



GREEN LOO

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DRY COMPOSTING TOILET

Owners – Installation – Operation

Manual

for the

ECO-POD 44

Assembly of the Eco – Pod 44 Seat

- 1) Turn the top half of the EP upside down
- 2) Undo the locking nut with a spanner/shifter and by holding on to the spreader disc with your other hand
- 3) Undo the 6 screws
- 4) Take the spreader cover off
- 5) Turn the top half of the EP the right way up again
- 6) Insert the hinge arms of the threaded hinge fasteners into the female hinge receiver of the toilet seat
- 7) Thread the rubber washer onto the thread up flush with the round flange of the hinge arm
- 8) Insert through the two holes of the top half of the EP
- 9) Turn the top half of the EP upside down again
- 10) Fasten the threads of the hinges with the plastic washers and quick release nuts – making sure the nuts fit into the concave side of the washers – don't overtighten
- 11) Reassemble spreader cover with the 6 screws
- 12) Re – tighten the lock nut until 2 threads of the rod are showing at the end of the lock nut

You have successfully assembled an Eco – Pod 44 !

NB.: For installation:

The Eco – Pod requires 75mm Stormwater pipe (not supplied for transport reasons) as its vent pipe. This pipe is sometimes not a standard stock item in your local plumbing supply shop and may need to be ordered in especially.

INSTALLATION PLANNING

It's all in the planning!

For proper operation of the toilet you should consider a number of issues.

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

- An elevated starting point for liquid to flow by gravity from the toilet down into a liquid absorption trench which is to be dug outside the toilet. The whole toilet needs to sit on level ground, **IF ANYTHING SLOPING SLIGHTLY BACKWARDS.**
- Space for the toilet and a firm, dry and sheltered base for it to sit.
- Adequate access to service and maintain the toilet, i.e. remove the full container and replace it with an empty one.
- Good ventilation to provide oxygen and evaporate liquids
- Electrical supply (240VAC or 12VDC) to the fan location

The Eco Pod 44 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 Eco Pod involves:

1. Preparing a flat, level and firm base for the composting container to sit
2. Installing the ventilation pipe-work, including fan and vent cowl
3. Connecting the ventilation pipe work, electrical connection and excess liquids pipe
4. Preparing the excess liquids dispersal trench
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 toilet, 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 remove and store the bins.

- Don't plan to install a light directly over the pedestal/waste chute as this will attract flying insects.
- Don't use your toilet fan. It's suction works against the suction of the fan of the Eco – Pod 44.

Most Eco Pods are installed indoors and are usually screwed or glued to the floor.

Vent System

The Eco Pod airflow requirement is provided by 75mm 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. Ensure correct airflow of the fan **away from the toilet.**

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.

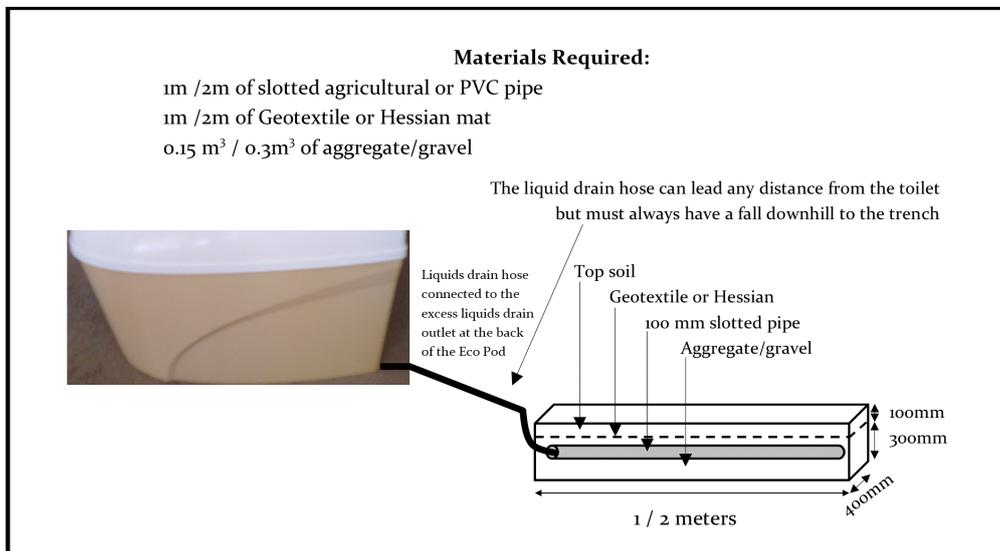
Warm air holding moisture entering a cold vent can result in condensation. Consider insulating the outlet vent piping or providing a moisture (condensate) trap as per page 4 and 5.

