

Operation Manual

UV Filter CUV-111, CUV-136, CUV-155, CUV-172, CUV-209, CUV-218, CUV-224, CUV-236, CUV-272, CUV-318, CUV-324, CUV-336, CUV-6110, CUV-618, CUV-624, CUV-636, CUV-655, CUV-672

50100, 50101, 50102, 50103, 50104, 50110, 50111, 50112, 50178, 50179, 50184, 50185, 50186, 50187, 50188, 50189, 50191, 50198



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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Even though, the WilTec Wildanger Technik GmbH has undergone biggest possible efforts to ensure that the operating manual is complete, faultless, and up to date, mistakes cannot be entirely avoided.

If you should find a mistake or wish to make a suggestion for improvement, we look forward to hearing from you.

Send an e-mail to:

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

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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.

Safety instructions

BEWARE:

In accordance with VDE 0100 Part 702 and 738, this device must not be used in the vicinity of bodies of standing water, garden ponds or swimming ponds unless it has been equipped with a fault current circuit breaker with a nominal current of up to a maximum of 30 mA.

This device is meant to create a healthy pond environment by killing harmful bacteria and disintegrating algae. It is not suitable for the use in swimming pools and paddling pools of any kind or any other body of water, in which people might be present during the duration of application. It is prohibited to operate the device while people are within the hazard area. Be aware that exposure to small doses of UV radiation can already be harmful. Contact a qualified electrician for further information.

This device can only be used by individuals with reduced physical, sensory, or mental capabilities, or lack of experience and/or knowledge if they have received instructions concerning the use of the appliance from and are being supervised by a person familiar with the product and responsible for their safety. Children are not allowed to operate the device and should be always supervised to ensure that they do not play with it.

Make sure to carefully read the information and instructions of the manual present and to always abide by them when installing or using the device. Non-compliance can damage the device as well as its surroundings and may lead to severe injuries and possibly even death due to fire or electric shock. Securely store this instruction manual along with the device for it to be always available.

ATTENTION:

- Only use the device according to the intended purpose stated in this instruction manual. This device is not intended for industrial and professional use and should never be used for any task aside from clearing murky water.
- The user is responsible for ensuring that the installation and use of the device occur in correspondence to the local laws and safety regulations. The instructions found in this instruction manual do not override local laws and regulations and instead complement them.
- Users are responsible for the safety of their working area.
- Run a visual inspection of the device before every use and do not use the device, if any of its parts are damaged or show signs of wear. Never overrule safety appliances or safety regulations.
- Only use the device, if it is in pristine condition. UV-radiation is potentially dangerous and must be handled responsibly. Do not look straight into the UV light and make sure not to expose skin to it.
- Do not pull at the power cord or use it to lift, carry or fix the device. Further ensure that the power cord is not being pinched and keep it away from heat and sharp edges.
- Do not use the device, if its cable or plug are damaged or show signs of wear. A damaged cable must not be repaired and instead needs to be replaced by a qualified electrician before the device can be used again.
- Always ensure that the device has been properly turned off and disconnected from its power supply before performing any kind of cleaning, repairs, or maintenance work.
- The device must not be used, if people are either inside or in contact with the water.



