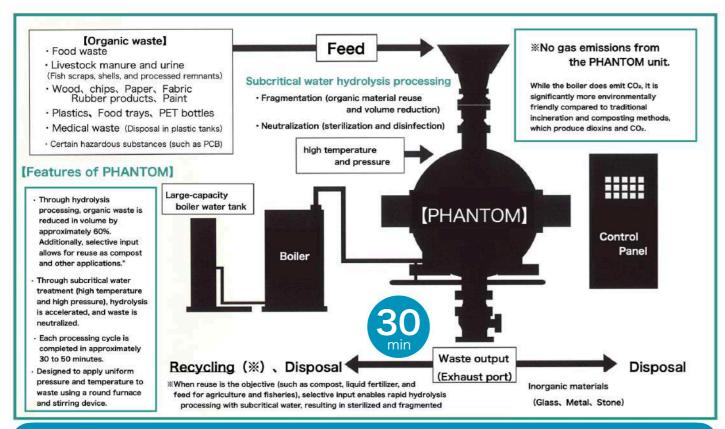
### **[PHANTOM]** Features and Functions



Actual operating time is 15 minutes. This time is not included for putting in and taking out the waste .

Estimated operating time is about 30 minutes. It is safer to calculate the time about 20-22 hours per day.

If you are not used to it. You will definitely waste time putting in and taking out.

Quotation and Ordering of Circular Subcritical Water Hydrolysis Processing System

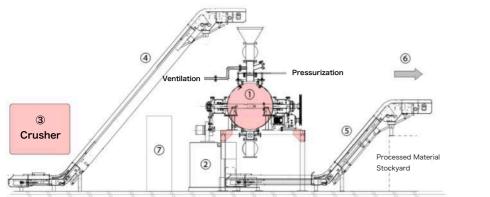


# **JEP Corporation**



Level 8, Shinjuku Oak City Nittochi Nishi-Shinjuku Building 6-10-1, Nishi-Shinjuku, Shinjuku-ku Tokyo 160-0023 Japan TEL: 81-90-2494-9403

E-mail: hayata@jepgroup.co.jp



①PHANTOM (Main Unit)②Boiler③Crusher④Input Conveyor ⑤Discharge Conveyor⑥Pellet, Power ⑦Generation & Other Production Lines Control Panel

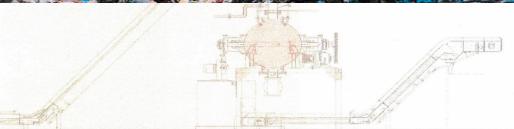


### **Creating the Future from Waste**

**Organic Waste Treatment** 

# PHANTOM





JEP corporation

### New Era Technology

# Subcritical Water Treatment

"Capable of Sterilizing and Neutralizing Input Materials.Also,Efficiently Reduces the Volume of General Plastic Waste."

Waste and CO<sub>2</sub> Reduction Measures

# Challenges in Environmental Issues

Compared to conventional methods, PHANTOM provides an environmentally friendly solution. Additionally, it enables the rapid processing and reduction of waste volume in a short period.

### **Eco-friendly waste solutions**

## Hydrolysis

"Organic waste is hydrolyzed and broken down into smaller molecules using the power of water and heat. By selectively processing waste, it can be reused as compost, feed, or fuel."

**Efficiency-Oriented Design** 

# Round-Type Processing Furnace

A round shape is adopted to ensure uniform processing and facilitate easy removal of treated materials.

### The Benefits of PHANTOM

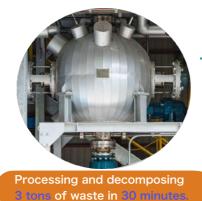
Various types of industrial waste











Converted into harmless and sterile residue







- Sterilization
- Deodorization

· Lowmolecularization

Organic waste treated by PHANTOM undergoes molecular decomposition, is rendered harmless, and is deodorized. Difficult-to-manage waste, such as medical waste, can also be processed efficiently. Organic materials are reduced in volume by approximately 60%.



#### Waste can be reused

(Composting, feed production, fuel conversion, etc.)

By selectively inputting waste, the resulting decomposed organic matter can be repurposed as compost or livestock feed.



Extremely low environmental impact

The round-shaped, sealed processing furnace—manufactured with advanced technology—minimizes environmental impact to nearly zero.

The only environmental burden comes from CO<sub>2</sub> emissions generated by the boiler.



Operational and maintenance costs are relatively low

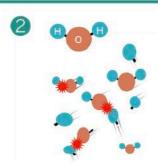
Operating costs are minimal, requiring only fuel expenses. With periodic inspections and gasket replacements every ten years, long-term operation is achievable.

### Basic Principles of PHANTOM

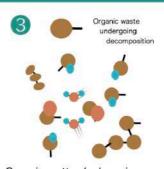
~About Subcritical Water and High-Speed Hydrolysis~



The material to be treated is fed in, and steam heated in a boiler is introduced into the furnace to bring it close to a subcritical state with temperature and pressure suitable for the material.



Water in a subcritical state dissociates into H\* and OH\*, moving rapidly and acting like a blade that cuts through organic molecular chains.



compounds) undergoes sterilization and rigorous purification in the furnace through the power of subcritical water, where it is finely broken down into low-molecular components via hydrolysis.



The reaction inside the processing furnace prevents the emission of carbon dioxide and dioxins, enabling environmentally friendly treatment. (By selectively feeding materials, the residue after processing can be utilized as compost, liquid fertilizer, or livestock feed.)

# **Creating the Future from Waste**

odern society faces serious waste challenges—marine pollution, plastic waste, livestock excreta, and medical waste. To tackle these issues, we present PHANTOM. PHANTOM supports the realization of an environmentally friendly, circular society. Moving from 'disposal' to 'reuse.' Let's create the future together with PHANTOM.





## **Waste Processing with PHANTOM**

Processing Available

#### Compostable

- Organic waste from livestock and fisheries
- Livestock manure and urinePaper, wood scraps,
  - r, wood scraps, and clothing
- Reducible
- Plastic
- PEs/PET、PE、PP、PS
  (Food containers、Food trays)

Harmful substances such as PCBs

Not compostable or reducible

- Metal
- Stone
- Glass

etc

**\*\*Only materials that can undergo hydrolysis** 

### A comparative analysis of **[PHANTOM]** and traditional systems processing

incinerator	(project)	PHANTOM
With emissions	Smoke, toxic gases & odors	No emissions
Incineration ash	Residue after treatment	Can also be reused
A significant financial burden	Construction and maintenance ossts	About a few percent of large incinerators
considerable fuel costs	running cost	small fuel cost
not clear	Durability	Regular inspection (boiler) and packing replacement about once every 10 years
Adding more fuel	Garbage with high moisture content	Water treatment - no additional fuel
driving is affected	Doning wth the amount of gartage	Driving is not affected

PHANTOM	(project)	Compost/natural decomposition
Organic waste and plastics	object	Organic waste and plastics
plant yard	land (space)	vast land
30~50 minutes	processing time	Months to thousands of years
Finely granulated compost and liquid fertilizer	product	Compost is the main
No pollution (CO <sub>2</sub> from boiler)	environmental pollution	Dioxins, odors, soil contamination