

Operation Manual

External Aquarium Filter

HW-504A, HW-505A

50369, 50370



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 that you have understood its content.**

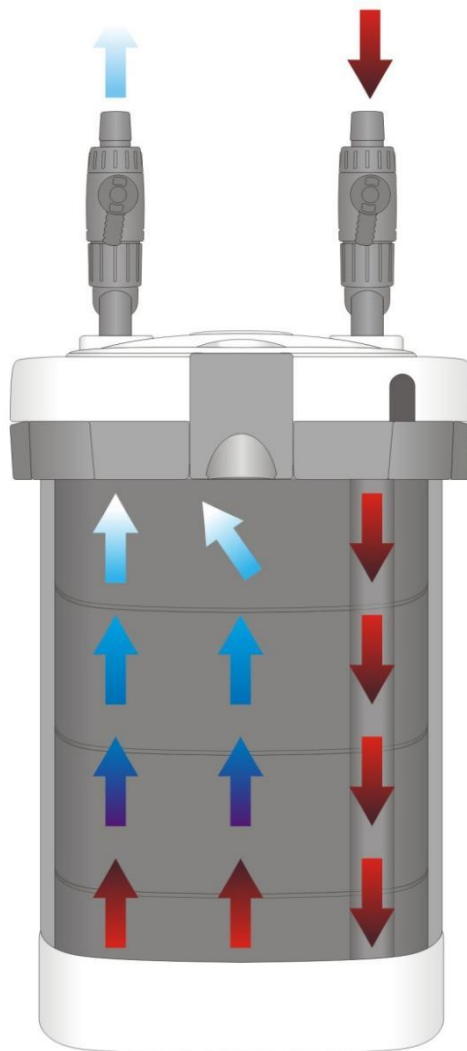
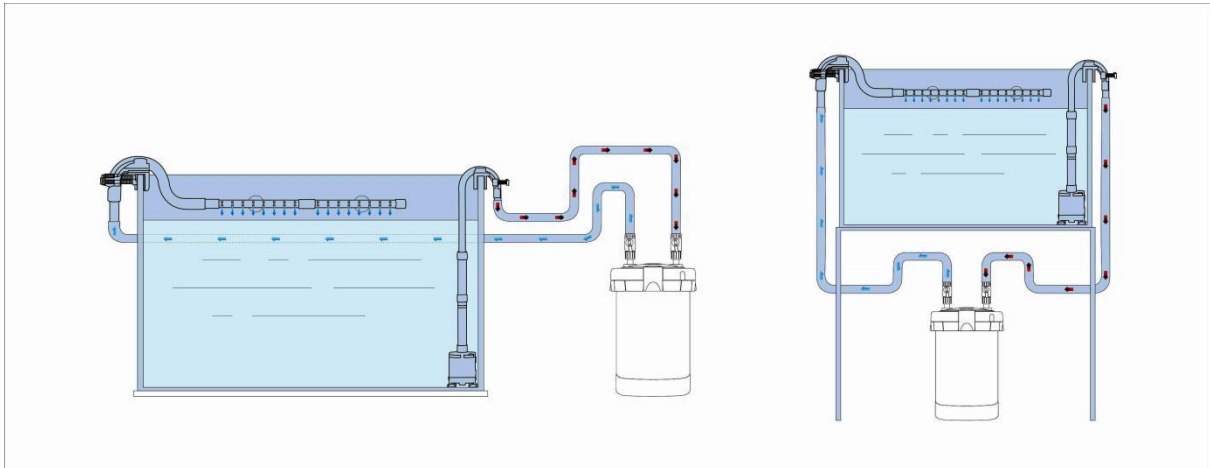
Keep these operation instructions safe.

