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# Innovative Toilet Solutions

# Today's solutions for tomorrow's problems





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# About Us

Global Inventive Industries (GII) is the exclusive manufacturer of ECOJOHN – the most efficient, reliable, and unique toilets for any mobile or remote application. The ECOJOHN product line consists of waterless incinerating toilets, separating composting toilets, and incinerating waste control systems for use with low-flush toilets. These products have been carefully tested and are designed to solve the problems with toilets in remote applications. ECOJOHN is superior where there is no power or water available, or where septic tanks are restricted, or simply in situations where a regular toilet is too costly or difficult to install. In addition to our self contained toilets, we also build upscale portable restrooms that include our own ECOJOHN toilet solutions that don't need unsanitary and costly pump outs – the ECOJOHN restrooms provide hygienic, logistical, and economical benefits.

GII continues to enhance and develop its products through a combination of company values and customer-focused design. Our products are built to last and provide superior efficiency; every ECOJOHN that leaves our factory is a clear indication of an absolute commitment to quality and design for which we are very proud. From the beautiful design and sparkling look, to quality built stainless steel parts; all reflects the meticulous attention to details. You will rapidly notice why ECOJOHN has received a reputation as the premiere brand for toilet solutions.

# SR Series



# waterless incinerating toilet

### Introduction

The SR models are self-contained waterless toilets that use an incineration process to reduce waste into sterile ash. These models are extremely efficient and leave a very minimal amount of ash that only needs to be emptied periodically (depending on usage). They require minimal effort to install, very little maintenance, and feature an aesthetically pleasing design. Due to its unique features, it can be used virtually anywhere. The SR toilets are perfect for areas where plumbing connections or sewage systems are unavailable (i.e. cabins, work shops, construction sites, camp grounds, fishing and hunting camps etc.) or as a replacement for the traditional porta potties. The SR toilets are available in various sizes, and colors; they also differ in burning capacity and what type of fuel they use. The SR5 models use Propane and are our smallest models (capacity wise) that are ideal where the usage is small. SR12 models are built to handle a higher capacity environment and are available in Propane, Natural Gas, and Diesel.

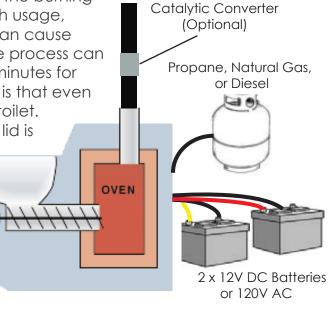
### How the toilet works

The only requirements for the SR to operate are a power source and Propane, Natural Gas, or Diesel. They conveniently attach to 120V AC power, or 12V DC as its power source, which can be recharged by solar energy. To operate the toilet after use, one simply has to close the lid and press the "flush buttons". The toilet has two flush buttons: one for urine, and one for waste. By pressing the button, a feeder screw will start to move any waste present into the burn chamber, which is located at the back of the toilet. At this point the

incineration process starts up automatically and begins the burning cycles. Since these models burn all the waste after each usage, there will never be any waste left inside the toilet that can cause unpleasant odor. Depending on the SR model used, the process can take a few minutes for a quick urine cycle, or up to 30 minutes for a waste cycle. One of the great features of these units is that even though a burn cycle is in progress, one can still use the toilet. It will simply shut off the burning process when the toilet lid is



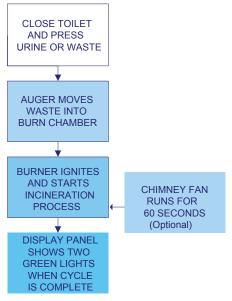
lifted up. Once the lid has been closed again, it will resume the burn process and finish the burn cycle. A display panel signals when the process is complete or if something has gone wrong with the unit or malfunction has occured, i.e. Propane or Diesel is out.



#### SR Models

Models	Power	Fuel	Capacity
SR5-P12	12V DC	Propane	4-6 people
SR5-P120	120V AC	Propane	4-6 people
SR12-P120	120V AC	Propane	10 people
SR12-N120	120V AC	Natural Gas	10 people
SR12-D120	120V AC	Diesel	10 people

### Operation





### Display Panel



Waste Urine Button Button

The SR is controlled by a display panel, which signals when the burn cycles are completed, if fuel is out, or if there has been too many users in a too short time period, etc.