Excess Liquid

A lot of the liquid waste is used up in the composting process, as well as being evaporated through the vent system. An absorption trench is required to deal with any excess liquid.

The length of the trench is 1 m for the Eco Pod servicing 2 people, or 2m for the Eco Pod with 2 extra chambers, servicing 4 people. The trench is to be 400mm wide, 400mm deep.

However, dimensions must not be less than required by Regulation 50 of the Health (Treatment of Sewage and Disposal of Effluent and Liquid Waste) Regulations 1974 or AS/NZS 1547. See diagram for an installation below.



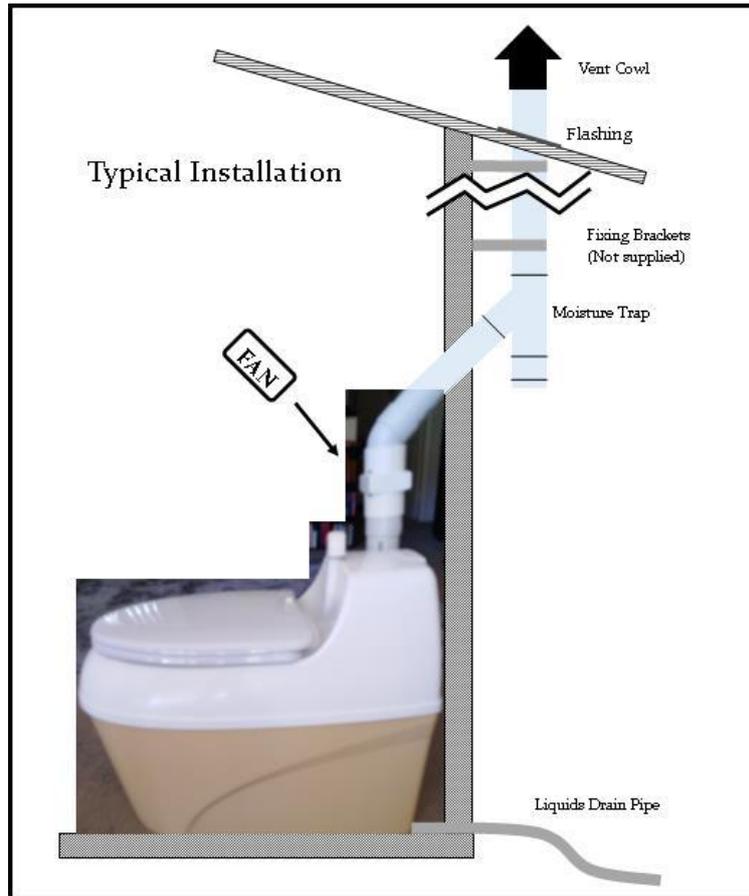
1. INSTALLATION

The first thing to do is to decide where in the toilet room you want to place the Eco Pod. Ensure you have an outside facing wall at the back of the Eco Pod for ventilation and excess liquids drain purposes.

Once you have found the right spot in the toilet room, either glue the Eco Pod to the floor using silicone or similar – or drill 4 small holes through the edge of the bottom of the Eco Pod base and into the floor – affix with suitable screws or fixings.