- Always make sure that the voltage of the mains supply corresponds to the 230 V AC stated on the nameplate of the device. The device should always be connected to an isolated ground receptacle of 230 V ~ 50 Hz with a minimum fuse protection of 10 A.
- Consequential damage arising from flooded rooms caused by a dysfunction of the device must be avoided by taking appropriate measures, such as the installation of an alarm system or a reserve pump.
- Only qualified electricians are allowed to perform repairs and in-depth maintenance work on the device.
- Do under no circumstances allow the device to run dry and do not operate while the suction line is completely closed. Letting the device run dry or operating it with a fully closed suction line causes severe damage to the device and might even lead to damage of the surrounding area.
- The device must not be inserted into the drinking water supply.
- Ensure to clean the quartz glass on a regular basis as its cleanliness greatly affects its performance.
- To ensure the efficiency of the device, the UV lamp should be replaced after about 8,000 hours of use.
- Ensure to remove the UV filter upon the prediction of freezing temperatures and safely store it indoors to prevent the device from sustaining damage. Make thereby sure that it always remains unavailable to children.
- Do not connect the device to the mains supply before it has been completely assembled.
- Make sure that the power plug is placed in a flood-proof area and is protected from moisture.
- The device must not be activated before the water circulation has been started.
- Avoid exposure of the filter to direct jets of water or rain.
- Make sure that the device is not exposed to a pressure exceeding 0.3 bar.
- Do not install the device within water bodies and always ensure that there is at least a distance of 2 m between the water body and the device. This device cannot be operated under water.
- Always ensure that the device is positioned in a way that prevents it from possibly falling into the water.
- Make sure to install the device at an even and secure installation site with the help of screws as its light source is made from quartz glass and therefore highly fragile. The device has thereby to be set up in a horizontal position with its feet on the ground and should not be exposed to direct sunlight. Other installation positions are prohibited for safety reasons.
- When setting up the device, make sure to shorten the hose nozzle according to the size of the hose.
- The device was designed to operate with water and must not be used with flammable or explosive liquids, fuel, detergents, or other chemical substances. The water should thereby not exceed a temperature of +35 °C during continuous operation.

Areas of application and features

This UV filter ensures clear water as well as healthy fish. The system operates by pumping water through the UV unit and past the UV lamp, exposing it to the UV radiation and thereby destroying flowing algae, bacteria, and other pathogens. This process turns murky water into clear water.

- **Only concerns series 1 (111, 155, 172 and as an exception 209):** The electrical ballast located within the electric supply line must not be placed inside the water and should either be placed in a dry place or wrapped into a waterproof encasement.
- **Only concerns series 2 (218, 224, 236, 272):** The integrated helix ensures a longer conduction of the flow and thereby improves the results of the water purification process as a longer exposure to the UV radiation is guaranteed.
- **Only concerns series 3 (318, 324, 336):** Within the casing of the CUV-300 series, SunSun has installed an ingenious system that moves the water in a circular motion without relying on a helix difficult to clean. It is additionally equipped with a mirror made of stainless steel which improves the UV light efficiency by reflecting the radiation that has previously not been absorbed by the water and thereby increasing the duration of exposure.

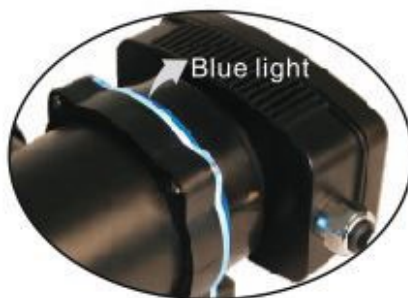
- **Only concerns series 6 (618, 624, 636, 655, 672, 610):** Just like the CUV-300 series, the housing of the CUV-600 series also has an ingenious water flow that sets the water in a rotating motion with the help of the water flow, without installing a helix that is difficult to clean. At the same time, SunSun has installed a stainless-steel mirror that ensures that the UV light is reflected. Light that has not been absorbed directly is reflected in the pond water and can operate again there. This more than doubles the contact time of the water to be clarified with the UVC radiation and the intensity of the clarification. Two large ferrite magnets were built into the housing to effectively magnetise the pond water.

Getting started

Use hoses to connect the inlet of the device to the outlet of the pump and the outlet of the device to the inlet of the filter. Make thereby sure that the hoses are properly connected and securely fix them by using hose clamps. Next, attach the sight glass to the UV filter and close potentially unused connections with a dummy plug. Turn the pump on and wait for the device to be filled with water in order to make sure that all connections are leakproof. Once proper connections have been confirmed, turn the UV filter on by connecting its plug to the mains supply.