# Safety

The SR is a safe and convenient appliance when assembled and used properly. In order to provide a high quality toilet, we have chosen high quality materials that are made to withstand high usage and a severe environment. Throughout the production, it goes through several meticulous testing procedures, which has been approved by Underwriters Laboratory (UL) and CE. Also, the toilet is equipped with multiple safety devices that recognize if any minor problems occur and shut off the unit.

## Maintenance / Cleaning

For regular usage, the SR only has to be emptied periodically (depending on usage). The chamber is easily accessable through a lid from the outside of the toilet, and it makes the ash removal process extremely easy. To ensure a clean bowl and auger, the toilet is equipped with a small reservoir of water, which can be used to clean the bowl. One only needs to press a rinse button to rinse the bowl. As an option, it is also possible to add a liner in the bowl before usage; the liner gets moved into the burn chamber along with other waste material. Once inside the chamber, the incineration process quickly eliminates the paper liner along with the waste.

## Cost of Usage

The cost of running this unit is considerably low. Electricity usage is minimal since it only uses electricity to start the incineration process and run the auger. Fuel cost is also low: On average the cost per flush is 8 to 10 cents per flush.

### Applications

Cabins / Guest and Pool houses Military Disaster situations Construction Work sites Trains / Barges / RVs Remote Camp sites Mobile offices Barns

# WC Series waste combustion system



#### Introduction

The WC Series consist of a wide range of incinerators in different sizes and fuel sources. All products in the WC Series incinerate waste and operate with low-flush toilets. The WC5, WC12, WC32, and WC48 are all included in the WC Series and use Propane, Natural Gas, or Diesel as fuel source depending on model and size. The WC Series are ideal in any remote application where a conventional toilet is too expensive or difficult to install. These incinerators along with a low flush toilet provide ecological, economical, and logistical benefits as well as eliminate costly and potential harmful environment which is often associated with a standard pump out process.

#### How the system works

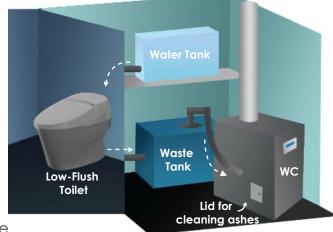
After flushing the toilet, the low-flush toilet dissolves the waste with the built in macerator pump before

transporting it into the waste holding tank. Only 0.3-0.5 gallons of water is being consumed. Inside the holding tank, a sensor reads the level of the tank. Once a certain level has been reached, a portioned amount of waste gets transferred by another waste pump into the WC incinerator (as long as the system is set in automatic mode). The incineration process takes approximately 7 minutes until completed. If there is still waste in the waste tank, the pump will automatically portion another batch of black water into the incinerator. This process is continuous for as long as the sensor signals that waste is in the tank. Once the tank is empty, the WC models set itself in a standby mode until the sensor signals that more black water in the holding tank and the incineration process start over. WC Series may also be set in a manual mode; by doing so, one can control the burn process manually and start and stop the incineration process if needed. As shown in figure below, the WC incinerator is just one part of a complete WC system. In addition to the incinerator, a water tank, a low-flush toilet with a macerator pump, a waste tank, fuel (Propane, Natural Gas, or Diesel), and 12V DC or 120V AC are required.

A great advantage of installing this system is that one can install multiple toilets to one system, which makes the system more cost effective. It is also possible to upgrade the size of the tanks if needed.



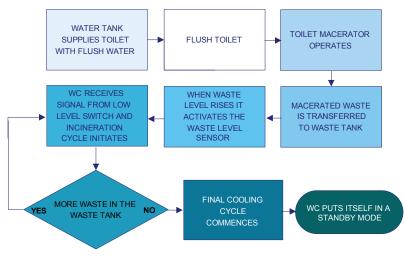
This is typically done when usage is higher. By having larger water and fuel tanks, refilling the tanks doesn't need to be done as frequently. By having a larger waste holding tank, the max capacity of the system increases. Larger or additional WC incinerators can also be added to the system to increase the amount of waste burned per hour.