Drill the right size hole at floor level through an outside facing wall wall of the toilet to allow the excess liquids drain hose to traverse. Attach the hose to the Eco Pod, using the supplied hose clamp and feed through wall. Seal hole with silicone. Connect the hose to the absorption trench. Ensure there is a natural fall on the drain hose!

Drill a suitable hole in the wall to allow the vent pipe to traverse through the wall. Suggested installation drawing below. After the vent system has been installed, seal wall hole with silicone.

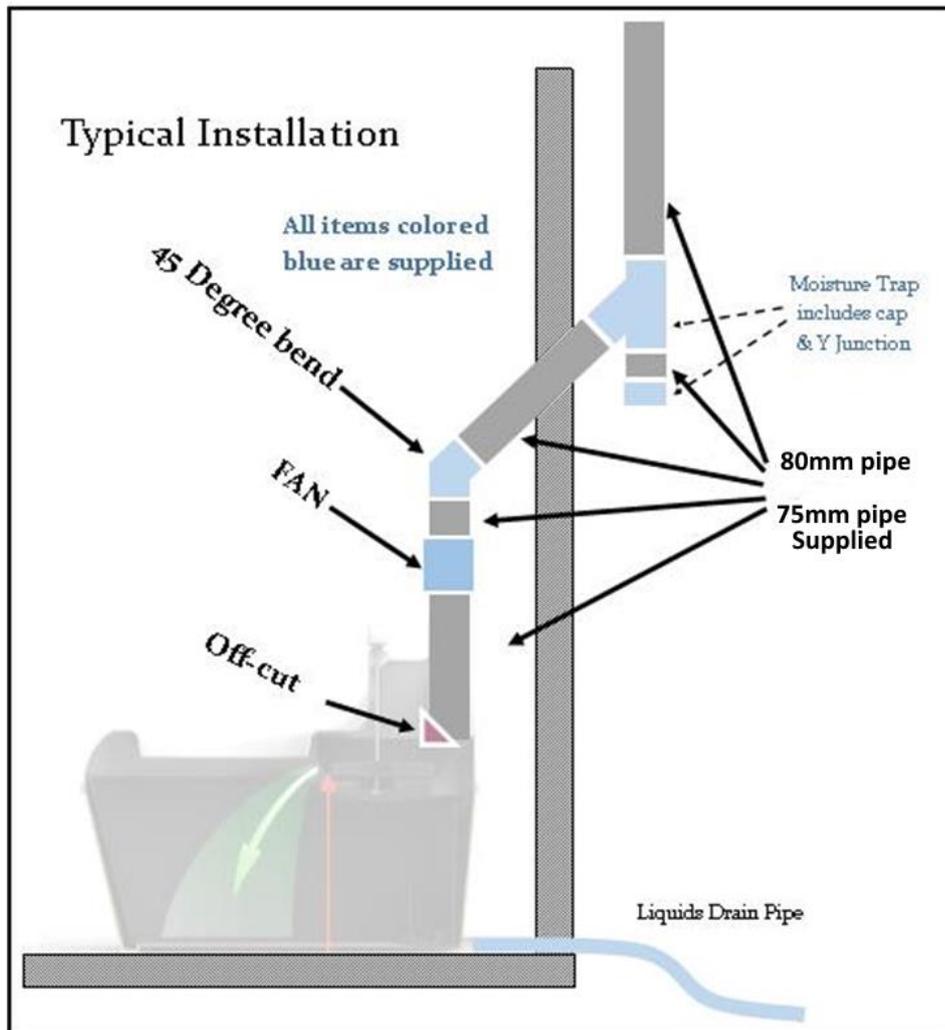


Vent Pipe Installation

The ventilation pipe should rise perpendicularly with as few curves and elbows as possible, the vent cowl placed on top. Don't use pipe cement – the push fittings should be tight enough for this purpose, and this allows you to dismantle and service the vent system as required.

