CF 8

Continuous composting toilet

Installation and user manual



Waterless Toilet Shop

Essential Safety Guidelines for Use and Maintenance

For Users:

Follow Manufacturer's Instructions: Always adhere to the specific guidelines provided by your composting toilet's manual regarding use, maintenance, and compost removal.

Do Not Dispose of Inappropriate Items: Only human waste and toilet paper should be added to the composting toilet. Avoid disposing of items like sanitary products, chemicals, and non-biodegradable materials, as they can disrupt the composting process or damage the system.

Maintain Adequate Ventilation: Ensure the ventilation system is always functioning correctly to prevent odors and promote aerobic decomposition. This is crucial for the composting process and for keeping the environment safe and pleasant.

Use Composting Additives as Recommended: Some composting toilet systems require bulking agents like sawdust, hemp, or peat moss to help balance moisture levels and carbon-to-nitrogen ratios. Follow the specific guidelines provided by your composting toilet's manual regarding use of additives.

Monitor Moisture Levels: The compost should be moist but not wet. Excess moisture can lead to odor issues and improper composting, so adjust as necessary according to your system's instructions. Trust your instincts when monitoring moisture levels; if the compost looks and feels too wet, it likely is, and conversely, if it appears too dry, you may want to decrease the amount of used dry material.

Practice Good Hygiene: After using the composting toilet, wash your hands thoroughly with soap and water to prevent the spread of pathogens.

For Service and Maintenance:

Wear Protective Gear: When servicing the waterless toilet, always wear gloves, and suitable clothing that protects your skin to avoid direct contact with waste material.

Regular Inspection and Maintenance: Regularly inspect the system for signs of wear or malfunction, including the ventilation system, and perform any recommended maintenance tasks according to the product manual.

Handle Compost Properly: Mature compost should be handled according to local regulations regarding human waste compost. It often needs to be cured outside the toilet for several months before it can be safely used in non-food gardens or disposed of.

Avoid Using Harsh Chemicals: Do not use chemical cleaners or pesticides in or around the composting toilet, as these can kill the beneficial bacteria responsible for decomposition.

Report and Address Issues Promptly: If you notice odors, leaks, or any malfunctioning parts, address these issues immediately to prevent health hazards or damage to the system.

Emergency Situations:

In case of a spill or accidental exposure to raw waste, clean the area thoroughly with a disinfectant suitable for biological waste and follow local health guidelines for such exposures.

If the system becomes damaged or malfunctions in a way that poses a health risk, cease use immediately and contact the manufacturer or a professional for repair or advice.

In case of a life-threatening situation, prioritize safety by calling 911 immediately to get professional assistance.

Following these safety instructions can help ensure that your composting toilet operates effectively, promoting environmental sustainability while minimizing health risks.

Dear Friend,

Thank you very much for choosing our waterless toilet!

We hope that you enjoy many years of fruitful, waterless and trouble-free use. Please don't hesitate to contact us with any questions or 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!

Sincerely on behalf of the whole Waterless Toilet Shop team



Eemeli Palo

Dry Toilet Expert at the Waterless Toilet Shop

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Waterless Toilet Shop

TABLE OF CONTENTS

1. **WHAT'S INCLUDED……3**
2. **INSTALLATION PLANNING……4**
3. **ASSEMBLY……5**
    a. **Space required……5**
    b. **General considerations and tips……5**
    c. **Structural considerations……5**
    d. **Mark the pedestal and chute positions……5**
    e. **Excess liquids trench……6**
    f. **Cutting the hole for the chute and chute to length……7**
    g. **Cutting the waste hole in the CF 8 and affixing the waste chute……7**
    h. **Insert floor, add covering material and assemble the CF 8 Container……8**
    i. **Connect the excess liquids drain system……8**
    j. **Insert and chute and seal……9**
4. **PEDESTAL INSTALLATION……10**
5. **VENT SYSTEM INSTALLATION……11**
6. **USE OF THE SYSTEM……12**
7. **SERVICE……13**
8. **USE OF COMPOST……13**
9. **FINAL NOTES……15**

Materials required (see page 6 and pages 11/12):

2m of slotted agricultural or PVC pipe

2m of Geotextile or Hessian mat

0.3 m3 of aggregate/gravel

Length of 100 mm PVC Vent pipe (DWV)



1. INSTALLATION PLANNING

For proper operation of the toilet, you should consider several aspects to enable the natural composting processes for a 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 to the fan location (unless the whirlybird option is selected).

The CF 8 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.

