

 **ECOJOHN**®

# BASIC Series

a waterless composting toilet



**ECOJOHN**  
17282 Mount Wynne Circle • Fountain Valley • CA 92708  
Phone: 1.866.ECOJOHN • 714.568.1077 • Fax: 714.568.1068  
www.ECOJOHN.com • info@ECOJOHN.com

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## Introduction

The BASIC Series consists of two models; one that operates on 12V DC and one that operates on 120V AC. Both are waterless composting toilets that are ideal for applications where a conventional toilet is too expensive or logistically difficult to install. The BASIC toilet uses a simple design, yet it is equipped with several smart features that makes it a very attractive and popular product.

## How the toilet works

The BASIC is equipped with a separating, and drying feature, which is the first step in its composting process. The solid waste is collected in a special environmental box inside the toilet. The liquid waste is separated from the toilet through a special liquid waste hose. Underneath the waste box, there is a heating plate that dries the waste material in the box; the heating plate is thermostatically

controlled and it reaches a temperature where most bacteria die. When the box is full, one can easily open the toilet and remove the entire waste box with its waste bag, or only take out the waste bag itself and then add the entire box/bag to a composting pile; after a few months, the waste and bag will decompose.

The liquid waste is separated away in the front of the toilet bowl. By using gravity the liquid waste gets drained outside the rear of the unit. The liquid waste is collected with a domestic wastewater system, or guided to a drain pit or to a container. By mixing 1 part of liquid waste with 8 parts of water, it can be used as a fertilizer.



## Advantages:

- Waterless toilet, no need for sewage or septic systems
- Runs on 12V DC or 120V AC
- Can operate in cold and hot climates
- Ecological, economical, and logistical benefits
- Easy to install, maintain, and use
- Can be installed in fixed or mobile applications
- Liquid waste can be reused as a garden fertilizer
- Lightweight, only 45 pounds and can be easily transported

# BASIC Models

Models	Power	Usage
BASIC-12	12V DC	Residential
BASIC-120	120V AC	Residential

## Operation



## Capacity

There is no maximum limit of usage, simply change the box when it gets full. Below is a guide as to how often the box needs to be changed.

### Daily usage:

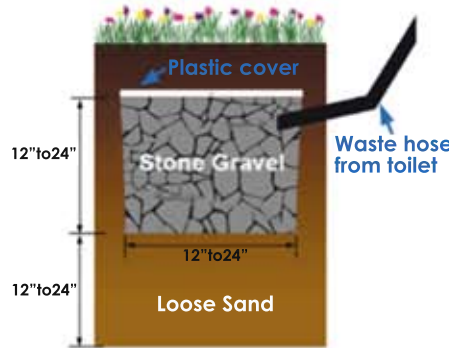
3 people (empty the waste bag every 2-3 weeks)

### Weekend usage:

3 people (empty the waste bag every 4-6 weeks)

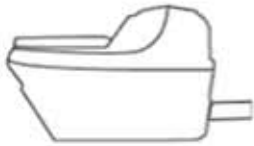
## Building a Drain Pit

Dig a drain pit approx. 12" to 24" wide. Add about 24" or more of loose fill such as sand or crushed rocks below the drain pit. Add lime stone gravel inside the drain pit.

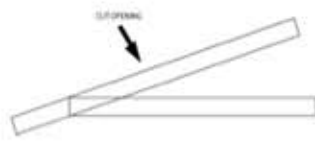


Guide the waste hose towards the pit. Connect the hose to a PVC pipe and guide it into the center of the drain pit, ensure that the pipe will gravity feed the liquid waste into the pit. Next cover the top of the lime stone gravel with a plastic cover. On the plastic cover, add 2" of earth; then add another 6" to 10" of sand, soil and grass. Important: 50 ft away from any water source.

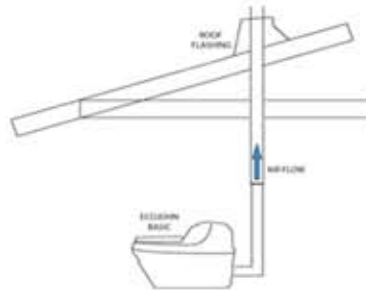
## Vent Installation through the Roof



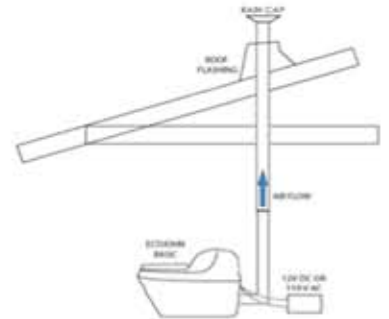
**1. Place Appliance:**  
Place the BASIC in its location.



