

No fire, low cost, no toxic gases/smells



# New product ! POLARIS

## Active oxygen organic solid-waste low-temperature decomposition system

What are active oxygen? Active oxygen are the strongest substances on earth with the highest oxidizing capacity. For example, when a person breathes, active oxygen sterilize and decompose bacteria and viruses by their instantaneous oxidative action so that they do not invade the body. However, it disappears in an instant. If kept for a long time or generated more than necessary, it has such a high oxidizing effect that it destroys the brain and body cells and can annihilate all life on the earth. Until now, there has been no way in the world to effectively utilize this active oxygen. A Japanese company invented the world's first technology for generating large amounts of active oxygen in the atmosphere and developed a compact active oxygen generator. In April 2022, the owner of this company was awarded the Order of the Sacred Treasure by the Japanese government in honor of his achievements.

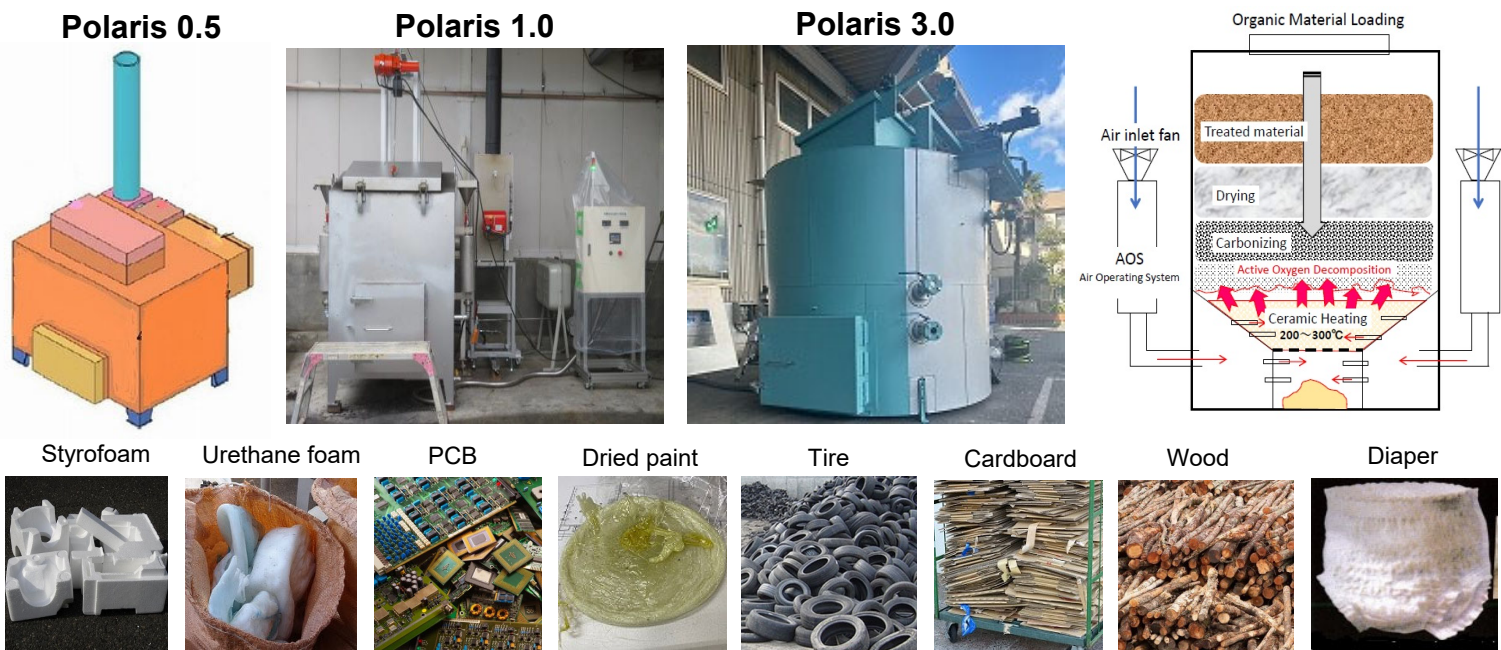
Organic matter is generally composed of carbon, hydrogen, and oxygen atoms that are very tightly bound together, making it difficult to decompose even with strong acids and alkalis, high temperatures, and high pressure.