- This UV filter can only operate irreproachably, if its chassis is intact. Additionally, it should be placed at least 2 m away from any water body to avoid accidents and possible damage to the device. The device must not be operated if it shows signs of damage or wear.
- It is advised to use hoses capable of withstanding a pressure of at least 1.0 bar.
- Make sure to cut the hose spout in correspondence to the diameter of the hose to guarantee an unobstructed flow of water.
- **Warning:** Always turn the pump on before starting the UV filter. The device must not be used if its body is not filled with water as water acts as a coolant for the device.
- The UV filter will begin to operate immediately after its power cord has been connected to the mains supply. Its operation is indicated by the visibility of blue light as seen in the picture below.



- The device must be turned off immediately, if there is no water being pumped through it.
- **Warning:** This device emits a harmful radiation! Direct exposure of skin or eyes might lead to severe injuries and must be avoided.
- The device must not be used, if it has been damaged in any way.
- In case of freezing temperatures, the device must be removed from the pond and stored in a secure, dry and warm place.

Technical specifications

Model (item number)	Power (W)	Cable length (m)	Voltage and frequency (V / Hz)	Flow rate (l/h)	Dimensions inlet/outlet (mm)
CUV-209 (50111)	9	5	230 / 50	1700	20/25/32/40
CUV-111 (50110)	11			2500	19/25/32/40
CUV-118/218 (50112)	18			4500	
CUV-224 (50101)	24			4500/6000	
CUV-136/236 (50178/ 50102)	36			5000	
CUV-155 (50100)	55			6000	
CUV-172/272 (50103/ 50104)	72	2 × 5		3000	25/33/38/51
CUV-318 (50179)	18	5		5000	
CUV-324 (50184)	24			7000	
CUV-336 (50185)	36			3000	25/33/38
CUV-618 (50186)	18			5000	
CUV-624 (50187)	24			7000	
CUV-636 (50188)	36			8000	



CUV-655 (50189)	55			8000	
CUV-672 (50191)	2 × 36	2 × 5		8000	
CUV-6110 (50198)	2 × 55			1700	

Maintenance and cleaning

It is advised to annually clean the device. The UV lamp should be replaced once a year (after approx. 8,000 hours of usage) as its loss of power amounts to about 50 % per year.

Before performing any kind of cleaning, repair, or maintenance work, make sure to properly disconnect the plug from the mains supply to turn the filter off. Once the UV filter has stopped operating, turn the pump off and ensure that it cannot accidentally be turned on again.

Replacing the UV lamp

The lamp should be replaced after approximately 8,000 hours of use.

CUV-1 series

1. Pull out the power plug.
2. Switch off the pump connected to the clarifier and make sure that it cannot start again accidentally.
3. Carefully unscrew the connection unit counter-clockwise and pull it out of the housing together with the lamp.
4. Remove the fixing clip on the lamp base.
5. Pull the lamp out of the socket.
6. To remove the quartz glass sleeve, carefully pull the transparent plastic ring back until the quartz glass can be removed from the housing. Pay attention to the sealing ring.
7. Check the quartz glass sleeve for damage and clean it with a damp cloth. Vinegar is recommended for cleaning, but it must be rinsed off with clean water afterwards.
8. When reinserting the quartz glass sleeve, ensure that the seal is correctly seated.
9. **ALL** removed seals and O-rings should be cleaned and greased prior to assembly.
10. **IMPORTANT!** Please note that for safety reasons it is not possible to put the connection unit into operation after it has been removed. UV light is harmful. Never look directly into it.