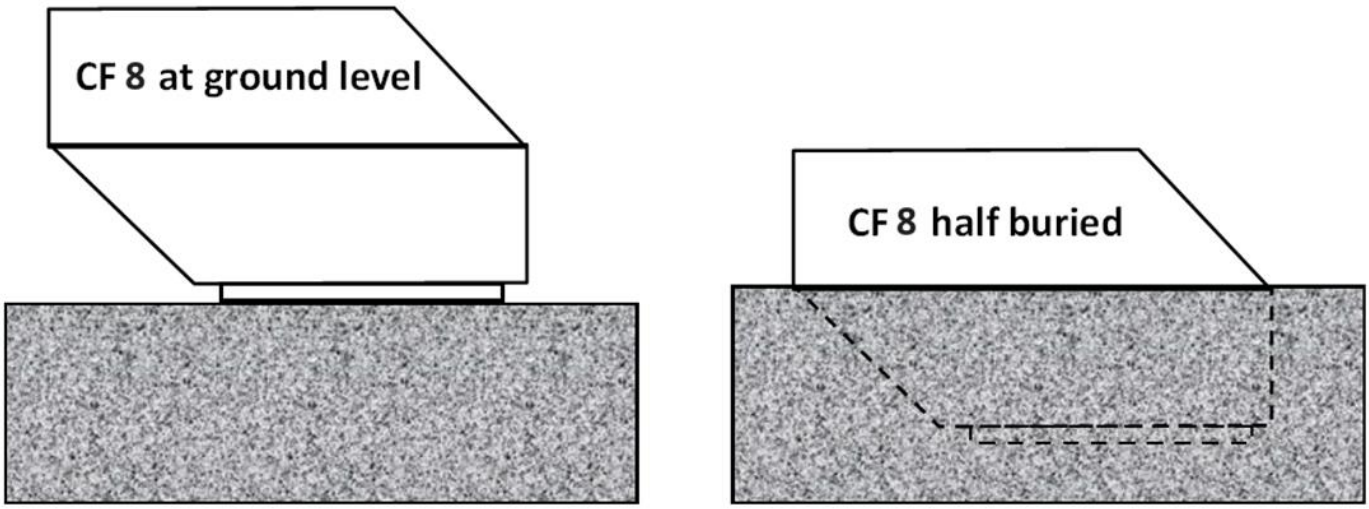
Installation of the CF 8 involves:

1. Positioning the Pedestal and composting container to ensure a vertical drop from the pedestal to the waste container
2. Assembly of the CF 8 composting container
3. Preparing a flat, level, and firm base for the composting container to sit
4. Preparing the excess liquids dispersal trench
5. Connecting the Pedestal, waste chute and composting container
6. Installing the ventilation pipework, including fan and vent cowl
7. Final checks before use

3. Assembly of the CF 8 System's Composting Container

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 service the composting container via its hatch. The CF 8 is designed to achieve this with a 450mm minimum space requirement if buried halfway up to the join line. However, the chute allows for installations up to 1.4m high - and this can even be further extended with optional additional chutes.



General considerations and tips

- The composting container must be located directly below the toilet pedestal(s).
- The composting power of the CF 8 System is increased if the unit can be installed pointing North - exposed to sunlight. This warms the container and boosts the composting process.
- Do not plan to install a light directly over the pedestal(s)/waste chute as this will attract flying insects.
- Always close the lid of the toilet after use
- Do not use your bathroom fan! Its suction works against the suction of the fan of the CF 8.

Installation - structural considerations

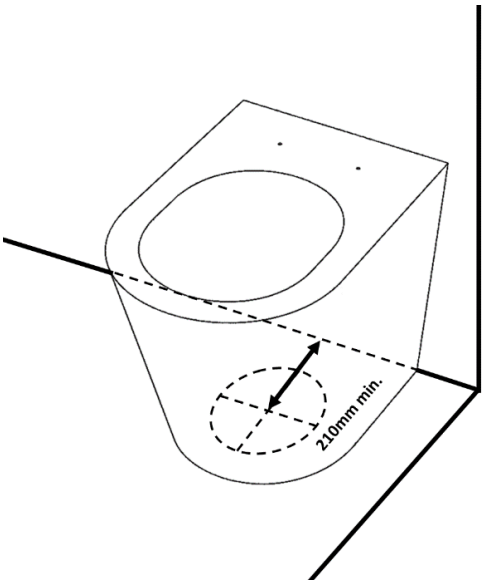
The CF System is installed sub-floor. It may be installed under a concrete slab or bearer and joist floor, in a full or partial cellar as desired in the building design. Consider the spacing of joists or concrete slab penetrations to allow for the waste chute. Ensure support member spacing and floor spans are adequate for the position of the CF 8 and toilet pedestal. Install trimmer joists if necessary (this has to be carried out by a licensed builder). Ensure no piping or wiring encroaches on the cut out.

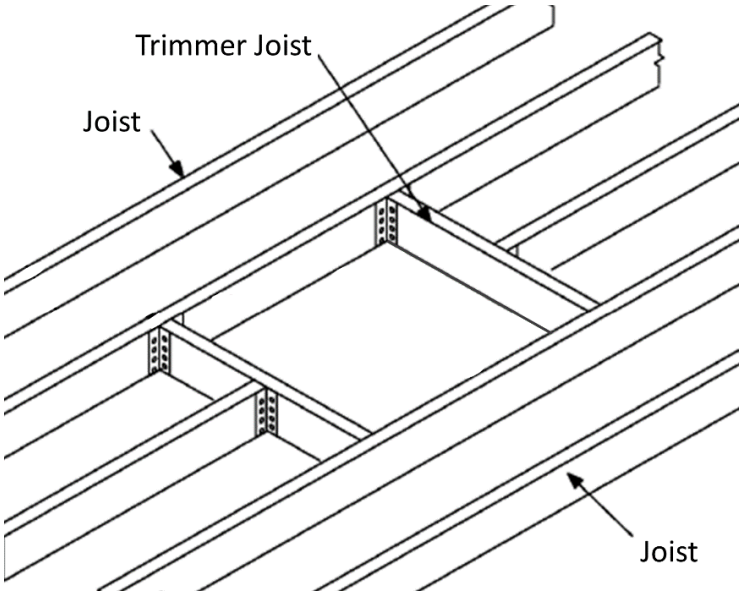
Mark your pedestal/chute position

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. Drill a small hole through the centre point and through the floor. Go to where the CF 8 is to be located below floor. 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 service the container via the hatch.