The below is an example as to a standard vent installation – there are many permutations possible and if in doubt, contact us for discussion and guidance:

1. Cut off a short piece of vent pipe and cut off a 45 degree piece, about half the pipe diameter. The length of this pipe is to allow the fan to be affixed without interfering with the turning mechanism for the bulking material spreader. The 45 degree cut off is to be the at the bottom of this pipe, facing inwards, to make exchange of composting containers easier.
2. Attach the fan (supplied), and cut off a short piece of the vent pipe and insert into the fan. Plug the fan into the power supply (supplied) or 12V system and ensure the airflow is away from the composting container, upwards towards the exhaust end.
3. Attach the 45 degree bend (supplied), pointing backwards. Cut a hole in the wall, allowing the vent pipe assembly to traverse the wall. Cut a short piece of pipe to traverse the wall.
4. Moisture trap: Attach the Y joiner (supplied) as per the picture. Cut off a short piece of vent pipe and insert into the Y – joiner at the bottom. Finish with attaching the cap (supplied). This is your moisture trap, which should be emptied every few weeks by undoing the cap, letting the water drain out and re-attaching the cap.
5. Attach a length of vent pipe to the house wall using pipe fasteners. Add additional vent pipes, joiners and pipe fasteners (from your local plumbing store) as required. Cap with the (supplied) vent cowl. The vent cowl should be 60 cm above the roof line. Congratulations, you are done!



2. BEFORE USE

Before putting the system into use, fill the front part of the composting chamber with a 2 - 3 cm layer of peat. Also, after every emptying, remember to add a new layer of peat before use.

3. USE OF THE ECO POD

The Eco Pod 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. This can be done manually, or using the covering material application system integral to the Eco Pod:

Fill the chamber at the top of the Eco Pod with peat. After each solid deposit turn the mechanism a couple of times (After a while you will get the knack as to how fast and how much to turn the knob to achieve a satisfactory covering).

Remember that there is a balance between covering the deposit enough visually, and covering it excessively, resulting in the chamber filling up and needing changing more often.

Our compost starter/accelerator may also be added.

4. SERVICE

- a) Check the fan 1) monthly to ensure it is working or 2) if you notice unusual odour.
- b) The average length of time until a container is $\frac{3}{4}$ full (recommended exchange level) is around 3 – 6 weeks at 2 people full time use.
- c) The fallow containers need to be secured to prevent tampering by young children. This can be achieved by keeping the containers in a locked area or by securing and locking a strap around the composting container that can not be undone by young children.
- d) It is not vital that the fallow container is kept in the sun, however composting is accelerated by warmth. Therefore choosing a warm spot is helpful, as long as provision a) above is observed.

To exchange or empty the Eco Pod, protective clothing, face mask, glasses and gloves must be worn at all times. Lift the container out, using the in-built handles. Cover with lid. Lift the second container in place. There are wheels and handle supplied to enable hassle free removal of the full container. The in-built liquids valve at the bottom should avoid any spillage. Childproof fallow containers as per point 4c above. The waste will finish composting in this container (3 months on average).

When emptying a container, wheel to the prepared disposal site. Gently lay the container on its side and start emptying the container with a spade or shovel. Always observe safe work methods. Clean the container by hosing if required.

5. USE OF COMPOST

- a. Bury the contents of the container into a prepared area. Burial depth is a minimum of 300mm in soil that is not intended for human food cultivation for six (6) months, and
- b. Burial should be a minimum of 30 metres from any water source and 6 metres from any sub-soil or open drainage system, or
- c. Disposed of as directed by the Local Government.

6. CLIMATIC CONDITIONS

Composting will occur satisfactorily between 5 and 50 degrees Celsius.

GOING AWAY

If you are leaving the premises for a couple of weeks, it is OK to hibernate the system.

Cover the compost with a generous amount of peat and turn the fan off.

When re-activating the system turn the fan on and possibly add some compost starter.

If going away for a prolonged period of time, turn the fan off, take the active bin outside to compost, and cover.

Start the system up as per usual on your return.

Dear Friend,

Thank you very much for choosing our Eco Pod 44 Bio Sanitation System.

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!

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