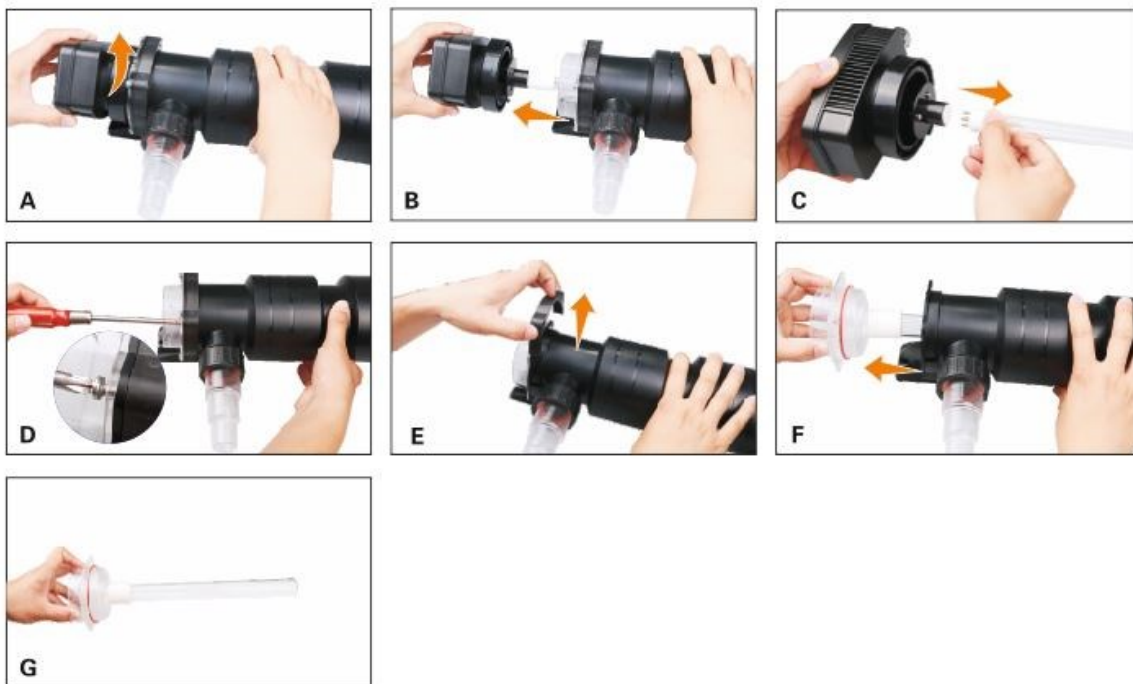
CUV-2 series

1. Pull out the power plug.
2. Switch off the pump connected to the clarifier and make sure that it cannot start again accidentally.
3. Use a flat-blade screwdriver to press down the catch on the top of the device and turn the connection unit $\frac{1}{8}$ turn counter-clockwise until the catch is free.
4. Pull the connection unit out of the housing together with the quartz glass sleeve.
5. Remove the union nut from the quartz glass sleeve.
6. Loosen the sleeve by gently rocking it back and forth.
7. Check the quartz glass sleeve for damage and clean it with a damp cloth. Vinegar is recommended for cleaning, but it must be rinsed off with clean water afterwards.
8. Remove the fixing clip on the lamp base.
9. Pull the lamp out of the socket.
10. Pay attention to the correct positioning of the seals during assembly. Observe the corresponding note on the device.
11. **ALL** removed seals and O-rings should be cleaned and greased prior to assembly.

12. **IMPORTANT!** Please note that for safety reasons it is not possible to put the connection unit into operation after it has been removed. UV light is harmful. Never look directly into it.

