

# Oase

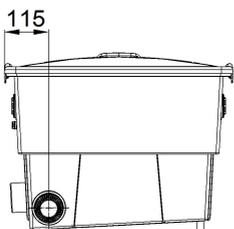
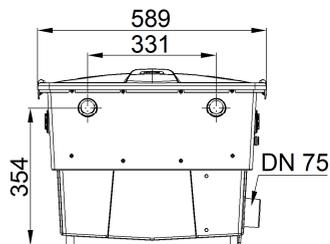
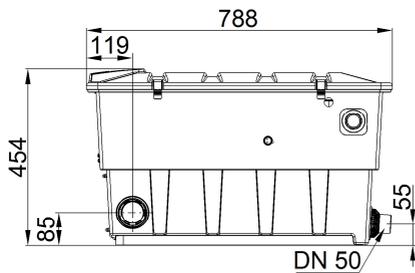


## BioTec ScreenMatic<sup>2</sup>

40000, 60000, 90000, 145000

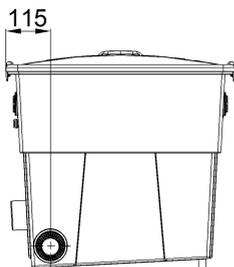
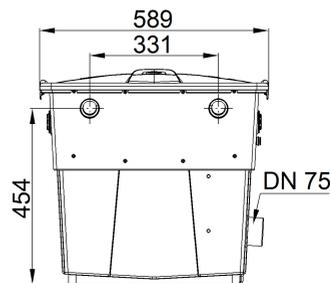
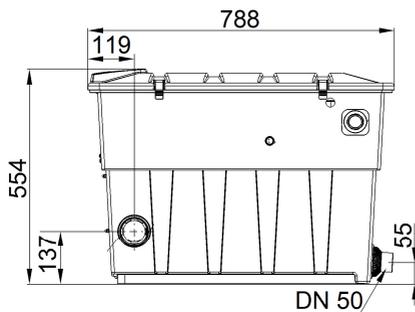
Operating instructions

### BioTec ScreenMatic<sup>2</sup> 40000



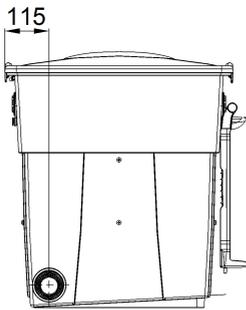
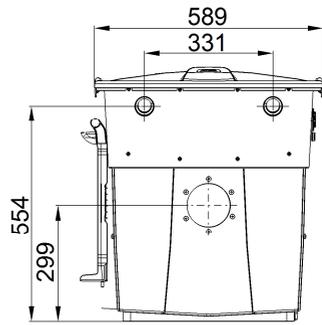
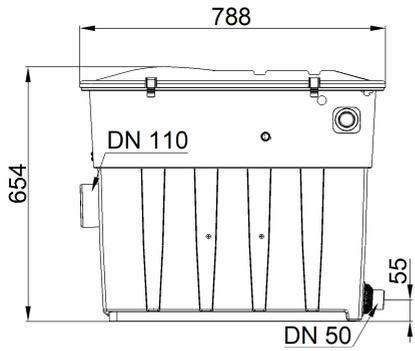
BTC011

### BioTec ScreenMatic<sup>2</sup> 60000



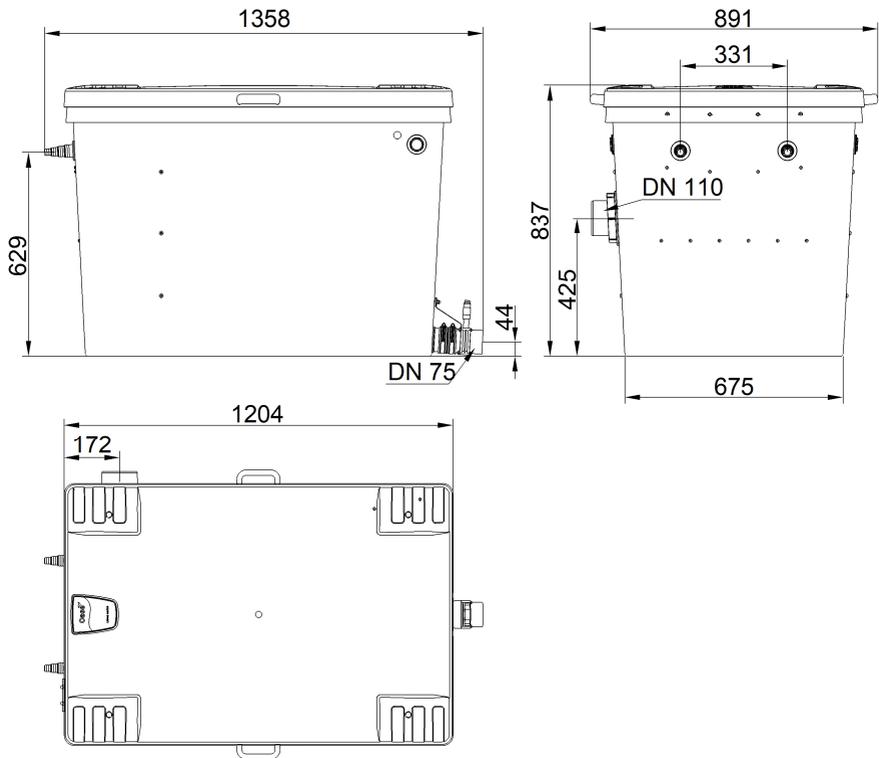
BTC010

**BioTec ScreenMatic<sup>2</sup> 90000**



BTC0109

### BioTec ScreenMatic<sup>2</sup> 145000



BTC0108

Original manual.

### WARNING

- ▶ Disconnect all electrical devices in the water from the power supply before reaching into the water. Otherwise there is a risk of severe injuries or death by electrocution.
  - ▶ This unit can be used by children aged 8 and above and by persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they are supervised or have been instructed on how to use the unit in a safe way and they understand the hazards involved. Do not allow children to play with the unit. Only allow children to carry out cleaning and user maintenance under supervision.
- 

## Safety information

### Electrical connection

- Special regulations apply for electrical installation in outdoor spaces. Only a qualified electrician may perform the electrical installation.
  - The qualified electrician has the necessary professional training, knowledge and experience to perform electrical installation in outdoor spaces. The electrician can detect potential dangers and knows how to adhere to regional and national standards, regulations and directives.
  - For your own safety, please consult a qualified electrician.
- Only connect the unit if the electrical data of the unit and the power supply match.
- Only plug the unit into a correctly installed outlet.
- The device is to be supplied through a residual current device (RCD) having a rated residual operating current not exceeding 30 mA.
- Extension cables and power distributors (e.g. outlet strips) must be suitable for outdoor use (splash-proof).
- Protect open plugs and sockets from moisture.

## Safe operation

- The container cover contains a magnet with a strong magnetic field that may affect the operation of pacemakers or implantable cardioverter defibrillators (ICDs). Always keep magnets at least 20 cm away from implanted devices.
- Never operate the unit if the housing is defective!
- Never operate the unit if an electrical cable is defective!
- Do not carry or pull the unit by its power cable.
- Route lines in such a way that they are protected from damage and do not present a tripping hazard.
- Never carry out technical changes to the unit.
- Only carry out work on the unit that is described in this manual.
- Only use original spare parts and accessories.
- Disconnect the unit from power in the event of a thunderstorm to prevent damage to the electronics.
- Overvoltage in the mains could lead to operating malfunctions of the unit. For information, please refer to chapter "Correcting malfunctions". (→ Malfunction remedy)
- Should problems occur, please contact the authorised customer service or OASE.

## Intended use

Only use the product described in this manual as follows:

- For cleaning garden ponds.
- While adhering to the technical specifications. (→ Unit data)
- Adherence to the permissible water quality. (→ Permissible water quality)

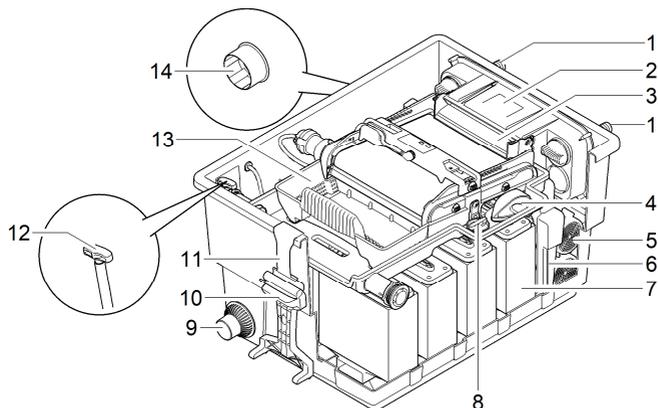
The following restrictions apply to the unit:

- Never use the unit with fluids other than water.
- Do not use for commercial or industrial purposes.
- Not suitable for salt water.
- Do not use in conjunction with chemicals, foodstuff, easily flammable or explosive substances.

## Product Description

### Unit configuration

#### BioTec ScreenMatic<sup>2</sup> 40000, 60000

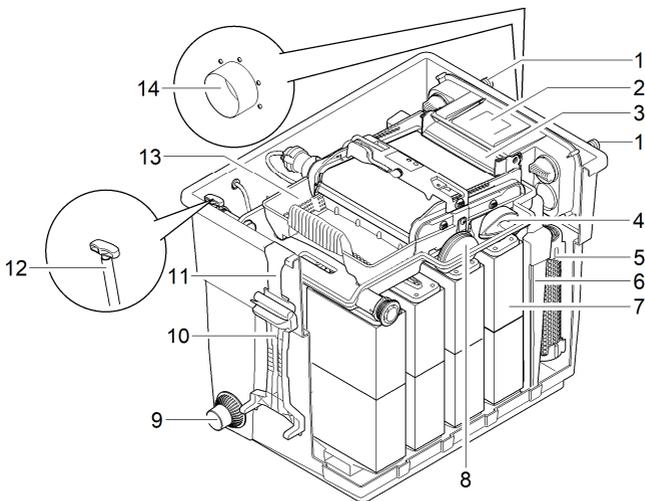


BTC0050

1	Inlets, 2 x
2	Water distributor
3	Distributor extension
4	Brush for regularly cleaning the ScreenMatic screen
5	Substrate tube <ul style="list-style-type: none"> <li>• BioTec ScreenMatic<sup>2</sup> 40000: 2 x</li> <li>• BioTec ScreenMatic<sup>2</sup> 60000: 3 x</li> </ul>
6	Separating plate, can be removed for maintenance purposes
7	Foam filter, 8 x
8	Plug for closing the outlet (14) <ul style="list-style-type: none"> <li>• Closing the outlet before cleaning the foam filters prevents dirty water from flowing back into the pond.</li> </ul>
9	Dirt outlet
10	Foam cleaning device
11	Holder for the foam cleaning device
12	Dirt outlet slide valve
13	Debris tray
14	Outlet