#### WC Models

Models	Power	Fuel	Burning Capacity
WC5-P12	12V DC	Propane	1 gal/hour
WC5-P120	120V AC	Propane	1 gal/hour
WC12-P120	120V AC	Propane	2.5 gal/hour
WC12-N120	120V AC	Natural gas	2.5 gal/hour
WC12-D120	120V AC	Diesel	2.5 gal/hour
WC32-P120	120V AC	Propane	4 gal/hour
WC32-N120	120V AC	Natural gas	4 gal/hour
WC32-D120	120V AC	Diesel	4 gal/hour
WC48-P120	120V AC	Propane	8 gal/hour
WC48-N120	120V AC	Natural gas	8 gal/hour

## Operation



### Safety

The WC series are very safe when assembled and used properly. In order to provide a high quality system, we have chosen to only use top quality materials that can withstand high usage and operate in a severe environment. All WC models go through several meticulous testing procedures to monitor operations and quality.

### Maintenance / Cleaning

Under normal usage, the WC models only need to be emptied a few times per year. The remaining ashes is sterile and it can easily be vacuumed out by a ShopVac. To access the burn chamber, the WC units are equipped with a rear access door that may be opened from the outside of the unit. In addition to emptying the ashes, the water and fuel levels must also be monitored and maintained.

### Control Board



All WC models have a control board that indicates the fluid level in the tanks and the status of the unit. This can be set to an automatic or manual mode. It also displays the current temperature, hours left before service needed, or if there are any error messages.



The low-flush toilets only use 0.3-0.5 gallons per flush. A built-in macerator pump dissolves the waste before pumping it into the waste holding tank.

### Cost of Usage

The cost of running this system is considerably low. Electricity usage is minimal since it only uses electricity to start the incineration process, run the water, macerator and waste pumps for a very short time. The cost of the fuel is also low due to the efficiency of the burn units.

#### Applications

Cabins / Guest and Pool houses Military Disaster situations Construction Work sites Trains / Barges / RVs Remote Camp sites Mobile offices Barns



# BASIC Series waterless composting toilet



#### 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 Series uses a simple design, yet it is equipped with several smart features that makes it a very attractive and popular toilet.

#### How the the toilet works

The BASIC Series toilets are 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 out 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.



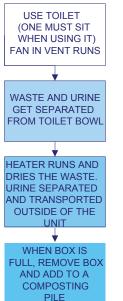
#### Advantages:

- Waterless toilet, no need for sewage or septic systems
- Runs on 12V DC or 120V AC
- Can operate in extreme 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		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)

#### Vent System

The vent system can be installed vertically (straight up), or horizontally (out through a wall). A fan is located inside the vent and runs continously. The fan ensures that the air inside the toilet gets to the outside air.

# 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.

### Maintenance / Cleaning

For regular usage, the BASIC only has to be emptied about once every 2-3 weeks. The waste box and bags are easily accessible, which makes the waste removal process very easy. The removable bowl can easily be removed for cleaning. The liquid waste can be collected in a container for reuse as a garden fertilizer, or guided into a drain pit or an existing sewage system.

#### Cost of Usage

The cost of running this unit is considerably low. There is no fuel cost associated with the BASIC. The only operating cost is the electricity usage which is low, and the cost for replacing the waste boxes and 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 Remote camps RVs Barns



### Specification

DIMENSIONS	SR5	SR12	WC5	WC12	WC32	WC48	<b>BASIC Series</b>
Height	25 in	32 in	30 in	37 in	37 in	37 in	25 in
Width	23 in	25 in	16 in	19 in	19 in	19 in	23 in
Depth	34 in	39 in	25 in	29 in	29 in	29 in	34 in
Sitting Depth	19 in	20 in					19 in
Weight	132 lbs	160 lbs	120 lbs	185 lbs	185 lbs	185 lbs	45 lbs

WC Series TANK DIMENSIONS (Standard size: 16 gallons)	Waste Tank	Water Tank	Fuel Tank
Height	11.5 in	11.5 in	11.5 in
Width	14 in	14 in	14 in
Length	26 in	26 in	26 in

