

FERMENTED BIO FERTILIZER PRODUCTION FROM ORGANIC WASTE



Producing Fermented Bio Fertilizer from Organic Waste **Only in 10 days**

We produce compact facilities for the rapid and odorless conversion of organic waste (animal waste, food and garden waste, etc.) into fermented fertilizer in 10 days.

Rapid Fermented Fertilizer Production

Suitable for Daily Feeding

Where It Is Used: In all livestock facilities (poultry, cattle, small ruminants), horse farms, food production facilities, gardens and farms, solid waste sorting facilities.

Feedable Wastes: Animal manure, animal fur, food waste, garden waste, organic agricultural waste.

Feeding Capacity: Depending on the selected model, 10 - 15 m³/day and 18 - 25 m³/day (up to 75% moisture content material can be fed). Production

Output Capacity: Depending on the selected model, 5 - 10 m³/day (with a 25-30% output moisture).



▲ *Organic Waste in Feeding Bucket*



▲ *Fermented Bio Fertilizer ready in 10 days*

High Energy Efficiency

The heating of waste and its conversion into fertilizer occurs due to the active proliferation of aerobic bacteria. The production of hot air and mixing the waste are powered by electricity.

Our energy-efficient system uses only ~40 kW/hour of energy even in challenging winter conditions.

Suitable for Challenging Climate Conditions

Our machine is suitable for both indoor and outdoor use. It is weather-resistant, capable of withstanding conditions such as snow, rain, sunshine, and extreme temperatures ranging from -40°C to +50°C.



Environment Friendly and Odorless

The temperature in the fermenter reaches 60–70°C, which eliminates harmful bacteria. The contaminated air from the fermenter is transferred to a heat exchanger, where unpleasant odors are filtered through water filtration, and the hot air is returned to the fermenter. Thanks to the completely closed system, odors cannot escape outside the system. The heat exchanger allows for the reuse of hot air, thus achieving energy savings.



User Friendly

Animal waste is loaded into the feeding bucket without prior separation. All the staff needs to do is load the waste into the feeding bucket and empty the produced fermented fertilizer into the system through an integrated conveyor.

Earn from the Waste

- Get rid of complaints coming to your business due to bad odors.
- Save on the costs of transporting your waste to landfills.
- Avoid potential fines due to violations of waste management regulations.
- Start generating income from your waste.
- Contribute to organic food production with completely organic fermented fertilizer.
- Become an exemplary organization with sustainable and environmentally friendly waste management.

Robust Design

Our machine, consisting of high-quality components, is designed to operate 24 hours a day with minimal maintenance. Thanks to stainless steel and hot-dip galvanized parts, it is suitable for outdoor use.

Production & Delivery

Production, Installation and Start-up: 100 days

The machine's mechanical assembly and electrical connections are carried out by our service team.

