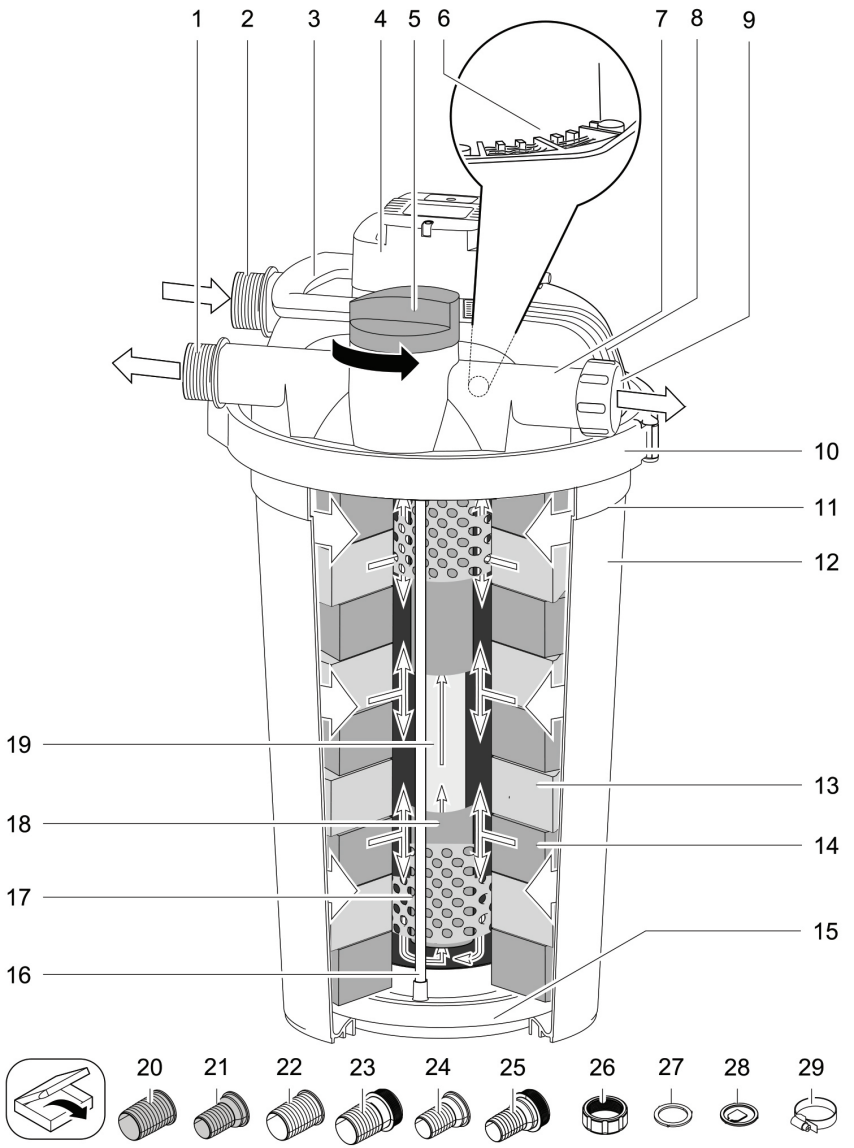
Unit configuration

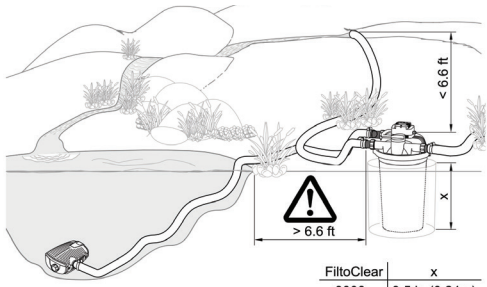


Function description

Cleaning stage “filtering”: The water flows through the foam filters. Mechanical soiling is retained by the foam filters. Suspended matter and bio sludge settle on the container bottom. Usseful bacteria settle on the foam filters, cleaning the water biologically. Their effect starts at a water temperature of 50 °F (+ 10 °C).