Important instructions

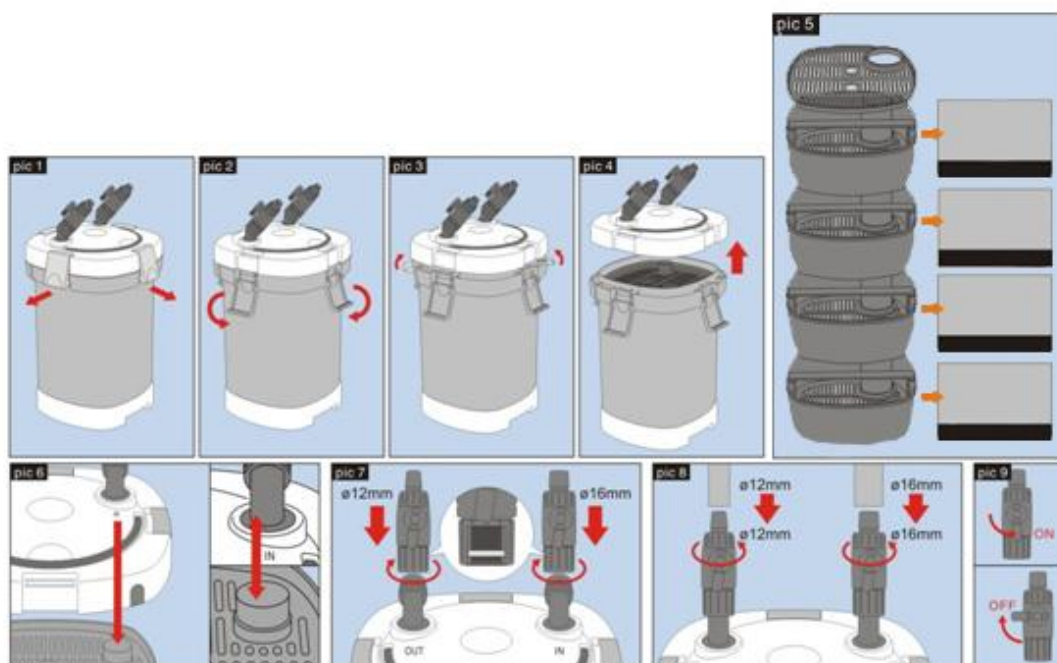
To prevent injuries and minimise the risk of accidents, abide by the following safety instructions when handling the device:

- This device is only suitable for aquarium and indoor use.
- To avoid electric shock, special care needs to be taken, as water is involved in the use of this device. Never try to repair the device yourself. Ask a qualified person to maintain or repair it.
- Always make sure that the outlet voltage corresponds to the rated voltage stated on the name-plate of the device.
- Do not come into contact with the water whenever the filter of the device is submerged. Make sure to properly disconnect the power supply before reaching into the water to remove the filter.
- Carefully examine the device after installation. It should not be plugged in if its electrical components are wet.
- Do not operate the device if its power cord or plug are damaged and do not attempt to repair a damaged power cord or plug. In case of the power cord being damaged, the device should be properly scrapped as the power cord cannot be replaced.
- Ensure that the power cord of the device is placed in a way (drip loop) that prevents water from running down the cord and into the plug socket.
- Children near the device must be always supervised to ensure that they do not play with the device or come into contact with the water while the filter is running.
- Always unplug the filter before performing maintenance or repair work, adding, or removing accessories or if the device is not being used.
- Do not install or store the device in environments with a high level of humidity or temperatures close to or beneath the freezing point. Always make sure to place the device itself in a dry environment.
- Make sure that the device is securely installed before starting to operate it.
- Do not let the pump run dry under any circumstances.
- Never use unauthorised accessories or spare parts of lesser quality as they might cause damage to the device as well as its surroundings and might even lead to severe injuries.
- Only use the filter for domestic purposes and in the way described in this instruction manual.
- Only use a damp cloth when cleaning the device and avoid the use of detergents as well as an excessive amount of water which might otherwise run into the device and damage it.

Installation



HW-504A-505A



1. Pull the four clasps in the direction of arrows (pic. 1) to unlock the top cover with filter head (pic. 2).
2. Push the two handles, located on the sides of the filter, down (pic. 3) to remove the filter head from the casing (pic. 4).
3. Remove the filter baskets from the device casing and insert filter material (pic. 5).
4. Put the filter baskets back into the device and reattach the filter head. Make sure that the inlet side of the filter (signed "IN") is above the filter basket (pic. 6). Then close the lid with the four clasps again after carefully having checked the gasket.
5. Connect the $\varnothing 16$ mm inlet adjuster to the opening marked "IN" and carefully attach it by screwing. After that connect the $\varnothing 12$ mm outlet adjuster to the opening marked "OUT" and attach it by carefully screwing it on. Make sure that both are attached properly and tightly (pic. 7).



CAUTION: Before fixing the intake/outlet adapter, check if the gaskets pre-installed are placed correctly.

6. Next attach the 16 mm and the 12 mm hoses to the adjusters with the appropriate size and make sure that both fit tightly (pic. 8).
7. Each of the inlet and outlet adjusters can individually be set to either "on" or "off" (pic. 9). Thus, you avoid that the hoses be emptied, e.g., while cleaning the device.
8. After having assembled the inlet (refer to the parts list), fix it via suction cups inside the aquarium. Attach it to a $\varnothing 16$ mm inlet hose by screwing it onto the inlet bend.
9. Next assemble the outlet (refer to parts list) and attach it to the $\varnothing 12$ mm outlet hose by screwing it onto the respective connection piece. The outlet can also be fixed inside the aquarium via suction cups.
10. The connection piece allows to either install a spray bar or use the outlet nozzle for a stream outlet.