**BioTec ScreenMatic<sup>2</sup> 90000**

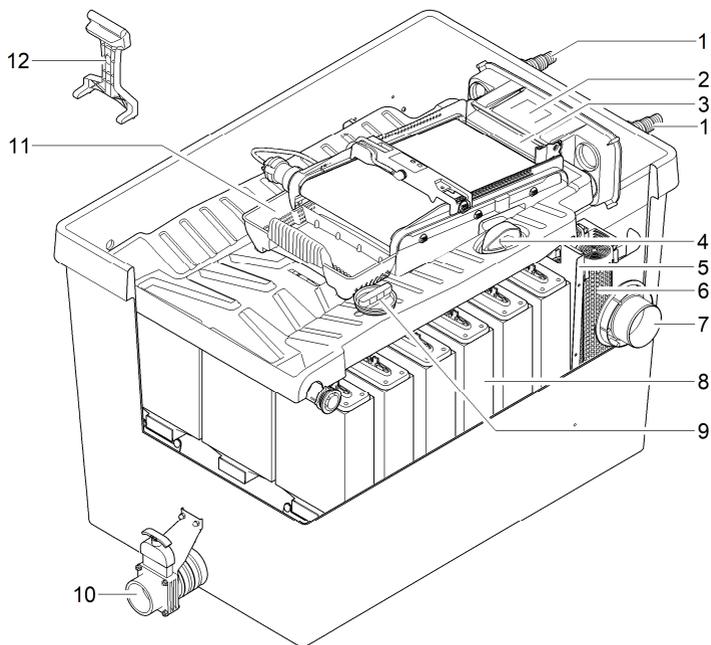
EN



BTC007

- |    |  |
|----|--|
| 1  | Inlets, 2 x  |
| 2  | Water distributor  |
| 3  | Distributor extension  |
| 4  | Brush for regularly cleaning the ScreenMatic screen  |
| 5  | Substrate tubes, 4 x   |
| 6  | Separating plate can be removed for maintenance purposes   |
| 7  | Foam filter, 16 x  |
| 8  | Blind plug for closing the outlet (14) <ul style="list-style-type: none"> <li>• Closing the outlet before cleaning the foam filters prevents dirty water from flowing back into the pond.</li> </ul> |
| 9  | Dirt outlet  |
| 10 | Foam cleaning device   |
| 11 | Holder for the foam cleaning device  |
| 12 | Dirt outlet slide valve  |
| 13 | Debris tray  |
| 14 | Outlet   |

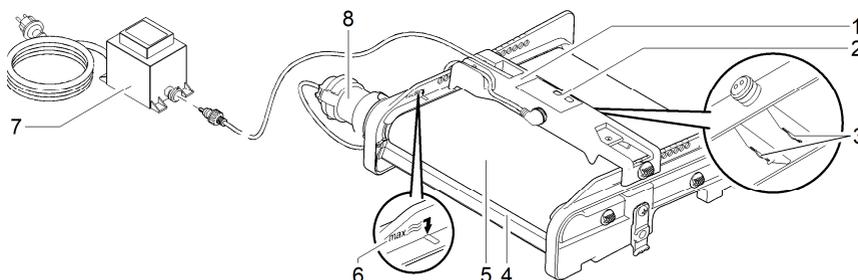
### BioTec ScreenMatic<sup>2</sup> 145000



BTC0049

- |    |  |
|----|--|
| 1  | Inlets, 2 x  |
| 2  | Water distributor  |
| 3  | Distributor extension  |
| 4  | Brush for regularly cleaning the ScreenMatic screen  |
| 5  | Separating plate   |
| 6  | Substrate tubes, 12 x  |
| 7  | Outlet   |
| 8  | Foam filter, 18 x  |
| 9  | Blind plug for closing the outlet (14) <ul style="list-style-type: none"> <li>• Closing the outlet before cleaning the foam filters prevents dirty water from flowing back into the pond.</li> </ul> |
| 10 | Dirt outlet  |
| 11 | Debris tray  |
| 12 | Foam cleaning device   |

## ScreenMatic rotating screen unit



BTC0056

- |   |   |
|---|---|
| 1 | Control system  |
| 2 | Operating panel   |
| 3 | Sensor underneath the control device <ul style="list-style-type: none"> <li>• When the sensor comes into contact with the water on the ScreenMatic screen, an automatic cleaning process is triggered.</li> </ul> |
| 4 | Stripper <ul style="list-style-type: none"> <li>• scrapes the debris from the ScreenMatic screen and conveys it into the debris tray.</li> </ul>  |
| 5 | ScreenMatic screen  |
| 6 | "Max. water jet" mark <ul style="list-style-type: none"> <li>• Debris may be washed out of the debris collection tray if the water jet from the water distributor exceeds this mark.</li> </ul>                   |
| 7 | Transformer <ul style="list-style-type: none"> <li>• Voltage supply for the control device and motor</li> </ul>   |
| 8 | Motor <ul style="list-style-type: none"> <li>• Drive of the ScreenMatic rotating screen unit</li> </ul>   |

## Properties

- High performance flow-through filter for ponds up to 40 m<sup>3</sup>, 60 m<sup>3</sup>, 90 m<sup>3</sup> or 140 m<sup>3</sup>.
- Electrically driven ScreenMatic rotating screen for automatic removal of coarse debris.
- Low-maintenance filter due to the automatic removal of coarse debris.
- Bottom dirt outlet with slide valve for removal of dirt/debris from the filter system.
- Convenient cleaning of the foam filters directly inside the filter.
- Foam cleaning device and holder for fastening the foam cleaning device to the container.
- Perfectly tailored to the OASE AquaMax Eco filter pumps.
- Direct connection of the OASE UVC clarifiers of the Vitronic 18W/24W/36W, Bitron C and Bitron Eco series possible.
- Use of different filter media to ensure optimum colonisation of bacteria for biological filtration.

## Technical data

### Unit data

BioTec ScreenMatic <sup>2</sup>			40000	60000	90000	145000
Power pack	Primary rated voltage	V AC	230	230	230	230
	Mains frequency	Hz	50	50	50	50
	Secondary rated voltage	V DC	12	12	12	12
	Permissible ambient temperature	°C	-10 ... +35	-10 ... +35	-10 ... +35	-10 ... +35
Control system	Power consumption	W	5	5	5	5
	Permissible ambient temperature	°C	-10 ... +35	-10 ... +35	-10 ... +35	-10 ... +35
Cable length	Power pack	m	2.10	2.10	2.10	2.10
	Control system	m	5.00	5.00	5.00	5.00
Foam filter	Number of blue foam filters	pcs.	2	2	4	4
	Number of red foam filters	pcs.	3	3	6	7
	Number of purple foam filters	pcs.	3	3	6	7
Special filter pellets		kg	2.50	3.50	5	14.50
Removal of coarse dirt particles		µm	300	300	300	300
Permissible water temperature		°C	+4 ... +35	+4 ... +35	+4 ... +35	+4 ... +35
Inlet	Quantity	pcs.	2	2	2	2
	Connection, hose	mm	25, 32, 38	25, 32, 38	25, 32, 38, 50	25, 32, 38, 50
			G1, G1¼, G1½	G1, G1¼, G1½	G1, G1¼, G1½, G2	G1, G1¼, G1½, G2
Connection, UVC clarifier		Bitron C 36 W / 55 W / 72 W / 110 W Bitron Eco 120 W / 180 W / 240 W Vitronic 18 W / 24 W / 36 W				
Outlet	Quantity	pcs.	1	1	1	1
	Connection		DN 75	DN 75	DN 110	DN 110
Dirt outlet	Quantity	pcs.	1	1	1	1
	Connection		DN 50	DN 50	DN 50	DN 75
Circulation capacity	minimum	l/h	4000	6000	8000	8000
	Max.	l/h	9000	11000	12500	17500
Maximum pond volume	Without fish population	m <sup>3</sup>	40	60	90	140
	With fish population	m <sup>3</sup>	20	30	45	70
	Including koi carp	m <sup>3</sup>	10	15	22.5	35
Dimensions	Length	mm	788	788	788	1200
	Width	mm	590	590	590	800
	Height	mm	454	554	654	760
Weight	Without water	kg	20	25	30	115

## Permissible water quality

Type		Fresh water	Pool water	Salt water
pH value		6.8 ... 8.5	7.2 ... 8.3	7.5 ... 8.5
Hardness	DH	8 ... 15	8 ... 15	20 ... 30
Free chlorine	mg/l	<0.3	<0.6	<0.3
Chloride content	mg/l	<250	<250	<22000
Salt content	%	<0.4	<0.4	<4
Overall dry residue	mg/l	<50	<50	<50
Temperature	°C	+4 ... +35	+4 ... +30	+4 ... +28

## Installation and connection

### Access to the device

- Remove the container cover: Access to the control device.
- Hinge up the screen holder: Access to the foam filters, substrate tubes, separating plate and outlet.

### Remove the container cover

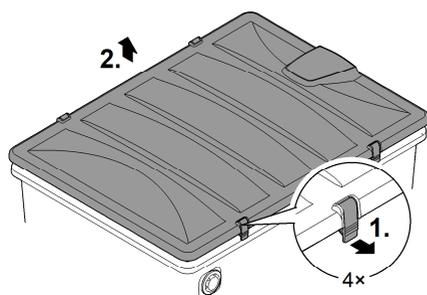
BioTec ScreenMatic<sup>2</sup> 40000, 60000, 90000

- Release the two locking clips, lift the cover and remove it.

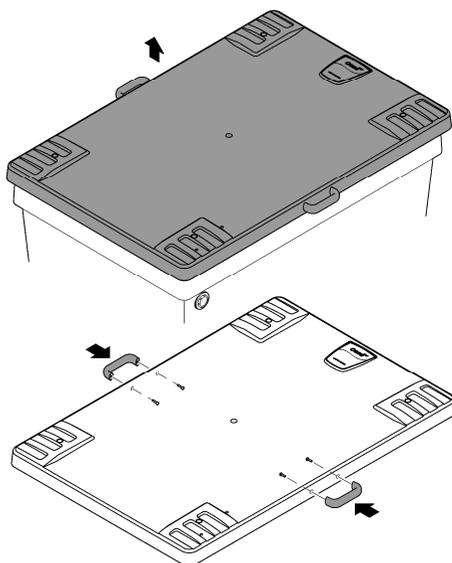
BioTec ScreenMatic<sup>2</sup> 145000

- Lift the cover by the handles and remove it.
- The handles are not fitted on delivery.
  - Screw the handles onto the cover.

BioTec ScreenMatic<sup>2</sup> 40000, 60000, 90000



BioTec ScreenMatic<sup>2</sup> 145000



BTC0051

### Hinging the screen holder up/down

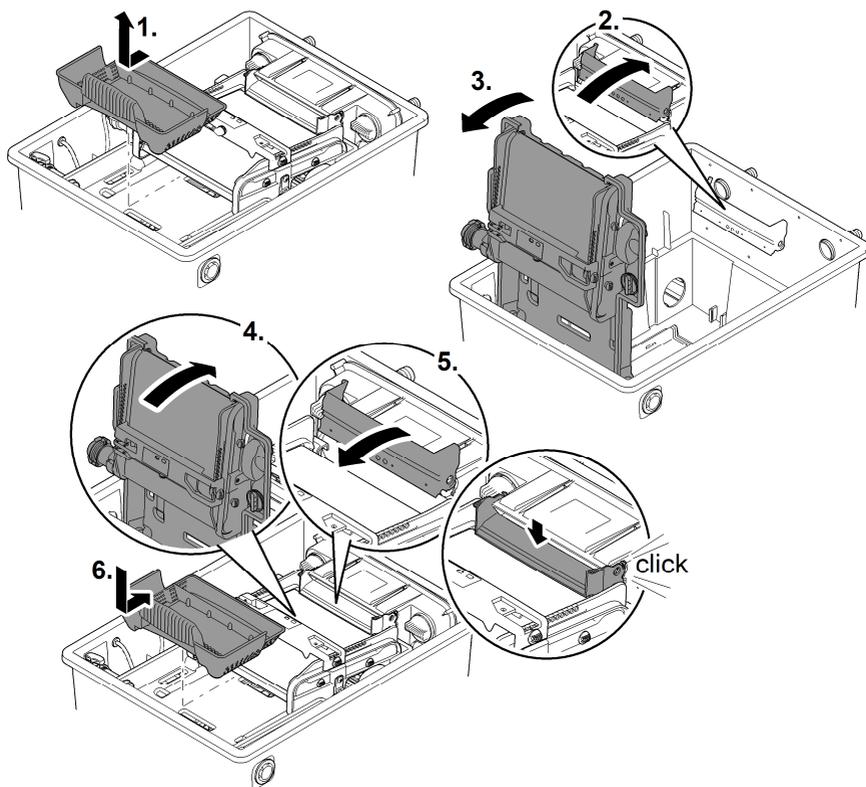
How to proceed:

To hinge up/open

1. Remove the debris tray.
2. Hinge up the distributor extension.
3. Hinge up the screen holder with the ScreenMatic rotating screen unit.