Function description

A filter pump presses the water into a pressure-tight container, where it passes several cleaning stages before returned into the pond. The soiled water resulting from cleaning the unit can be used to fertilize the garden.



FiltoClear	x
3000	9.5 in (0.24m)
4000	14 in (0.36m)
8000	19 in (0.48m)

Coarse foam filters (blue)	**Fine foam filters (red)**
high flow rate	low flow rate
Bacteria for nitrification	Bacteria for nitrification and denitrification
Ammonia -> nitrite -> nitrate reaction	Nitrate -> nitrogen reaction

Cleaning stage “radiation”: The water is radiated with the ultra-violet light from a UV-C lamp. Green algae die, pathogenic agents are killed.

Bypass: A bypass ensures that only part of the returning water (approx. 25 %) is radiated. In this manner a sufficient radiation duration is obtained even at a high circulation rate.

Filter starter: The unit only reaches its full biological cleaning effect after a few weeks. The formation of a bacterial community on the foam filters can be notably accelerated by adding a filter starting bacteria product (not included).

OASE recommends:
- as a reference value for the fish population in the pond: approx. 2 ft (60 cm) fish length in 260 gal (1 m3) pond water.
- as a pond pump for FiltoClear 3000: pump max. 2100 GPH (8000 l/h).
- as a pond pump for FiltoClear 4000: pump max. 2600 GPH (10000 l/h).
- as a pond pump for FiltoClear 8000: pump max. 4200 GPH (16000 l/h)

Symbols on the unit

The warning symbols on the unit have the following meaning:

Risk of personal injury if used incorrectly.
Incorrect use of the unit can cause injury or damage to assets. Always read the instructions for use first.

Risk of personal injury caused by a general source of danger.
Dangerous UVC radiation. Health hazard for eyes and skin caused by light flash. Only operate the UV-Clamp inside the housing.

The symbols on the unit relating to its use have the following meaning:

IP 24 Protected against touching dangerous components. Splash water protected.


Protect from direct sun radiation.


Dismantle at temperatures of 32°F and below

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Installation

- Spacing between unit and water: min. 6.6 ft (2 m) (safety spacing!).
- Do not expose the unit to direct sun radiation.
- Water return point. OASE recommend: Route the return hose such that the clean water is indirectly returned to the pond, e.g. through a waterfall. In this manner it will be additionally enriched with oxygen.
- Height difference between filter lid and water return point: max. 6.6 ft (2 m).

Installation possibility 1: Bury close to the pond.
Dig a hole close to the pond and place the container into the hole up to the mark. (See **Function description** diagram**)**

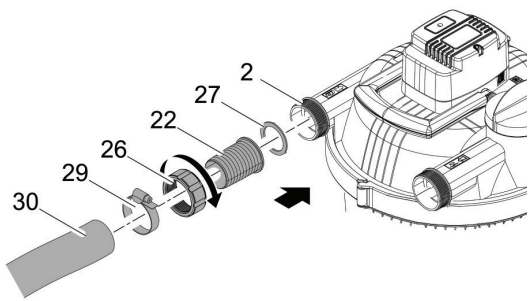
Installation possibility 2: Placement close to the pond.
Place the unit close to the pond where it is flood protected (e.g. hidden behind shrubs). The ground must be firm and level.

Connecting a filter pump
A filter pump is required to operate the pressure filter. Only connect to the pump by means of pressure hoses approved for at least 2.9 psi (0.2 bar) or the maximum pump pressure.
Hoses with an internal diameter of 1 1/2" or 2" can be connected to the unit.

Installation
1 ½" hoses or 2" hoses can be connected to the unit. The respective hose connectors are part of our scope of delivery. Recommendation: Use 2" hoses to convey the water through the lines at a minimum pressure loss.
If you use a filter starter, fill the product into the container prior to carrying out the following installation steps (See Commissioning/Start-up).