Active oxygen can instantly decompose the strong atomic bonds of organic matter.

The active oxygen generator "AOS" generates a large amount of active oxygen in the atmosphere, making it possible to decompose organic matter.

POLARIS is a solid organic waste processor capable of decomposing and treating petrochemical products, plastics, Styrofoam, urethane, papers, woods, diapers, etc. by heated active oxygen at 200 to 300°C.

As shown in the figure below right, the ceramic powder at the bottom is heated to 200 to 300°C while active oxygen is supplied from both sides. When the waste is thrown in, the active oxygen causes drying and carbonization, and the decomposition process proceeds. When the amount of waste decreases, additional waste is fed in through the feed port. Since no fire is used, there is no "ignition. When the waste is removed after about half a day, ceramic-like ash and metals that cannot be processed remain.



### The main features of Polaris

1. The world's only system capable of decomposing and treating organic matter using only active oxygen without fire
2. No oil, gas, or other fuels are used; only electricity is used
3. Decomposition and treatment at low temperatures of 200 to 300°C
4. Low running cost and drastic reduction of industrial waste cost
5. No CO<sub>2</sub>, dioxin and odor
6. Ash volume is reduced to about 1/300 to 1/500 of the input capacity
7. Only a small amount of ash is produced, so it is enough to discharge several times a month. Post-processing is easy.
8. Waste can be fed continuously, enabling efficient waste treatment
9. Compact and simple structure eliminates breakdowns and maintenance.

#### Processable

Petrochemical products (plastic, urethane, Styrofoam), tires, circuit boards, electric wires, solidified paint, cardboard, paper, lumber, diapers, cloth, food waste, and organic materials such as food waste with less than 30% water content

#### Things cannot be processed

Steel, metal, batteries, aluminum packaging bags, glass, bottles, stones, shells, concrete, vinyl chloride, gypsum board, objects with high moisture content

# Example of decomposition treatment by Polaris

## 1. Tire



Ashes and steel remains



## 2. Medical waste such as syringes, cotton pads, gloves, Supplements, blood transfusion sets, etc.



Ashes except for metal and glass



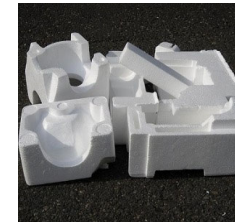
## 3. Wire cables, circuit boards



Ashes and metal remain



## 4. General waste, paper, and Diapers, films, Styrofoam, etc. only a small amount of ash remains.



## Points!

1. Decomposition and treatment of solid organic matter is possible with active oxygen at low temperatures of 200-300°C without fire.
2. Low running costs due to the use of electricity only, without oil, gas, or other fuels.
3. When the amount of waste decreases, additional waste can be fed in from the top 24 hours a day for high processing efficiency. In the case of the batch system, you have to wait until the end of processing.
4. Very simple structure of the equipment reduces breakdowns and makes maintenance easy. Maintenance costs are also low, so there are small expenses.
5. Ash volume is reduced to 1/300 of the initial amount, and ash scraping can be done only once or twice a month (depending on the type of waste). General incinerators require daily removal of ashes.
6. Active oxygen has high sterilizing power and is safe for medical waste disposal



## Polaris Specifications

Model	Polaris 0.5	Polaris 1.0	Polaris 3.0
Size mm	W 1,000 X D 700 X H 700	W 1,200 X D 1,200 X H 1,800	W 1,800 X D 1,800 X H 3,000
Weight	400Kgs	1,500Kgs	2,500Kgs
Processing capacity	0.5m <sup>3</sup> / 6h	1 m <sup>3</sup> / 6h	3m <sup>3</sup> / 6h
Power consumption		1.3kWh	2.3kWh



Manufacturer : WEF

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