To hinge down/close

4. Carefully hinge down the screen holder.
5. Push the distribution extension down until it audibly engages.
6. Replace the debris tray.



BTC0052

## Installation planning

### WARNING

Risk of severe injuries or death by electric shock.

Protective measures for swimming ponds:

- ▶ Only use electrical units or installations with a rated voltage of  $U \leq 12\text{ V}$  in the water.
- ▶ Electrical installations with a rated voltage of  $U > 12\text{ V}$  must be located at a distance of at least 2 m from the water

### WARNING

Due to the high weight of the unit, spinal injuries or crushing of limbs is possible when carrying the unit. The unit weighs more than 25 kg.

- ▶ Have at least four people carry the container exclusively on the handles to avoid spinal injuries.
- ▶ Protect your limbs from crushing injuries.
- ▶ Do not transport the container when it is filled with water.

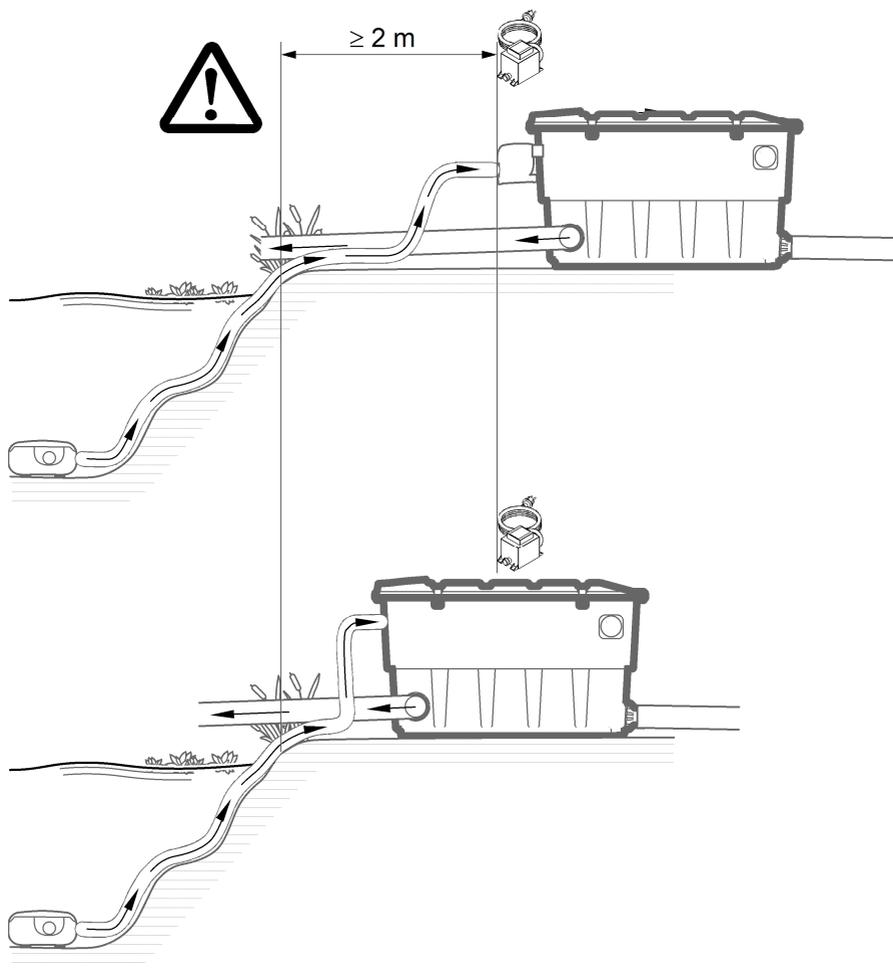
Electrical components of the filter system operate with a rated voltage of  $U_{DC} = 12\text{ V}$ . The supply voltage is supplied via an external transformer connected to the mains.

- Filter system with UVC clarifier fitted:
  - The filter system and transformer must be located at a distance of at least 2 m from the water.
- Filter system without UVC clarifier fitted:
  - The filter system can be installed directly next to the water. The transformer must be located at a distance of at least 2 m from the water.

Optimum operating results can be obtained with careful planning, taking the ambient conditions into account.

- As the filter is very heavy when filled, it must be placed on a suitable base (at least on slabs, but preferably on a poured concrete base) to prevent it from subsiding.
- Align the base slab horizontally.
- Ensure sufficient room for movement for carrying out cleaning and maintenance work.
- Allow the dirty water to drain out into a drain or far enough away from the pond to ensure that it cannot flow back into the pond.
- Do not position the inlet into the pond higher than the outlet of the filter system (e.g. above a water course or waterfall).

-  A water course or waterfall guarantees optimum water return to the pond.
  - In this way, the filtered pond water is enriched with oxygen before it is returned to the pond.



BTC0048

## Inlets

The filter system has two inlets with stepped hose adapters.

- For connecting a filter pump
- For connecting a UVC clarifier (→ Connecting a UVC clarifier)
- If an inlet is not used, fit a closed stepped hose adapter.
  - The stepped hose adapters are delivered closed.

Prerequisite:

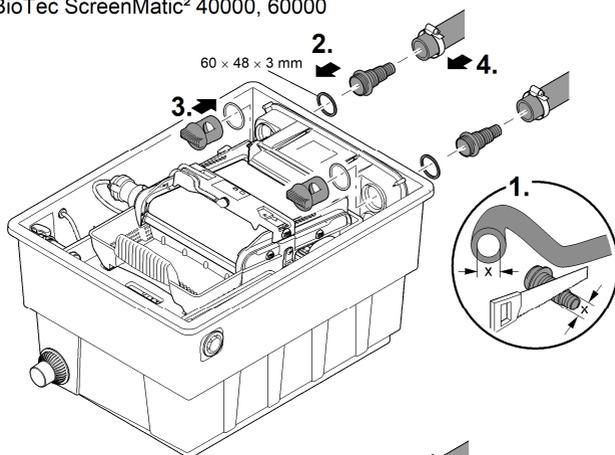
- The container is open. (→ Remove the container cover)
- The screen holder is hinged up. (→ Hinging the screen holder up/down)

## Connecting the filter pump

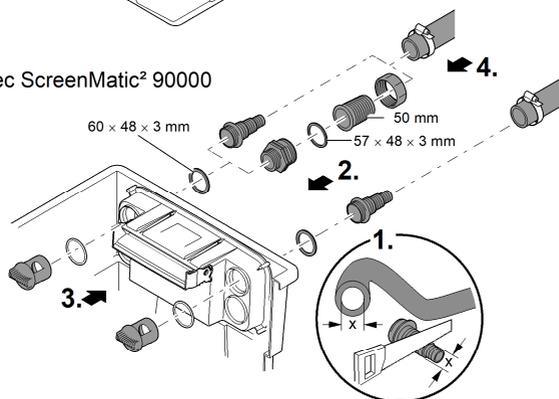
How to proceed:

1. Shorten the stepped hose adapter to the diameter of the hose used.
  - This reduces pressure losses.
2. Insert the stepped hose adapter with flat seal into the inlet opening.
3. Screw the distributor nut with O ring onto the stepped hose adapter and hand tighten.
  - BioTec ScreenMatic<sup>2</sup> 145000: Alternatively you can fit a 50 mm hose sleeve.
4. Slip the hose clip over the hose, fit the hose onto the hose connector and secure with the hose clip.

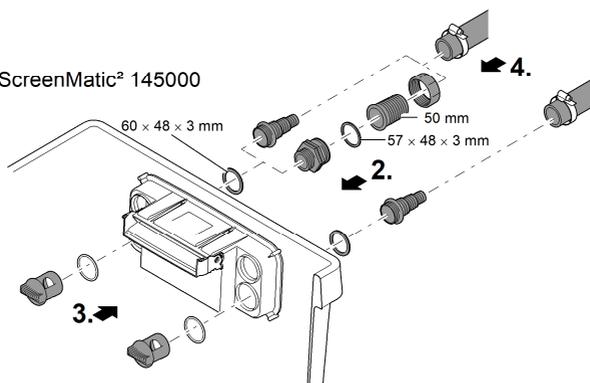
### BioTec ScreenMatic<sup>2</sup> 40000, 60000



### BioTec ScreenMatic<sup>2</sup> 90000



### BioTec ScreenMatic<sup>2</sup> 145000



BTC0058

## Connecting a UVC clarifier

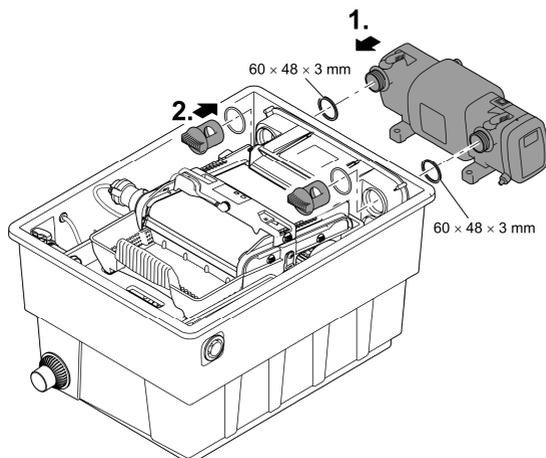
### Fitting the outlet

Prerequisite:

- The container is open. (→ Remove the container cover)
- The screen holder is hinged up. (→ Hinging the screen holder up/down)

How to proceed:

1. Fit the UVC clarifier with flat seal into the inlet opening.
2. Screw the distributor nut with O ring onto the stepped hose adapter and hand tighten.  
– Read the UVC clarifier operating instructions.



BTC0059

## Outlets

- Use suitable pipes.
- Do not use any right-angled bends. Bends with a maximum angle of 45° are very efficient.
- Standing water in pipes can freeze when there is a hard frost and cause pipes to burst. For this reason, lay the pipes and hoses with a gradient (50 mm/m) to ensure that they can run empty.
- Pipe dimensions: (→ Unit data)

**i** Support the connected pipes. This increases the stability of pipe constructions and prevents them from sagging.

## Fitting the outlet

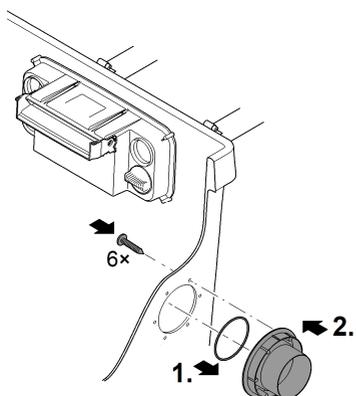
BioTec ScreenMatic<sup>2</sup> 145000: The outlet is not fitted on delivery.