Further information concerning the inlet and outlet assembly can be found in the parts list section of this instruction manual.

Filter material (pic. 5)



Ceramic rings



Filter sponge



Biochemical cotton



Bio balls

The filter material included in the scope of delivery is considered the standard for your external aquarium filter.

Application is from bottom to top:

1. Stage: mechanical / partly biological filtration
2. Stage: biological filtration
3. Stage: chemical filtration (activated carbon, turf, phosphate, etc.)

Four stage filters can be complemented by another mechanical or biological filter stage, depending on personal requirements.

Ceramic rings

Being suitable for internal and external aquarium filters, ceramic glass rings are filtering media for mechanical filtration, mainly used to remove suspended particles. As the rings create turbulences within the water due to their special shape and large surface, floating dirt particles are accumulated and removed from the water cycle. Additionally, the rings create an ideal environment for filter bacteria settlement and thereby reduce the peak contamination caused by nitrite more effectively than common filtering media.

Filter floss – filter fleece

Filter media such as fleece, floss, or sponges are an essential part of modern fish-keeping. Filter floss and fleece can absorb coarse dirt particles while filter sponges reduce the nitrate levels of the water, remove chemical pollutants, and create an ideal environment for filter bacteria.

Bio balls

Bio balls are used as both biological and mechanical filter media. Offering a large surface for bacteria to settle on, these balls are considered high performance filter media, especially in large filter systems. In contrast to most other filter media, bio balls offer a virtually unlimited lifespan, making them a popular and cheap filter medium, especially for pond filter systems as well as trickle filters and chamber filters.

Activated carbon (optional)

Activated carbon is used to bind urinary and humid matter, pesticides, toxins as well as products of metabolism and similar residues and thereby provide clean aquarium water. The use of activated carbon further reduces the ozone and chlorine content of the water. It is particularly well suited for the pre-treatment of tap water, for the removal of turbidity caused by suspended particles as well as for the effective filtering of possible residue of medical treatments.

The use of activated carbon is not recommended during the duration of medical treatments or algae control efforts. Its use, however, is essential once the treatment has ended as it is needed to reliably remove residue from the water. It is further not recommended to leave activated carbon inside the filter for too long, since the previously bound contaminants may be released into the water again, once the intake capacity of the activated carbon has been exceeded

