



MANUAL FOR ASSEMBLY AND USE



GREEN TOILET
330



GREEN TOILET
120 *Family*

CONGRATULATIONS FOR YOUR GREAT ECOLOGICAL CHOICE!

The use of a dry toilet represents nutrient recycling at its best in your own yard.

For example, when a family of four uses a Green Toilet, the save of clean water can be up to 120 liters per day. Also, a lot of energy is saved, because there is no black wastewater to be transported and purified elsewhere.

Instead, by composting your toilet waste, you will get nutritious mulch to be used in your own garden – for free!



Ecological

Green Toilet saves natural resources and energy.

Durable

Will last in use for decades.

No electricity required

Reliable, off-grid operation.

Easy maintenance

The use of a spare container with wheels makes maintenance effortless.

Finnish quality

Designed and manufactured in Finland.

Odorless

Efficient separation of liquid ensures odorlessness.



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PREPARATION OF ASSEMBLY

Before you start, check that you have received all the necessary parts.
A list of the package contents is shown on the last page of this manual.

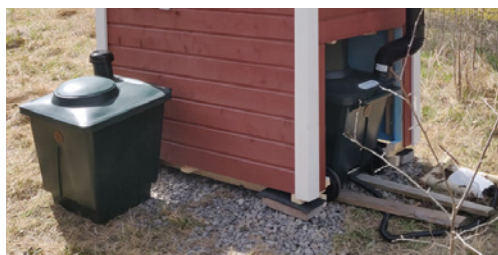
The composting power of the Green Toilet is based on the capillary double base. It works like an underwatering flower pot: It lets the excess liquid out, but can also absorb some of the liquid back to the compost mass. This will ensure efficient composting, as the compost works at its best when it is moist enough: not too dry, not too wet.

In order for the composting to start, it is important to cover the double base with some dry material. **Start using Green Toilet by pouring a layer of dry material (5-15 cm): peat, saw dust or equivalent, onto the double base of the toilet container.** Fill also the hollow legs of the double base with the dry material.

Remember to do this covering every time you take an empty container into use. No dry material is put into the bottom of the container. There will be some excess liquid during the use of the toilet.



Capillary double base



It's a good idea to reserve enough space for maintenance behind the outhouse so that changing the containers can be done easily. You can also leave the full container to decompose behind the outhouse if there is space for that.

ASSEMBLY

Green Toilet is usually assembled from the back of an outhouse under a bench below the toilet seat hole. The height of the waste pipe can be adjusted vertically.



Assembly of waste pipe and thermal seat

There are wooden rails for the waste pipe included in the package. They are assembled on both sides of the hole in the seat to hold the waste pipe during the use of the toilet. The upper part of the waste pipe is wedged between the wooden rails and the toilet bench. If the bench is close to the container and some of the waste pipe goes into the container, the pipe can be cut shorter by saw. It is best to have about 2 cm of waste pipe going into the composting container.



The openings for the seat tend to vary in outhouses – there is no standard. Usually this is not a problem when assembling the Green Toilet. Just level the thermal seat, the opening of the seat and the waste pipe in the front of the seat. Thus, the use of the toilet will be clean and hygienic.

There is a thermal seat included in the Green Toilet package with separate installation instructions.

Assembly of ventilation

The ventilation pipe should be led as straight as possible to the roof level. Usually, it is assembled to the back of the outhouse wall with the metal holders, which can be bent for fixing to the wall. With the flexible pipe, you can adjust where to fix the pipe.

Also, a ventilation pipe hat is included, and it is placed to the top to prevent any rainfall. If the outhouse roof is wide, it maybe necessary to make an inlet for the ventilation pipe through the roof.



Hint! If you have to bend and make curves to the ventilation pipe, it's a good idea to add a wind fan (an accessory) to the top of the pipe to boost dehydration and ventilation.



When the place for the Green Toilet is ready and the ventilation duct fixed, you can place the Green Toilet container below the seat. Finally, attach the flexible pipe, liquid hose and the canister.

Assembly of canister for excess liquid

With the Green Toilet, there is a 20-liter canister supplied. It is used to collect the excess liquid (seap liquid) coming out of the composter during the use. Most of the liquid is absorbed to the compost mass, dehydrated through ventilation, but some will flow into the canister. The amount of the seap liquid is highly dependent on the use and environment.



The liquid hose should flow a bit downwards. If the ground can be dug, you can make a hole with boards on each side for the canister.

Other remarks of installation and use

The wheels for Green Toilet should be used in the container that needs to be moved. The container in use should be without the wheels. You can put the wheels easily: Just lift the container a bit and place the axel to its position in the back. No tools are needed.

Sometimes the distance from the seat to the ground is so long, that the Green Toilet waste pipe is not enough. In these cases, contact your dealer to have a longer waste pipe.

Hint! There is a wide variety of accessories for the Green Toilet available. They may be handy if there is exceptionally high use for the toilet or the installation is somehow unusual. Contact your dealer for more information.



USING GREEN TOILET

Now that you have installed the Green Toilet – you can start using it!

Green Toilet can be used almost like a water closet – there just is no flushing. All toilet waste, including the toilet paper, go into the same container. For other garbage, like sanitary pads, there should be a separate bin available in the toilet.