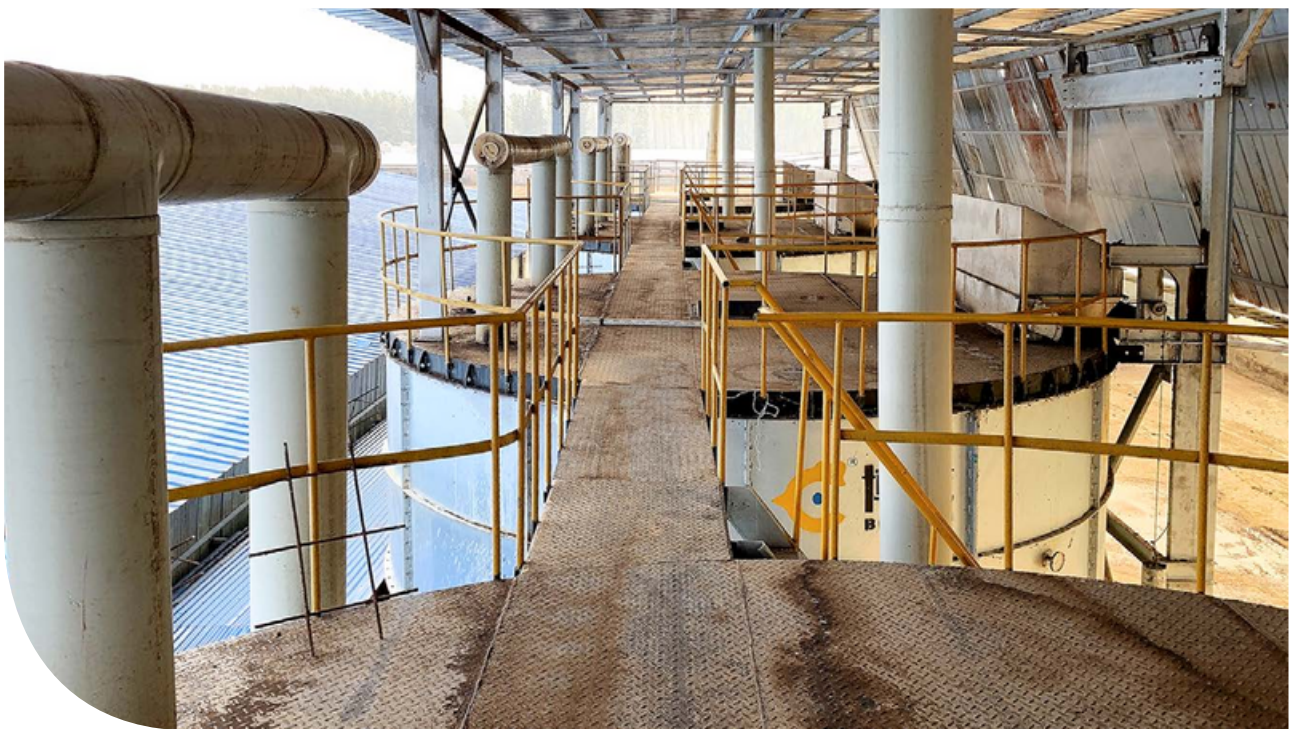
Operator training is provided by our team.

Warranty

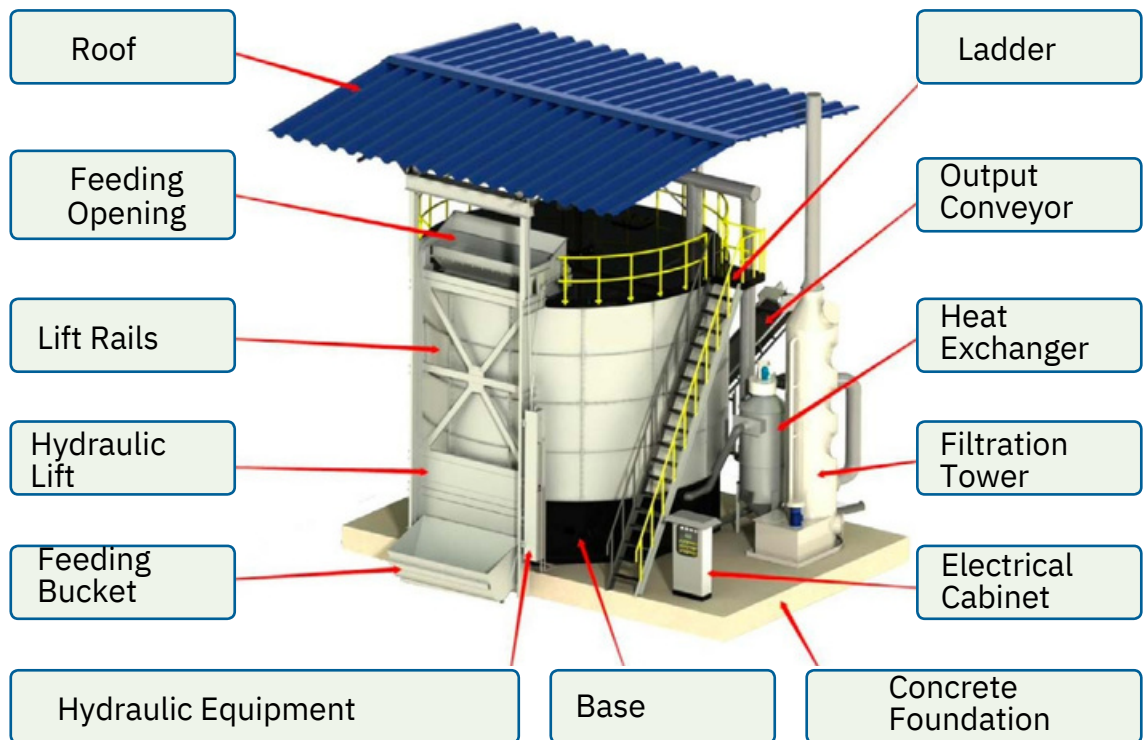
General Mechanical and Electronic Warranty - 12 months

