

# what is a compost toilet?

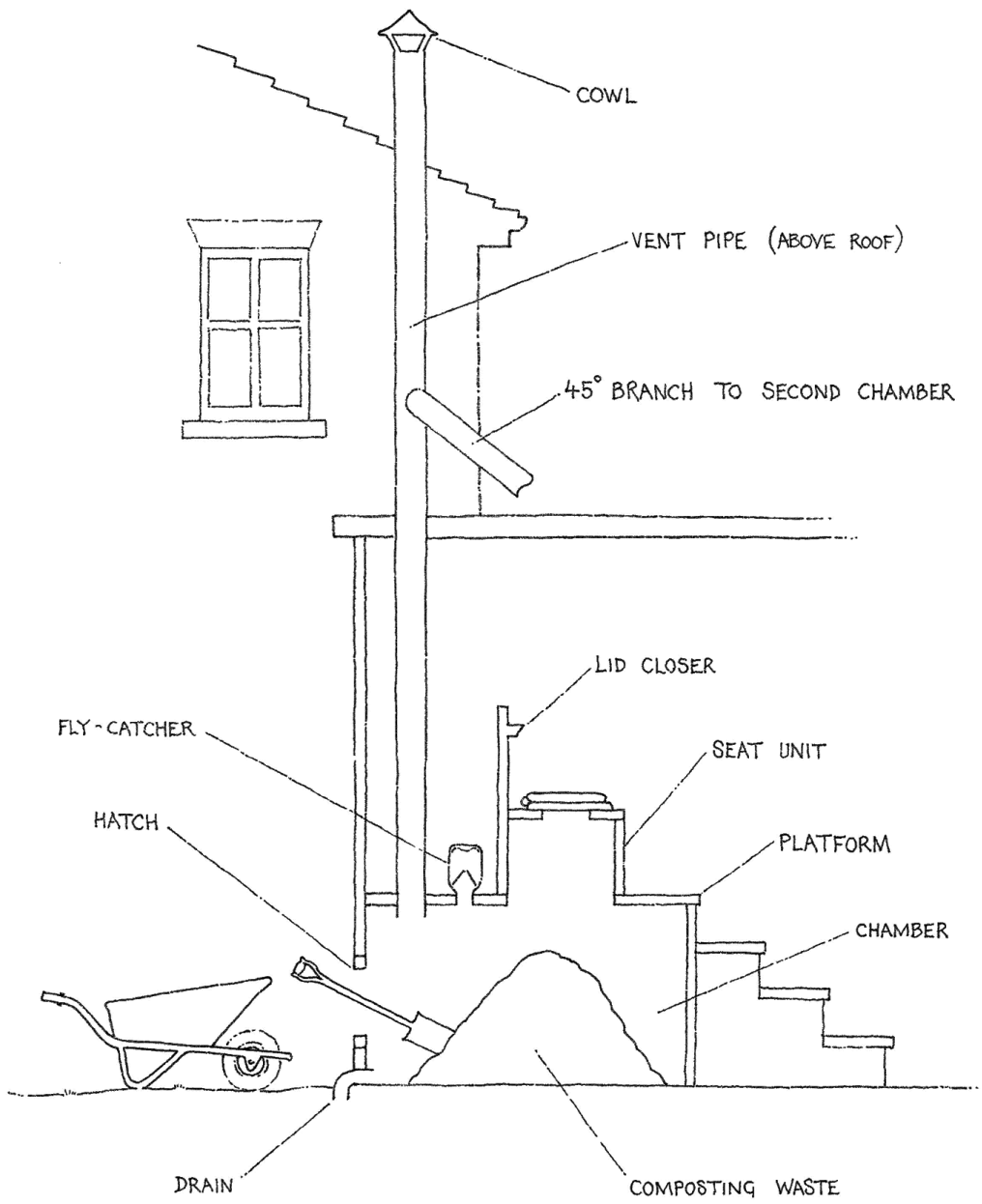
A compost toilet is a dry or waterless toilet, i.e. one that doesn't use water to take waste somewhere else. Water isn't at all helpful when it comes to dealing with human waste – it has to be separated again further down the line. It's only for transport, because we're not too fond of our waste, and want to get rid of it as quickly as possible. But we don't have to get rid of it; we can turn it into healthy, odourless compost, which would otherwise cost good money to buy.

A compost toilet allows natural processes to produce useful compost, after a resting period, the length of which depends on the type of toilet. This is an important point. Old-fashioned, hole-in-the-ground pit latrines can't really be called compost toilets, because generally, no soak was added (see 'carbon:nitrogen ratio'), and there was no drain so that the pile could decompose aerobically (see 'decomposition') to produce healthy, odour-free compost. They usually became smelly, and a new pit was dug elsewhere, or the contents were put onto fields without being properly composted. In the BBC TV programme, *Castaway*, a group of people on a remote Scottish island were using what they described as a compost toilet, but wasn't. They didn't seem to be putting a soak in, and part of their procedure was to take off the lid and turn the raw sewage with a spade (for some reason that was left unexplained). The whole thing was misguided and disgusting, and probably turned millions of viewers off compost toilets for life.

There are many different types of compost toilet. You can buy them off the shelf, but they tend to be expensive. Some have just one chamber, some have a heating element, some have sophisticated ways to separate urine, some are not completely dry, but use tiny amounts of water to 'micro-flush' waste to the chamber. You can buy quite sophisticated compost toilets with a maintenance contract in the States.