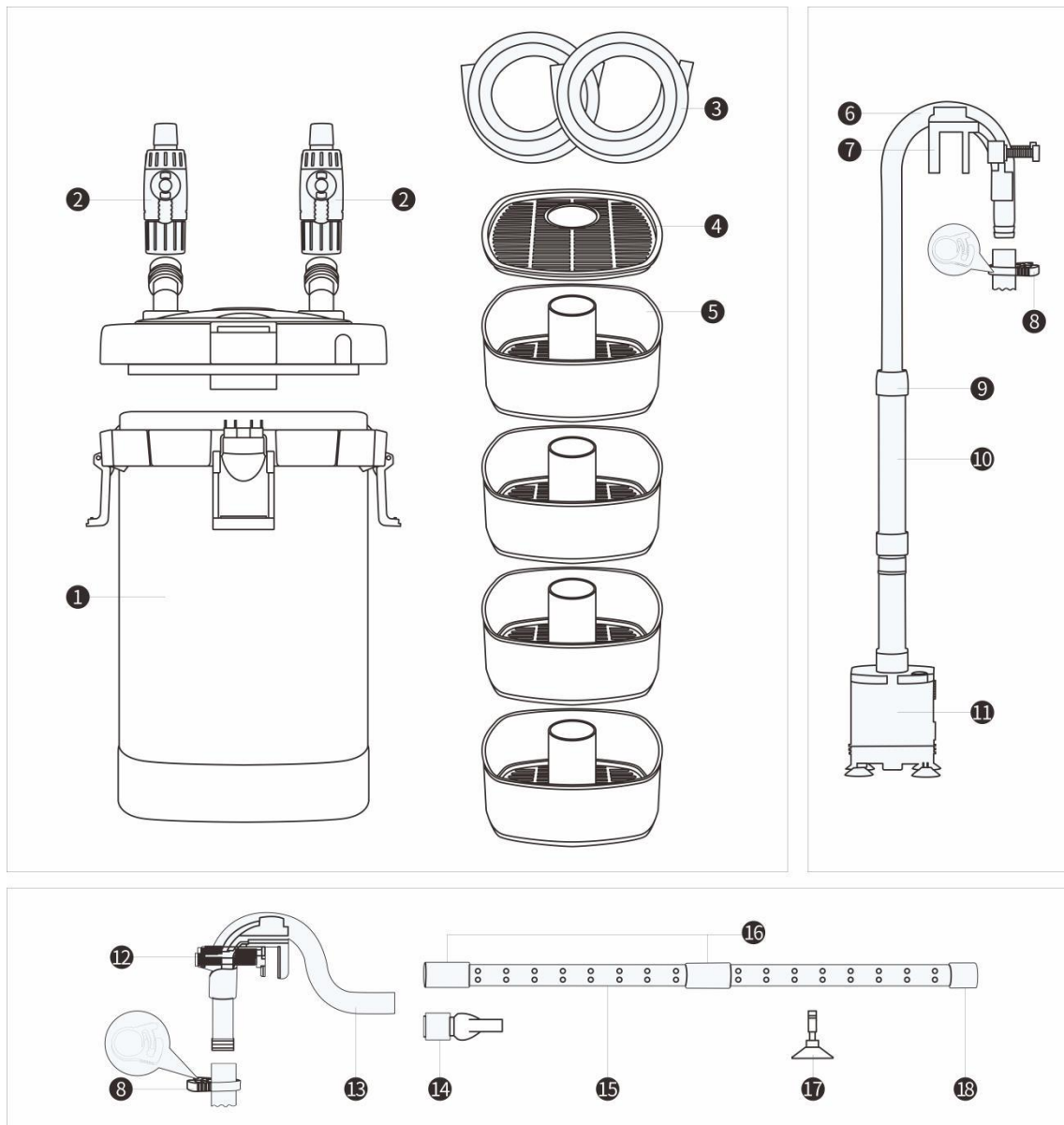


Please be aware that the beneficial bacteria must be accumulated again after the new acquisition of an aquarium or a thorough cleaning of the same. Special bacteria cultures can be placed inside the aquarium filter to facilitate the growth of beneficial bacteria.

Technical data

Model		HW-504A	HW-505A
Item number		50369	50370
Energy supply (V / Hz)		230 / 50	230 / 50
Power consumption (W)		15	15
Cable length (m)		1.3	1.3
Hose connection (mm)	Pressure side	12	12
	Suction side	16	16
Max. flow rate ($\frac{\ell}{h}$)		800	800
Max. transportation height (m)		1.2	1.2
Max. aquarium size (ℓ)		400	400
Capacity (ℓ)		5	9
Weight (kg)		4.5	6
Dimensions (mm)		185 × 185 × 365	225 × 225 × 425
Protection class		IP 44	IP 44

Exploded view and parts list



No	Name	No	Name
1	Main body	10	Extension pipe
2	Inlet/outlet adjuster	11	Pump
3	Hose	12	Plastic screw
4	Filter cover	13	Outlet bend connection
5	Filter	14	Outlet
6	Inlet bend connection	15	Spray bar
7	Mounting base for bend connection	16	Connecting sleeve
8	Hose clamp	17	Suction cup
9	Connection flange	18	Spray bar cover



Filter operation and troubleshooting

Noise reduction / secondary air

The inlet and the surface water intake connected to it must be checked for tightness and adjusted according to the aquarium water level. In case of this being impossible due to technical reasons, seal the surface water intake to prevent secondary air from getting into the filter.

Venting the filter system

Remove the backflow hose (conducting the water from the filter into the tank) from the aquarium and place it inside a clean bucket placed on a level lower than that where the filter is on. Leave the hose within the bucket and start the venting process by using the button to manually operate the pump. Make sure that both inlet and outlet flow adjusters are set to "open" and enable a maximum flow of water. Once there are no more bubbles visible, seal the hose with your finger and reinstall it for the pump to continue its operation.

Leakage after installation or cleaning

A slight leakage after the filter installation or filter cleaning indicates an issue with the tightness of the connection between hose connector and filter head.

The adjusters connecting the hose to the filter head are equipped with two O-rings ensuring the tightness of the filter head. In case of these gaskets being polluted, displaced, or damaged, tightness can no longer be ensured and water may enter the filter head. Water entering the filter head will usually escape through the clasps located on the filter head sides, responsible for securely connecting it to the casing of the filter. To solve this problem, simply check the integrity of the O-rings and ensure that they are clean and have been placed accordingly. It is also important to ensure that the seating of the O-rings is free from dirt as the formation of algae or sand accumulated can impair the tightness of the gaskets.

Make sure to regularly clean this area to prevent the growth of algae or the accumulation of sand and other particles. Thorough cleaning is thereby required to ensure that the parts in question are completely clean and capable of preventing leakage.

Check the condition of the O-rings located inside the adjusters if thorough cleaning will not stop leakage from occurring at the clasps. To do so, the adjusters must be opened.

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 WilTec 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 WilTec 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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