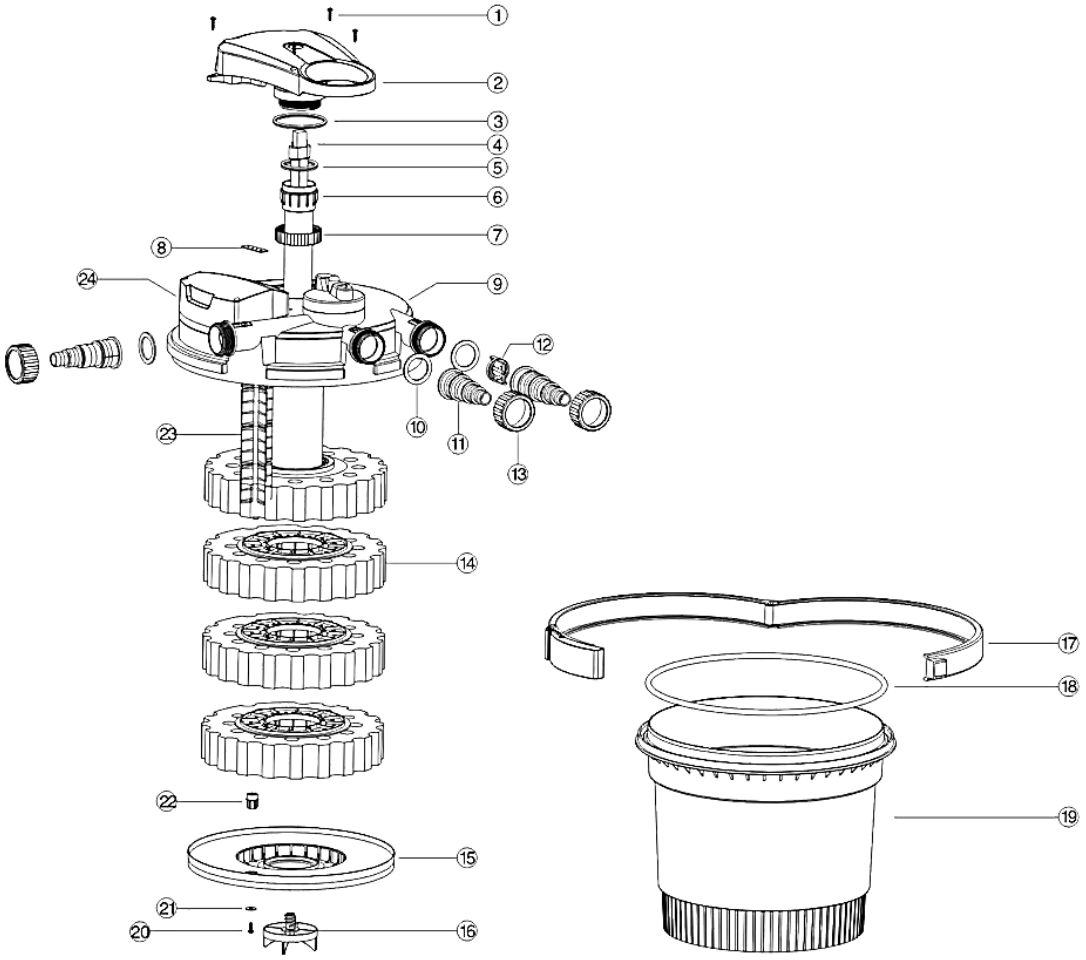


| № | Name | № | Name | № | Name |
|---|---|---|---|---|---|
| 1 | Screw 1 | 9 | Lid | 17 | Threaded ring |
| 2 | UV unit | 10 | Gasket | 18 | O-ring 3 |
| 3 | O-ring 1 | 11 | Inlet and outlet | 19 | Container |
| 4 | UV lamp | 12 | Flow ring (for transparent set) | 20 | Screw 2 |
| 5 | O-ring 2 | 13 | Connecting nut for inlet and outlet | 21 | Washer |
| 6 | Quartz glass sleeve set | 14 | Filter sponge | 22 | Bearing |
| 7 | Cap nut | 15 | Filter sponge inset | 23 | Cleaning set |
| 8 | Rubber seal | 16 | Filter-holder | 24 | Motor |