At the other end of scale (see *The Humanure Handbook* - 'resources / books') you can crap in a bucket and tip it onto a compost heap to break down with kitchen and garden waste. It works perfectly well, but we want the use of compost toilets to spread, and we don't feel that too many people will want to do that. This manual focuses on a compromise between the bucket system and the off-the-shelf system – a basic loo that is indoors, and cheap to build yourself. A lot of people think that a compost toilet has to be outside, in its own little outhouse, but we don't think that it will get much use if it's outside, especially in winter.

Ours is meant to be installed indoors (although it will work just as well in an outbuilding). There will be some properties where this is impossible, but even then, some sort of extension (maybe straw-bale, as in our visitor centre) can be built to accommodate it. Our design is for a basic toilet that has two chambers, uses no water or electricity, and liquids drain from the bottom via gravity; it is therefore probably the lowest-impact design of all.



*Cross-section of one chamber of a basic compost toilet.*

## components of a basic compost toilet

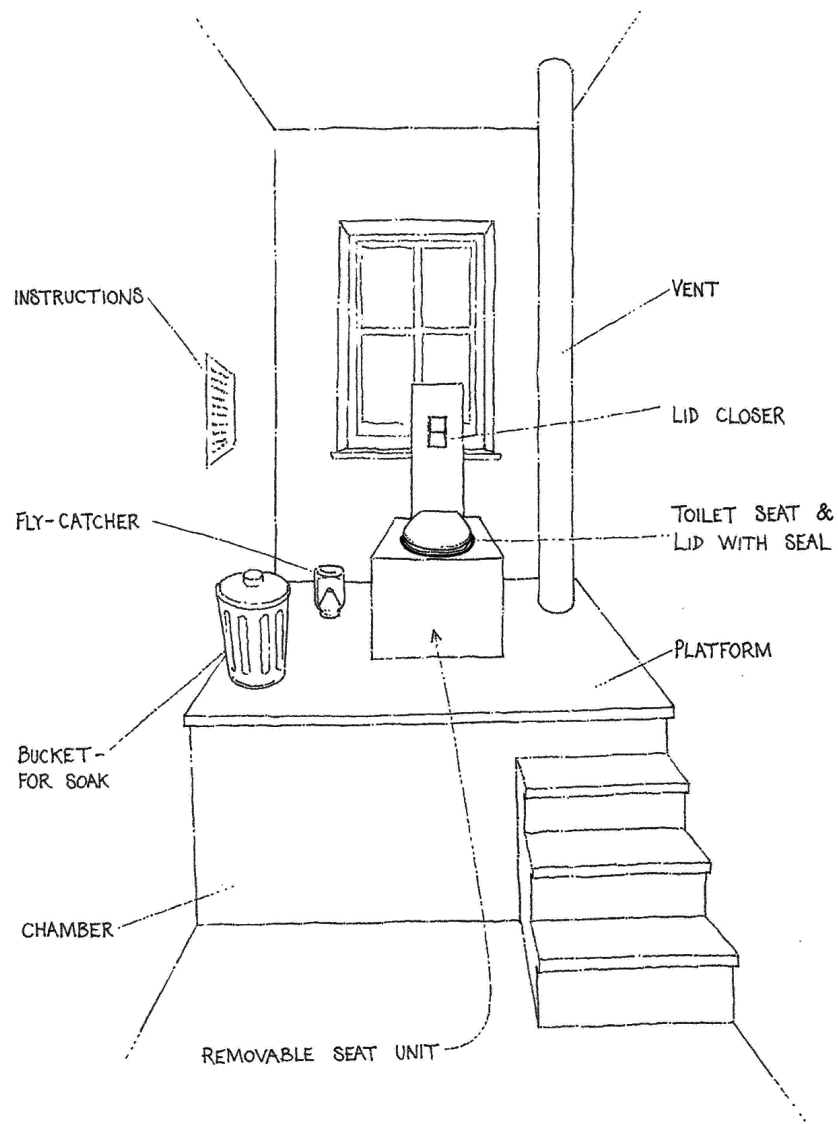
- two chambers
- platform
- vent
- removable seat
- hatch
- fly-catcher

The basic design has two chambers, but you can buy toilets with one chamber. We think the two-chamber model is better, because it gives the contents of each chamber at least a year to break down with no fresh material added. The new material will contain more nutrients, liquids, salts and ammonia, which means that worms can't be added, and pathogenic material may be leached into the compost you are about to remove. A chamber is used for one year while the contents of the other one are decomposing.

A seat is situated on a platform over the chamber in use. The seat can be removed when the chamber is full and re-situated over the empty chamber; the full chamber is then sealed and allowed to decompose for at least a year. You could also have a seat on each chamber, so that it doesn't have to be removed – but you'd have to make sure that you can't open the lid of the one that isn't in use.

There has to be some sort of hatch to empty the finished compost, a vent to take away odours and moisture, and a fly-catcher is recommended, as it is very unpleasant to open the toilet lid and have flies fly out.

The basic design in this manual has no fans to remove smells and vapours, no electrical elements to heat the waste, no paddles or mixers to turn the pile, or to knock the top off the pile. Some off-the-shelf models have these, and if you want them, by all means get one – they're just more expensive, and our design works!



*Components of a basic compost toilet (one chamber shown).*