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QUICK GUIDE

v.2023-1

DVS FILTERSYSTEMS



Index

1	SAFETY	3
1.1	Symbols	3
1.2	Warnings / safety regulations	3
2	BASIC REQUIREMENTS	4
2.1	Control unit.....	5
2.2	Change Gravity → Pump fed.....	6
2.3	Adjust cleaning time	6
3	A. GRAVITY SYSTEM	7
3.1	Placing the filter system	7
3.2	Schematic setup.....	8
3.3	Set level control.....	8
4	B. PUMP FED SYSTEM	10
4.1	Placing the filter system	10
4.2	Schematic setup.....	10
4.3	Set level control	10
5	WATER VALVE (PLC)	12
6	TROUBLESHOOTING	13

1 SAFETY

1.1 Symbols

The following symbols are fixed to the filter.



Warning of dangerous electrical voltage.



Use safety glasses when spray head is enabled.

1.2 Warnings / safety regulations



During assembly or maintenance work, disconnect the device from the power supply.

- Make sure there is no damage to the filter before connecting it. Check the power cords and plugs carefully before connecting.
- It is forbidden to use the machine for other uses as intended by the manufacturer. Unintended use can lead to unforeseeable risks.

- **PAY ATTENTION ROTATING PARTS !**

Safety devices, such as protective covers/safety circuits, must never be removed or bypassed during normal use of the device.

The fixed separations on the gear drive have been attached with fastenings such as bolts. These features prevent any contact with moving parts and therefore protect from severe injury.

The removal of fixed guards, or the operation of the machine without any of these guards is not allowed!

Immediately after the execution of this work, the safety devices must be installed / activated again and checked for their functionality.

For this, only the original mounting hardware of the safety devices can be (re)used.

- Never try to stop the rotating drum with your hands.
- The motor and all electrical connections must not come in contact with water. If this does happen, make sure everything is dry before switching the filter back on.
- The controller of the drum filter may only be connected to an earthed socket.

ELECTRICAL WIRING AND/OR PLUGS MUST NOT BE CUT. THIS IMMEDIATELY VOIDS THE MANUFACTURER'S WARRANTY EN LIABILITY.

2 BASIC REQUIREMENTS

Basic requirements every filter system must meet:

- The filter system should be placed on a ground surface with sufficient carrying capacity, for instance:
 - a well-vibrated sand bed of 10 cm, possibly with concrete tiles
 - a concrete floor

In the event of subsidence, the filter may not function properly!

- The filter system should be placed fully level.
- Leave sufficient space around the filter, to perform cleaning and maintenance work.
- The filter control should be in a dry area, preferably indoors.
- The drive motor must be protected against weather influences.

The filter system can be used as gravity-system or pump fed system.



IMPORTANT!

The correct placement and constant water level in the pond are important conditions for optimal and problem-free operation of the filter system.