Prerequisite:

- The container is open. (→ Remove the container cover)

How to proceed:

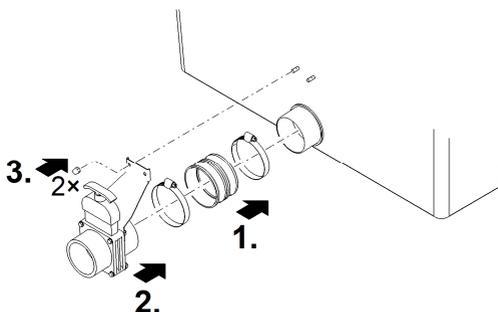
1. Push the O-ring onto the outlet.
2. Position the outlet in the container wall from the outside.
  - Ensure that the marking points up and is aligned with the holes in the container wall.
3. Use three oval head screws to screw the outlet to the container wall from the inside.
  - Tighten the screws diagonally to ensure that the seal is uniformly applied.
  - If you are using a cordless screwdriver: Do not set the screwdriver to “drill” to prevent damage to the self-tapped thread. Then re-tighten the screws with a Torx screwdriver.



BTC0064

## Installing the dirt outlet

BioTec ScreenMatic<sup>2</sup> 145000: The outlet is not fitted on delivery.



Proficlear0347

## Connecting the dirt outlet

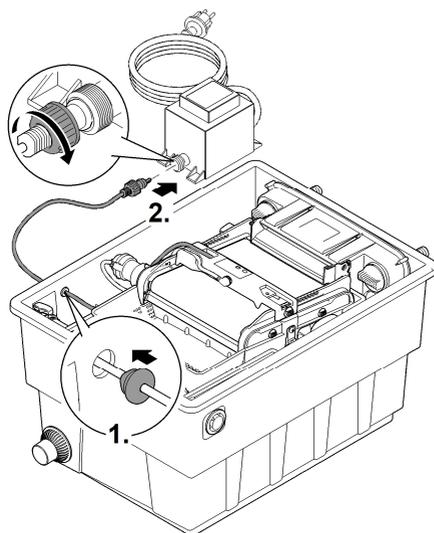
The water in the container can be drained via the DN 75 dirt outlet with a slide valve at the bottom of the container if required (for cleaning, repair, overwintering).

- Connect a suitable DN 75 pipe and drain the dirty water into the sewer system.
- Pipe dimensions: (→ Unit data)

## Carry out the electrical connection

How to proceed:

1. Thread the connection cable through the opening in the container wall and seal off the opening using the sealing plug.
  - Ensure that the connection cable inside the container is sufficiently long so that it is not subjected to tension when the ScreenMatic rotating screen unit is hinged up.
  - Avoid tangling of the cable inside the container.
2. Connect the plug of the connection cable to the socket on the transformer and hand-tighten the union nut.



BTC0061

## Commissioning/start-up

- ① Remove the protective film from the substrate tubes and insert the substrate tubes into the container. (→ Cleaning/replacing the substrate tubes)
  - The substrate tubes are sealed in protective film on delivery.

Thoroughly clean the pond before starting up the filter system for the first time to ensure that the filter system is not overloaded by excessively soiled water. OASE recommends using the pond vacuum cleaner PondoVac for cleaning the pond.

- This cleaning measure is normally not necessary for newly installed ponds.

## Biological filter starter

The foam filters take several weeks to reach their full biological cleaning effect. We recommend using the OASE filter starter Biokick to ensure fast growth of bacterial populations. Micro-organisms colonise the filter system, multiply and ensure an enhanced quality of the pond water by the decomposition of excess nutrients.

- ① Leave the UVC clarifier switched off for at least 36 hours if you are using filter starters, medications or pond care products.
  - This does not affect the effect of the agents.

## Order of starting up steps

How to proceed:

1. Close the slide valve of the dirt outlet.
2. Check that the filter system (pipes and hoses) is complete.
3. Remove the container cover.
4. Connect the transformer for the control device to the power supply.
5. Switch on the filter pump and UVC clarifier (if applicable).
  - Ensure that the water is returned to the pond via the return pipe.
6. Check all pipes, hoses and their connections for leaks.
  - Expansion seals may leak initially until they have fully expanded on contact with water.
7. Adjust the control device to the flow rate if necessary. (→ Aligning the control device)
8. Check the function of the ScreenMatic rotating screen unit. (→ Operation)
9. Fit the container cover.

- ① Only operate the unit with the container cover in place.
- ① To reduce pump noise, connect the pump to the pipework via flexible, pressure-resistant hose lines for fixed installation.
- ① The substrate tubes should remain completely under water to ensure maximum effectiveness.
  - If, due to the system configuration, the water level in the container is too low for this, place the top substrate tube directly into the pond, at a well-flowed place.

## Aligning the control device

### **Do not align the control device until after the running-in period**

- Lowering the pump into the pond may swirl up so much debris that starting up the filter system straight away could cause the ScreenMatic screen to overflow.
- The filter system requires a running-in period of 2 to 3 hours. After this, the control device can be aligned if necessary.
- Align the control device such that the sensor only switches when a well-formed line of debris has formed on the screen.
  - A well-formed line of debris can be optimally removed by the stripper and conveyed into the debris tray.
  - The stripper brush under the ScreenMatic screen collects the fine debris, which falls into the debris tray.

How to proceed:

1. Remove the screw from the control device and take out the control device.
2. Insert the control device into the determined position, insert the screw and hand tighten.

### **Aligning the control device depending on the degree of soiling of the pond**

In order to prevent premature soiling of the foam filters, ensure that the dirty water does not flow beyond the "Max. water jet" mark directly into the debris tray.

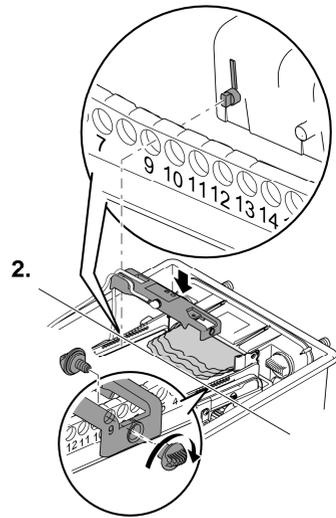
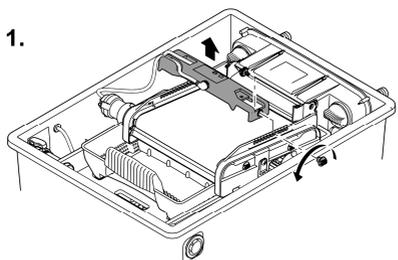
- Do not change the position of the control device unless the water flows as far as or beyond the "Max. water jet" mark, even when the ScreenMatic screen has been cleaned (with the enclosed brush). (→ Cleaning/replacing the ScreenMatic screen)

### Typical position of the control device

#### BioTec ScreenMatic<sup>2</sup>

40000	60000	90000	145000
<6000 l/h	<8000 l/h	<9000 l/h	<12000 l/h
>8000 l/h	>9000 l/h	>11000 l/h	>15000 l/h
Delivery state 7	Delivery state 9	Delivery state 10	Delivery state 18

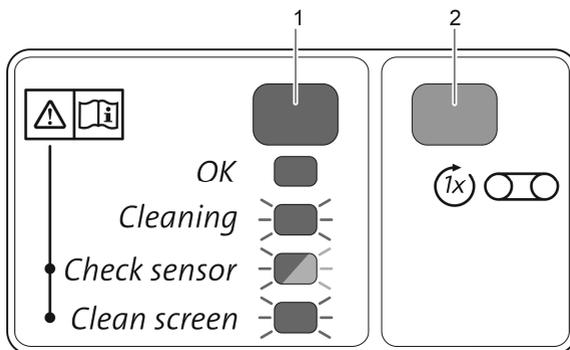
EN



BTC0062

## Operation

### Operating panel



BTC0046

1	LED, 2 colours	
	• Lit green	The ScreenMatic rotating screen unit is operational
	• Flashing green	Cleaning active
	• Flashes green/red	Malfunction (→ System messages)
	• Flashing red	Malfunction (→ System messages)
2	Button, start/stop manual cleaning	(→ Manual cleaning)

### Manual cleaning

#### Proceed as follows

Press  for 1s.

#### Description

The ScreenMatic screen is rotated by 1 revolution.

- Press the button again for 1s: The rotational movement stops prematurely.

## Automatic cleaning

Due to the build-up of debris the water level on the ScreenMatic screen also rises. When the sensor in the control device comes into contact with the water, it triggers the rotational movement of the ScreenMatic screen.

By briefly moving the ScreenMatic screen back several times a larger line of debris is formed, which can be better removed by the stripper.

Sequence of an automatic cleaning cycle	Rotational movement of the ScreenMaticscreen
Normal soiling	
1. Contact of the sensor with water	Brief movement backward
2. Contact of the sensor with water	Brief movement backward
3. Contact of the sensor with water	Brief movement backward
4. Contact of the sensor with water	One rotation forward <ul style="list-style-type: none"> <li>• The debris is conveyed into the debris tray.</li> </ul>
Heavy soiling or incorrectly aligned control device (permanently high water level on the ScreenMatic screen)	
1. Contact of the sensor with water	Brief movement backward, then one rotation forward <ul style="list-style-type: none"> <li>• The debris is conveyed into the debris tray.</li> </ul>

## Time-dependent cleaning

The ScreenMatic rotating screen unit executes a cleaning cycle after a set interval depending on the ambient temperature. This ensures cleaning at regular intervals

- if the sensor is soiled or defective,
- if there is very little soiling on the screen and/or low flow rates (e.g. when the SFC of the filter pump is activated).

Ambient temperature	Interval	Rotational movement of the ScreenMaticscreen
≤10 °C	6 hours	One rotation forward
10 °C ... 20 °C	4 hours	• The debris is conveyed into the debris tray.
≥20 °C	3 hours	

## System messages

LED	Malfunction	Possible cause	Remedy	Reset the system message
Flashes green/red	No automatic cleaning cycle within 48 hours	Sensor soiled	<ul style="list-style-type: none"> <li>Clean the sensor.</li> <li>Descale the sensor.</li> </ul>	Automatic reset after remedy of malfunction
		No dirty water, cleaning is not necessary	–	
	No flow of water	Filter pump is not operating	Start up the filter pump.	
	No water detected by the sensor	Control device incorrectly positioned	Correctly position the control device	
		Control device defective	Replace the control device.	
Insufficient conductivity of the water		Increase the water hardness with OptiPond		
	Insufficient pump capacity	Adjust the pump capacity accordingly		
Flashing red	20 automatic cleaning cycles in succession	ScreenMatic screen soiled	<ul style="list-style-type: none"> <li>Start manual the cleaning cycle and use a brush to clean the ScreenMatic screen on the side of the water distributor (→ Manual cleaning)</li> <li>Clean the ScreenMatic screen from the inside if the mesh is clogged by a biofilm (→ Cleaning/replacing the ScreenMatic screen)</li> </ul>	Automatic reset after remedy of malfunction
		Sensor soiled	Clean the sensor.	
		Control device incorrectly positioned	Correctly position the control device	
		Pump capacity too high	Adjust the pump capacity accordingly	
Flashing green	ScreenMatic screen not rotating although a manual cleaning cycle was triggered.	Motor cable plug not connected or incorrectly connected to the control device	Connect the plug, check that it is correctly seated.	–
		Motor defective	Replace motor	
Off	ScreenMatic screen not rotating although a manual cleaning cycle was triggered.	Connection cable plug not connected or incorrectly connected to the transformer	Connect the plug, check that it is correctly seated.	–
		Transformer not connected to the mains voltage	Connect the transformer to the mains voltage.	
		Transformer defective	Replace transformer	
		Control device defective	Replace the control device.	