\*Note: Larger water and waste tanks are also available

#### **Technical Data**

	SR5	SR12
Heat Flow	5kW	12kW
Fuel	Propane	Propane, Natural Gas, Diesel
Operating Voltage	12V DC or 120V AC	120V AC
Hourly Btu	18,000	50,000
Temperature	Operation: -30 to 120 F	Operation: -30 to 120 F
Material	Polypropylene Plastic	Color Coded Steel
Color	White	White, Black, Gray Metallic
Electrical Consumption	Urine Cycle: 0.215 AmpH Waste Cycle: 0.312 AmpH	Urine Cycle: 0.215 AmpH Waste Cycle: 0.312 AmpH

	BASIC-12	BASIC-120
Operating Voltage	12V DC	120V AC
Temperature	Operation: -30 to 120 F	Operation: -30 to 120 F
Material	Polypropylene Plastic	Color Coded Steel
Color	White	White
Electrical Consumption	2.3 Amp	2.3 Amp
Watts Consumption	0.26kW/day	0.26kW/day
Vent Size	2.5" PVC Pipe	2.5" PVC Pipe
Waste Hose	6' Long	6' Long
Waste Box	7.5 Gallons	7.5 Gallons

	WC5	WC12	WC32	WC48
Heat Flow	5kW	12kW	32kW	48kW
Fuel	Propane	Propane, Natural Gas, Diesel	Propane, Natural Gas, Diesel	Propane, Natural Gas, Diesel
Operating Voltage	12V DC or 120V AC	120V AC	120V AC	120V AC
Hourly Btu	18,000	50,000	100,000	160,000
Temperature	Operation: 32 to 120 F	Operation: 32 to 120 F	Operation: 32 to 120 F	Operation: 32 to 120 F
Material	Color Coded Steel	Color Coded Steel	Color Coded Steel	Color Coded Steel
Color	Gray Metallic	Gray Metallic	Gray Metallic	Gray Metallic
Electrical Consumption	2.5 Amp	2.5 Amp	2.5 Amp	2.5 Amp





#### Installation

#### SR Series

The SR is easy to install. The standard SR models include an 8 ft long chimney system. It can go vertically straight up or horizontally out through the wall and then vertically up along the wall to the outside air.

- must be located inside a weatherproof building.
- must be installed on a non-combustible level and even base.
- must not be operated in areas where there is a risk of accumulation of flammable vapors or dusts.
- At no times should the flue be obstructed i.e. overhanging branches.

When the chimney system has been installed, one only has to connect the power supply and fuel (Propane, Natural Gas, or Diesel). The toilets need to be placed inside a weather proof building/structure, and they need a minimum of 12 inches clearance from any wall. Furthermore, the SR should not be operated in any area where there is a risk of an accumulation of flammable vapors or dust

• Catalytic converter - a catalytic converter may be installed in the chimney pipe; the catalytic converter cleans the outgoing air and ensures that there are no harmful agents going out. (optional)

• Chimney fan - an extra fan may be installed in areas where extra draft is needed. (optional)

#### WC Series

The installation of the system can be done in a few easy steps. The WC models can be installed up to 10 feet from the toilet and 3 feet above the ground. The incinerator and waste tank must be placed within 10 feet from each other. When the chimney system has been installed, connect the power supply (120V AC or 12VDC as an option for WC5) and the fuel source. The WC must be installed inside a weather proof building/structure. A minimum of 12 inches clearance from any outside wall is required. Furthermore, it should not be operated in an area where there is a risk of an accumulation of flammable vapors or dust. The chimney has to be a minimum of 4 ft long. It can go vertically up or horizontally out through the wall to the outside air.

• Catalytic converter - a catalytic converter may be installed in the chimney pipe; the catalytic converter cleans the outgoing air and ensures that there are no harmful agents going out. (optional)

#### **BASIC Series**

The BASIC is extremely easy to install. The first step in the installation process is to install the vent pipe through the roof or out through the wall. Next, one only has to connect the power supply and decide what to do with the liquid waste hose. There are three options of how the liquid waste hose can be installed (see BASIC Series Section)

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. Note: Check with your local authorities for any restrictions regarding installing a drain pit.



# Portable Restrooms

Restrooms with incinerating technology



Gll offers new upscale mobile restrooms equipped with one of our unique incinerator models which make these mobile restrooms ideal for work sites, sporting events, military, disaster areas, etc. Portable restrooms with incinerating technology can be used anywhere a mobile restroom is used or needed.

