

BioBox graywater cleaner

by Raita Environment

The Graywater Cleaner



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Reasonable - easy !!

Get familiar with BioBox advantages:

- 1) Small of size - easy to install.** BioBox has been developed for holiday homes graywater treatment. Its small size makes it easy to install.
- 2) Effective - efficiency of a large-sized soil infiltration in a small but efficient unit.** The large area of BioBox filter elements (equivalent to ground filtration of 12 m²) and good air circulation make it very effective in use.
- 3) Long life (50-100 years) - no need to dig up and new after 10 years - replaceable filter elements.** BioBox elements are cleanable. They will be replaced every 10-15 years.
- 4) Easy to handle - not continuous filtermass moss or peat exchanges.** BioBox has plastic filtering elements that can be cleaned. Cleaning is easy to carry out.
- 5) Reasonable Module Build - You do not pay for unnecessary capacity.** BioBox capacity can be easily increased.
- 6) Compatible with Envirotiletoilet.** BioBox maintenance (also with greater capacity) can be done by oneself. Capacity increase is possible with bio-modules.
- 7) Compatible with septic tank / wc.** BioBox maintenance (also with greater capacity) can be done at the same time as emptying septic tank. Capacity increase is possible with precipitation tanks before BioBox.
- 8) If you want to reuse treated wastewater, the cleaning efficiency can be further enhanced.** Additional filters are available for BioBox to increase cleaning efficiency. Treated gray water can be reused, irrigated, rinsed in toilet, etc.
- 9) Operating costs to a minimum.** BioBox does not need to change filter masses or add chemicals continuously. You save up to hundreds of euros a year.
- 10) Many installation options.** BioBox is usually installed in the ground. It can also be installed under the terrace or inside, for example in the basement.



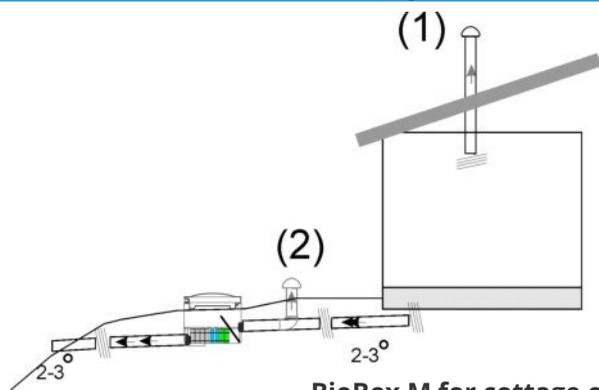
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BioBox M - for sink, saunas sewage effluents

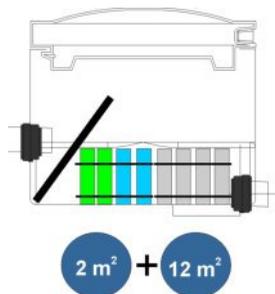


BioBox M for cottage or sauna

Capacity 50 l / h - 400 l / 24 h is sufficient for a summer cottage, where there is pressure water and kitchen sink.

Dimensions width 60cm - length 60 cm - height 50 cm. Height difference between the input and output pipe (D75mm) 10 cm.

Possible to expand capacity.



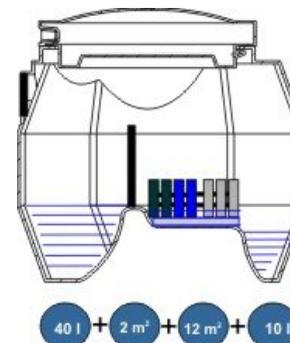
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BioBox XL - also shower and machine wash gray waters



BioBox XL

Capacity 75 l / h - 600 l / 24 h is sufficient for a summer cottage with in addition to sink, also shower and machine wash gray waters.

Dimensions width 60cm - length 80 cm - height 70 cm. Height difference between the input and output pipe (D75mm) 10 cm.

Enhanced natural method The organic load and nutrients are degraded by biological microbial activity (biofilm). The same method uses traditional soil filtration and absorption fields, ie natural microbes accumulate to purify nutrient-rich water when they have the right conditions for action.

BioBox cleaning is based on biological microbial activity that occurs in filter elements. The elements are of three different densities (290, 350, 450 m² / m³). With the help of these, the naturally-occurring biofiltration (biofilm) process is enhanced in a small space. The microbes in the elements remove organic matter, nutrients biologically. The large surface area of the elements (equivalent to ground filtration of 12 m²) and good air circulation make it very effective to clean. BioBox works well with load changes, the enhanced filter responds quickly to load change.