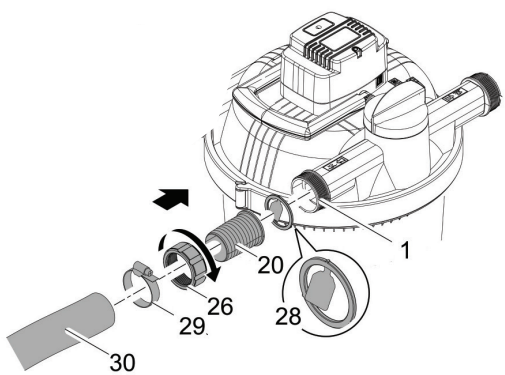
Fitting the water inlet

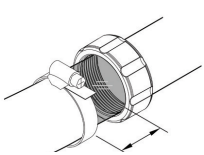
- Push the union nut (26) over the black hose connector (22).
- Insert the flat sealing ring (27) in the union nut (26).
- Screw tighten the hose connector to the water inlet socket (2) using the union nut.
- Push the hose clamp (29) over the hose (30).
- Push the hose over the hose connector (up to the stop) and secure using the hose clamp.



Fitting the water return

- Push the union nut (26) over the transparent hose connector (20).
- Place the flow indicator flap (28) into the union nut.
- Screw tighten the hose connector to the water return socket (1) using the union nut.
- Push the hose clamp (29) over the hose (30).
- Push the hose over the hose connector and secure with the hose clamp. Leave the last segment free for use as a window to control flow and soiling. (As shown)

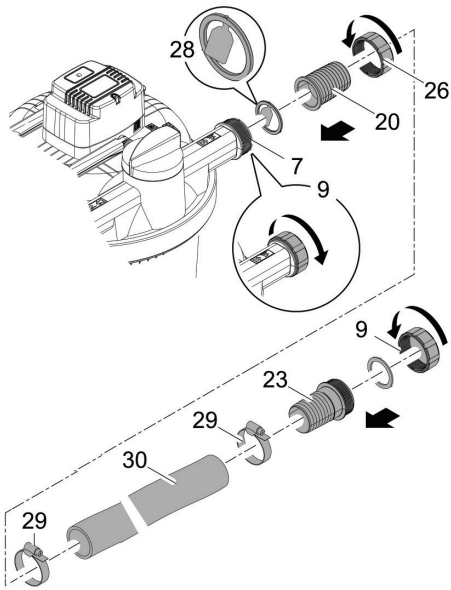




Fitting the soiled water drain

The soiled water resulting from cleaning the unit can be used for fertilisation purposes. Recommendation: Connect and route a drain hose (not included in our scope of delivery) up to a suitable point (e.g. plant bed)

- Unscrew the cover cap (9) from the soiled water drain socket (7).
- Push the union nut (26) over the transparent hose connector (20).
- Place the flow indicator flap (28) into the union nut.
- Screw tighten the hose connector to the socket using the union nut.
- Push the hose clamp (29) over the hose (30).
- Push the hose over the hose connector and secure with the hose clamp. Leave the last segment free for use as a window to control flow and soiling.



Closing the soiled water drain

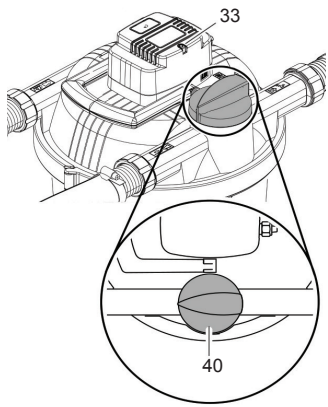
Note!
During filter operation, ensure that the soiled water socket (7) or a drain hose (30) connected to it is always closed with a cover cap (9) with the flat sealing ring inserted. This prevents unintended emptying of the pond.

- Push the hose clamp (29) over the hose (30).
- Push the hose connector (23) into the hose and secure with the hose clamp.
- Close the hose connector using the cover cap with the flat sealing ring (9) inserted.

Commissioning/Start-up

Attention! Sensitive electrical components.
Possible consequences: The unit will be destroyed.
Protective measures: Do not connect the unit to a dimmable power supply.

- Fit the connections (See **Installation**).
- Check the firm seating of hoses, cover cap for soiled water drain, clamping ring with safety latch.
- Turn the function switch to water filtering (40), if it is not already in this position.
- Switch on the pond pump.
- Only switch on the UVC unit when water is flowing through it. You may have to wait for 24 hours. Connect power plug to the socket. The UVC unit switches on immediately, the blue LED (33) is lit.



