Matala Biofilter 20 Installation and maintenance manual

Matala Biofilter 20 is suitable where you have a small water consumption of max 750 l/day and 125 l/h.

It is suitable if the filter is to stand freely on the ground or be buried to less depth. It is not possible to put on an increase on Biofilter 20.

It is easy to build an insulated box around the filter if you are going to place it above ground. It is also available as a model with built-in pump, to pump away the water after the filter.

Matala grey water filter/BDT (bath, dishes & laundry) is the original and it has been sold in the thousands over the past 15 years.

- **No costs for consumption**
- **No electricity consumption**
- **No moving parts**

Matala grey water filters are adapted for smaller amounts of BDT wastewater such as in small houses, holiday homes, sauna houses, building sheds and others where you do not have toilet water connected.
Not all types of grey water filters can handle high flows that you can have in year-round houses with high water consumption, then choose other technology.

The capacity is from 400 to 750 liters/day, depending on the model and accessories. Biofilter 10 has a capacity of 400 l/day or 55 l/h and Biofilter 20 & 25 can handle 750 l/day and 125 l/h.

Function

The function is completely natural by purifying the water, as it slowly flows through the patented filters that break down biological nutrients with Biofilm technology with microbes.

Since the filters are airy in the biofilter and the water varies in level all the time, no air compressor is needed for oxygenation of the biohud.

There is always some water at the bottom of the biofilter so that the biohud should always have a good environment even when the load stops.

Contents
1 pcs Tank with lid
2 pcs Implementations 75mm
2 pcs green filters
2 pcs blue filters
4 pcs grey filters
1 pcs ventilation hat 75 mm
1 pcs ventilation pipe 75 mm
1 pcs manual

Dimensions/Specifications
Capacity: 750 l/day and 125 l/h.
Height: 660mm
Width: 600mm
Length: 800 mm
Weight: 26kg
Volume: est. 175 liters
Total Filter area: 25.8m2
Total filter volume: 66.3 liter

Pipe Connections
Inlet 75mm 400mm cc from floor
Outlet 75mm 85mm cc from floor

Outlet when pumping is R32 internal thread.

Filter mats
2x Green Low FSM290 (1.46m² filter area per disc)
2x Blue Low FSM 365 (1.84m² filter area per disc)
4x Grey Matala FSM460 (2.32m² filter area per disc)

Placement

Biofilter 20 should be placed freestanding or buried to a maximum of half the height.
If the filter is to be installed in the ground, you should put 50mm styrofoamboards as relief around the filter for soil pressure. If you're going to dig deep, then choose Biofilter 25 instead.

The biofilter must also be in such a way that it is easy to lift the lid off and inspect and clean the filter elements in the box - under normal conditions once a year.

The inlet gray water is connected to the short side that has the hole high.
The pipes for the Biofilter shall tilt at least 1% (1 cm per meter) to ensure that waste water does not remain in the pipes. If it is slow to push the pipes through the sleeves, we recommend that you use lubricants.

Outgoing water is connected in the lower hole on the short side with 75mm holes.

If the Biofilter is to be used in winter, it must be insulated.

Ventilation

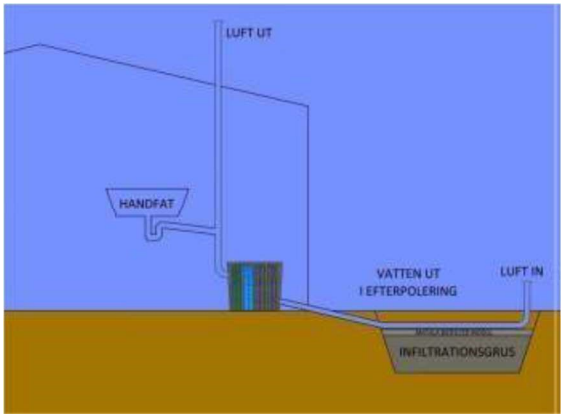
You should strive to get the best possible ventilation of the biofilter.
Since the wastewater often contains grease, you might get an odor. The best way to get rid of the odor is to air it out over the roof, through ventilation on the drain stem in the house.

If there is no ventilation on the roof, ventilate the filter with a T-pipe somewhere before the filter on the drain line.

Inbound air is, if possible, through the pipe for outgoing water, or via the upper hole on the same short side as outgoing water if an unventilated post-polishing is used.

Outgoing air goes through the housing pipe trunk or via t-pipe on the pipeline before the filter. Outgoing air should be drawn as high as possible, over the roof is best, this leads to a good self-draught and oxygen addition as well as pulling out any odors.

All sewers need ventilation and good air exchange thus also Matala biofilter, keep in mind that there should be ventilation at both ends of the biofilter.



Ventilation on the discharge pipe and the roof of the house.

Emissions by bio filter

You can choose to release the purified water into a stone coffin or simple HS infiltration

HS infiltration bed is used as post-polishing and infiltration of water after graywater filter. The HS infiltration packages are available in different sizes and include all parts for post-polishing and infiltration.

If necessary, you can supplement, with parts for ground bed or dense ground bed depending on how permeable the soil is for water and how when it is to groundwater and mountains.

If you need there is an accessory available, that replaces the sand that should be located under the HS infiltration and ground bed. This fits very well when you have difficulty handling gravel and sand such as on i.e., islands.

Keep in mind that if you're going to infiltrate into the ground, then do a soil test to see if the ground can infiltrate all the water every day, so you don't get a marsh on the plot.

Maintenance

The microbial growth formed on the filter elements collects nutrients from the gray water flowing through the filter elements. The biological purification process is sensitive to poisoning i.e., drugs, chemicals for sewage stops, chlorine, large amounts of antibacterial detergents, solutions, oil, paint, or other problematic waste. This is because all of this kill the microbe function of the biofilter.

It should also be avoided to lead nutritious substances, such as milk and fats to the biofilter, nutritious substances should be composted.

Keep in mind that large amounts of greasy dishwashing water may cause the filter elements to be cleaned more often.

If the water flow through the filter elements deteriorates significantly, the filter elements should be cleaned more often. The clearest sign that the filter elements need to be cleaned is that the upper part of the filter elements (10 highest cm) is dirty.

Contamination of the upper parts of the filter elements may also be due to a temporarily large amount of wastewater or to a stop in the discharge site after the filter.

Position of the filter elements from inbound to outgoing water:
2 green, 2 blue and last 4 grey filters.

Cleaning

Sewage sludge contains bacteria and therefore it should be handled with caution.
The easiest way is to shake off the filter elements above a compost, about 90% of the sludge then releases from the filter elements.
The excluded filter elements are then put back in the biofilter.

The sludge should be composted in a latrine compost for normally 6 months to ensure full degradation of bacteria.

It should be avoided cleaning the filter elements too often, as this reduces microbial growth, which in turn leads to a deterioration in purification results.

In winter, the biofilter can be drained if there is a risk of freezing stop the flow, if you want to be able to use the biofilter in winter, you should
isolate it.

The biofilter can resist freezing temperatures normally well, nothing breaks.

New filters are available as spare parts.

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Note maintenance measures here.

Date	Performed by	Measure