CUV-3 series/CUV-6 series/CUV-155

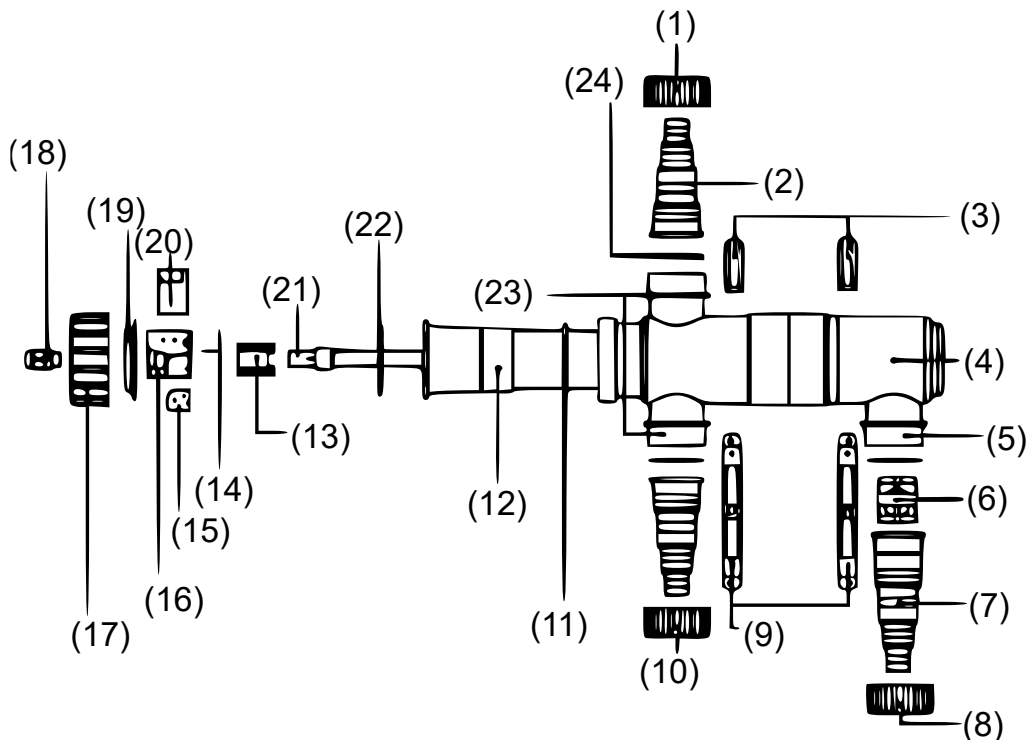
1. Pull out the power plug.
2. Switch off the pump connected to the clarifier and make sure that it cannot start again accidentally.
3. Turn the connection unit about $\frac{1}{8}$ counter-clockwise until the lock is free.
4. Pull the connection unit out of the housing.
5. Remove the fixing clip on the lamp base.
6. Pull the lamp out of the socket.
7. To remove the quartz glass sleeve, loosen the four screws and carefully pull back the transparent plastic ring until the quartz glass can be removed from the housing. Pay attention to the sealing ring!
8. Check the quartz glass sleeve for damage and clean it with a damp cloth. Vinegar is recommended for cleaning, but it must then be rinsed off with clear water.
9. When reinserting the quartz glass sleeve, ensure that the seal is correctly seated.
10. **ALL** removed seals and O-rings should be cleaned and greased prior to assembly.
11. **IMPORTANT!** Please note that for safety reasons it is not possible to put the connection unit into operation after it has been removed. UV light is harmful. Never look directly into it.



After the device has been successfully reassembled, switch on the pump. Wait a moment before switching on the pond clarifier to ensure that all connections are tight and that the inside of the pond clarifier is filled with water.