## Maintenance and cleaning

### WARNING

Risk of severe injuries or death by electric shock.

- ▶ Disconnect all electrical devices in the water from the power supply before reaching into the water.
- ▶ Disconnect the unit from the mains before you start working on it.

- Do not use aggressive cleaning agents or chemical solutions as they could attack the housing or impair the function of the unit.
- Recommended cleaning agent for removing stubborn limescale deposits:
  - Pump cleaning agent PumpClean from OASE.
  - Vinegar- and chlorine-free household cleaning agent.
- After cleaning, thoroughly rinse all parts in clean water.

### Regular cleaning work

- Empty the debris tray:
  - The cleaning cycle is dependent on the degree of soiling of the pond.
  - Remove the debris tray. (→ Hinging the screen holder up/down)
- Clean the ScreenMatic screen:
  - If the ScreenMatic screen becomes clogged, clean the ScreenMatic screen downstream of the water distributor using the brush. For this, manually activate the ScreenMatic screen. (→ Manual cleaning)
  - Carry out intensive cleaning with the pump cleaning agent PumpClean from OASE: (→ Cleaning/replacing the ScreenMatic screen)

### Cleaning foam filters

- It is necessary to clean the foam filters as soon as the water exceeds the 100% mark on the separating plate.
- Do not use chemical cleaning agents, as these will kill the filter bacteria.

Prerequisite:

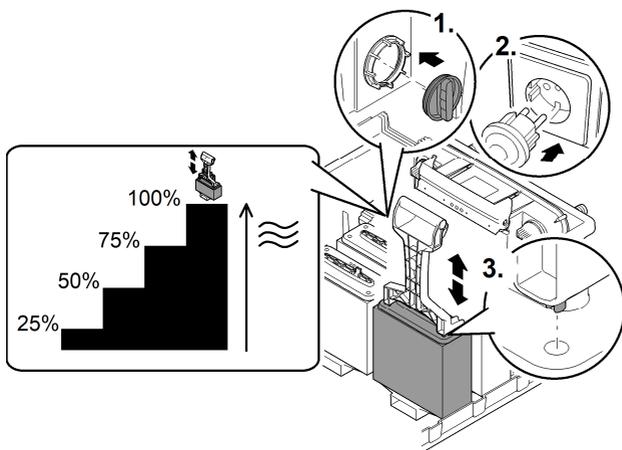
- The filter pump is switched off.
- The container is open. (→ Remove the container cover)
- The screen holder is hinged up. (→ Hinging the screen holder up/down)
- BioTec ScreenMatic<sup>2</sup> 90000: Separating plate has been pulled out and the substrate tubes have been removed. (→ Cleaning/replacing the substrate tubes)
- The water level in the container has lowered to the height of the outlet or below.

### BioTec ScreenMatic<sup>2</sup> 40000, 60000, 90000

How to proceed:

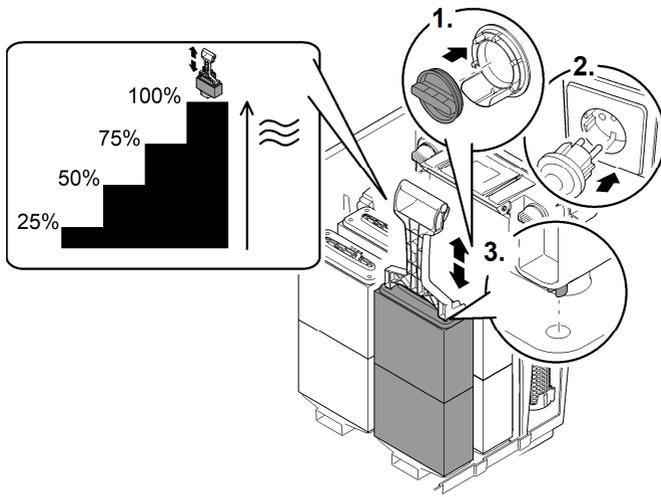
1. Insert the plug into the outlet from the inside to close off the outlet.  
– Remove the separating plate to facilitate access if applicable.
2. Switch on the filter pump until the foam filters are covered with water, then switch off the filter pump.
3. Compress all foam filters several times with the foam cleaning device.
4. Allow the dirty water to drain away.  
– Open the dirt outlet slide valve and close it again when the container is empty.
5. Repeat steps 2 ... 4 as required.
6. Rinse the container with clear water to remove any loosened dirt particles. To do this, first carry out step 2, then step 4.
7. Remove the plug from the inside of the outlet.
8. Close the dirt outlet slide valve.
9. Hinge down the screen holder (→ Hinging the screen holder up/down), insert the debris tray and switch on the filter pump.

### BioTec ScreenMatic<sup>2</sup> 40000, 60000



BTC0053

### BioTec ScreenMatic<sup>2</sup> 90000



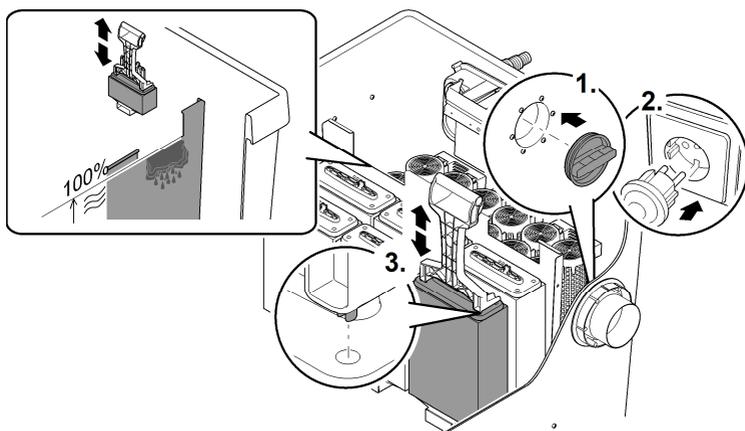
EN

BTC0082

### BioTec ScreenMatic<sup>2</sup> 145000

How to proceed:

1. Insert the plug into the outlet from the inside to close off the outlet.
2. Switch on the filter pump until the foam filters are covered with water, then switch off the filter pump.
3. Compress all foam filters several times with the foam cleaning device.
4. Allow the dirty water to drain away.  
– Open the dirt outlet slide valve and close it again when the container is empty.
5. Repeat steps 2 ... 4 as required.
6. Rinse the container with clear water to remove any loosened dirt particles. To do this, first carry out step 2, then step 4.
7. Remove the plug from the inside of the outlet.
8. Close the dirt outlet slide valve.
9. Hinge down the screen holder (→ Hinging the screen holder up/down), insert the debris tray and switch on the filter pump.



BTC0079

## Cleaning/replacing the substrate tubes

The substrate tubes are filled with zeolite on delivery. OASE recommends replacing the zeolite with Phosless when the bacteria are established and the foam filters are fully effective.

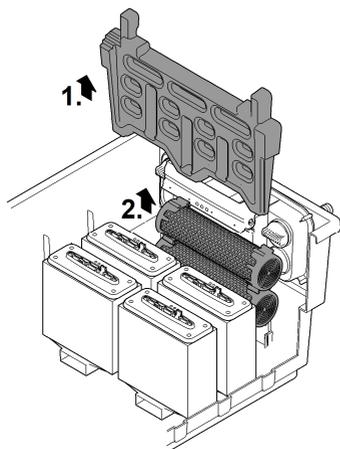
Prerequisite:

- The filter pump is switched off.
- The container is open. (→ Remove the container cover)
- The screen holder is hinged up. (→ Hinging the screen holder up/down)

### BioTec ScreenMatic<sup>2</sup> 40000, 60000

How to proceed:

1. Remove the separating plate.
2. Remove the substrate tubes and clean them or replace their contents.
  - BioTec ScreenMatic<sup>2</sup> 40000: Two substrate tubes
  - BioTec ScreenMatic<sup>2</sup> 60000: Three substrate tubes
  - When inserting, push the substrate tubes against the wall opposite to the outlet.

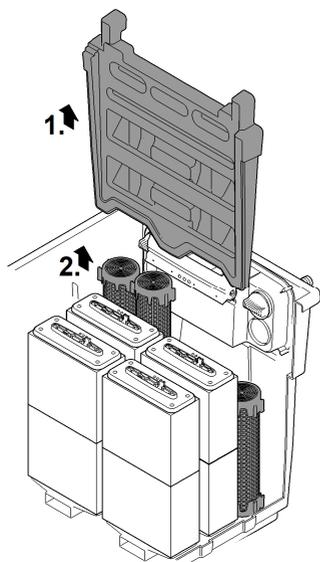


BTC0055

## BioTec ScreenMatic<sup>2</sup> 90000

How to proceed:

1. Remove the separating plate.
2. Remove the substrate tubes and clean them or replace their contents.
  - BioTec ScreenMatic<sup>2</sup> 90000: Four substrate tubes
  - Two substrate tubes each to the left of the outlet and two substrate tubes each to the right of the outlet.



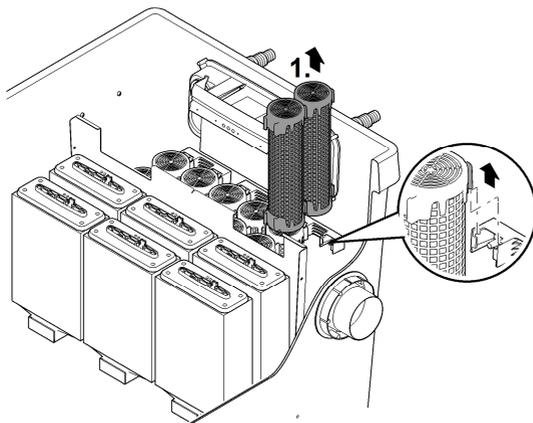
BTC0081

**BioTec ScreenMatic<sup>2</sup> 145000**

How to proceed:

- Remove the substrate tubes individually and clean them or replace their contents.
  - BioTec ScreenMatic<sup>2</sup> 145000: Twelve substrate tubes

EN



BTC0080

**Cleaning/replacing the ScreenMatic screen**

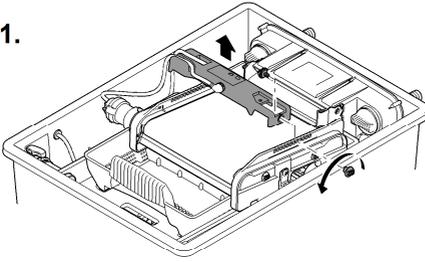
Prerequisite:

- The filter pump is switched off.
- The container is open. (→ Remove the container cover)
- The debris tray is removed. (→ Hinging the screen holder up/down)

How to proceed:

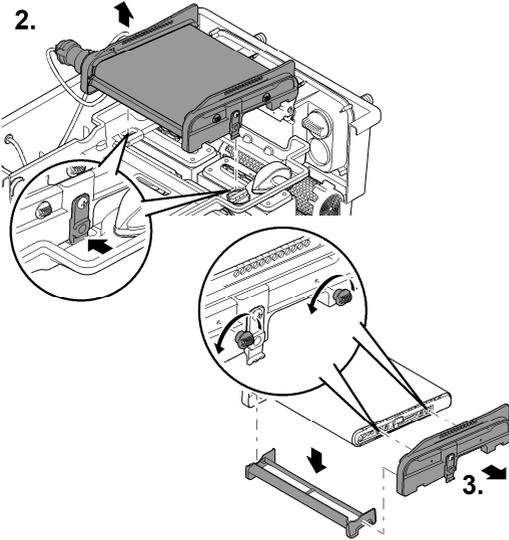
1. Remove the screw for fastening the control device, remove the control device and place it carefully to the side.
  - If necessary, disconnect the motor cable plug from the control device.
  - Mark the position of the control device on a side section for reassembly.
2. Take the ScreenMatic rotating screen unit out of the screen holder.
  - Biotec ScreenMatic<sup>2</sup> 40000, 60000, 90000: Press the locking clips on both sides and remove the ScreenMatic rotating screen unit.
  - Biotec ScreenMatic<sup>2</sup> 145000: Press the ScreenMatic rotating screen unit in the direction of the water distributor and remove.
3. Undo the nuts on the side section, and remove the side section and stripper.
4. Release the clamping lever and remove the ScreenMatic screen.
  - Thoroughly clean the stripper.
  - Thoroughly clean both sides of the ScreenMatic screen. Replace the ScreenMatic screen if necessary.
  - Use the pump cleaning agent PumpClean from OASE.
5. Reassemble the ScreenMatic rotating screen unit in the reverse order and place it into the screen holder.
  - When tensioning the ScreenMatic screen, ensure that the clamping lever engages.