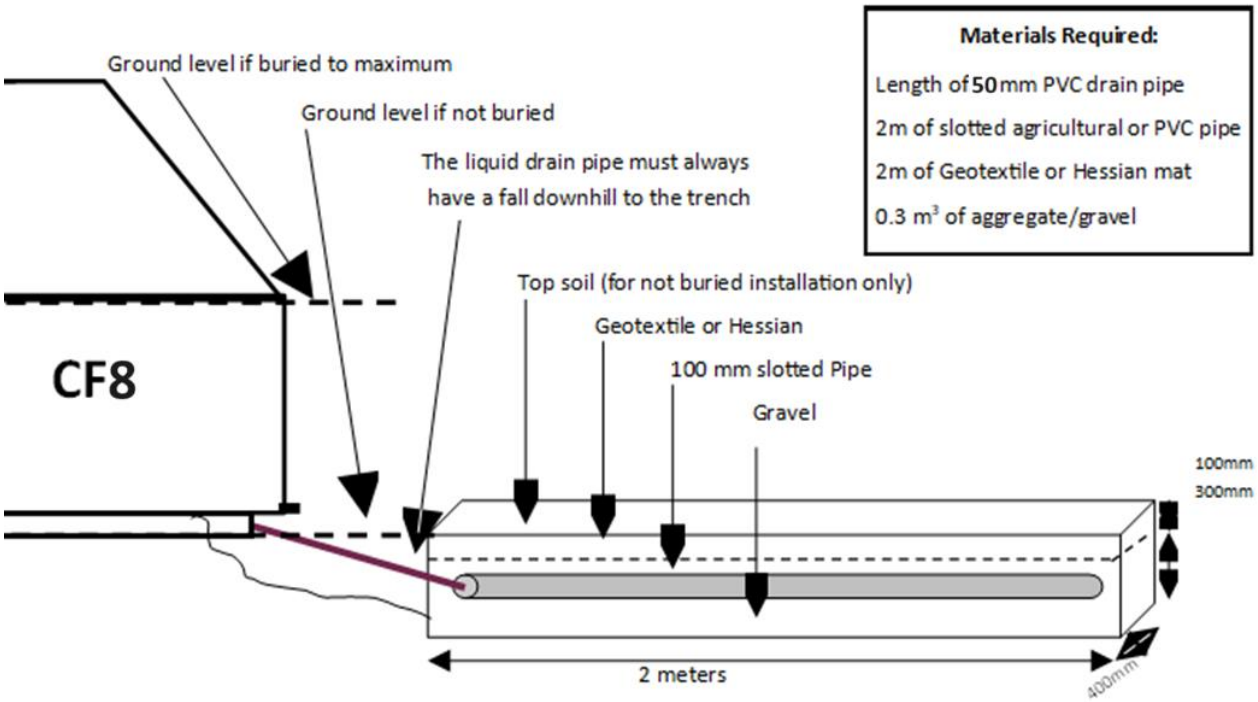
Check you have clearance in the joists for the waste chute to pass through the floor. Do not cut out the waste chute hole in the floor until you are sure you have everything lined up in case you need to adjust the position.





Prepare a flat, level ground for the CF 8 and dig out the excess liquids trench

The CF 8 can be installed at ground level or partially buried (up to the centre line). Dig out the excess liquids trench as per below. Just ensure that the container is level, or even better – **slightly sloping towards the excess liquids outlet**.



Prepare the excess liquids trench, ready to receive the excess liquids drainage pipe. Materials required: Length of 50mm PVC drain pipe (supplied), 2m of slotted agricultural or PVC pipe, 2m of Geotextile or

Hessian mat & 0.3 m3 of aggregate/gravel. If a longer length of 50mm pipe is required, please purchase appropriate length from a local hardware/plumbing supply.

NB: 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.

Cutting the waste hole in the floor, composting container, installing brace and affixing the waste chute

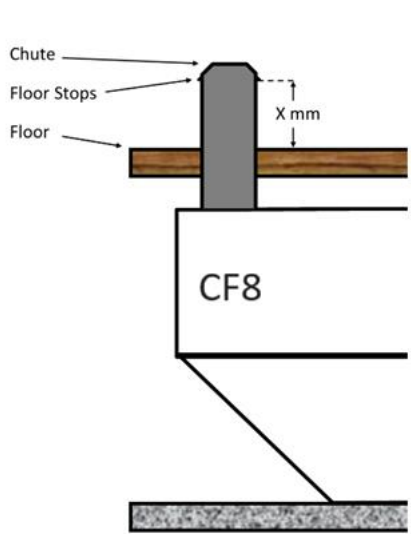
Place the CF 8 provisionally in its position. You may want to temporarily bolt the top onto the base at 4 – 6 places for maximal accuracy for the following stages.