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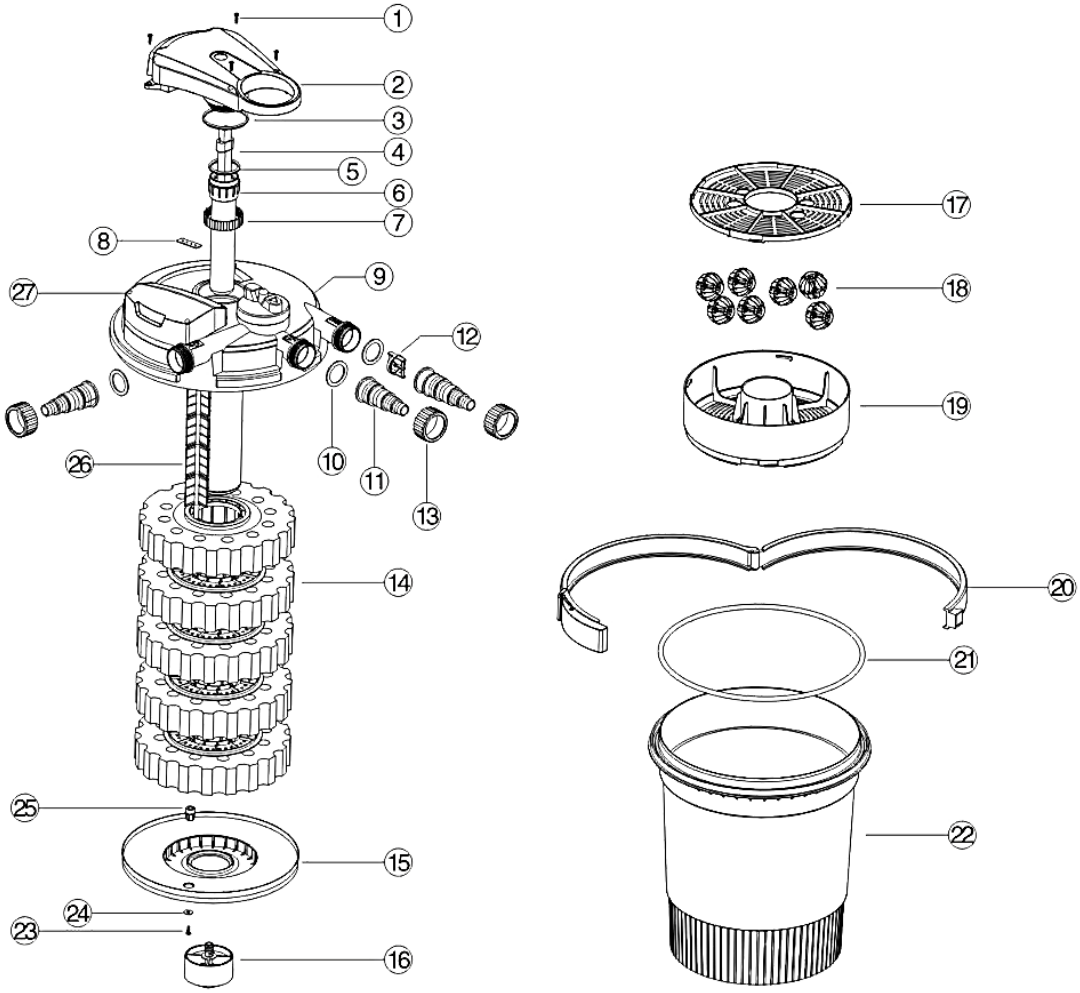