Stainless steel walls and blades - 5 years

Service and spare parts warranty for a period of 10 years for a fee.

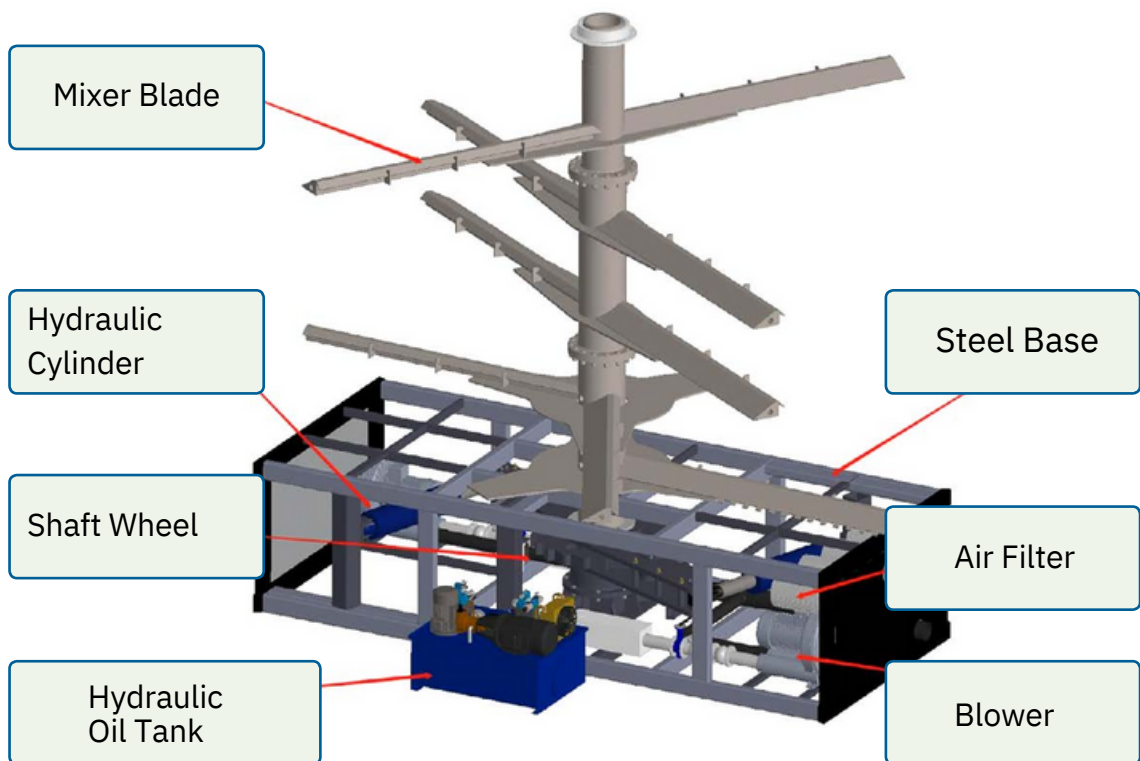


Parts and Features



- Our machine is controlled by a fully automatic PLC system.
- The waste is homogeneously mixed using a vertical mixer.
- Air channels in the blades ensure that the hot air is evenly distributed to the waste.
- The mixer is driven by hydraulic pistons and completes 1 revolution in 20 minutes.