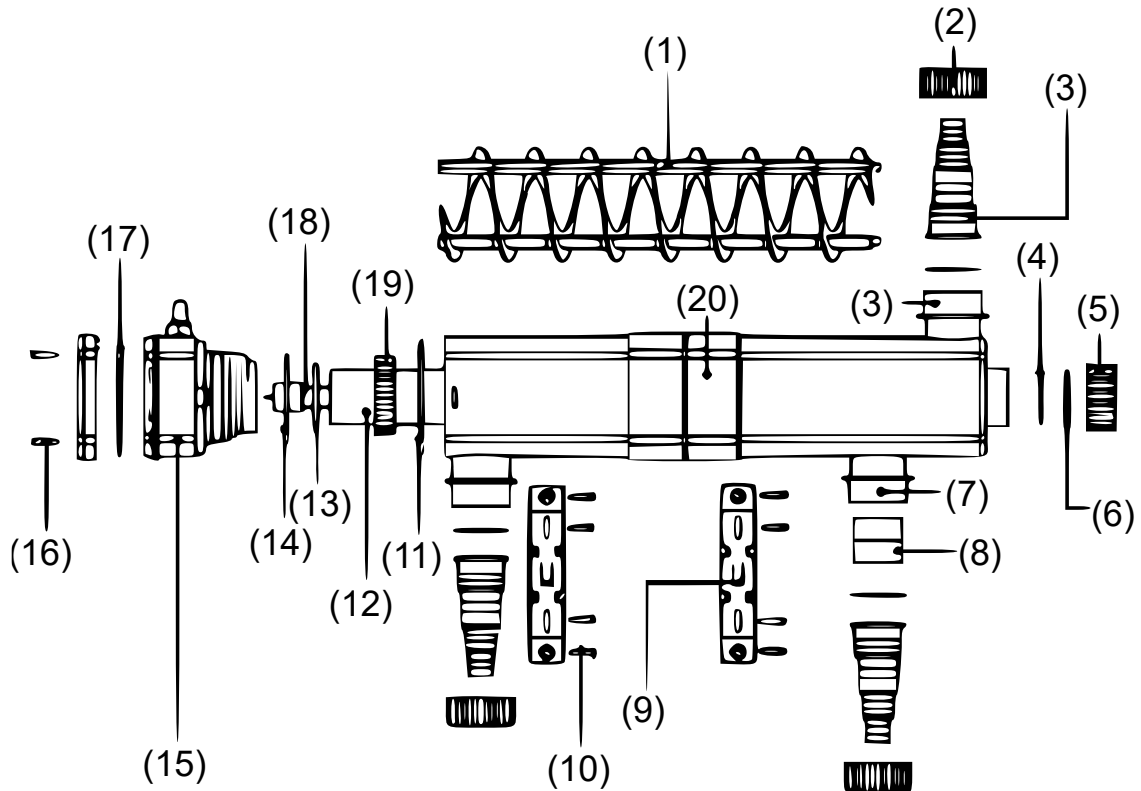
Exploded views

CUV-1 series



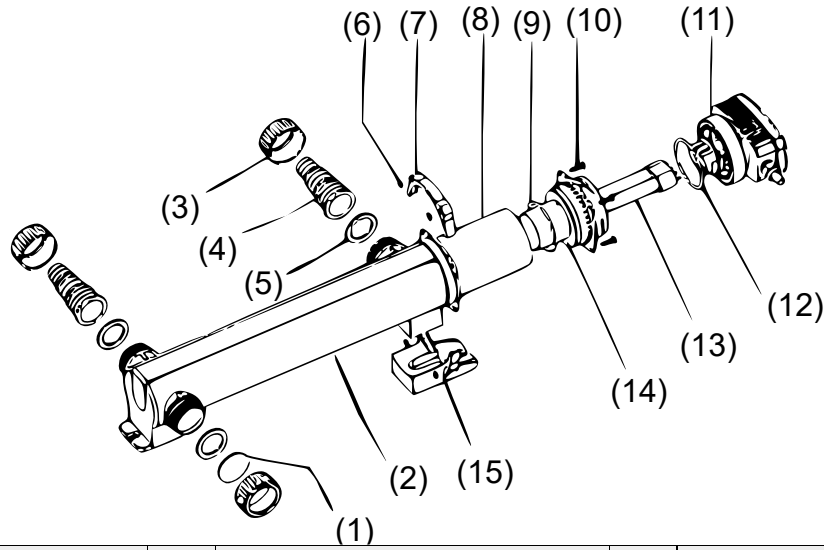
Nº	Name	Nº	Name	Nº	Name
1	Dummy plug	9	Fixing bracket	17	Screw cap
2	Spout	10	Dummy plug	18	Cable screw
3	Fixing bracket (counter piece)	11	O-Ring 1	19	Sealing cover
4	Casing	12	Quartz glass sleeve	20	Switch cover
5	Inlet pipe	13	Socket	21	UVC lamp
6	Flow rate meter	14	Earth plate	22	O-Ring 2
7	Spout	15	Glow switch starter	23	Outlet pipe
8	Dummy plug	16	Fixture	24	Gasket