Our mobile restrooms may either be skid mounted or permanently secured on a trailer. By using the ECOJOHN restroom, it is now possible to provide your crews with a pleasant and fresh portable restroom that require a minimal of maintenance. All our restrooms come installed with waterless incinerating toilets or low-flush toilets with Propane or Diesel fuelled incinerators.

All of our standard moveable restrooms have a sparkling interior, stainless steel urinal and low flush toilets and a waste combustion system. Portable restrooms may also be configured using the free standing SR model incineraing toilet. In addition to our standard mobile restrooms, GII can also design custom restrooms designed to fit your specific needs. These restrooms can be configured to include upgrades such as air conditioning, hardwood floors, upscale counter tops, stereo systems, mirrors, or special insulation for use in colder climates.

### How the ECOJOHN restrooms differ

The ECOJOHN restrooms are different from other portable restroom. Instead of pumping out the waste, our restrooms are equipped with incinerating toilet systems that eliminate the need for pumping out the waste. The restrooms can be installed with either waterless incinerating toilets or with low flush toilets in combination with a waste incinerator.

The restrooms are available in various sizes and configurations; the incinerators can be fuelled by Propane or Diesel. For restrooms that need to be used in cold or hot climates, a combined heater and A/C can be installed.

#### Advantages:



- Very clean and upscale toilets compared to today's unpleasant porta-potties
- Doesn't require any pump outs of waste holding tanks
- Can be operated with water toilets or waterless toilets
- Mobile units that can be moved from site to site
- Very little maintenance Refill water, add Diesel Fuel, or Propane
- Can be powered by 12V DC with solar panels or 120V AC

### Portable Restroom Models

Models	Waterless	With Water	# of Toilets
Elite 1S	Х		1
Elite 1T	Х		]
Elite 2S	Х		2
Elite 2T	Х		2
Elite 4S	Х		4
Elite 4T	Х		4
Deluxe 1S		Х	1
Deluxe 1T		Х	1
Deluxe 2S		Х	2
Deluxe 2T		Х	2
Deluxe 4S		Х	4
Deluxe 4T		Х	4

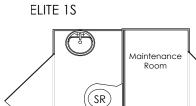
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S = skid mounted T = trailer

#### Options

High Efficiency A/C and Heater Waste Tank Heaters **Outside Lighting Motion Sensors** Storage Units Generators Air Vent Covers Vinyl Trailer Skirts **Baby Changing Station** Hand Sinks Solid Surface Sink Tops AM/FM/CD Player Sanitary Napkin Disposal Toilet Paper Dispensers (Double Roll) H/D Option To Move Trailer Loaded Solar Option To Power D/C Items Woodgrain Flooring **Custom Exterior Colors** Caster Wheel For Front Jack



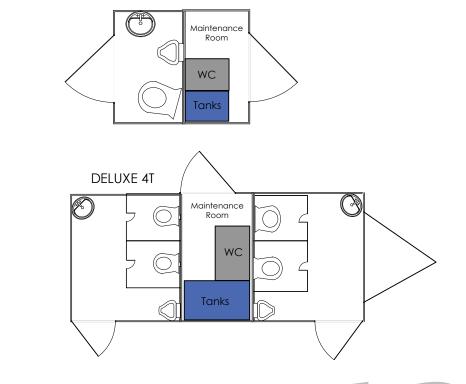
Maintenance

Room

Tanks

WC

DELUXE 1S



#### Applications

DELUXE 2T

Construction/Work sites Barges Remote camps Parks

Military Golf courses Temporary Restrooms Sport Events

Today's fresh water is decreasing. 1/3 of the world's population lives in areas that have a moderate or severe water shortage. It is estimated that the amount of water available to each individual will be cut in half over the next 25 years. It is also known that only three percent of the world's water is fresh; water that we today use in our regular toilets! In the 21st century , water is becoming a scarce resource. China, where some 82 million people are struggling with severe water shortages, is no longer an isolated example.

ECOJOHN is at the forefront of a worldwide push to save our planet's most precious resource - water.



# **ECOJOHN**<sup>®</sup>

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