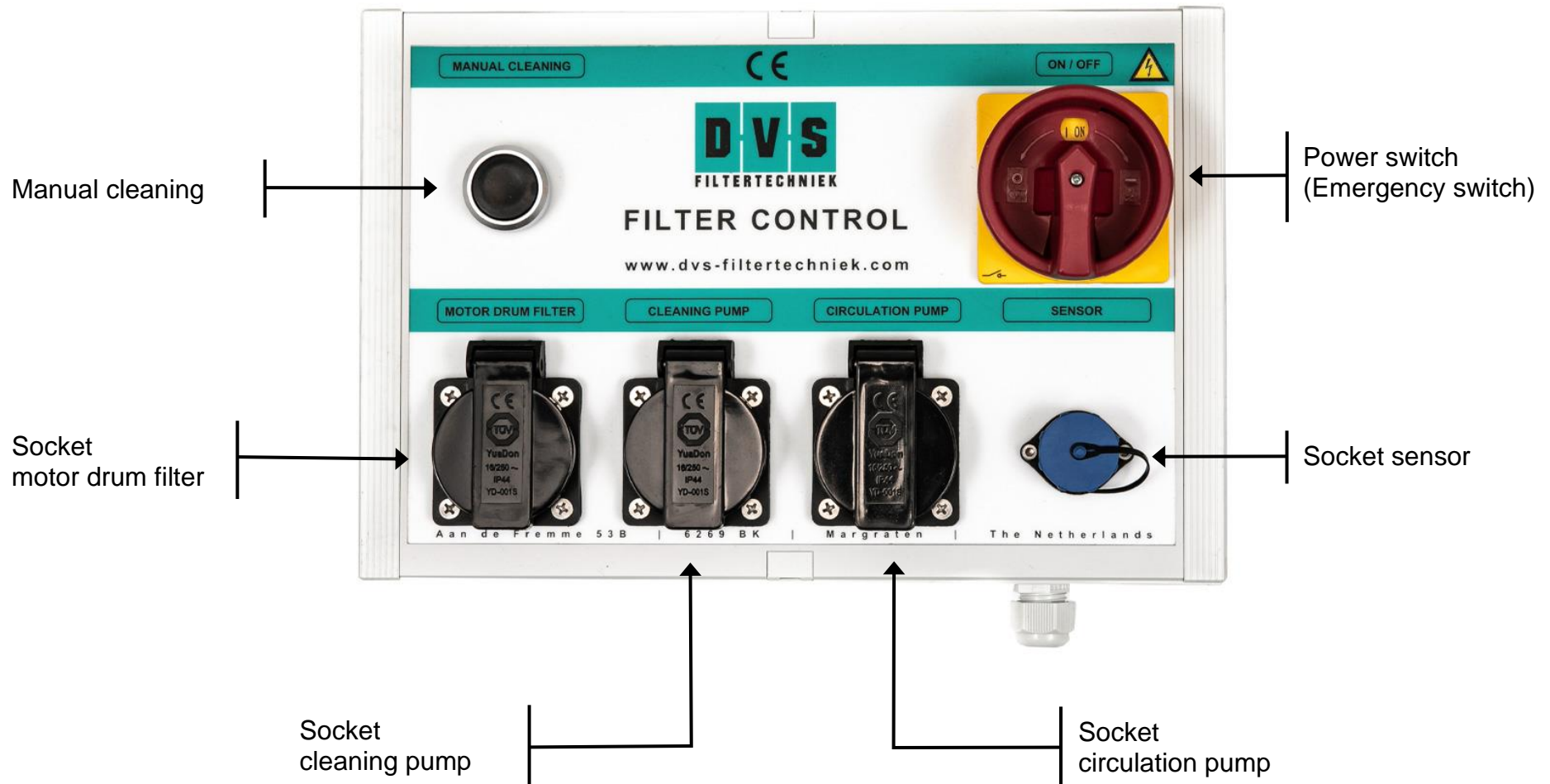


IMPORTANT!

The use of salt in the pond can cause stainless steel components of the filter to oxidize.

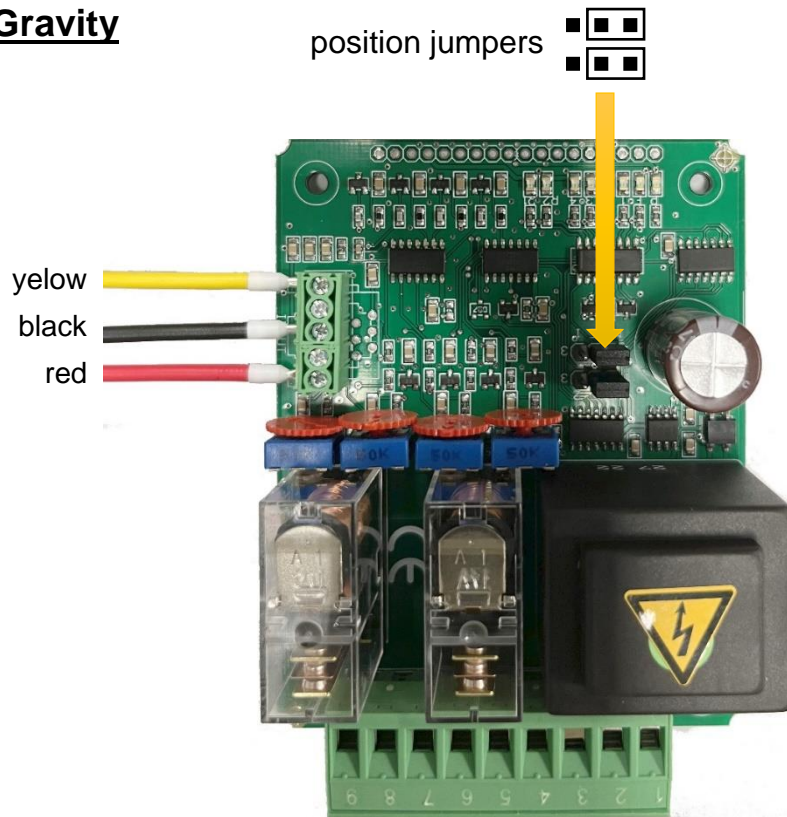
2.1 Control unit

Controller is not waterproof, please keep it out of the water. Place it under cover from the rain and wind.