1.



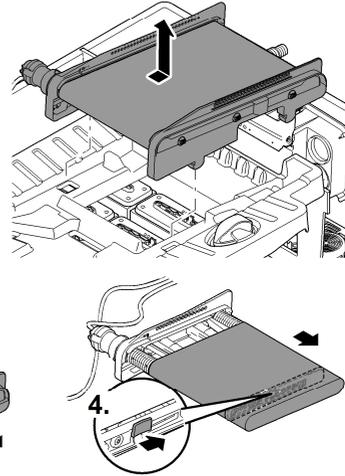
BioTec ScreenMatic² 40000, 60000, 90000

2.



BioTec ScreenMatic² 145000

2.



BTC0060

## Replacing foam filters

Prerequisite:

- The filter pump is switched off.
- The container is open. (→ Remove the container cover)
- The screen holder is hinged up. (→ Hinging the screen holder up/down)

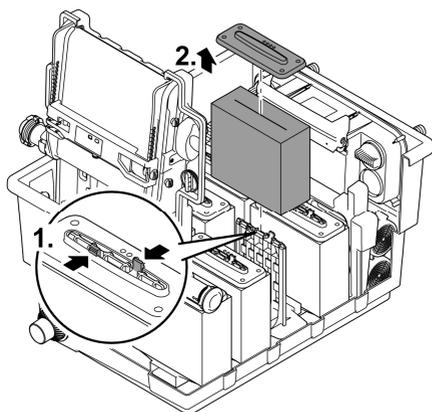
How to proceed:

1. Press both locking clips on the foam holder.
2. Remove the foam holder plate and foam filter.
3. Push a new foam filter onto the foam holder, fit the foam holder plate and push down until the two locking clips engage in the foam holder plate.



Recommendation regarding the replacement of foam filters:

- Only partially replace the foam filters at intervals of at least a week so as not to impair the biological cleaning action too much.
- Never replace more than 50 % of the foam filters at any one time.



BTC0054

## Storage/winter protection

### **The unit is protected from frost (e.g. stored in a garage or other enclosure)**

The unit can be operated as long as the water temperature does not go below +4 °C.

The deeper areas of the pond have a water temperature of approx. +4 °C in winter and are essential for the fish. By taking the following measures it is possible to reduce the cooling effect on the water of the circulation by the filter system:

- Position the pump nearer to the surface of the water so that only colder water closer to the surface of the pond enters the pump.
- Insulate the return pipes from the filter system into the pond.
- Do not allow water to flow into the pond via a water course.

### **The unit is not protected from frost (e.g. outdoor installation)**

Shut down the unit at water temperatures below +8 °C or at the latest when freezing temperatures are expected.

- Drain the water remaining in the unit, in the hoses, pipes and connections as much as possible.
- Open all slide valves to prevent water from pooling.
- Cover the container to prevent rain water from entering.
- Protect any lines and slide valves from which you cannot drain the water against freezing.

## Malfunction remedy

Malfunction	Possible cause	Remedy
No flow of water	Filter pump not switched on.	Switch on the filter pump, connect the power plug.
	Supply to filter system or return to pond blocked.	Clean the supply and/or return.
Water flow insufficient	Hose kinked or clogged	Check, clean or replace the hose if necessary.
	Excessive loss in the hoses due to friction	Reduce hose length to minimum necessary
	Insufficient pump capacity	Adjust the pump capacity accordingly
Water remains cloudy	Insufficient circulation of the water	Adjust the pump capacity accordingly
	The water is extremely soiled.	<ul style="list-style-type: none"> <li>• Optimise the circulation of the water in the pond.</li> <li>• Remove algae and leaves from the pond.</li> <li>• Change the water.</li> <li>• If the water is particularly contaminated, change 30 % of the water to avoid damage to the fish.</li> </ul>
	Too many pond animals	Reduce number of pond animals Guide value: approx. 600 mm fish length per 1 m <sup>3</sup> pond water
	ScreenMatic screen is clogged	Clean or replace the ScreenMatic screen.
	Foam filters soiled	Clean foam filters
	No water at the pond inlet	Pond inlet blocked
Filter pump is not operating.		Start up the filter pump.
Water level in the container too low, foam filters are not completely immersed in water.	The water level is initially lower when new foam filters are fitted as they have not yet been colonised by bacteria.	<ul style="list-style-type: none"> <li>• It takes several weeks for the bacteria to become established and the foam filters to become fully effective.</li> <li>• Use OASE filter starter Biokick to speed up the colonisation of bacteria.</li> </ul>
	The separating plate is missing. (Only BioTec ScreenMatic <sup>2</sup> 40000, 60000, 90000)	Insert the separating plate.
Increased noise	Noise of water at the outlet due to insufficient aeration	Insert a tee into the discharge pipe with the opening pointing up for aeration.

## Wear parts

- Foam filters
- Substrate tubes
- ScreenMatic screen

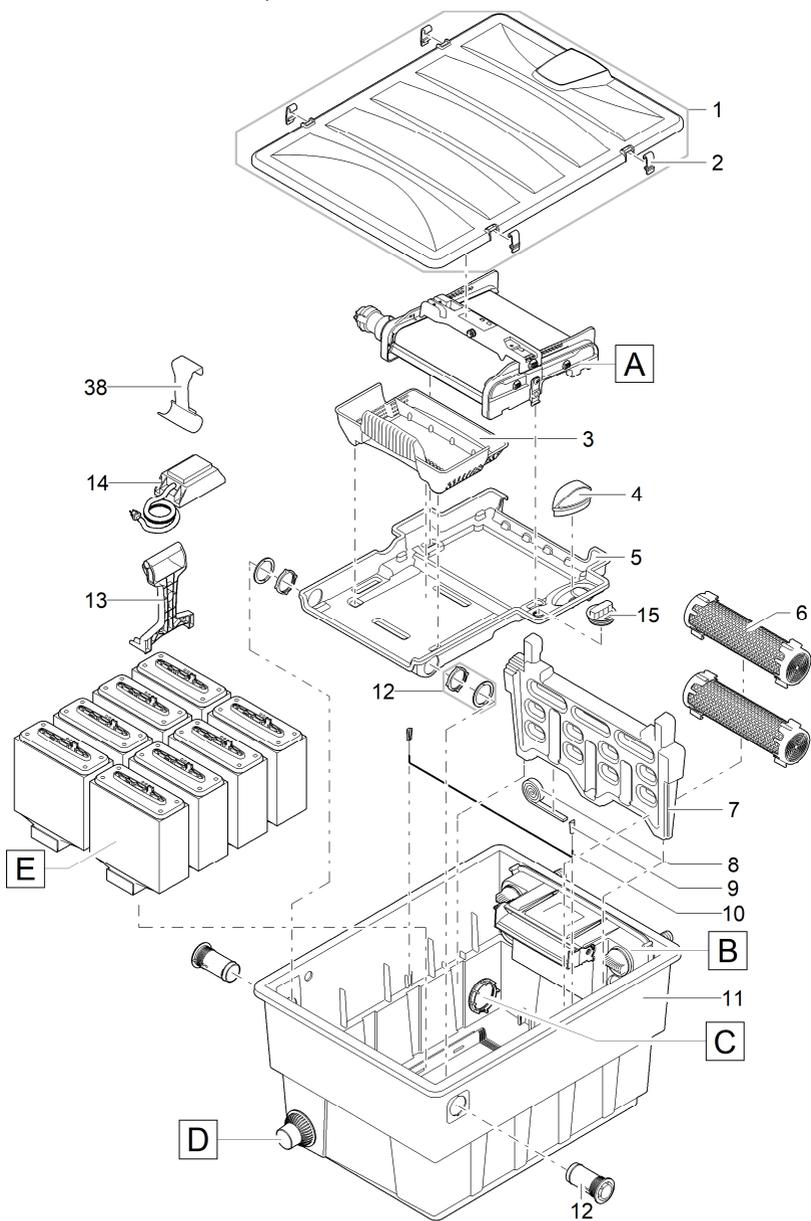
## Disposal

### NOTE

Do not dispose of this unit with household waste.

- ▶ Dispose of the unit by using the return system provided for this purpose.
  - ▶ Should you have questions, please contact your local disposal company. They will give you information on how to correctly dispose of the unit.
  - ▶ Render the unit unusable by cutting the cables.
-

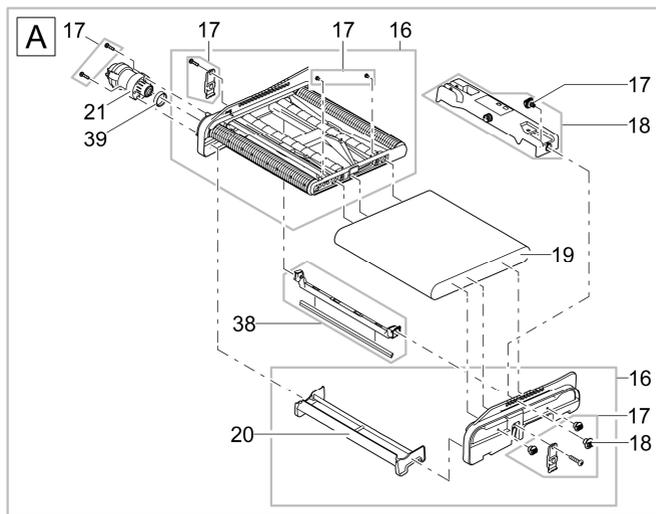
**BioTec ScreenMatic<sup>2</sup> 40000, 60000**



BT0040

1	45320	6	25507	10	25624	15	44343
3	42346	7	42341	11	43106	38	44308
4	42449	8	84923	12	44181		
5	42344	9	34830	13	34734		

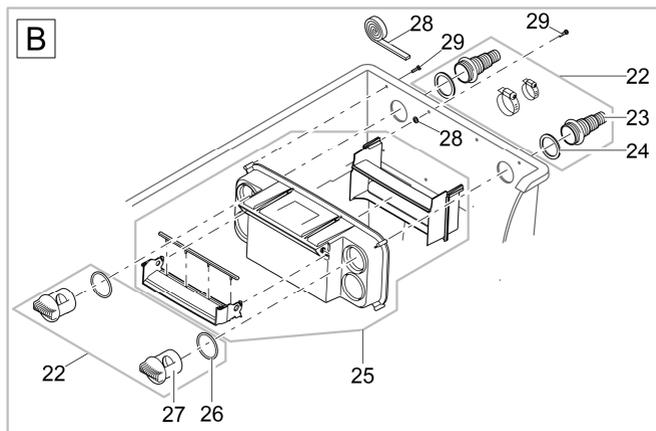
**BioTec ScreenMatic<sup>2</sup> 40000, 60000**