| № | Name | № | Name | № | Name |
|---|---|---|---|---|---|
| 1 | Screw 1 | 10 | Gasket | 19 | Filter basket |
| 2 | UV unit | 11 | Inlet and outlet | 20 | Threaded ring |
| 3 | O-ring 1 | 12 | Flow ring (for transparent set) | 21 | O-ring 3 |
| 4 | UV lamp | 13 | Connecting nut for inlet and outlet | 22 | Container |
| 5 | O-ring 2 | 14 | Filter sponge | 23 | Screw 2 |
| 6 | Quartz glass sleeve set | 15 | Filter sponge inset | 24 | Sealing ring |
| 7 | Cap nut | 16 | Filter-holder | 25 | Bearing |
| 8 | Rubber seal | 17 | Cover of filter basket | 26 | Cleaning set |
| 9 | Lid | 18 | Bio balls | 27 | Motor |

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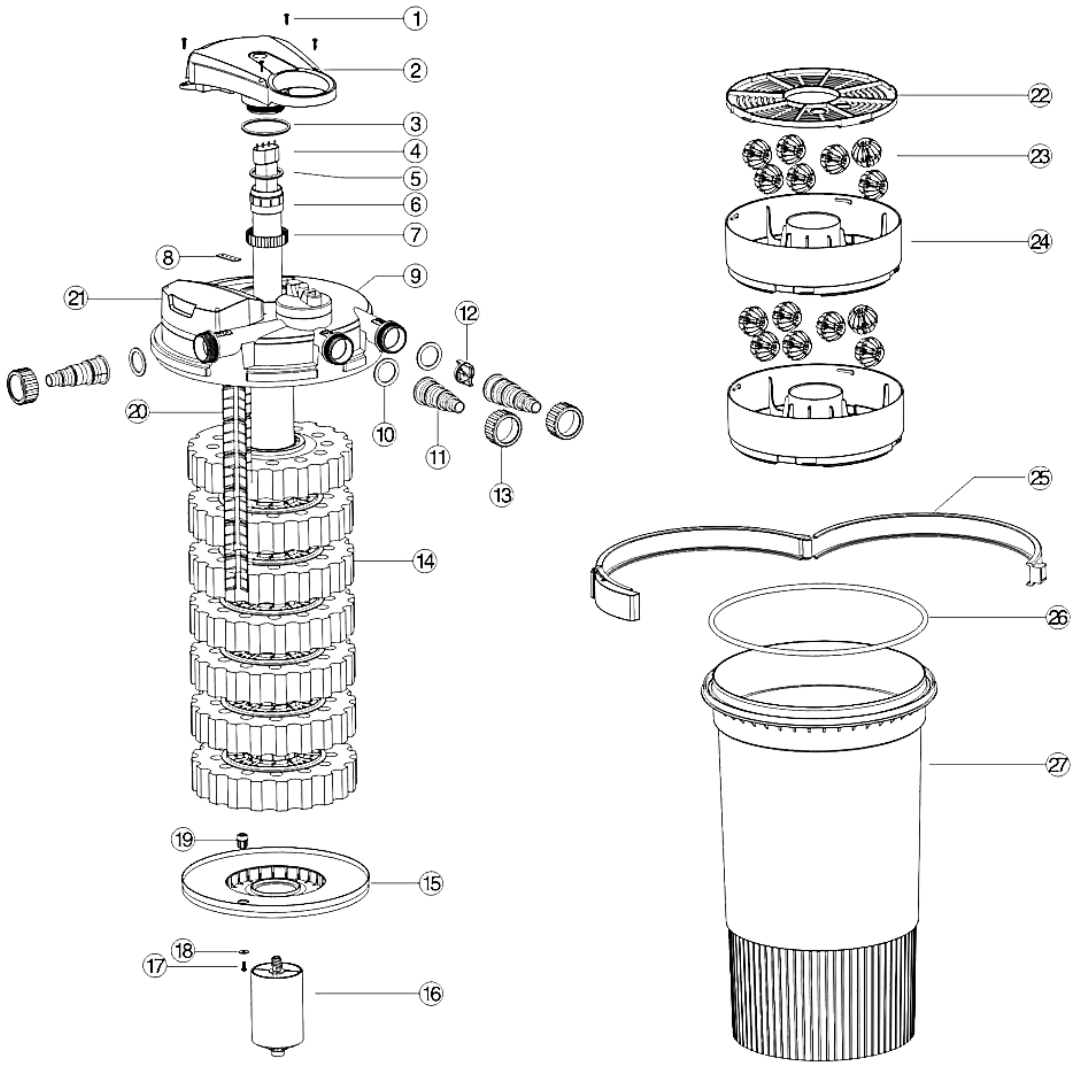