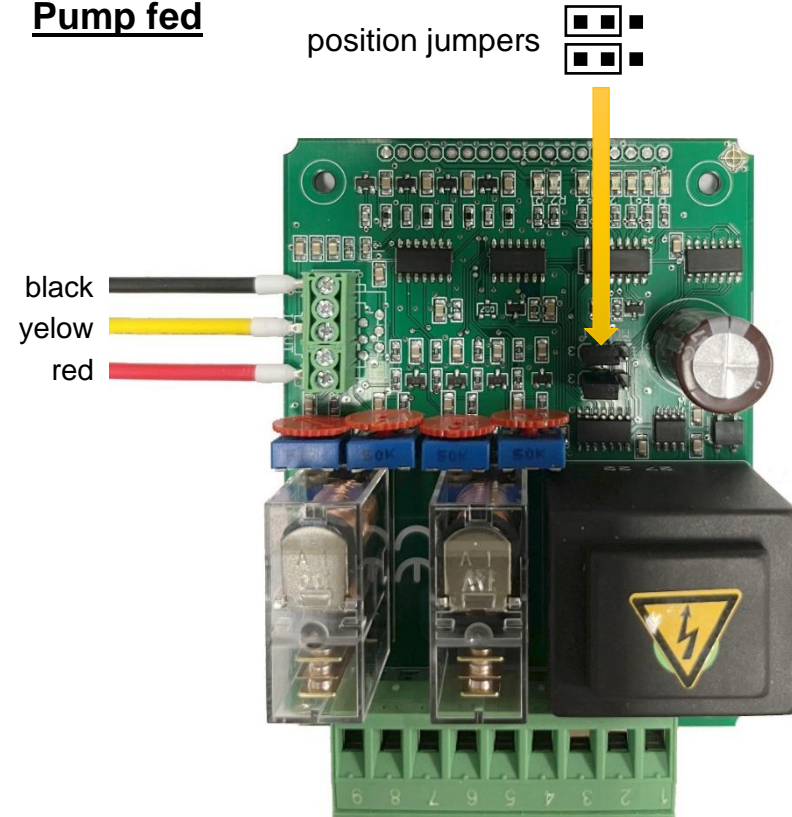


2.2 Change Gravity → Pump fed

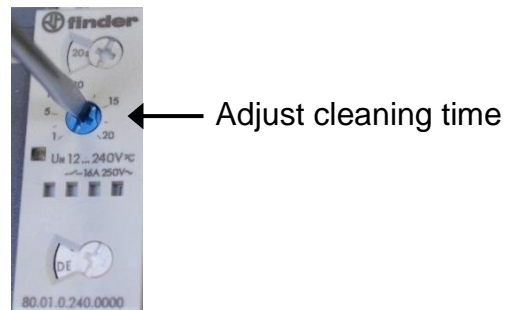
Gravity



Pump fed



2.3 Adjust cleaning time



3 A. GRAVITY SYSTEM

3.1 *Placing the filter system*

- Determine the maximum water level of the pond.
- Align the base plate horizontally (the filter should be placed fully level).
- The filter should be placed the height of the installation height (pic. 2.1) above water level.
(installation height is the distance from maximum water level to top of filter).
- For the operation of the gravity system a constant water level in the pond is necessary.
A tolerance of up to 20 mm below maximum water level is allowed.
- Should the maximum water level in the pond exceed this, the excess water will be disposed of via the waste water drain, until the maximum water level has been reached.

Type filter	Installation height [cm]
ENTRY25	16
ECO15	16
ECO22	16
D50	12
PP22	17
PP35	17
PP35-P	12
PP50	12
PP50-P	12
PP65	12
PP65-P	12
PP100N	12
PP140N	12
ENTRY C25 gravity	17
ENTRY C25 pump fed	17
ENTRY M25 gravity	17
C15	12
C22	12
C35-M	12
C65-M	12
CL15	12
CL22	12
CL35 (K/L/M)	12
CL50 (K/L/M)	12
CL65 (K/L/M)	12

3.2 Schematic setup

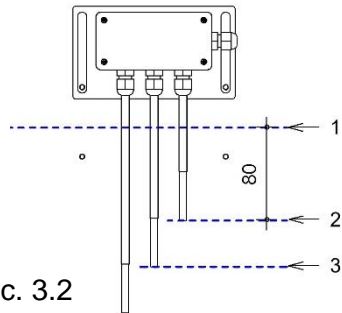
To get the best out of the drum filter, use all of the water inlets. This result in good water turn over ratio for your pond.