BTC0041

16	42383	18	44184	21	44183	39	42450
17	44178	20	44177	38	44308		

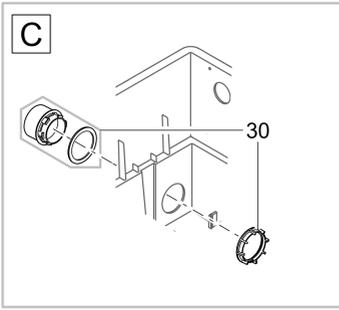
**BioTec ScreenMatic<sup>2</sup> 40000, 60000**



BTC0043

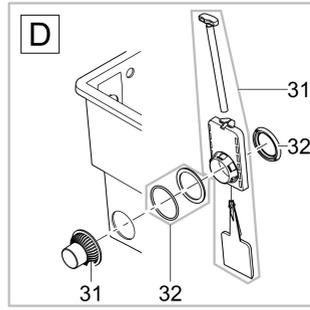
22	48674	24	19506	26	25691	28	44179
23	43749	25	44337	27	42949	29	25000

**BioTec ScreenMatic<sup>2</sup> 40000, 60000**



30 45321

31 44182

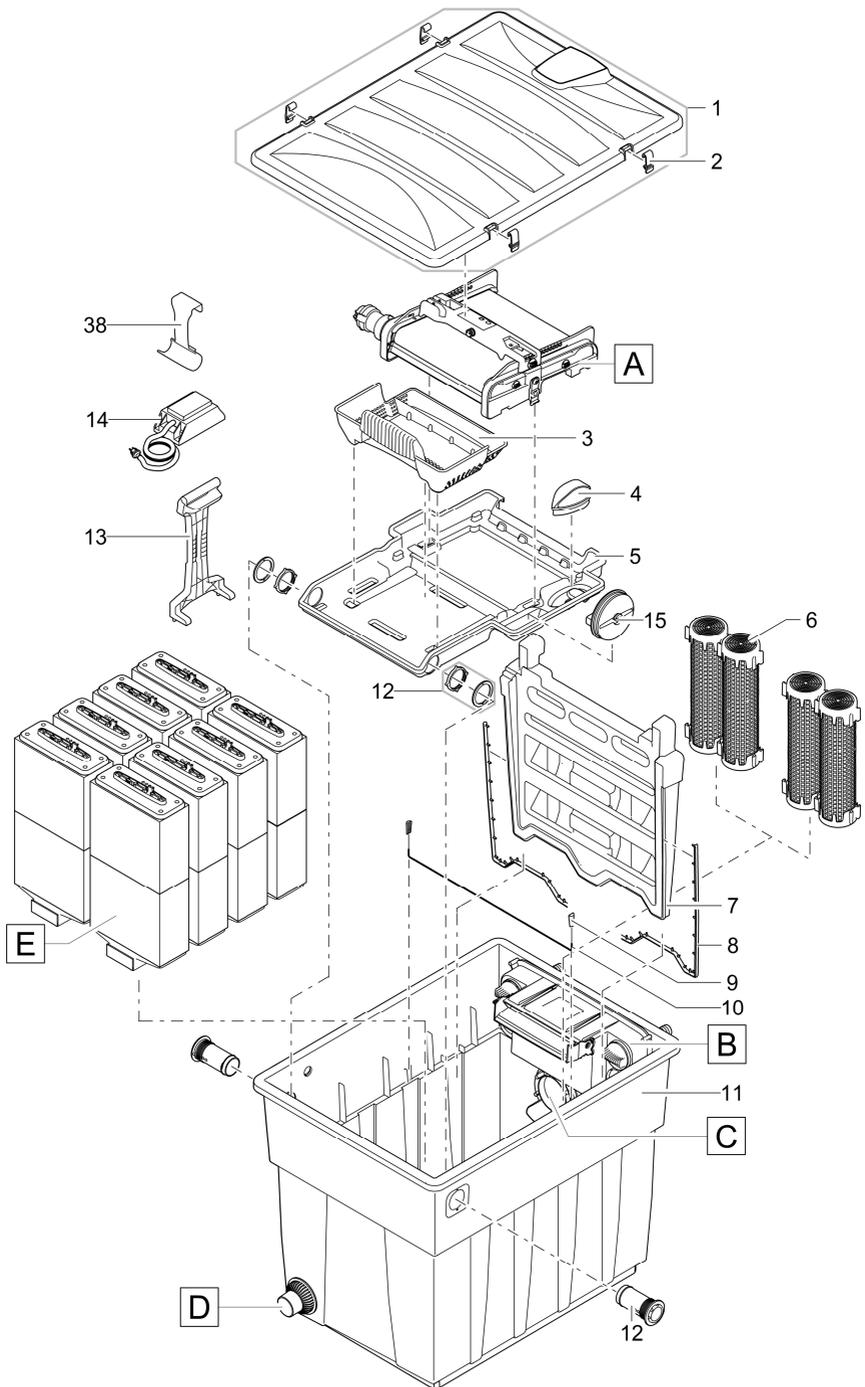


BTC0044

BTC0045

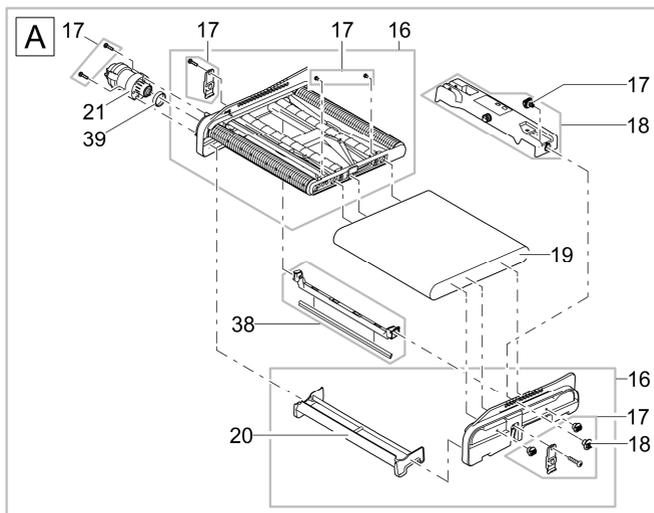
32 34859

### BioTec ScreenMatic<sup>2</sup> 90000



1	45320	6	25507	10	25646	15	44173
3	42346	7	42342	11	49600	38	44308
4	42449	8	47031	12	44181		
5	45323	9	34830	13	45252		

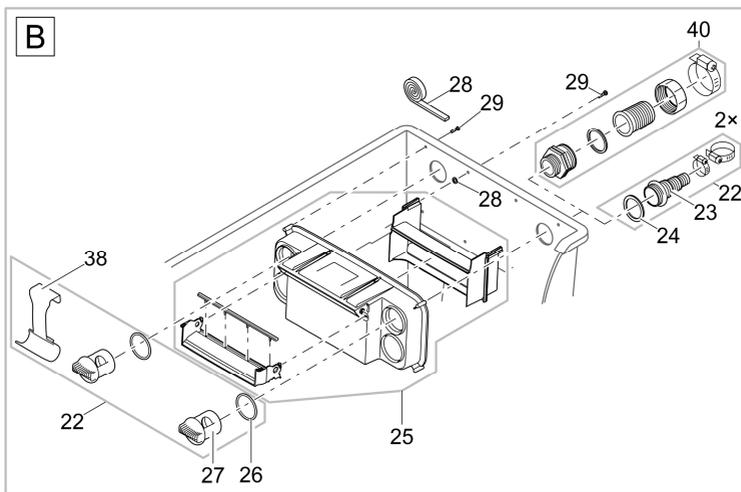
**BioTec ScreenMatic<sup>2</sup> 90000**



BTC0041

16	42383	18	44184	21	44183	39	42450
17	44178	20	44177	38	44308		

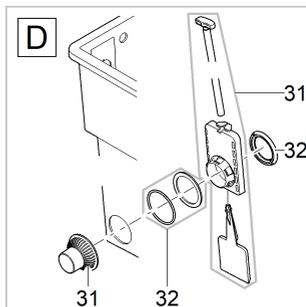
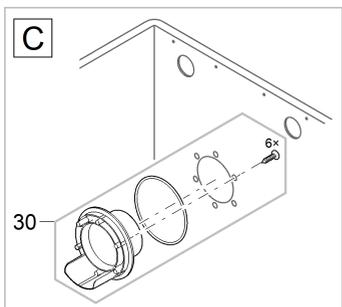
### BioTec ScreenMatic<sup>2</sup> 90000



BTC0086

16	42383	20	44177	24	19506	28	44179
17	44178	21	44183	25	44337	29	25000
18	44184	22	48674	26	25691	38	44308
19	42325	23	43749	27	42949	40	34367