CUV-2 series



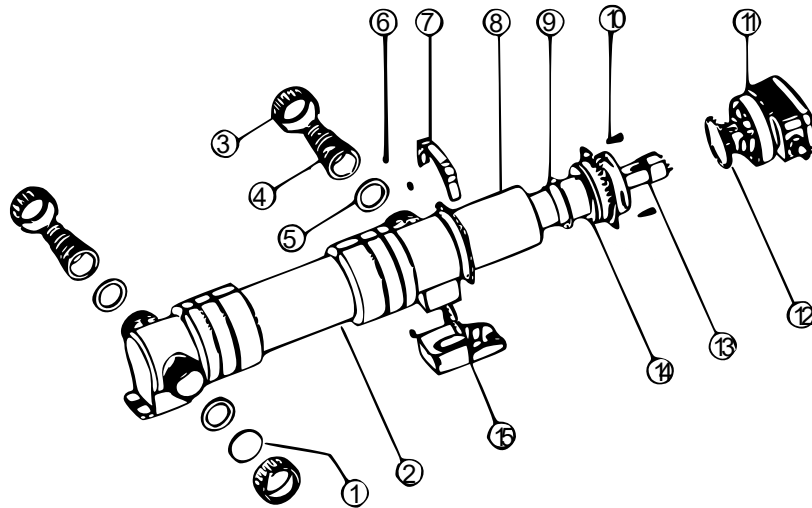
No	Name	No	Name	No	Name
1	Helix	8	Flow regulator	15	UV device head
2	Dummy plug	9	Foot	16	Screw (3.9×16)
3	Spout	10	Screw (3.9×19)	17	O-Ring 1
4	Gasket	11	O-Ring 4	18	UVC lamp
5	Sight glass cover	12	Quartz glass sleeve	19	Union nut
6	Sight glass	13	O-Ring 3	20	Casing
7	Outlet pipe	14	O-Ring 2		

CUV-3 series



No	Name	No	Name	No	Name
1	Sight glass	6	Nut	11	UV device head
2	Casing	7	Fixing bracket counterpart	12	O-ring 2
3	1.5" dummy plug	8	Stainless steel casing	13	UV lamp
4	Outlet	9	O-ring 1	14	Quartz glass sleeve
5	Gasket	10	Screw	15	Fixing bracket

CUV-6 series



No	Name	No	Name	No	Name
1	Sight glass	6	Nut	11	UV device head
2	Casing	7	Fixing bracket counterpart	12	O-ring 2
3	1.5" dummy plug	8	Stainless steel casing	13	UV lamp
4	Outlet	9	O-ring 1	14	Quartz glass sleeve
5	Gasket	10	Screw	15	Fixing bracket

Disposal regulations

EU guidelines regarding the disposal of scrap electric appliances (WEEE, 2012/19/EU) were implemented in the law related to electrical and electronic equipment and appliances.

All WiITec electric devices that fall under the WEEE regulations are labelled with the crossed-out wheeled waste bin logo. This logo indicates that this electric equipment must not be disposed with the domestic waste.

The company WiITec Technik GmbH has been registered in the German registry EAR under the WEEE-registration number DE45283704.

Disposal of used electrical and electronic appliances (intended for use in the countries of the European Union and other European countries with a separate collection system for these appliances).

The logo on the article or on its packaging points out that this article must not be treated as normal household waste but must be disposed to a recycling collection point for electronic and electrical waste equipment. By contributing to the correct disposal of this article you protect the environment and the health of your fellow men. Environment and health are threatened by inappropriate disposal.



Material recycling helps reduce the consumption of raw materials.

Additional information on recycling this article can be provided by your local community, municipal waste disposal facilities, or the store where you purchased the article.

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