3.3 Set level control

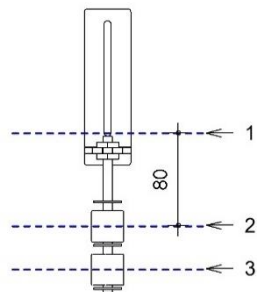
Sensor / float switch in clean chamber.

Pic. 3.2 / 3.3

1. Water level with running pump after rinse (8 cm above upper float switch)
2. Start rinsing
3. Pond pump switches off

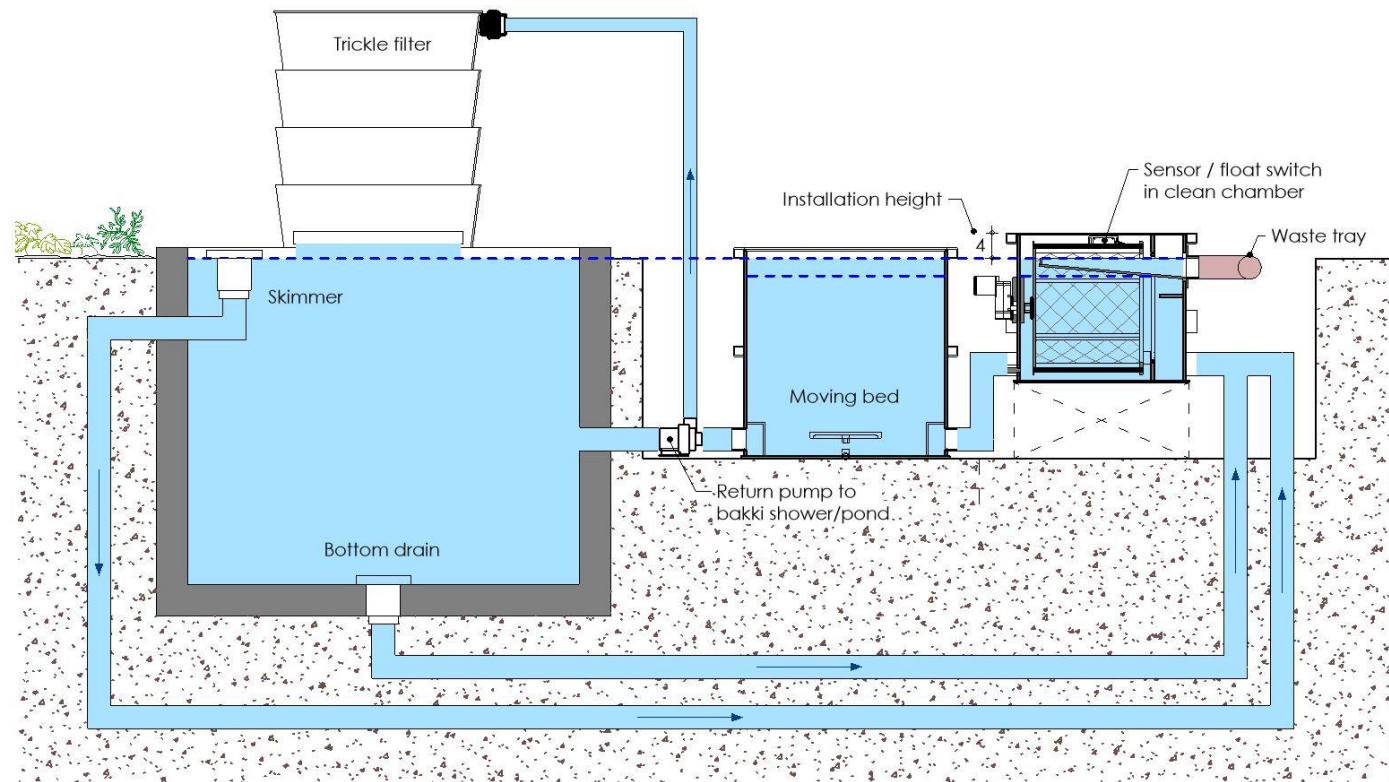


Pic. 3.2

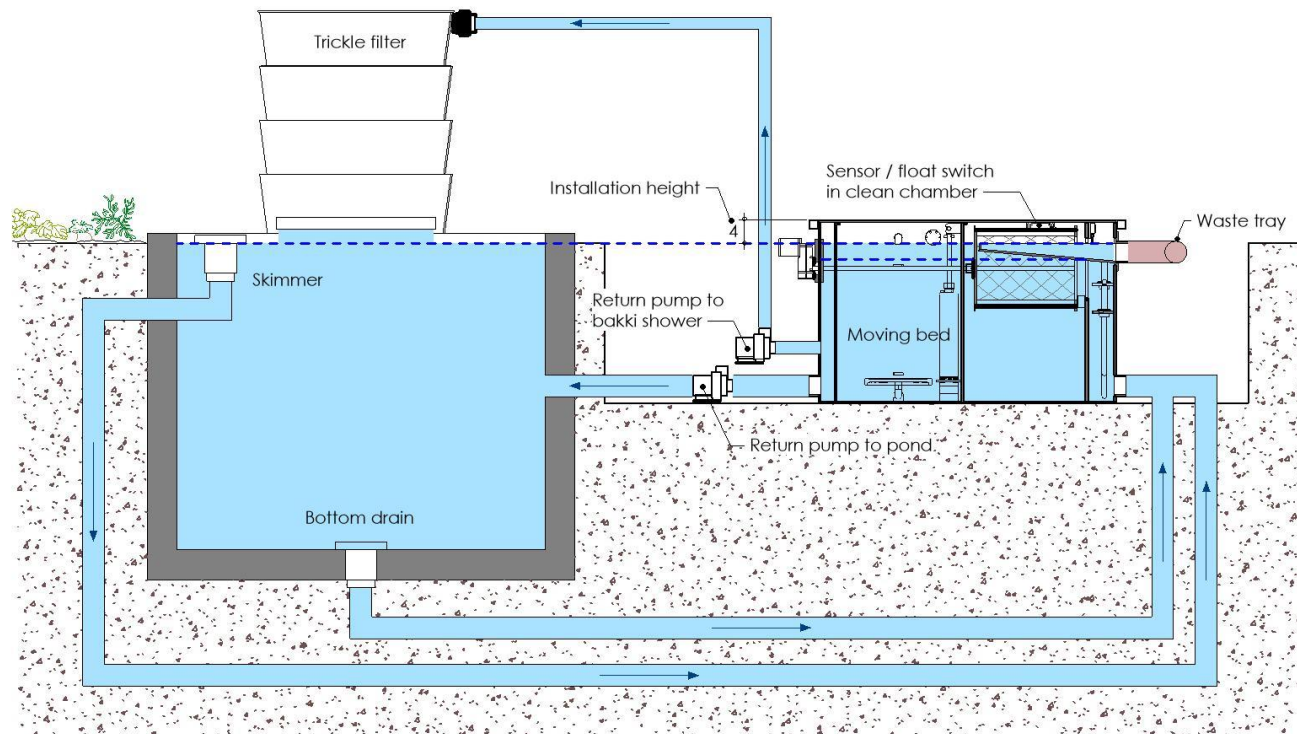


Pic. 3.3

- For Gravity, the water level of the pond must lined with the top of the drum filter waste tray.
- The water outlets on the top of the drum filter must be closed as these outlets are for pump fed usage configuration.
- The return pump is determined by how much water flow from the pond to the drum filter. For example if you have 20.000 L water flow from pond to drum filter, but you are using 50.000 L pump to push water from drum filter to shower or back to pond. This would not work, as you are missing 30.000 L. The flow must be balanced.