| № | Name | № | Name | № | Name |
|---|---|---|---|---|---|
| 1 | Screw 1 | 10 | Gasket | 19 | Bearing |
| 2 | UV unit | 11 | Inlet and outlet | 20 | Cleaning set |
| 3 | O-ring 1 | 12 | Flow ring (for transparent set) | 21 | Motor |
| 4 | UV lamp | 13 | Connecting nut for inlet and outlet | 22 | Cover of filter basket |
| 5 | O-ring 2 | 14 | Filter sponge | 23 | Bio balls |
| 6 | Quartz glass sleeve set | 15 | Filter sponge inset | 24 | Filter basket |
| 7 | Cap nut | 16 | Drain tube | 25 | Bearing |
| 8 | Rubber seal | 17 | Screw 2 | 26 | Threaded ring |
| 9 | Lid | 18 | Washer | 27 | O-ring 3 |

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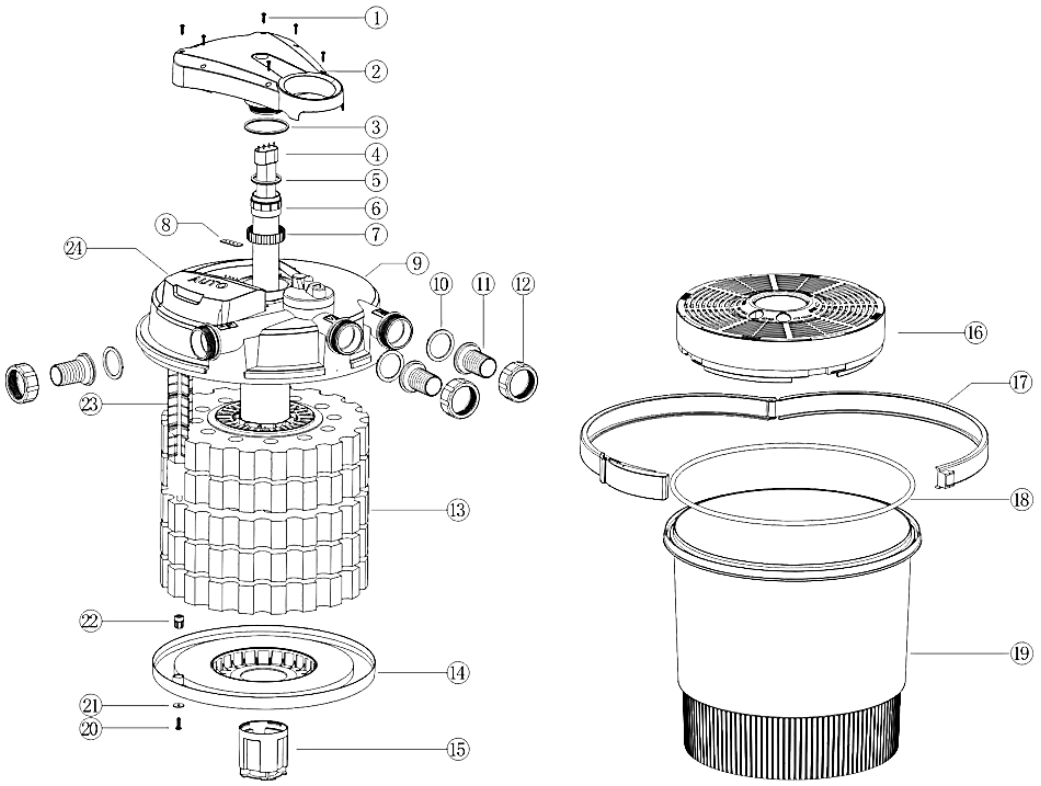