The cleaning performance and technical properties of BioBox are in accordance with EU standards - see the "declaration of conformity" and the installation instructions for the RAITA BioBox Declaration concerning the purity and technical properties of the unit. BioBox cleaning efficiency has been tested, see link([BioBox purification efficiency](#)) .

Purified water can be drained to a ditch, stone bed or filtered to ground. We have SM 150 filter plate (100 cm x 120 cm x 4 cm) which makes it easy to infiltrate water into the soil. Biomodules are used to increase treatment capacity.



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BioBox XL - increasing capacity

Capacity is increased when the number of water accessories is high or when the user number exceeds 5 people.

More capacity with biomodules.

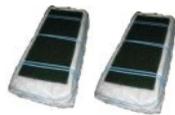
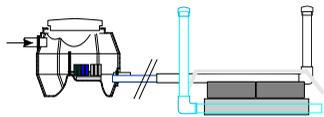
Using Infiltration / filter at the discharge site, increases the hourly capacity; two modules has 120 l / h, four biomodules has 200 l / h and six biomodules has 300 l / h. The cleaning-process continues in biomodules before the water enters the soil. Biomodules are also used if the discharge site is very close to a watersource or the soil conditions are poor (rocky, clayey) for infiltration.

Compatible with envirottoilets.



If you have an envirotilet, which does not need sludge emptying, BioBox XL + biomodules are compatible for your system.

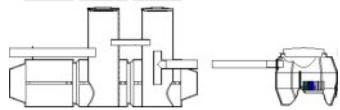
The gray water system can be maintained by yourself easily.



Biomodule - 60x120x20cm

More capacity with precipitation-tank.

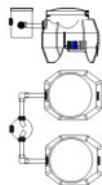
-precipitation tank 450 l ja 600 l increases the hourly capacity to 125 l / h.
-1300 l to 200 l / h.



Two units - XL/M

Installing two devices parallel to the double capacity:

- 2 x BioBox M - 100 l / h - 800 l / 24 h
- 2x BioBox XL - 150 l / h - 1200 l / 24 h



Compatible with wc + closed tank system.



If you use a wc / closed tank, it is reasonable to use precipitation tank as pre-treatment for XL.

Thus septic tank and the precipitation tank can be maintained (emptied) at the same time.

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Easy to install - fits well in a small space

BioBox XL is available with an extension section of 60 m, which if necessary, is installed with the screws to the device.

If BioBox is used year-round, it's worth to protect it from freezing. There is separate insulation kit for different models.

Check the condition of BioBox filters periodically. We recommend cleaning of the filters after 200 days use. Filters are easy to clean. The small amount of waste is composted.

Filters are renewed after every 10 to 15 years.



RaitaPro - network

There are many alternative ways for the implementing the wastewater project for a holiday home. We specialize in effective methods that can be "tailored" to the needs of the target. We can utilize existing excavation solutions, sewage tanks etc. Sludge from sewage treatment has several processing methods. We also offer a variety of toilet solutions. A well-designed system saves the total cost.



Wide sortiment:

- Summer cottages, small houses,
- Agriculture
- Envirottoilets, gray water filtration
- bio and bio-cleaners

Ask for a proposal from us. We have it knowledgeable staff and local partners to help you.



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Raita Environment

is a company specialising in environmental technology

Our products and methods are based on longtime experience in the environmental technology field. The business was established in the early 1950s as a provider of water purification equipment and expanded in the 1960s to include waste water treatment equipment and in the 1970s to include biological WC systems, and in the 1980s to include composting.

In addition to the sale of individual products, the business has included delivery of overall processes for more challenging sites. Today, we offer customers modern, developed environmental technology solutions of WC systems and composting in sparsely populated areas.

Our experience has shown that supplying solutions should include much more than just delivery of technical equipment. This is why we offer our customers a broader range of services, including planning, evaluation and schooling in the field of our expertise.



Contact information:

Oy Raita Environment Ltd

Showroom: Kuusikkotie 25, FI 01380 Vantaa
Stock: Astrakanintie 194, FI 05200 Rajamäki
+358 400 912111
helpdesk@raita.com
raita.com

