

# Incinerating Toilets

NDWC WRITER/EDITOR

Michelle Moore

Incinerating toilets are self-contained, waterless systems that don't discharge any effluent. They rely on electric power, oil, natural gas, or propane to burn human waste to a sterile ash. When properly installed, an incinerating toilet is safe and relatively easy to maintain.

An electric-powered incinerating toilet (see figure 1) is designed with a paper-lined upper bowl to hold newly deposited waste. This paper liner is replaced after each use. "Flushing" is accomplished by pressing a foot pedal, causing an insulated chamber cover to lift and swing to the side while the bowl halves separate. The paper liner and its contents drop into the incinerating chamber. When the foot pedal is released, the chamber cover reseals, and the bowl halves return to the closed position.

The system is designed to burn individual deposits, while outside surfaces remain cool to the touch. Burning begins with a press of the "start" button located on the frame of the toilet. An electric heating unit cycles on and off for 60 minutes while a blower motor draws air from the incineration chamber over a heat-activated catalyst to remove odors. The air then flows (with help from a fan) to the outdoors through a vent pipe. The fan continues to run after the heating cycle finishes to cool the incinerating unit. The entire cycle of burning waste to a small amount of ash takes from 1.5 to 1.75 hours.

Maintenance of the electric incinerating toilet includes:

- regular emptying of the ash collection pan,
- cleaning the outer surfaces including the upper bowl halves,
- periodic (every 90 days) cleaning of the blower motor and occasional replacement of the blower wheel,
- cleaning and lubricating the foot pedal

## Advantages:

- Units are self-contained and use no water.
- No effluent is discharged.

## Disadvantages:

- A power source must be available.
- Ash must be removed and the incinerating unit must be cleaned.
- Units cannot be used during the incinerating cycle.
- Incinerating toilets are not practical for public use.



mechanism, and

- annual inspection of the odor-removing catalyst.

A gas-fired incinerating toilet can be installed anywhere that has a propane or natural gas source. The toilet unit has an integral storage tank that can accommodate 40 to 60 uses before beginning the incinerating cycle. According to the only manufacturer of gas-fired incinerating toilets, Storburn International Inc., these systems can accommodate eight to 10 workers in an average workday or six to eight people in a cottage or residence in a normal-use day.

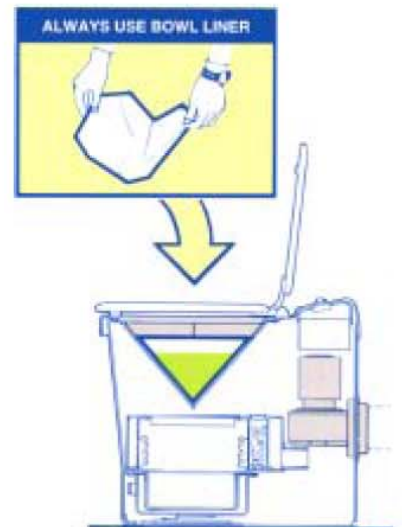
Gas-fired incinerating toilets do not have a toilet bowl. The waste drops into a holding chamber directly beneath the seat of the unit. An aerosol masking foam can be used to reduce odors and cover wastes between incineration cycles.

Before the burning process begins, an anti-foaming agent must be added to the heating chamber to reduce the likelihood of liquid wastes boiling over during incineration. The toilet seat is lifted and a cover plug is inserted over the chamber opening to act as a fire wall.

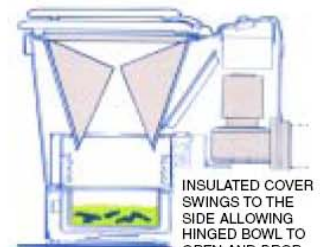
A timer is set according to the recommended duration for the load size. A gas valve is turned to the pilot position and ignited by pressing a button. The pilot light ignites the burner, which automatically locks down the unit (similar to a self-cleaning oven), so the toilet cannot be used during the burning cycle. The complete incinerating cycle takes from 1.5 to 4.5 hours, depending on the waste load.

Several factors must be considered when installing a gas-fired incinerating toilet. The toilet, being a gas fixture, must be routinely inspected for integrity of connections. Gas appliances must also

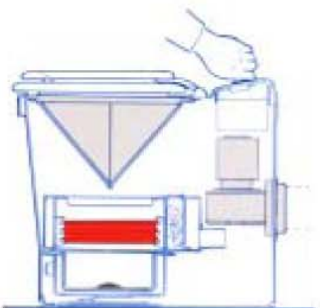
be adequately vented to the outdoors. A gray-water system must be in place to treat and dispose of all other wastewater produced in the home or building. An air space must be provided beneath the unit to ensure proper drafting/airflow during the incineration cycle. Rugs and carpets should not be installed under the unit. And, intake air vents may need to be installed if the incinerating toilet is installed in an enclosed, airtight room. 🌿



1. Drop bowl liner into toilet bowl. Bowl liner catches and contains all wastes plus paper.



2. Flush bowl by stepping on foot pedal. INSULATED COVER SWINGS TO THE SIDE ALLOWING HINGED BOWL TO OPEN AND DROP WASTE TO LOWER HOLDING AREA



3. Push start button to incinerate waste automatically

