GREEN LOO

GREEN LOO DRY COMPOSTING TOILET MANUAL

for the

GT 120 Family and GT 330

INSTALLATION PLANNING

It's all in the planning!

For proper operation of the toilet you should consider a number of issues during the building design stages to enable the natural composting processes the best chance to give trouble-free operation.

The design of the site and building needs to allow for:

• The location of the toilet pedestal in the building and any structures that may be required to have the composting container below floor level.

• Space for the composting container and a firm, dry and sheltered base for it to sit.

• Adequate access to service and maintain the toilet.

• Good ventilation to provide oxygen and evaporate liquids

• Electrical supply (240VAC or 12VDC) to the fan location

The GT 120 and GT 330 is supplied as a kit containing most of the components required and can be installed using basic building tools and materials available at plumbing suppliers or hardware shops

Installation of the GTs involves:

1. Positioning the Pedestal and composting container to ensure a vertical drop from the pedestal to the waste bins
2. Preparing a flat, level and firm base for the composting container to sit
3. Installing the ventilation pipe-work, including fan and vent cowl
4. Connecting the Pedestal, waste chute and composting container
5. Final checks before use.

Space Required

There is no ideal set of measurements which will suit all applications but you do need to provide enough space to locate and install the composting container, enough space to fit and maintain the air vent piping and fan and enough space to access and exchange the containers, so allow space to maneuver the bins.

Toilet Pedestal and composting container

- The composting container must be located directly below the toilet pedestal.
- The height of the pedestal above the compost container may vary according to the building design. The waste chute supplied allows for 200 - 300mm from underneath the floor of the toilet room to the top of the composting container. Additional Waste

Chutes may be added to increase this if desired. We suggest using black HDPE pipe that is larger in diameter than the waste outlet of the toilet pedestal but smaller than the diameter of the waste chute of the composting container (250mm and 280mm are standard).

- Don't plan to install a light directly over the pedestal/waste chute as this will attract flying insects.

Structural Issues

The GT System is installed sub-floor. It may be installed under a concrete slab or bearer and joist floor, in a full or partial cellar as desired in the building design. Consider the spacing of joists or concrete slab penetrations to allow for the waste chute. Consult a relevant Engineer to ensure support spacing and floor spans are adequate for the size and position of the GT.

Most GTs are installed in a location largely protected from the elements and can sit freely on the base. If your installation is likely to experience extremes, you may need to consider anchoring the composting container to the ground to prevent it moving in the event of weather events. The GT is not designed to be immersed in water so should not be installed where severe flooding may occur without flood protection.

Vent System

The GT airflow requirement is provided by 100mm pipe and incorporates a continuous running fan (supplied). Consider how the fan will be powered (240VAC or 12VDC) and ensure the fan housing is accessible for maintenance.

Remember that warm air from the composting chamber (the composting process generates its own warmth) naturally rises, and that sharp bends restrict airflow – designing the vent piping correctly will improve natural operation.

Warm air holding moisture entering a cold vent can result in condensation. Consider insulating the outlet vent piping, or providing a condensate trap in cold climates.

Excess Liquid

As a result of the capillary double base of the GT System, 90-95 % of the liquid waste is used up in the composting process, as well as being evaporated through the vent system. Excess liquid gravity feeds into the liquids tank. Ensure that there is a natural fall of the pipe into the liquids container and install the container below ground level (we suggest shoring up the sides of the cavity so that the container can be extracted and reinserted easily for servicing).

The excess liquid is a good but strong fertilizer and it should be diluted with water in a ratio of 1:10 mixed with water. This can be used on lawns and in flowerbeds as fertilizer or disposed of according to council regulations.. Do not pour the waste into waterways.

Alternatively a French drain, an absorption trench system or treatment device can be installed, again according to your local council regulations.

1. INSTALLATION

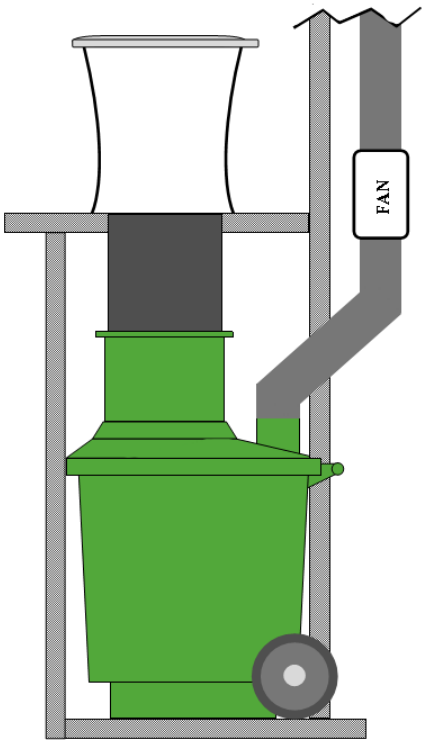
The first thing to do is to decide where in the toilet room you want to place the pedestal. Mark a centre position for the waste chute using the pedestal as a guide. The floor joists will need to be clear of the waste chute and provision should be made to secure the waste chute to the underside of the floor or similar (see photo below).

