ECOJOHN®

WC Series

a toilet waste combustion system

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WC Series

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The WC Series consist of a wide range of incinerators in different sizes and fuel sources. All products in the WC Series incinerate from a holding tank and operate with low flush toilets. WC5, WC32, and WC48 are all included in the WC Series and use propane, diesel, or natural gas as the fuel source depending on model. The WC incinerators 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. By installing the WC incinerator, it is now possible to install a water toilet in remote application and not have to connect to a septic or sewage system.

Introduction

The WC models were primarily developed to solve the problem of waste handling in remote and mobile applications. The WC ingeniously incinerates black or gray water from a holding tank. Multiple toilets and sinks can be connected to one holding tank, making it cost effective where more than one toilet needs to be installed. The toilets that are including in the system have a integral macerator pumps and only use 0.3-0.5 gallons per flush.

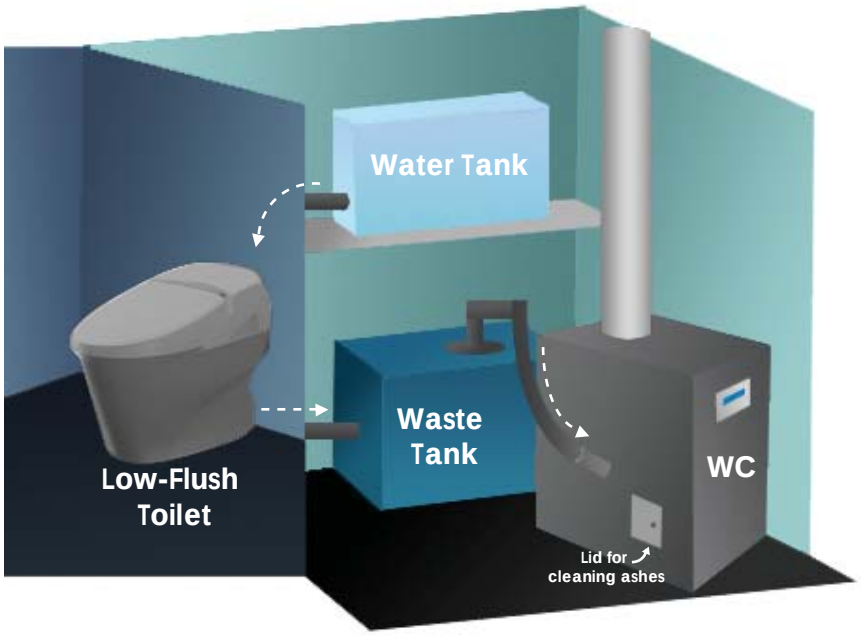
The WC Series have the capability to incinerate between 1 (WC5) to 7 gallons (WC48) of waste per hour. No chemicals are necessary to add in the waste holding tanks in any of the WC models.

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. Inside the tank, a sensor signals the level of the tank. If the unit is set in automatic mode, it will automatically pump in measured quantity into the incinerator after a certain level has been reach in the holding tank. The incineration process takes approximately 12 minutes (depending on model) 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 sufficient waste is in the tank. Once the tank is empty, the WC set itself in a standby mode until sensor signals more black water in the holding tank and the incineration process start over.

The WC unit 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 right, the WC incinerator is just one part of a complete system. In addition to the incinerator, a water tank, a low-flush toilet, pump, a waste tank, and fuel (propane, natural gas, or diesel), 12V DC, 120V AC, or 220V AC are required.



WC Models

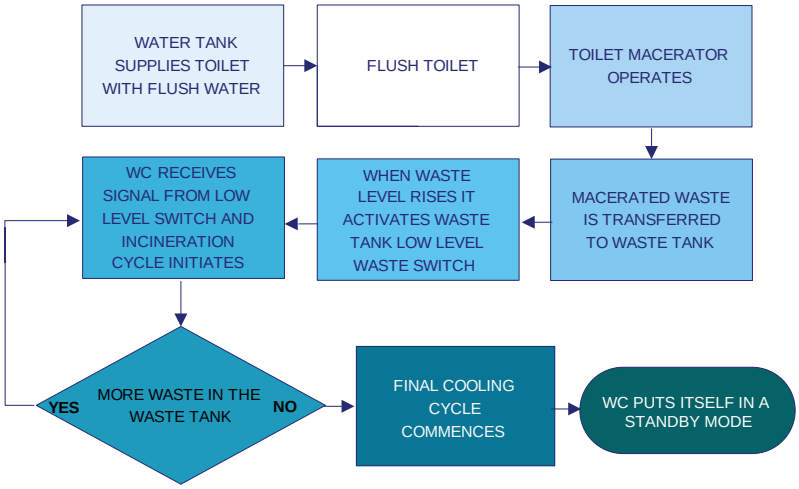
MODELS	FUEL	POWER	BURNING CAPACITY
WC5	Propane	12V DC/120V AC	1 gal/hour
WC32	Propane	120/220V AC	3-4 gal/hour
	Natural Gas	120/220V AC	3-4 gal/hour
	Diesel	12V DC/120/220V AC	3-4 gal/hour
WC48	Propane	120/220V AC	6-7 gal/hour
	Natural Gas	120/220V AC	6-7 gal/hour
	Diesel	12V DC/120/220V AC	6-7 gal/hour

