



ECOJOHN[®]

WASTE MANAGEMENT SOLUTIONS FOR DISASTER RELIEF/
REFUGEE CAMPS.

ECOJOHN[®]

ECOJOHN® Waste Management Solutions

It is estimated by the United Nations that half of all medical cost is caused by unsafe sanitation in the developing world. About 1.5 million children die each year from diarrheal disease.

The ECOJOHN® products were developed to improve waste handling in remote and developing areas. More specifically they were designed to eliminate costly and unhygienic pump out processes of toilets and septic tanks. In addition to the sanitary tribulations in these areas, the logistical problems could be immense. All people in this type of environment are being affected because of shortages of efficient toilets.

ECOJOHN® offers many different models which are designed for different environments and situations. ECOJOHN® product line consists of completely waterless incinerating toilets as well as waste combustion systems which operate with ultimate low flush toilets - the common factor is that they are efficient, hygienic, and that no system requires any pump outs or connection to a sewer.

Learn more about ECOJOHN® and how our assortment of products can help unravel handling of harmful waste sanitation and even help save life in developing countries.



The Challenge

Poor sanitation and lack of hygienic toilet solutions are major challenges in disaster, relief efforts, and in refugee camps. The Poor sanitation leads to vast number of diseases and death.

There are many obstacles with installing toilets in these distressed areas such as poor infrastructure. Many refugee camps are located in unsafe areas and trucks or other vehicles going to the sites may require military escort, which complicates the process as well as making it much more costly

The Solution

One of the major advantages with ECOJOHN® products is that there is no need for any sewage / septic tanks or to pump out any portable toilets or tanks. By using diesel, kerosene, propane, or natural gas, our solutions incinerate black and gray water into a harmless small amount of ash. The incineration process is done automatically and requires minimal maintenance. Due to a highly efficient incineration process, no detrimental residue is left. Since the systems may operate on 12VDC, they can be installed in completely off the grid locations. By connecting solar power to batteries, the electrical cost for operating the systems is very limited. 120VAC and 240VAC waste combustion systems are also obtainable.