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Operation

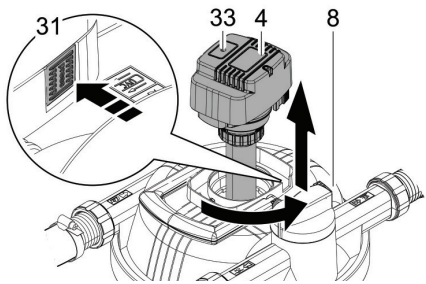
The unit is no longer biologically active at water temperatures below 50 °F (10 °C). Take the unit out of operation at water temperatures below 46 °F (8 °C) or, at the latest, when freezing temperatures are to be expected.
Normal operating condition: The UVC unit is switched on. The UV-C lamp must be replaced after approx. 8000 operating hours.

Maintenance and cleaning

Attention! Dangerous electrical voltage.
Possible consequences: Death or serious injuries.
Protective measures: Switch off the mains voltage prior to carrying out work on the unit

Removing the UVC unit head

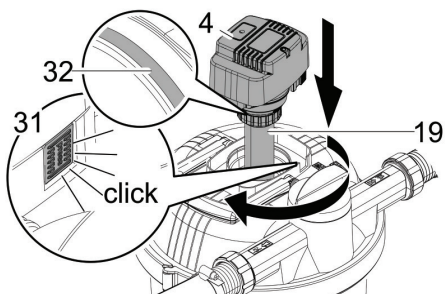
- Unplug UVC unit.
- Press the blue “Press” button (31) at the UVC unit head (4).
- Slightly turn the UVC unit head counter-clockwise.
- Carefully pull the UVC unit head out of the filter lid (8).



Inserting the UVC unit head

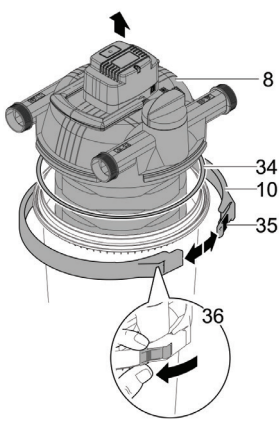
Note!
The O ring (32) on the closure of the UVC water housing (4) is firmly clamped on. Only remove the O ring when it must be replaced (e.g. when the O ring is porous).

- Carefully insert the UVC unit head (4) into the filter lid.
- Turn the UVC unit head clockwise up to the stop. The blue “Press” button engages (31).



Opening the container

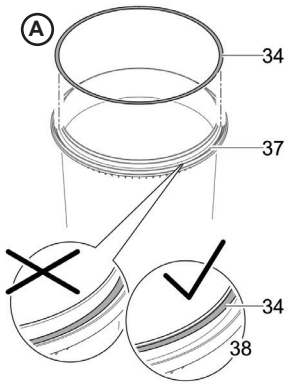
- Push back safety latch (36).
- Press the closing hook (35) inwards.
- Open and remove the clamping ring (10).

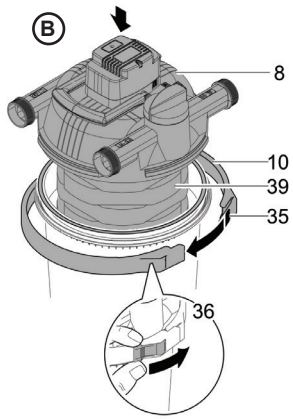


Closing the container

A. Clean the channel (37) around the container rim.
- Grease the lid sealing ring (34) and place flush around the container (38) top edge.

B. Press the filter lid (8) including the stack of foam filters on the container, if necessary, assist with your own body weight.
- Place the clamping ring (10) around the container top edge (do not pinch the power cable) and assemble.
- Engage the closing hook (35).
- Push in the safety latch (36).