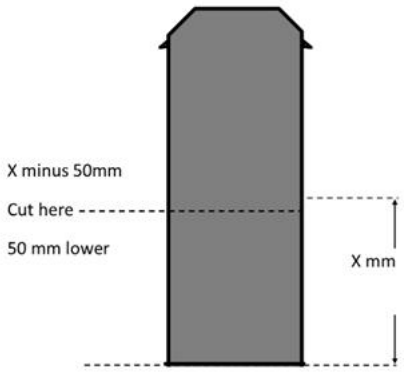
Mark the centre of where the waste chute meets the CF 8 via your plum bob. Try to arrange your install so that the waste chute enters the CF 8 chamber as far back as possible (like in the drawings)

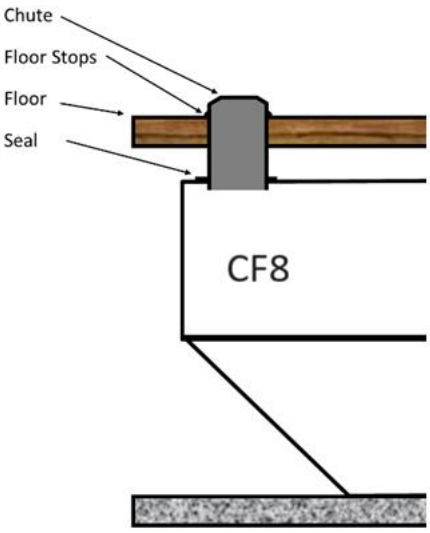
Cutting the hole for the waste chute and cutting the chute to length

Cut the waste chute hole in the toilet room floor to suit the chute - approx. 250mm (+/- 2mm).

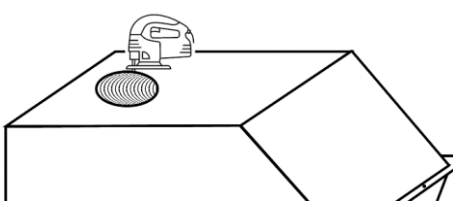
Insert the chute from above, tapered end up, through the hole you cut earlier. Firmly rest the chute onto the CF 8. Measure the distance between the floor and the floor stops of the chute. Remove the chute and cut this measurement <u>less 50mm</u> off the bottom of the chute so that when re-inserted later, it will protrude 50mm <u>into</u> the CF 8 container.

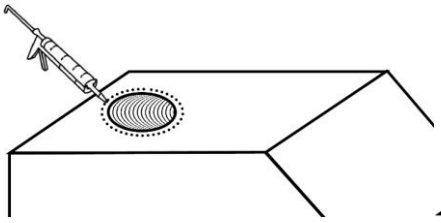


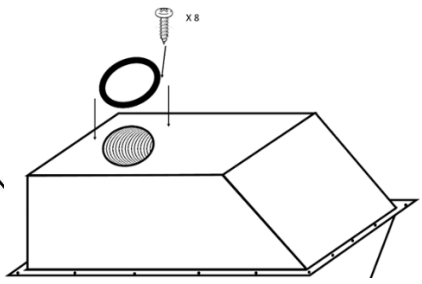




Remove the CF 8 and draw a 255mm circle and cut out with a jigsaw or similar.



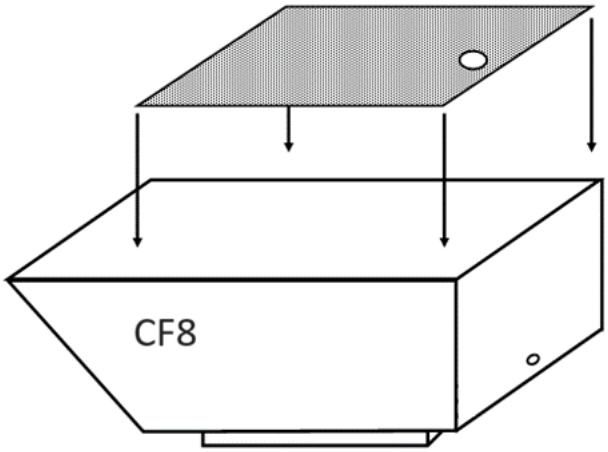




Fit the Chute Seal centrally over the chute hole, seal with Silicone & screw it down with the self- tapping screws supplied.

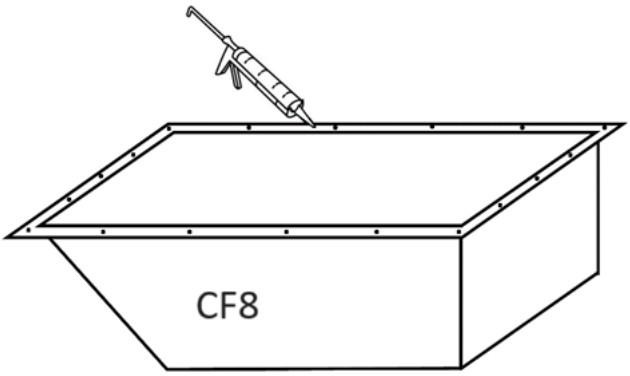
Insert floor, add bulking material and assemble the CF 8 container

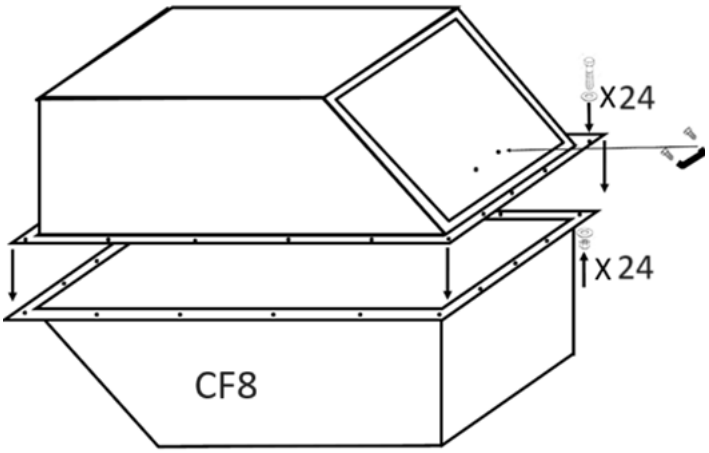
Insert the drainage tray - service hole facing the drain outlet.