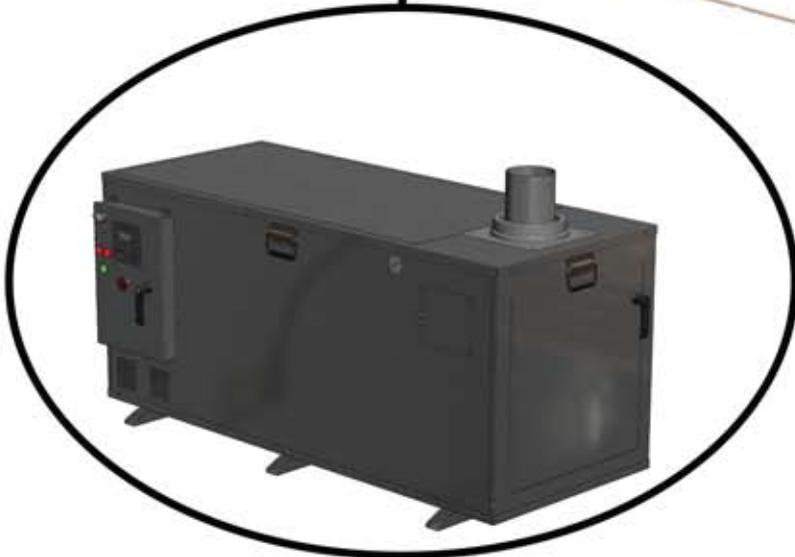
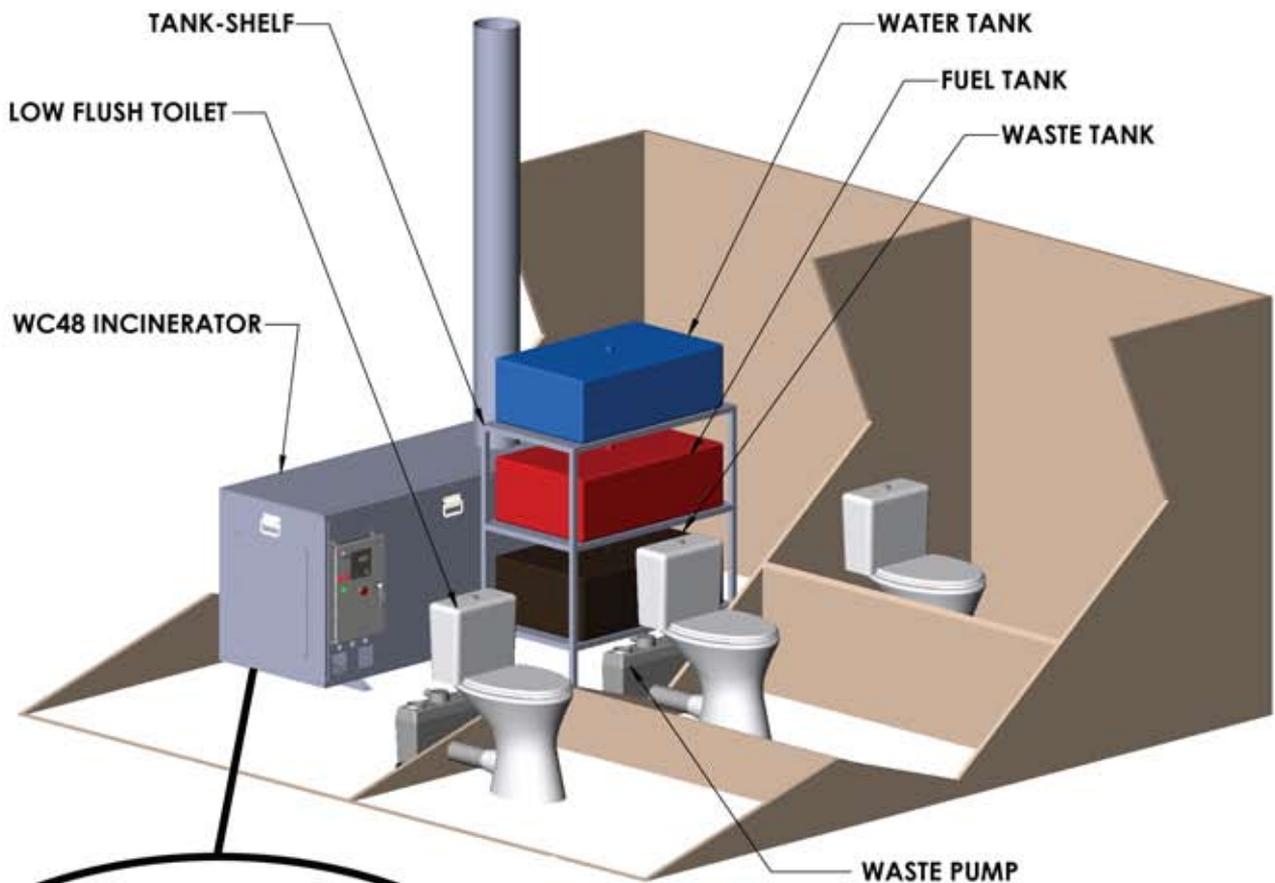
THE MEDICAL COST RELATED TO BACTERIA SPREAD FROM POOR WASTE HANDLING IN REFUGEE CAMPS AND DISASTER RELIEF EFFORTS IS MASSIVE.



The Concept

The concept of the ECOJOHN® waste combustion systems is to be able to connect one or multiple toilets to one system, and to utilize an incinerator that efficiently incinerates any black water. The small amount of remaining ash is sterile and can easily be disposed. The system is absolutely safe and reliable in operation and it does not release any toxic gases.

There are multiple types and sizes of waste combustion systems, toilets, and tanks; from smaller very low usage systems to larger systems which are intended for bigger camps. ECOJOHN® products are therefore very versatile and flexible.



The WC48 Incinerator

Multiple toilets can be installed in one system. The WC48 incinerator efficiently incinerates black water and eliminates pump-outs and septic tanks. The WC48 can be installed in new buildings or connect to existing buildings where toilets already are installed.