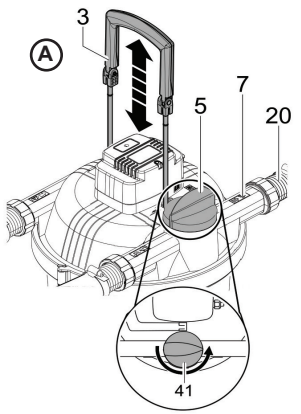
Cleaning the foam filters

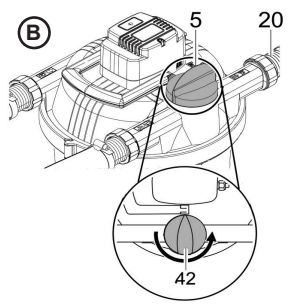
The Easy-Clean function (actuate the cleaning handle and flush with water) allows easy cleaning of foam filters, UVC unit and UVC water housing.

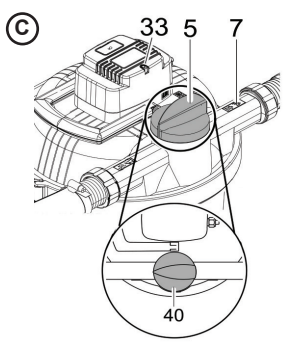
A. Remove the closing cap from the drain hose or the dirty water drain socket (7). Attention: Do not lose the sealing ring in the cap!
- Turn the function switch (5) counter-clockwise to “Cleaning foam filters” (41).
- Vigurously pull up the cleaning handle (3) several times, then push the handle down against the stop (“pumping” action).
- The foam filters will be rinsed by this action.

B. As soon as only clean water appears in the transparent hose connector (20), turn the function switch (5) counter-clockwise to “Cleaning UVC” (42).
- The UVC unit and the UVC water housing are flushed.

C. As soon as only clean water appears in the transparent hose connector (20), turn the function switch (5) counter-clockwise to “Filter water” (40).
- The unit filters the pond water.
- Close the drain hose or the soiled water drain socket (7) using the closing cap (insert sealing ring!) (See **Installation**).







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Cleaning the quartz glass tube manually

Attention! Ultra-violet radiation.
Possible consequences: Eye or skin injury from burns
Protective measures:
- Never operate the UVC lamp outside its housing.
- Never operate the UVC lamp in a housing that is defective

Danger: Ultraviolet radiation.
Do not expose eyes to lamp rays.
Disconnect power before servicing or replacing lamp.

Warning: To reduce the risk of electric shock - Connect only to a circuit that is protected by a ground-fault circuit interrupter (GFCI)

For indoor and outdoor household use

Attention! Breakable glass
Possible consequences: Injury to your hands caused by cuts
Protective measures: Handle the quartz glass and UVC lamp with care.

- Switch off the filter pump and UVC unit.
- Remove the UVC unit head (See **Cleaning and maintenance\Removing/inserting the UVC unit head**).
- Check the quartz glass tube and O ring for damage. Replace, if necessary.
- Clean the quartz glass tube externally using a moist cloth.
- Insert the UVC unit head (See **Cleaning and maintenance\Removing/inserting the UVC unit head**).
- Switch on the filter pump.
- Switch on the UVC unit.

Attention! Dangerous electrical voltage.
Possible consequences: Death or serious injuries.
Protective measures: Switch off the mains voltage prior to carrying out work on the unit

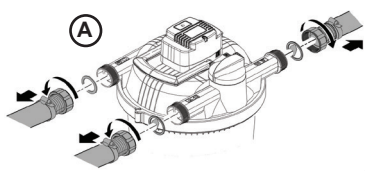
Cleaning the unit and washing or replacing the foam filters

Wear of the foam filters is caused by mechanical stress and normal ageing. OASE recommend: Replace old foam filters with new ones at the beginning of the new season.

- Switch off the filter pump.

A. Remove all hoses, hose connections.

- Remove the UVC unit head (See **Cleaning and maintenance\Removing/inserting the UVC unit head**).
- Open the container (See **Cleaning and maintenance\Opening the container**).



Disassembling the foam filters

- Check the foam filters, and either wash or replace.

B. Remove the filter disk (15) after loosening and removing the two screws (43).

C. Remove the lid including the stack of foam filters (39).
  - Place the foam filters on a soft clean surface such that the fixing disk (15) of the stack of foam filters faces upward.