Cover floor tray with 50mm of supplied bulking material. Wet down with a spray hose. Please complete this step before you assemble the composting container. If you try and do this with dry material after the container is assembled and the vent system is connected, the fan may clog due to the resultant dust produced.

Run a 4 - 6mm silicone bead around the center of the flange of the bottom unit (silicone and caulking gun supplied).



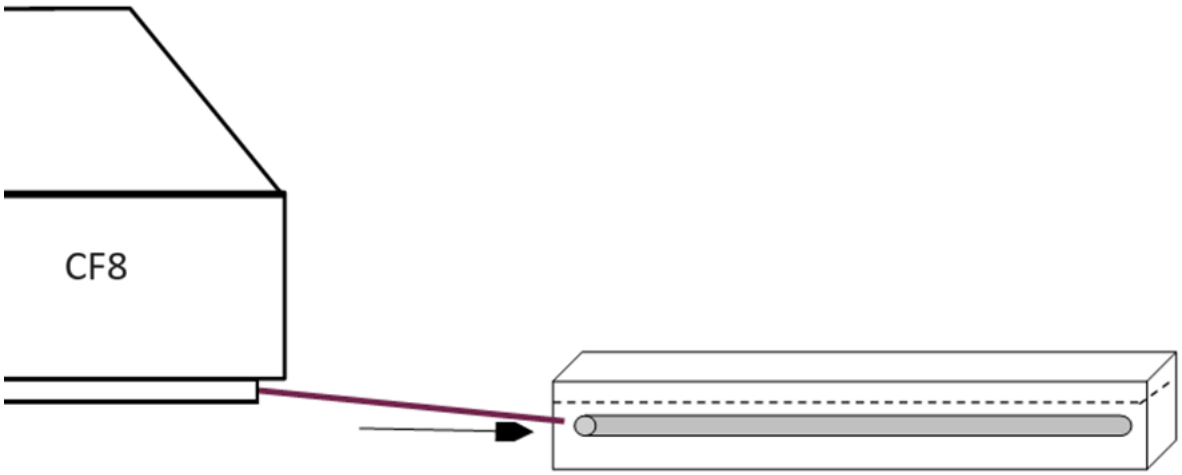


Put top unit on top of the bottom unit as per above. Line up the holes of the flanges and fasten with bolts, washers and nuts (supplied). Affix the handle with bolts (both supplied) through the pre-drilled holes.

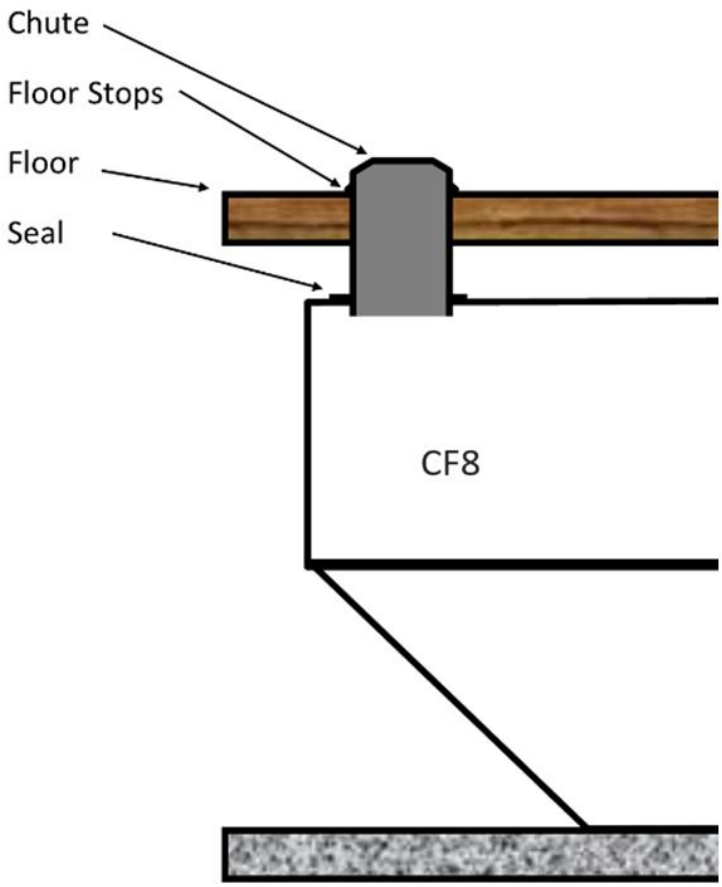
Connect the Excess Liquids Drain System

Screw the supplied 50mm threaded fitting into the excess liquids drain outlet of the CF 8. Cut your 50mm pipe to length so it fits into the prepared slotted pipe inside the trench once the CF 8 is moved into the final position. Insert into the fitting. Glue up.