Pic. 3.1 Schematic setup of the drum filter

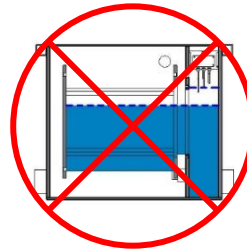


Pic. 3.4 Schematic setup of the combi filter

4 B. PUMP FED SYSTEM

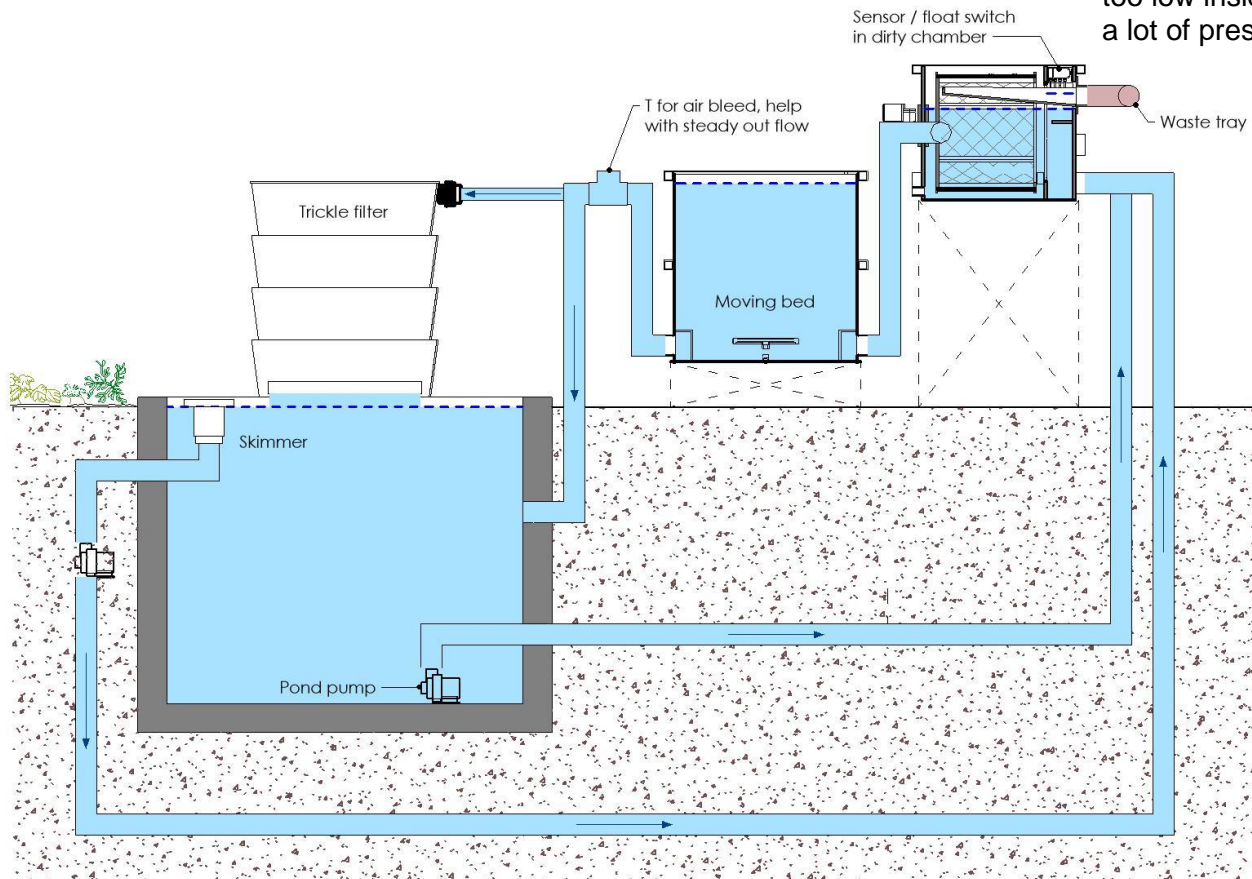
4.1 Placing the filter system

- Determine the maximum water level of the pond
- The installation height is min. 30 cm (installation height is the distance from maximum water level to the top of the filter)
- Install a tee at the outlets help prevent air pressure build up and help with steady water out flow



4.2 Schematic setup

- For Pump fed, you can use a water pump to push water from the pond/skimmer into the drum filter and from the drum filter the water gravity flow back to the bio chamber, however the drum filter unit must be above these unit.
- For Pump fed, close all the bottom outlets and use the high placed outlets. Do not use the bottom outlets as the water level would be too low inside the screen chamber as result this would put a lot of pressure on the screen.



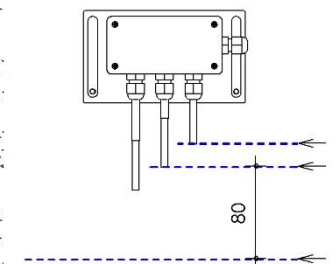
Pic. 3.1 Schematic setup of the drum filter

4.3 Set level control

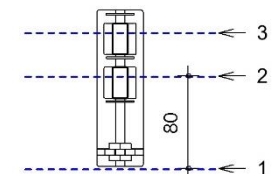
Sensor / float switch in dirty chamber.