### BioTec ScreenMatic<sup>2</sup> 90000



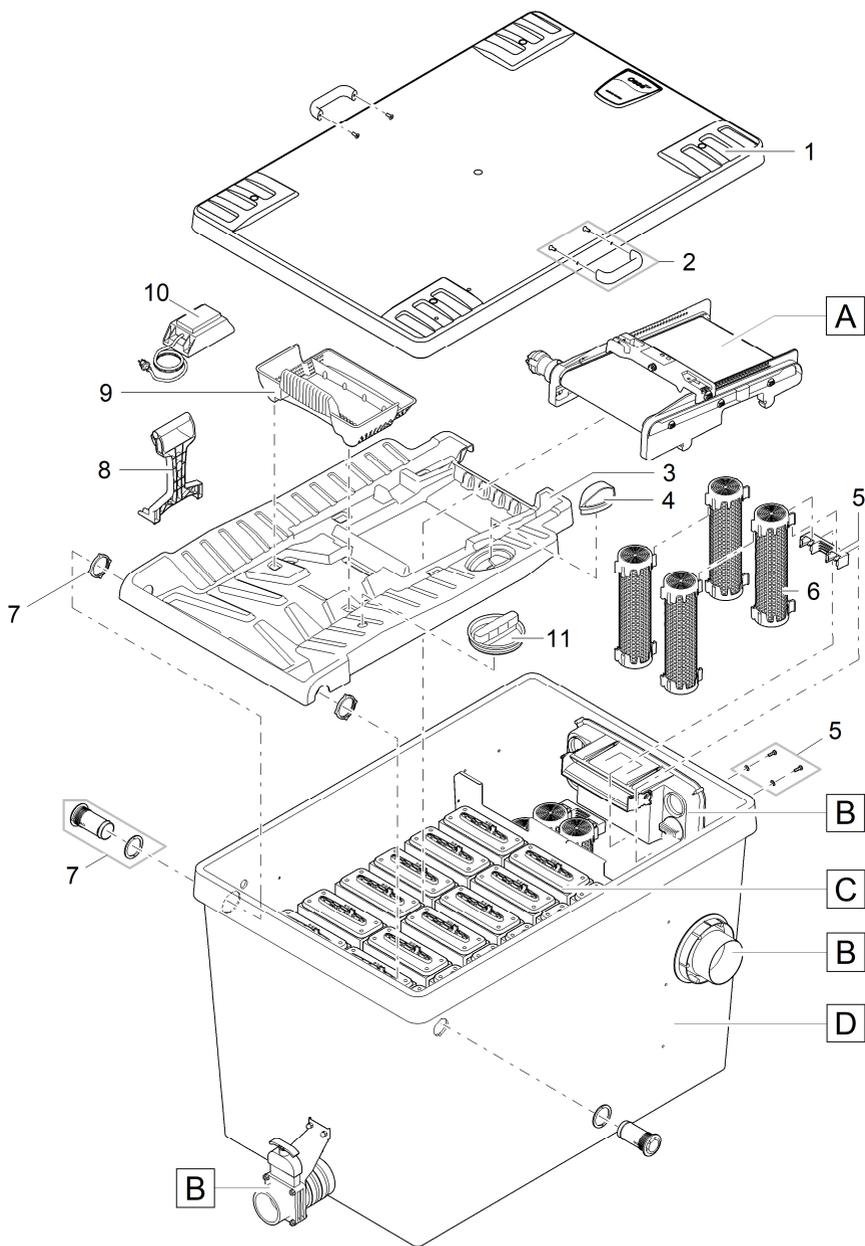
BTC0084

BTC0085

30	48686	31	44182
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32	34859
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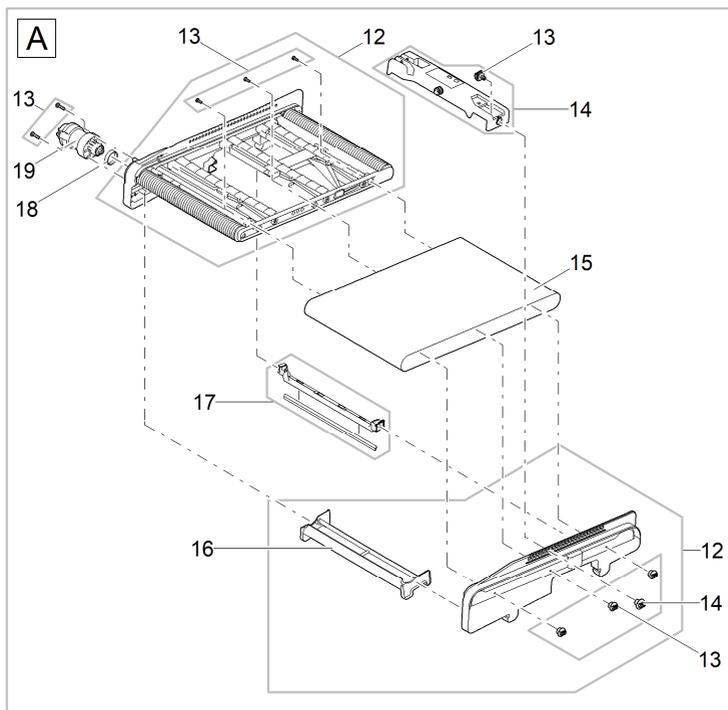
**BioTec ScreenMatic<sup>2</sup> 145000**



1	73381	4	42449	7	44181	10	15118
2	93094	5	34864	8	45252	11	44173
3	42345	6	25507	9	42346		

BTC012

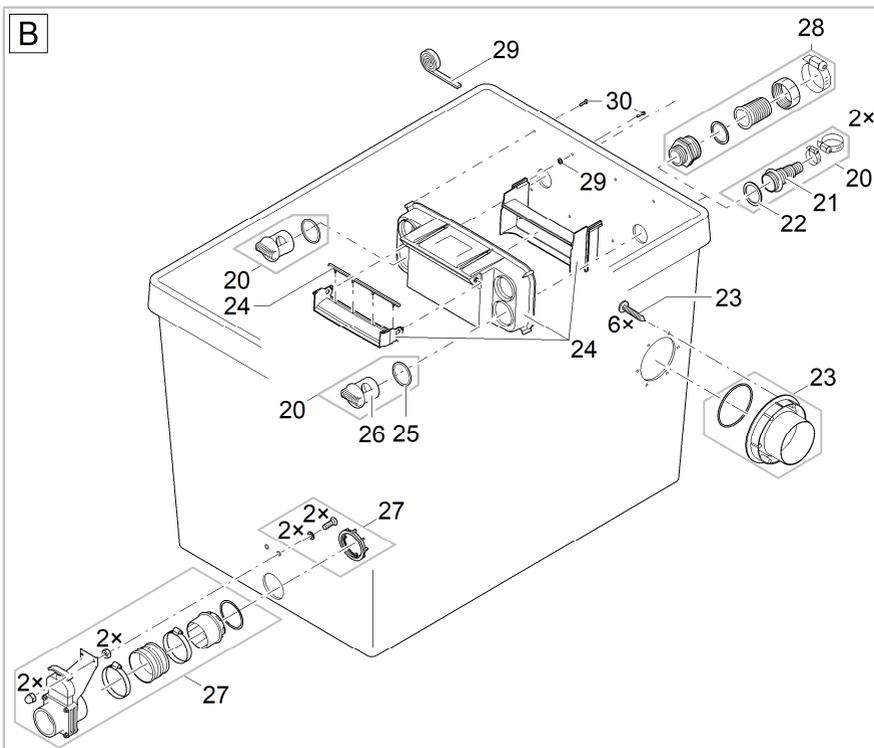
**BioTec ScreenMatic<sup>2</sup> 145000**



BTC013

12	42384	14	44186	16	44177	18	42450
13	44178	15	42326	17	44308	19	44183

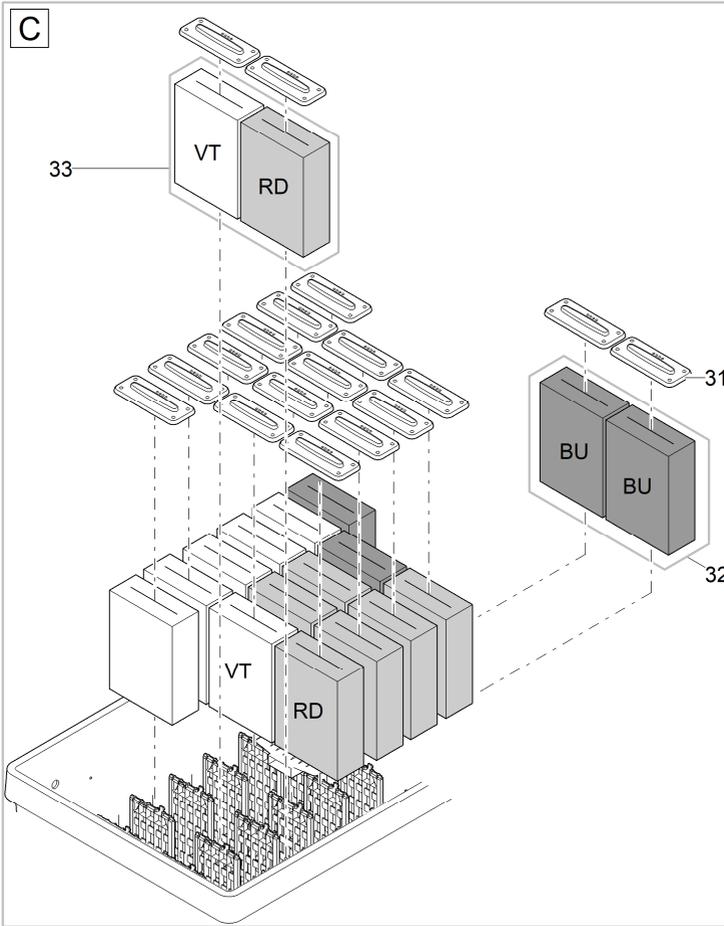
**BioTec ScreenMatic<sup>2</sup> 145000**



BTC014

20	48674	23	77507	26	42949	29	44179
21	43749	24	44338	27	70636	30	34784
22	19506	25	25691	28	34367		

**BioTec ScreenMatic<sup>2</sup> 145000**



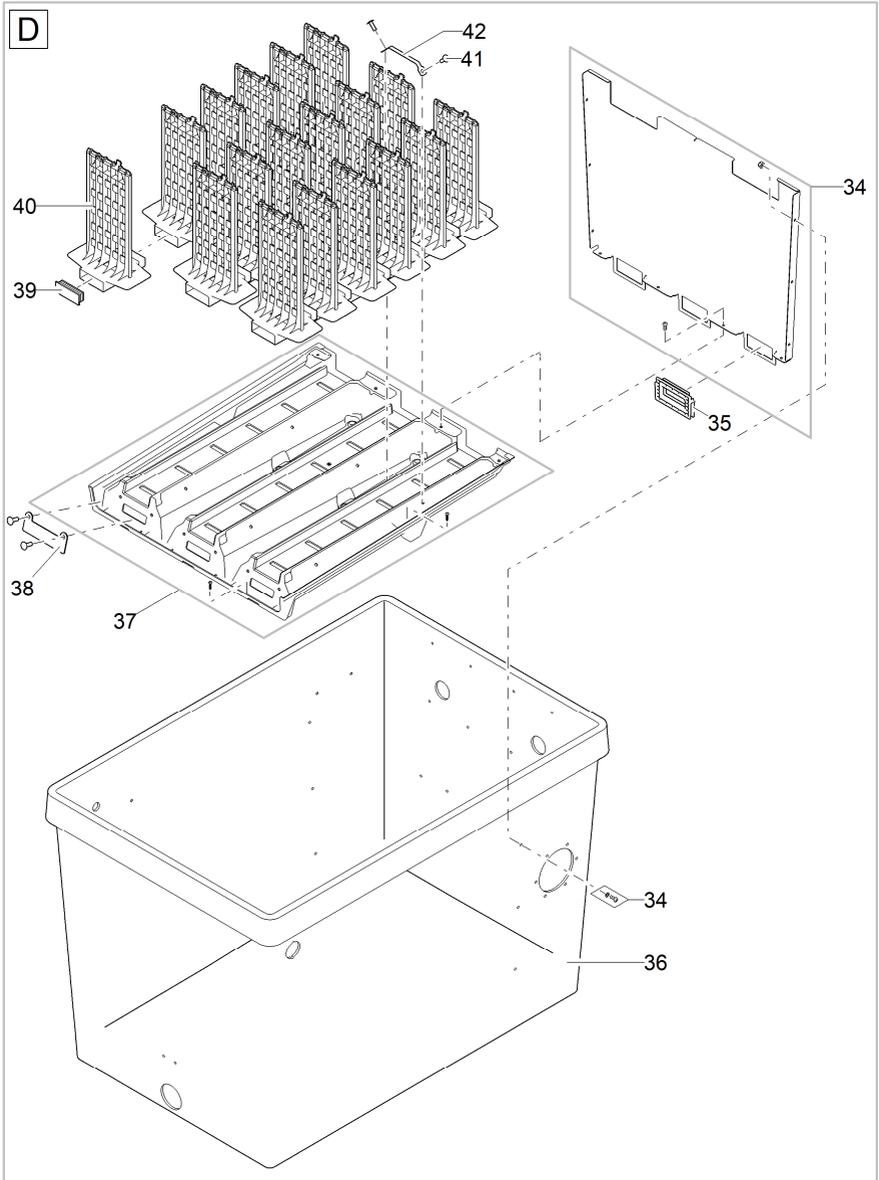
31 34670

32 42896

33 42894

BTC015

**BioTec ScreenMatic<sup>2</sup> 145000**



BTC016

34	93460	37	93461	40	34733
35	93101	38	25547	41	25546
36	93103	39	45325	42	25922

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