Control Board

A control board monitors the burn process and the levels in the tanks

WC System Operation

- WHEN INITIATED, THE BURNER AUTOMATICALLY STARTS UP AND HEATS UP THE BURN CHAMBER.
- WHEN THE TEMPERATURE HAS REACHED A CERTAIN TEMPERATURE IN THE CHAMBER, WASTE IS TRANSFERRED FROM THE WASTE HOLDING TANK INTO THE BURN CHAMBER WHERE IT GETS INCINERATED.
- COMBUSTION CONTINUES UNTIL WASTE IS GONE IN CHAMBER.
- THIS PROCESS CONTINUES AS LONG AS THE SENSOR IN THE TANK INDICATES THAT WASTE IS LEFT IN THE WASTE TANK.
- IF THERE IS NO FURTHER WASTE IN THE TANK, COOLING DOWN CYCLE COMMENCES AND THE WC PUTS ITSELF IN A STANDBY MODE.
- IF NEW WASTE IS TRANSFERRED INTO THE WASTE TANK, THE WC WILL AUTOMATICALLY START UP AND BEGIN ITS PROCESS.



Maintenance / Cleaning

For regular usage, the WC models only have 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 an access door and may be opened from the outside of the unit. Simply vacuum the sterile ashes. In addition to cleaning ashes, one must ensure to maintain water and fuel levels.

Safety

The WC is a very safe and convenient appliance when assembled and used properly. In order to provide a high quality system, we have chosen to only use top quality materials that are made to withstand high usage and severe environment. During the production, it goes through several meticulous testing procedures to monitor quality control.

Cost of Usage

The cost of running this system is considerably low. Electricity usage is minimal and due to its unique design, the fuel consumption is also low.

The system operates with one or multiple low flush toilets.

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Installation

The installation of the system can be done in a few easy steps. The WC must be installed inside a weather proof building/structure.
A minimum of 6 inches clearance from any outside wall is also recommended.
The chimney (6" double wall pipe) has to be a minimum of 4 ft long. It can go vertically or horizontally out through the roof/wall.
It is possible to install multiple toilets to one system. Maximum number of toilets depends on size of holding tank and usage.

- The low flush toilet - the toilet included in a complete system is a low flush that only consumes 0.3-0.5 gpf. It also has a macerator pump that quietly macerates the black water before pumping it into the holding tank. The toilet is made of white porcelain. It is also possible to use your own low flush toilet if that is a preferred.

- The tanks - the standard tanks (water, waste, and fuel) are 16-18 gal

Included in Chimney System

- 8 ft Chimney Pipe
- Flashing
- Storm Collar
- Roof Support
- Firestop
- Chimney Cap

Options

Catalytic converter

Solar System

TECHNICAL DATA	WC Series			
Heat Flow	5kW to 48kW			
Hourly Btu Input	18,000 to 165,000 btu/hr			
Fuel	Propane, Natural Gas, Diesel			
Operating Voltage	12V DC, 120V AC, 220V AC			
Temperature	Storage -40 to 120°F / Operation 32 to 104°F			
Electrical Consumption	80W / 5 Amp @ 120V AC, 11-12 Amp@12V DC			
DIMENSIONS	WC5	WC32	WC48	TANKS (Water, waste, fuel) 16 GAL
Height	27"	35"	38"	11.5"
Width	16"	19"	23"	14"
Depth	25"	28.5"	32.5"	26"
Weight	122 lbs	163 lbs	194 lbs	
Burning Capacity	1 gal/hr	3-4 gal/hr	6-7 gal/hr	
Propane Consumption	0.5 lbs/hr	6.9 lbs/hr	1 lbs/hr	
Natural gas Consumption	-	0.6 therm/hr	1.4 therm/hr	
Diesel Consumption	-	0.6 gal/hr	1.2 gal/hr	

Applications

Cabins and guest houses / Military and disaster situations
Restricted areas / Remote applications / Construction and work sites