Pic. 4.2 / 4.3

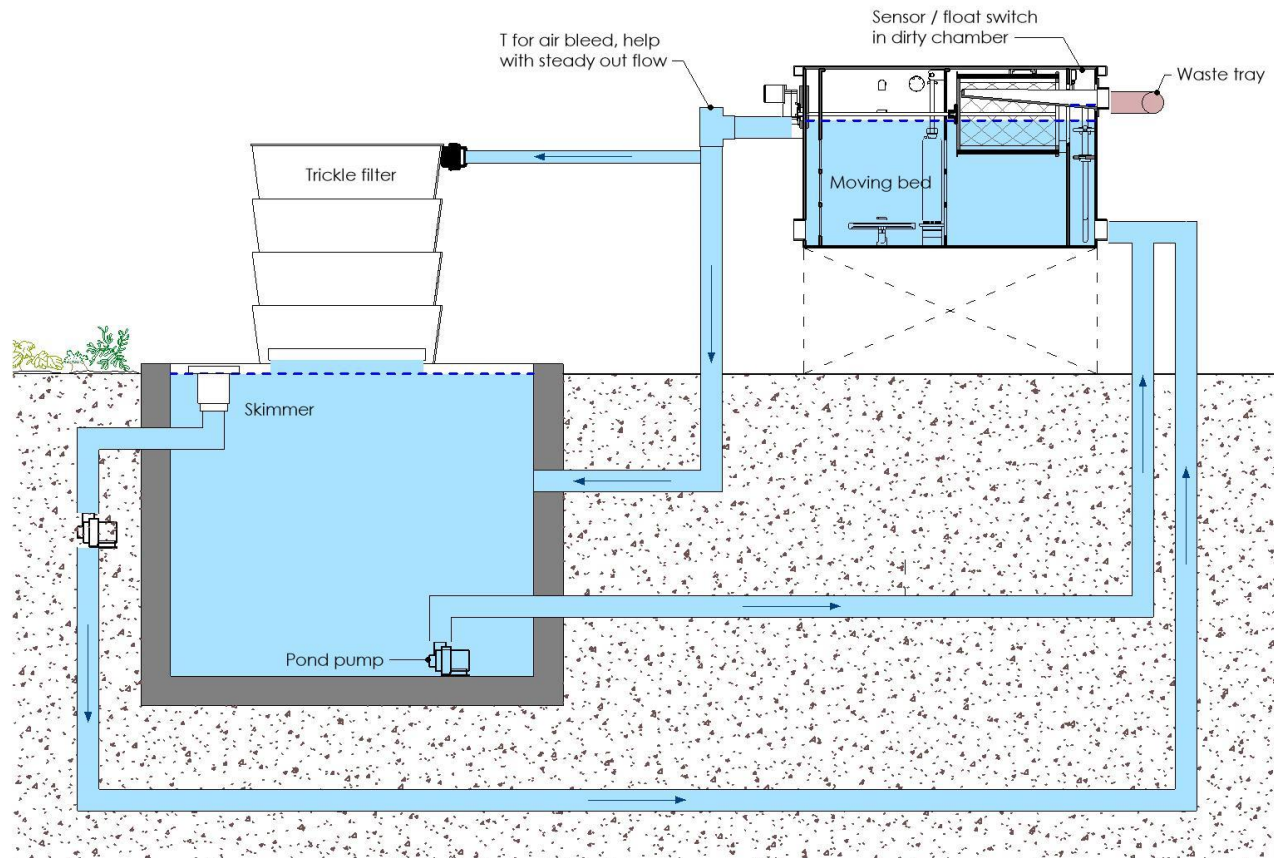
1. Water level with running pump after rinse
2. Start rinsing
3. Pond pump switches off