| № | Name | № | Name | № | Name |
|---|---|---|---|---|---|
| **1** | Screw 1 | **9** | Lid | **17** | Threaded ring |
| **2** | UV unit | **10** | Gasket | **18** | O-ring 3 |
| **3** | O-ring 1 | **11** | Inlet and outlet | **19** | Container |
| **4** | UV lamp | **12** | Connecting nut for inlet and outlet | **20** | Screw 2 |
| **5** | O-ring 2 | **13** | Filter sponge | **21** | Washer |
| **6** | Quartz glass sleeve set | **14** | Filter sponge inset | **22** | Bearing |
| **7** | Cap nut | **15** | Drain tube | **23** | Cleaning set |
| **8** | Rubber seal | **16** | Filter basket | **24** | Motor |

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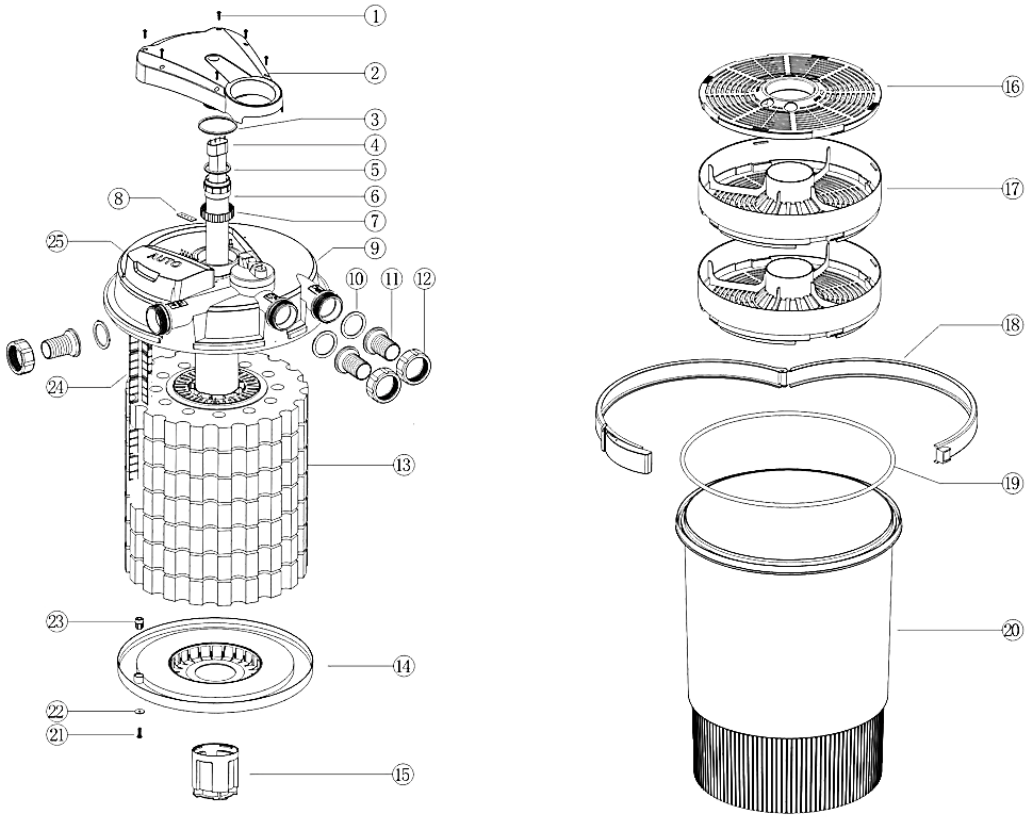