When glue is set angle the pipe slightly downwards and insert into the prepared excess liquids drain by moving the CF 8 forward. **The CF 8 is now in its final position.**



Insert the waste chute(s) through the floor into the Chute Seal on the CF 8.



4. Pedestal intallation

Pedestal Installation Guide

1) **Ensure you have enough space either side of the pedestal to affix the fastening screws. Typically this is 320mm to accommodate the screws and drill**

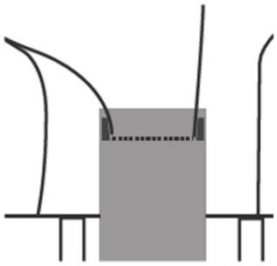
2) **Affix mounting brackets as per the below drawing, 110mm from the back position of the pedestal**

3) **Fix the insulation strip to the pedestal**

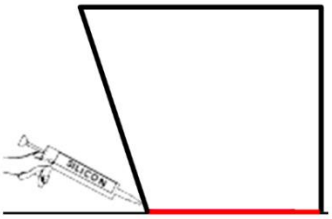
4) **Place pedestal into position, glue down with Silicone or similar if desired**



Fix the supplied insulation strip between the chute and the outside of the porcelain outlet - making sure it is behind the porcelain outlet, not visible and not subject to soiling



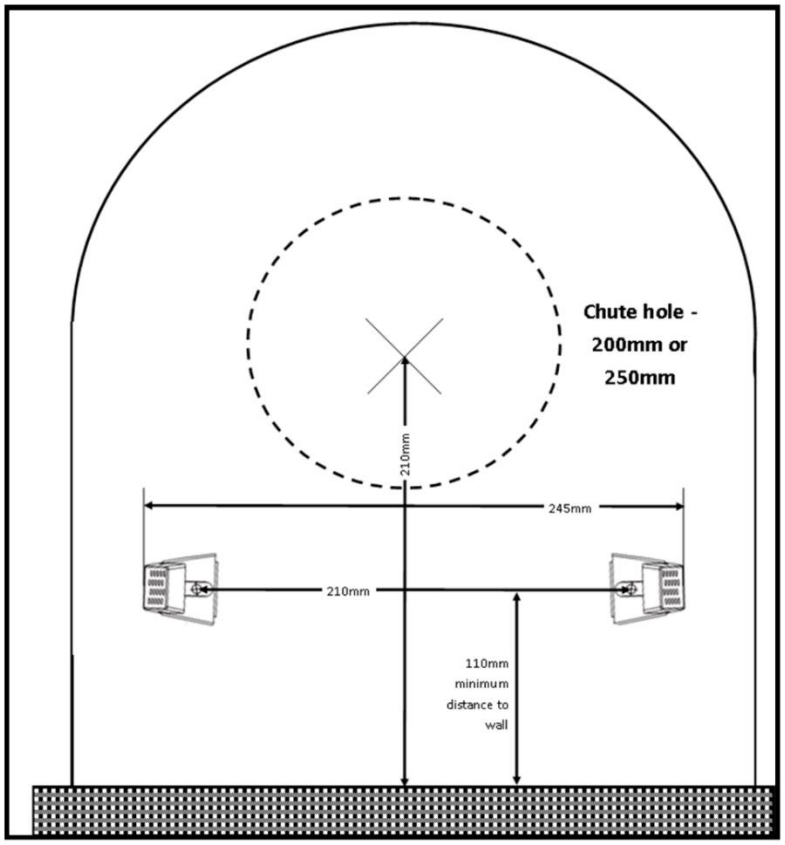
The strip ensures maximum efficiency of the ventilation



Use Silicone or similar to fix the pedestal to the floor & fasten with supplied brackets.

5) **Screw pedestal into place and cap with supplied white covers**





5. Vent System - General Considerations

- The vent outlet should be ideally placed at the front top of the unit (area outlined above the access hatch) but can also be installed at the upper front of either side.
- The CF 8 airflow requirement incorporates a continuous running fan (supplied). Consider how the fan will be powered (240VAC or 12VDC). **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 operation. Avoid bends tighter than 45 degrees & in order to maximise air flow, minimise the length of the piping between the composting container and the vent stack.
- Warm air, holding moisture, entering a cold vent can result in condensation. Install the provided Y-Junction and screw cap (your condensate trap) as per drawings.

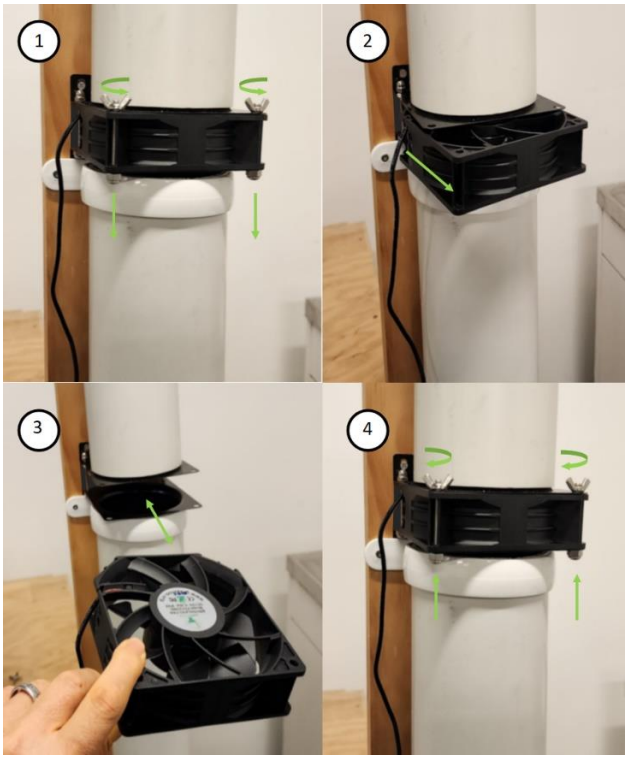
Vent Installation

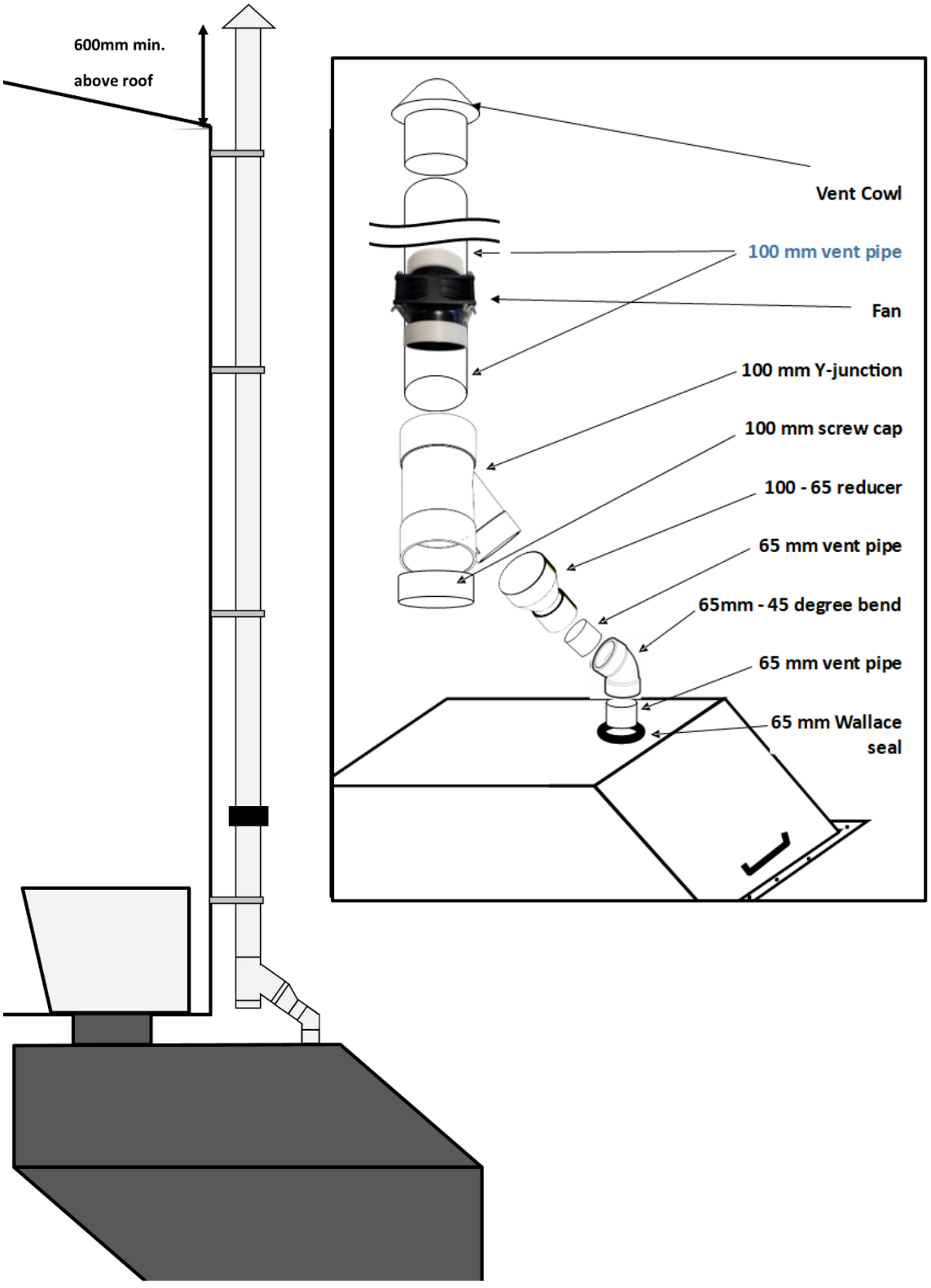
The below is an example as to a standard vent installation – there are many permutations possible and if in doubt, contact us for discussion and guidance. The 100mm vent pipe is not supplied for transport reasons and is readily available from your local hardware or plumbing supplier.

Cut a 76mm diameter hole in the front top of the unit and insert the Wallace seal - you may find this easier if you warm the seal in hot water first. Then insert the 65mm pipe into the seal making sure to only let the pipe protrude a maximum of 15mm inside of the CF 8.

To exchange fans:

1. Disconnect fan from power source, undo the 2 front wing nuts – remove bolts
2. Slide out fan
3. Slide in new fan (the cut off corners at the back, and the fan label pointing upwards).
4. Insert 2 front bolts and hand tighten wing nuts. Re-connect power source & check that the airflow is upwards, away from the toilet.


1
2
3
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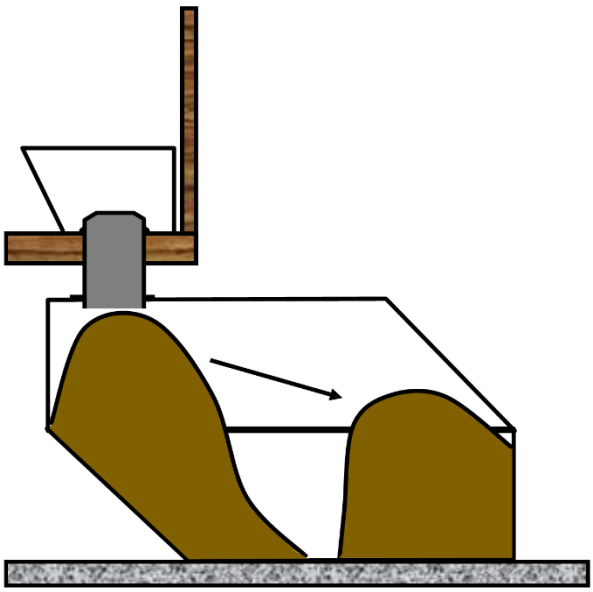


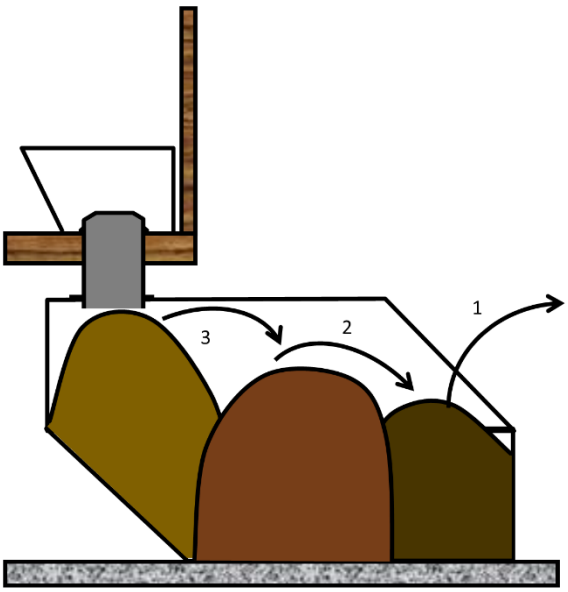
6. USE OF THE CF 8 SYSTEM

The CF 8 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. including sanitary products should be placed into a separate bin. A handful of covering material (hemp, 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 starter may also be added as per instructions to assist the composting process.

7. SERVICE

a) Check the fan 1) monthly to ensure it is working or 2) if you notice unusual odour. Remove the fan and clean off dust with a soft brush every 3 months.
b) Check the condensate trap every 3 months by unscrewing the cap at the bottom of the Y-junction - empty & replace. (A small tap may also be inserted into the screw cap instead of this process).
c) Rake the fresh contents from under the pedestal to the front of the unit
    a. when the contents reach the top of the unit at chute point, or
    b. after 3 months.
d) Repeat as necessary - this ensures that the oldest compost is at the front closest to the hatch. Remember that the compost continually reduces in volume as it matures.
e) Remove the compost from the front of the unit as per steps 1, 2 & 3 below:
    a. When the unit is full,
    b. after 6 months or
    c. when fully broken down.





f) If you find that the compost is far too wet check the excess liquids outlet via the service Cap in the front of the false floor. Remove compost, remove the cap, inspect visually and if blocked (or uric crystals are forming) insert garden hose and gently flush out. Replace cap.

To service the CF 8 System, protective clothing, face mask, glasses and gloves must be worn at all times.

8. USE OF COMPOST

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

- ✓ Burial should be a minimum of 30 metres from any water source and 6 metres from any sub-soil or open drainage system, or
- ✓ Dispose of as directed by the Local Government.

WARRANTY

New parts are furnished to a customer whose toilet fails within the allotted warranty period for the particular component, provided that our inspection shows such failure is due to defective material or workmanship. Any part supplied is warranted for the balance of the original warranty period. The warranty period for a part begins from the date the original product was dispatched (plus 10 working days for transportation).

Warranty Period:

Any electrical component including solar 1 year

Any rotomoulded component 15 years

Any porcelain component 4 years

Toilet seats 1 year

Any other component 1 year

This warranty does not cover:

1. Damage resulting from neglect, abuse, accident, or alteration; or damage caused by fire, flood, acts of God or other causality.
2. Damage resulting from failure of the purchaser to follow normal installation and operating procedures outlined in the manual or in any other printed instructions supplied with the system.

Items subject to a dispute, where photographic evidence is inconclusive, must be sent prepaid to Waterless Toilet Shop. The cost will be reimbursed by Waterless Toilet Shop should the claim be found valid.

In addition to the above, a fan that fails during the warranty period will only replaced under the following conditions:

1. The fan has only ever been connected and powered by either a 12-volt transformer plugged into mains power or a solar system supplied by Waterless Toilet Shop. Connecting your fan directly to a power source other than one supplied or specified by Waterless Toilet Shop may result in damage to the fan and void the warranty.
2. The fan and transformer must not be modified/altered in any way.
3. The faulty fan is returned to Waterless Toilet Shop for inspection, if required.

Providing the above conditions have been met replacement fans are shipped the same or following business day free of charge by regular post.

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