Pic. 4.2



Pic. 4.3

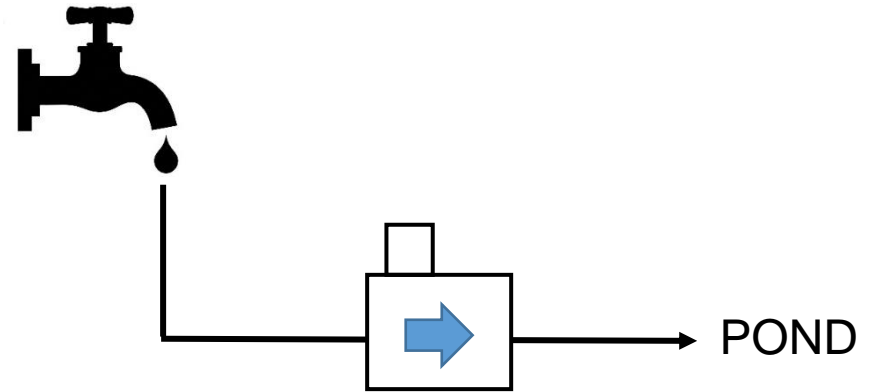


Pic. 4.4 Schematic setup of the combi filter

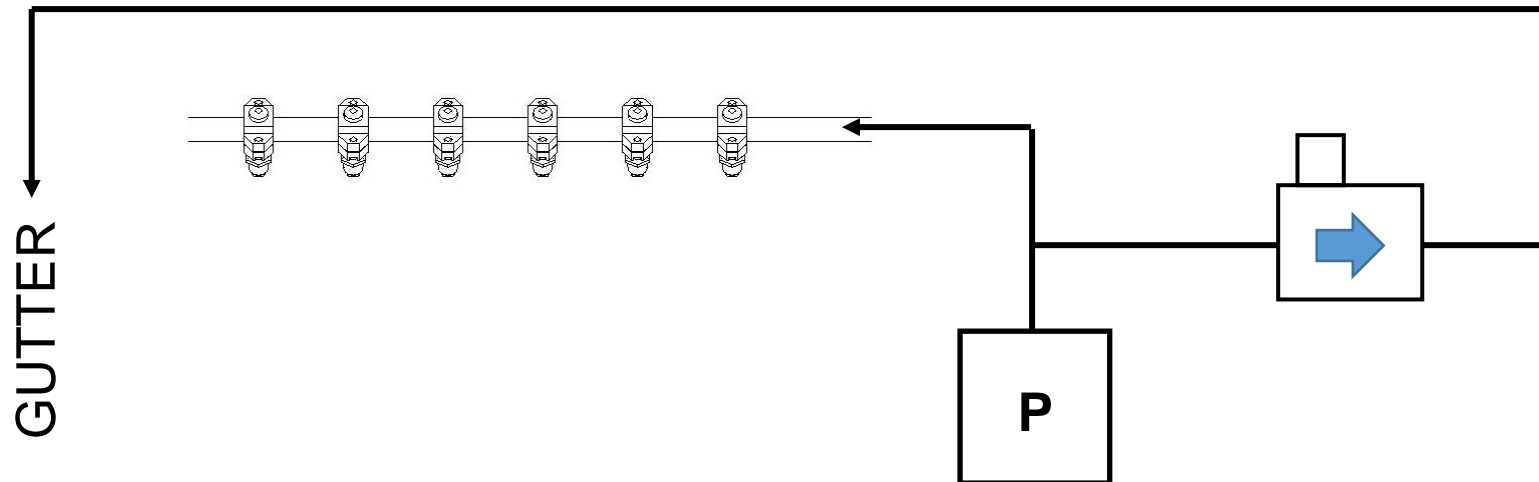
5 WATER VALVE (PLC)

Our advice is to use an automatic refill system, to ensure the water level remains constant. (See also chapter 3.4 dot 4).

Automatic refill



Waste cleaning



6 TROUBLESHOOTING

ISSUE	CAUSE	SOLUTION
Drum filter rinses to often	<ul style="list-style-type: none"> - Screen clogged - Flow to high 	<ul style="list-style-type: none"> - Clean screen with citric acid, - if heavily soiled, use hydrochloric acid (30%) - Regulate pond pump
Drum filter doesn't rinse automatically	<ul style="list-style-type: none"> - Water level to low - Screen clogged 	<ul style="list-style-type: none"> - Refill pond - Clean screen with citric acid, - if heavily soiled, use hydrochloric acid (30%)
Drum doesn't turn while rinsing	<ul style="list-style-type: none"> - Motor broken - Motor overheated - Relay stuck (broken) 	<ul style="list-style-type: none"> - Controleer motor door aan te sluiten op constante spanning (220V) - Motor laten afkoelen (ca. 60min) - Replace relay
Drum keeps turning	<ul style="list-style-type: none"> - Plug is in wrong socket 	<ul style="list-style-type: none"> - Plug should be in socket "MOTOR DRUM FILTER"
Cleaning pump doesn't work	<ul style="list-style-type: none"> - Cleaning pump broken 	<ul style="list-style-type: none"> - Controleer spoelpomp door aan te sluiten op constante spanning (220V)
Cleaning pump keeps running	<ul style="list-style-type: none"> - Plug is in wrong socket - Relay stuck (broken) 	<ul style="list-style-type: none"> - Plug should be in socket "CLEANING PUMP" - Replace relay