Rapid Fermented Fertilizer Production



- During the discharge, the blades rotate continuously to ensure easy and fast emptying. Fans continuously provide airflow into the tank.
- Waste loading is extremely simple. The waste filled into the feeding bucket is lifted by a hydraulic lift and emptied into the tank through the feeding opening.
- Continuous air exchange is maintained. Powerful airflow by fans creates aerobic reactions inside the tank. Excess heat and moisture are removed from the fermentation tank and transferred to the heat exchanger. After the heat exchanger, the dirty air enters the filtration tower, is filtered with water, and the unwanted ammonia odor is completely eliminated. The odor-free air is then returned to the fermenter.

How it Works?

- Continuous mixing and continuous air supply create a suitable environment for the reproduction of aerobic bacteria.
- As bacteria reproduce, they consume organic materials, benefiting from animal waste, residues, proteins, and oxygen, ultimately producing ammonia, carbon dioxide, and water.
- Bacterial growth increases between 45°C to 70°C. Harmful bacteria are eliminated at temperatures above 60°C.
- Meanwhile, at this temperature and humidity, beneficial bacteria and acidity persist. Continuous mixing ensures the disinfection of newly added waste as well.
- The prepared organic fermented fertilizer is sent to the storage area or packaging unit through a discharge conveyor.



Solar Energy Addition (Optional)



- By integrating solar panels as an option, we minimize your energy costs through the Solar Energy System.
- Our solar energy systems, designed according to the installation area, not only save costs but also make your facility more environmental friendly.
- Solar panels are positioned on the roof, eliminating the need for additional space.



Frequently Asked Questions

It is observed that the machine, especially when fully loaded, will be heavy. What kind of foundation should be prepared for a healthy working environment?

For each fermentation tank, a foundation with dimensions of 6x9 meters is required. The preparation of the ground for the foundation concrete should be evaluated according to the area where it will be established. A minimum C30 concrete foundation with double reinforcement of approximately 50 cm thickness is recommended, but the thickness and ground preparation should be assessed based on the installation area.

What is the energy consumption?

Approximately 40 kW/h for each fermentation system.

Our company also offers energy consumption minimization solutions through integrated solar energy solutions.

What is the lifetime of mixer and blades?

The mixer and blades are made of durable carbon steel. They come with a 5-year warranty under normal operating conditions.

Any other energy supply required?

No, our system is powered by electric only.

How many workers are required?

Only 1 worker can operate upto 6 fermentation systems.

What are storage conditions of fermented fertilizer?

Must be stored indoors, and protected from high moisture.

Is packaging system included?

The output conveyor is included in the system. The packaging system can be offered as an optional feature.

Can the fermented fertilizer transformed into pellet form?

Yes, a pellet machine is required.

Can work outdoors?

Yes, can work outdoors between -40 / +50 C degrees.

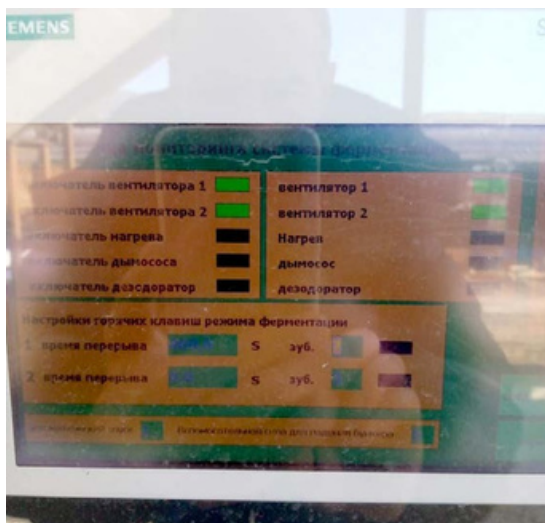
Photos of some projects



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