Installation / Operation / Maintenance

The ECOJOHN® waste combustion systems are designed to handle all sorts of environments (extreme hot or cold weather, high or low altitude, dry or humid climates). They can also be installed in a provisional as well as in a fixed location. The components in the system are plug-and-play which makes the setup easy. The toilets, tanks, and incinerator can also be preinstalled in containerized or prefab buildings that can be drop shipped by helicopter to a location.

The incinerator has an exhaust pipe that needs to be vented vertically through a roof or horizontally through a wall. After the chimney has been installed, the remaining components (toilets, tanks, and pumps) have to be connected collectively. Lastly, connecting power (12VDC, 120VAC, or 240VAC) is required.

Ultra Low Flushing Toilets or Vacuum Toilets

The system operates with ultimate low flush toilets or vacuum toilets that requires minimal amount of water per flush (less than 0.5 gpf). It is also possible to install a standard flushing toilet. In addition to the low flush toilets, the system may also include ECOJOHN® waterless urinals. Adding waterless urinals will reduce the water consumption and increase the capacity of the system.

Operational Overview

Any waste water from toilets, urinals, or sinks gets automatically transferred to a holding tank. From the holding tank the waste water gets portioned into the incinerator in small batches. The burner incineration turns on by design when the holding tank starts to fill up. It also stops without human intervention when the tank is empty. It is also achievable to program the system to only operate during certain hours, i.e. start up at night and finish in the morning. In addition, one can control the operation manually, and start and stop the burn cycles when required. In situations where gray water from sinks and showers need to be disposed, the gray water may be connected to the same holding tank.

Cleaning out Ashes

Although the maintenance on the system is very low, some upholding is necessary. The maintenance consists of cleaning out some sterile ashes (since it is sterile it can be vacuumed out or dumped in a trash bin). Other safeguarding includes refilling the fuel and water tanks. The frequency of cleaning out the ashes depends on the usage and what types of toilets being used. This process only takes a few minutes to do and it can be done by one person.

A white and red American Red Cross Disaster Relief van. The side of the van features a large red cross logo, the text "American Red Cross" in bold black letters, and "Disaster Relief" in a large, grey, serif font. A person in a red vest with a white cross and "American Red Cross Disaster Relief" text is standing at the open side door, which is filled with supplies. A "NO STEP" sign is visible on the lower part of the van's side.

**American
Red Cross**

Disaster Relief

NO STEP

Efficient Hygienic Toilet Solutions.

 **ECOJOHN[®]**

Shelters and Containerized Modules

Rapid Deployment and Shelters

One of the many advantages with the ECOJOHN® waste combustion systems is that they are portable and can be installed very rapidly in most types of environments and terrains. In many disaster and relief efforts, a key factor is to bring in help as quickly as possible and to get everything installed in a fast manner.



In disaster and relief efforts, bringing toilets and hygiene showers may be very difficult. Therefore, in addition to the waste combustion systems, ECOJOHN® also provides rapid shelters or mobile buildings where the incinerators can be installed. By pre installing the waste combustion system and toilets in a building/container, they can be drop shipped to the site and be put to use instantly. The system can also be installed in a rapid shelter that can be setup quickly on site.

The rapid shelters are lightweight and yet robustly built. Since they come in disassembled pieces, these shelters are easy to transport. Shipping multiple shelters inside one ISO container not only save space, but it is also much more cost-effective. Due to resourceful design, they can be installed in less than one hour and may be connected in series to handle larger camps.

Many refugee camps are located in exceptionally severe climate and current tents are not holding up well. By installing these rapid shelters, huge cost savings can be done as well as they provide more comfort and protection.

Configuration

The shelters may be installed in series and configured in many different ways - multiple toilets, sinks, and showers in one building; 12VDC with solar power.





www.ECOJOHN.com
info@ECOJOHN.com

17282 Mt Wynne Circle
Fountain Valley, CA 92708
P: 1.866.ECOJOHN
F: 714.568.1068