| № | Name | № | Name | № | Name |
|---|---|---|---|---|---|
| 1 | Screw 1 | 10 | Gasket | 19 | O-ring 3 |
| 2 | UV unit | 11 | Inlet and outlet | 20 | Container |
| 3 | O-ring 1 | 12 | Connecting nut for inlet and outlet | 21 | Screw 2 |
| 4 | UV lamp | 13 | Filter sponge | 22 | Washer |
| 5 | O-ring 2 | 14 | Filter sponge inset | 23 | Bearing |
| 6 | Quartz glass sleeve set | 15 | Drain tube | 24 | Cleaning set |
| 7 | Cap nut | 16 | Cover of filter basket | 25 | Motor |
| 8 | Rubber seal | 17 | Filter basket | | |
| 9 | Lid | 18 | Threaded ring | | |

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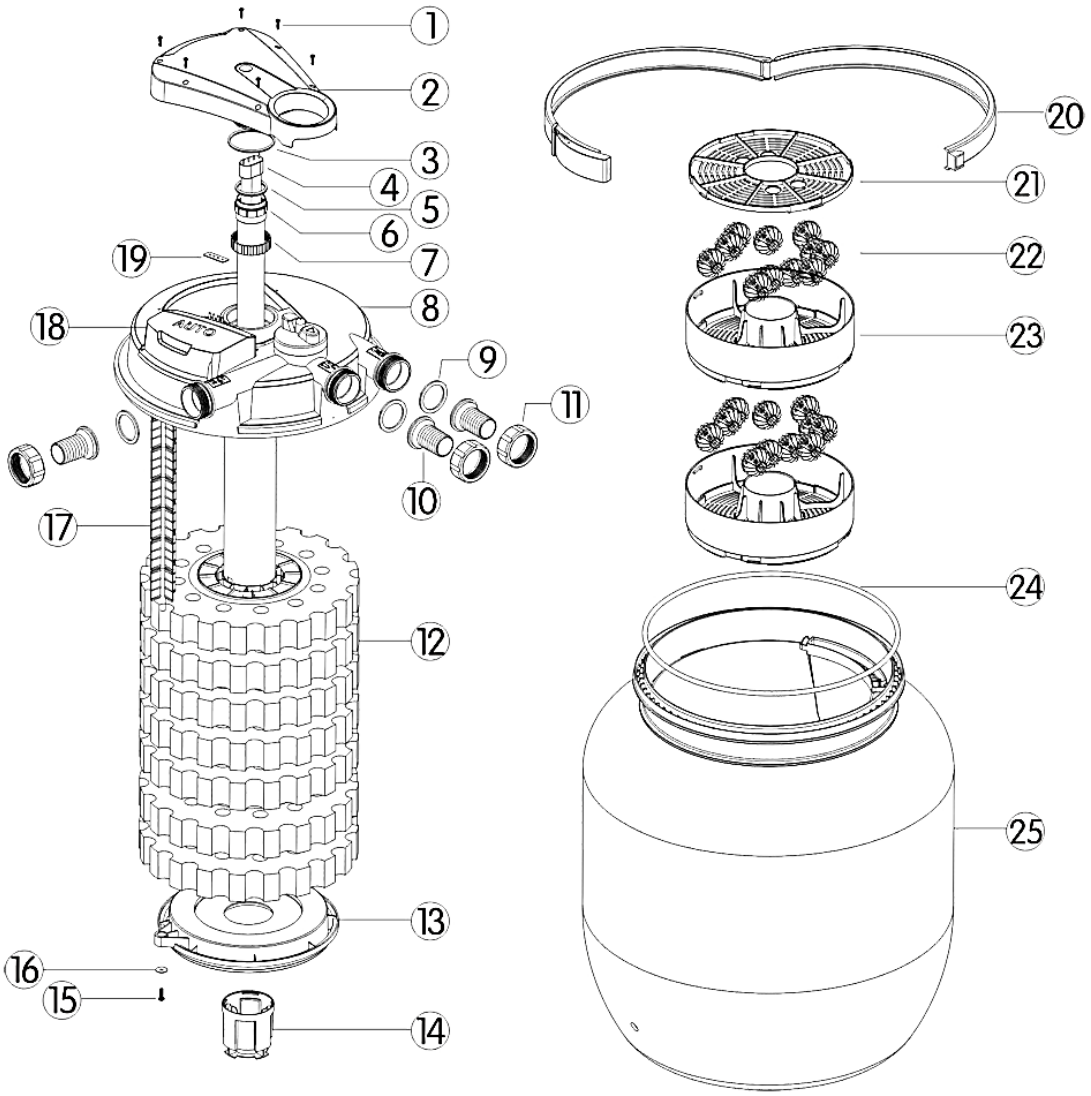