Once you have found the right spot in the toilet room, drill a small hole through the centre point and through the floor. Go to where the GT is to be located. Attach a plumb bob through the centre point hole and consider the position and ensure there is enough room to fix the vent piping and fan and there is adequate access to exchange the bins.

By maximising the length of the waste chute you will give yourself extra room as well as minimising the visual impact when you happen to look down the Pedestal.

Check you have clearance in the joists for the waste chute to pass through the floor. Don't cut out the waste chute hole in the floor until you are sure you have everything lined up in case you need to adjust the position.

Now cut the waste chute hole in the floor. If you wish to line the hole, we suggest using standard 250mm or 280 mm black HDPE pipe. This can also be used as extra length for the chute (see below).



The most common way to install and service the GT System is to push the container from the back of the toilet room to its position under the seat. To locate the waste shaft, there are rails in the package to be installed to both sides of the toilet base chute hole (see picture below). These rails ensure that the shaft holds firmly in its place during use.

The height of the waste chute can be adjusted by sliding up or down. If the chute is too long, the excess part can be cut off with a saw.

Vent Pipe Installation

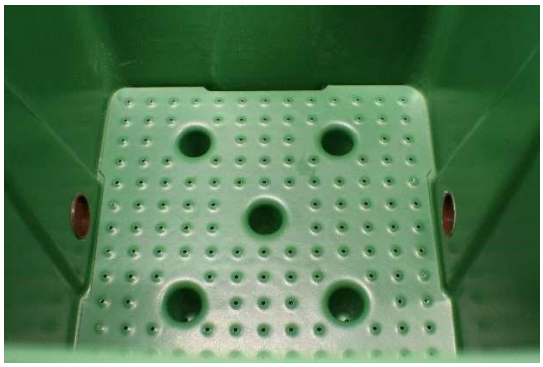
The ventilation pipe should rise perpendicularly with as few curves and elbows as possible, the vent cowl placed on top. With the flexible pipe connector, the placement of the pipe can be adjusted – alternatively 45 degree elbows can be used. Ensure that these aren't glued together to allow for removal in the bin exchange process.

Install the fan by cutting off a short piece of the vent pipe and inserting the fan into the resulting juncture. Sometimes fans can be attached directly to the flexible vent connector or 45 degree elbows, making this process unnecessary.

2. BEFORE USE

The composting power of the GT System is based on the capillary double base which works similar to under watering flower pots. A large part of the liquid waste is absorbed back to the composting mass through capillary action, thus boosting the composting process.

Before putting into use, fill the upper bottom and ”legs” with a 5-10 cm layer of peat. This layer enables the capillary feature to work. Also, after every emptying, remember to add a new layer of peat before use.



3. USE OF THE GT SYSTEM

The GT System can be used almost like any normal water toilet. Toilet paper can be thrown into the toilet, as it composts together with the waste. However, any items containing plastic, e.g. sanitary towels should be placed into a separate bin.

A handful of covering material (peat, 1 cup) should be added after each bowel movement. The composting process can be enhanced even further by leveling and mixing the compost occasionally. Our compost accelerator (biodegrader) may also be added.

4. SERVICE

To empty the GT System, first lift the flexible part of the ventilation pipe off (or disconnect your 45-degree elbows). Then pull the container out, exchange the lid onto the second, spare container and move the second container in place. Set aside the first container and seal with the supplied lid. The waste will finish composting in this container. Once the composting process is complete (6 months on average), empty the container (in the garden or a garden composter) – the container is ready for re-use. Hose out if required.

5. USE OF COMPOST

After the waste has composted adequately, it should be buried under 100mm of soil in the garden according to council regulations.

6. USE OF GT SYSTEM IN COLD CLIMATES

There is a cold climate model of the GT System available. It is equipped with a self adjusting heating cable which enables composting throughout the year.

Dear Friend,

Thank you very much for choosing our GT Bio Sanitation Systems.

We hope that you enjoy many years of fruitful, waterless and trouble-free use.

Please don’t hesitate to contact us with any questions, suggestions, we are here to help.

Feedback is always welcome and is an invaluable part of providing an excellent product and service!

Finally, thank you for being an integral part of the environmental solution. The Earth will thank you too!

The Team at Green Loo

GREEN LOO

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