After every use, pour some 3-5 dl of dry material on the compost. You can use any dry material that you can acquire easily. Also, dry garden waste, like dry leaves can be used as bulking agent. Saw dust also works, but it should be mixed with some more coarse material, as saw dust tends to get too dense in the compost.

During the use, you need to level the mass every now and then. A garden fork or a sturdy stick will be good for this. At the same it is useful to aerate the compost mass by making some holes to the mass.

There are some biodegraders and compost boosters available in the market and they can be used. This may be useful especially during high use of the toilet.

Hint! The composting inside the Green Toilet works best when the container is almost full. There is a lot of energy and microbes in the compost and the process is fast. So don't be too hasty in changing the containers! Level and work on the mass to get more space into the container. This may help postponing the change of the containers for many weeks.

MAINTENANCE AND EMPTYING

Handling of excess liquid

During the use of the Green Toilet, there usually is need to empty the excess liquid canister before the composting container gets full. The amount of this seap liquid depends on many factors, like the temperature and level of use. It is typical, that during hot summer months the dehydration and composting reduce the amount of the liquid almost to zero. On the other hand, during colder months one can expect that there is more liquid to be handled. It is important to check the level of the canister regularly.

The excess liquid is nutritious liquid – an eco-fertilizer. There are a few ways to use it: you can pour it directly to a compost, eg. to a full Green Toilet spare container, where the urea will boost the process. Alternatively, you can use it directly to non-eatable plants, trees or bushes for fertilization.

Please note! Do not pour any seap liquid to:

- any water body. In water the seap liquid will cause eutrophication and the fecal bacteria will spread. Remember to always keep a safe distance to any water: ditch, well, lake, sea etc.
- eatable plants, like vegetables, because there is a risk that the bacteria is carried to the food.

Changing Green Toilet container

When the active Green Toilet composting unit becomes full, it is time to change the container. Here are the steps to follow:

- 1 Release the flexible ventilation pipe from the container.
- 2 Unfasten the liquid hose from the container. Cover your hands and beware of possible splash when doing this. If small amount of liquid is drained out to the ground at this point – that is not harmful.
- 3 Place the wheels under the container.
- 4 Pull the container out from the outhouse and tilt the container on the wheels. Now you can pull the container further away from the outhouse.
- 5 Put the closed Green Toilet lid onto the full container and leave it to decompose.
- 6 Take the empty container and cover the double bottom with dry material. Place the Green Toilet lid with the waste shaft on to the empty container and wheel it into the outhouse. Attach the liquid hose and the flexible ventilation

If there is no spare container available, you can take the compost from the toilet to a garden composter, mix it with garden waste and let it decompose to the end there.

You can empty a full container by taking it first to a suitable place and turning it around fully. After this, it is advised to mix the compost with eg. sand to get suitable mulch to be used in the garden.



Hint! It's a good idea to store the spare container close to the outhouse. When the Green Toilet is taken out of the toilet, the compost can still be fairly wet and the mass heavy. During storage and composting, the volume of the mass, together with the weight, will go down significantly – even by half. Thus, the container will be much easier to wheel after a few months of storage.

COMPOSTING TOILET WASTE

Usually it is prohibited to let raw toilet waste untreated to the ground. This is especially harmful in water areas, like in lakes, where toilet waste causes eutrophication. The Green Toilet system will help you to manage sanitation in your own yard safely and easily.

The time needed for the composting varies in different areas. The normal time span is 8–14 months, depending on the climate. In many cases, you can rely on your senses: if the compost smells like mulch and looks like mulch – it can most likely be used freely. The compost from a dry toilet is very nutritious, so one should mix at least one third of other material: sand, mulch, clay etc. before using it for plants.

Can you compost other bio waste (like kitchen waste) in the Green Toilet?

It is possible, but it also brings higher risk for flies and other insects in the toilet. Therefore many prefer to have kitchen waste in a separate composter or alternatively in the passive Green Toilet, ie. in the spare container.

USING GREEN TOILET IN THE WINTER

Green Toilet is manufactured so that it can freeze without breaking, even if it's full of compost. If the Green Toilet is mainly used during the summer months, there is no need to do anything special. If the compost freezes during the winter, it will melt down in the spring and composting will continue normally.

If the toilet is used all year round in cold climate, it should be taken into account already in the assembly phase. If possible, the composting unit should be placed into a heated space or an insulated box should be built for it. Also, in the coldest areas, a frost protection cable can be utilized.

ACCESSORIES



Green Toilet spare container

Volume 120 or 330 liters. Scales up the system endlessly. No need to handle raw toilet waste.



Wind fan

Boosts the ventilation and dehydration. Less excess liquid to handle.



Electrical duct fan

For effective ventilation especially indoors and in public toilets.



GeoTrap dry toilet filter

For treating the seap liquid before leading it to a soak pit. Replaces the canister in the system.



Wheels

Additional wheels with an axel for spare containers, either normal or XL-size.

Get the right combination of Green Toilet for your use.
Ask your dealer for more information!



LIST OF PARTS – GREEN TOILET 120 FAMILY AND 330