| № | Name | № | Name | № | Name |
|---|---|---|---|---|---|
| 1 | Screw 1 | 10 | Inlet and outlet | 19 | Rubber seal |
| 2 | UV unit | 11 | Connecting nut for inlet and outlet | 20 | Threaded ring |
| 3 | O-ring 1 | 12 | Filter sponge | 21 | Cover of filter basket |
| 4 | UV lamp | 13 | Filter sponge inset | 22 | Bio balls |
| 5 | O-ring 2 | 14 | Drain tube | 23 | Base of filter basket |
| 6 | Quartz glass sleeve set | 15 | Screw 2 | 24 | O-ring |
| 7 | Cap nut | 16 | Washer | 25 | Container |
| 8 | Lid | 17 | Cleaning set | | |
| 9 | Gasket | 18 | Motor | | |

**Technical specifications**

| Model | Item number | UV power (W) | Max. flow rate (l/h) | Inlet and outlet (mm) | Capacity (l) |
|---|---|---|---|---|---|
| **CPA-2500** | **51627** | 11 | 6000 | 19–40 (¾″–1½″) | 16 |
| **CPA-5000** | **51628** | 11 | 9000 | 19–40 (¾″–1½″) | 20 |
| **CPA-10000** | **51629** | 11 | 10,000 | 19–40 (¾″–1½″) | 25 |
| **CPA-15000** | **51630** | 18 | 10,000 | 19–40 (¾″–1½″) | 38 |
| **CPA-20000** | **51631** | 36 | 12,000 | 19–40 (¾″–1½″) | 50 |
| **CPA-30000** | **51632** | 55 | 12,000 | 19–40 (¾″–1½″) | 75 |
| **CPA-50000** | **51633** | 55 | 12,000 | 32 / 38 / 50 (1¼″, 1½″, 2″) | 170 |

**Regulations for waste disposal**

The Waste Electrical and Electronic Equipment Directive (WEEE Directive, 2012/19/EU) of the EU was implemented in the German law related to electrical and electronic equipment and appliances.

All WilTec electric devices that fall under the WEEE directive are labelled with the symbol of a crossed-out wheeled rubbish bin. This symbol indicates that this electric device must not be disposed of with the domestic waste.

WilTec Technik GmbH is registered with the German registration authority EAR (Stiftung Elektro-Altgeräte Register) under the WEEE-registration number DE45283704.

Disposal of used electrical and electronic devices (intended for use in the countries of the European Union and other European countries with a separate waste collection system for these devices).
The symbol on the packaging or the product itself indicates that this product must not be treated as normal domestic waste but must be disposed of at a recycling collection station for electrical and electronic waste.
By disposing of this product correctly, you contribute to the protection of the environment and the health of your fellow people. Inappropriate disposal threatens the environment and health.


Material recycling helps to reduce the consumption of raw materials.

Additional information about the recycling of this product can be provided by your local commune, the municipal waste disposal facilities, or the store where you purchased the product.

Address:
WilTec Wildanger Technik GmbH
Königsbenden 12 / 28
52249 Eschweiler Germany

Important Note: