



## **AC/DC Kit**

### **CONVERSION AND INSTALLATION INSTRUCTIONS**

Kit required for conversion of electric units to also operate in non- electric or 12 Volt mode. For use with Excel and all Centrex Systems.

# CONVERTING YOUR COMPOSTING UNIT

The AC/DC kit is required to convert an electric Excel or Centrex System for use without electricity or where 12 volt DC electricity is only available. Non-electric units have certain features which the electric units do not have. The non-electric units have a 4" vent stack and a 1" diameter drain assembly. The installation of a 4" vent stack is required. The drain is required on the non-electric units since evaporation is not assisted by the heating element, there will be overflow liquid.

## PARTS IN THE KIT

5 X 4"X 31.5" Vent Pipe	4 X 4" ABS Coupling
1 X 4" Roof Flashing	1 X 4.25" Hole Saw
1 X 6" Diffusor	1 X Microbe Mix 50g.
1 X 12 Volt 2.4 Watt Fan	1 X Compost Quick 250ml.
1 X 4" Inlet Pipe	1 X 1" SS Hose Clamp
1 X 1"X 8'4" Drain Pipe	1 X Clear Scoop

\*\*You may also require a marker pen, a phillips screwdriver, an exacto knife, masking tape, a drill and a 1/8" drill bit

## CREATING THE HOLE FOR THE VENT

1. UNPLUG YOUR COMPOSTING UNIT and disconnect the 2" vent stack. If the vent connection is sealed with silicone, use exacto knife to break the seal between the vent stack and the unit.
2. Locate the composting unit in an area where you have access to the top of the unit.
3. Removing the fan from the unit. The area where you will need to create the hole for the 4" vent is directly above the fan assembly.

To remove the fan, locate the 8 snap caps around the large plate near where the 2" vent stack connects to the unit. Using your exacto knife, pry the 8 snap caps off, exposing the screw heads. Remove the all 8 screws and set all parts aside for reuse. Lift the fan out of the unit and set aside.

4. Locating the center for the hole.

Use the picture to locate the location for the hole for the 4" vent on your composting unit.



Excel



Centrex 1000



Centrex 2000



Centrex 3000

Once you have located the center, make a mark for the pilot hole.

5. Once you have marked the hole for the pilot, use a 1/8" drill bit to drill a small pilot hole on the mark.
6. Before you drill the 4" hole, place the 4.25" hole saw on the unit (as shown above) with the pilot bit in the pilot hole you have drilled. Ensure that the alignment is exact before you drill. Ensure that the hole is centered in the correct area (as shown in the the pictures above). Once you are satisfied that the hole is in the proper location, proceed to step 7.
7. Using the hole saw. Make sure to press down with even pressure on the hole saw so that the blades bite evenly into the top of the unit. Carefully apply firm pressure until the hole is cut in the unit.
8. **Excel Unit Only:** Use masking tape to secure the handle under the seat. This will ensure that the handle will not end up at an odd angle when the fan is replaced. Once the handle is secure, ensure that the opening in the drum is centered under the opening in the bowl liner. Slide the stainless steel shaft into the cone on the bottom right corner of the fan plate. Once you have completed this step, you may proceed with replacing the fan.
9. Replacing the fan:  
Replace the fan plate over the hole in the unit from where it was removed. Line up the screw holes. Insert the screws into the holes, making sure each screw has a CKS washer around the screw. Fasten all 8 screws. Ensure that the screws are not to over-tightened. Replace the snap caps.

## INSTALLING THE VENT

### INLET COUPLING



Place the vent inlet coupling into the hole that you have created for the 4" vent so that the 1" of smaller diameter pipe is protruding into the hole in the top of the unit. This is the first piece of the venting. Once you have finished assembling the vent, you should run a bead of silicone around the inlet coupling to prevent odor from escaping.

### 12 VOLT FAN

- The 12 volt fan should be used if there will be any bends in the vent pipe configuration, if you have a Centrex 3000, if the toilet will be used as an AF waterless toilet or if you are in an area where you will experience regular downdraft.
- The 12 volt fan may not be necessary if the vent is installed vertically as per specifications outlined under "Vent Pipe Location".
- If you do choose to install the 12 volt fan (included with kit), it must run continually for the duration of the time that you will spend at your house or camp.
- If the 12 volt fan is not running, it will cause a blockage in the vent pipe and will reduce the venting capacity of the 4" vent.



### INSTALLING THE 12 VOLT FAN

Install the 12 volt fan on the inlet coupling with the large side with the wires protruding facing upwards (as shown in the picture at right).

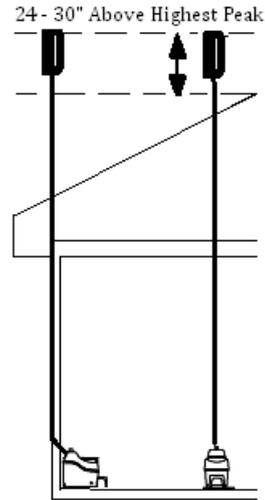
The 12 Volt Fan may be powered with a battery that is connected to a generator, solar panel, or other alternative energy system. For use in AC, purchase a 12 Volt to AC Adapter and snip off the female end. Wire the positive wire to the red wire on the fan, and the negative wire to the blue wire on the fan. Tie them off with wire connectors, and plug your AC Adapter into the wall.

Use silicone caulking to seal the connections between the inlet coupling where the bottom contacts the composting unit and all connections on the vent. Do not glue the fan to the vent stack.

**AC/DC mode: When both vents are installed the 12 Volt fan must be running continuously even when using AC power to prevent re-circulation between the two vents.**

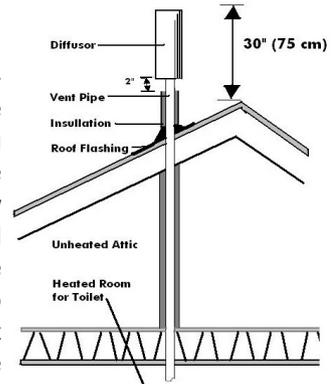
## VENT PIPE LOCATION

- 1) All vent should be vertically installed. Limit bends in the vent stack to no more than 2 - 45 ° bends. **THERE SHOULD BE NO HORIZONTAL SECTIONS OF VENT.**
- 2) If you will be installing venting on a steeply pitched roof where snow shear may occur; Install a heavier pipe through the roof and feed the enclosed vent through the heavier pipe. Seal between the pipes with expandable foam or other such water-tight substance. The heavier pipe should be able to withstand the weight of sliding snow.
- 3) If there is more than 36" of vent needed above the roof line to reach 24-30" above the highest peak of the roof (diffuser included in measurement), use guide wires to secure the vent above the roof.
- 4) The vent must be installed separately from ALL other household vents. Venting cannot be merged with other venting. Doing so will prevent the unit from operating odorlessly.
- 5) All connectors in the vent pipe should be sealed. **Use silicone caulking to seal the connections.**
- 6) The diffuser should be glued vertically on to the top of the vent pipe. This assembly helps draw air up the vent pipe.



## LEADING THE VENT THROUGH THE ROOF

As shown in the installation, the vent stack should end about 30" above the peak of the roof so that it is less subject to downdraft. Where the piping is taken through the roof, the roof flashing provided should be used to seal the installation. Insert the vent into the bell of the roof flashing and slide the roof flashing down until it lays evenly on the roof. Slip the upper edge of the roof flashing flange under the shingles. Outline the flashing on the roof. Raise the roof flashing and apply silicone sealant or roofing tar inside the outline. Slide the flashing back into place and firmly press onto the sealant. The flashing is properly placed when the top part of the roof flashing flange is tucked under the shingles and the lower portion is sealed on top of the shingles so that water sheds easily. Secure the flashing with corrosion resistant nails at each corner and along sides. Any exposed nails should be sealed with silicone caulking.



## INSTALLING THE OVERFLOW DRAIN

When used without electricity, evaporation is completely dependant upon the climate where the unit is installed. For this reason, the overflow drain should be connected as it will be required.

- Remove the orange cap from the drain assembly.
- Place a 1" SS hose clamp over the end of the drain hose that will be connected to the overflow drain assembly.

CTO-00002  
SM AC/DC Kit  
Jan 2011  
Rev.D1

### Tools Required



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