**2. Cut Openings:**  
Cut vent opening in the ceiling and roof at your desired place. Assemble the vent sections to a point above the roof (min 2ft) then secure vent with the roof support to the ceiling or roof.

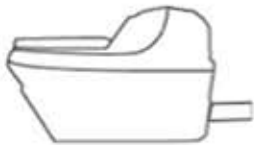


**3. Attach Roof Flashing:**  
Install the flashing on top of the vent. Always insure the vent remains vertical (use level). Seal the joint between flashing and other surfaces with silicone caulk.

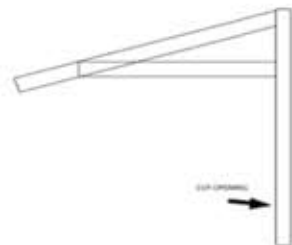


**4. Fasten Rain Cap:**  
Lastly add the rain cap onto the vent pipe, now the vent installation is complete. connect the toilet to a 12V DC battery or 120V AC outlet.

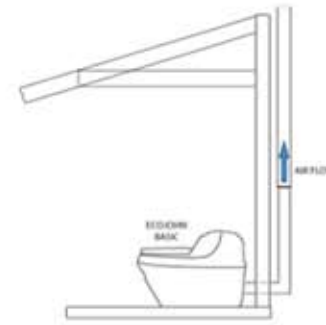
## Vent Installation through the Wall



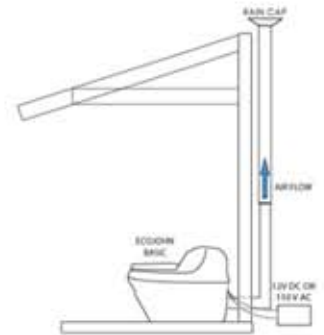
**1. Place Appliance:**  
Place the BASIC in its location.



**2. Cut Openings:**  
Cut the ceiling and roof openings in your desired locations. Secure roof support.



**3. Attach Roof Flashing:**  
Assemble the vent sections to a point above the roof, then slip the flashing over the vent. On an existing roof, center and install the flashing before extending the vent section up through the flashing.



Always insure the vent remains vertical (use level). Seal the joint between flashing and other surfaces with silicone caulk.  
**4. Fasten Rain Cap:**  
Lastly add the rain cap onto the vent pipe.



# Installation

The installation is very easy and it can be done by following a few easy steps: The first step in the installation process is to install the vent pipe (that comes with the unit) through the roof or out through the wall. Next, one only has to connect the power supply (12V DC or 120V AC) and decide what to do with the liquid waste hose. There are three options of how the liquid waste hose can be installed.

1. Guide it to an existing sewage line
2. Guide it to a drain pit
3. Collect it in a container and use it as a great fertilizer: (Mix 8 parts of water with 1 part of liquid waste)

When installing the liquid waste hose, it is imperative that it has an adequate drop through its entire length to prevent it from getting clogged up. This is especially important when the toilet is being installed where the temperature gets below freezing.

TECHNICAL DATA	BASIC
Electrical Consumption	12V DC: 2-3 Amp/hr 120V AC: 0.2-0.4 Amp/hr
Vent Size	2.5" PVC Pipes
Waste Hose	6 ft long
Waste Box	7.5 Gallons
Operating Voltage	12V DC or 120V AC
Material	Polypropylene Plastic
Temperature	Operation: -40 to 120 F
DIMENSIONS	BASIC
Height	25 in
Width	23 in
Depth	34 in
Sitting Depth	19 in
Weight	45 lbs

## Safety

The BASIC models are very safe and reliable to operate. They have no moving parts that can fail; its basic design keeps it a very easy to operate and maintain unit. The BASIC toilets don't operate on any fuel and the heating element keeps the temperature below 130 degrees F.

## Cost of Usage

The cost of running this unit is considerably low. There is no fuel cost. The only operating cost is the electricity usage which is low, and the cost for replacing the waste bags. If a 12V DC battery is being used, solar panels can be installed to back up and recharge the battery.

## Applications

Cabins / Guest Houses / Outhouses / RVs / Barns / Remote Camp Sites

