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MINGJIA ECO

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Expert in
the livestock and poultry waste treatment

Zhejiang Mingjia
Environmental Protection Technology
Co., Ltd

浙江明佳环保科技股份有限公司

明佳环保股份
MINGJIA ECO

COMPANY INTRODUCTION

Mingjia Eco, a high-tech enterprise specializing in the full industrial chain of organic waste resource utilization, is located in Huangqiao Industrial Zone, Haiyan County, Zhejiang Province. With a total area of 95 acres and modern standard workshops covering over 120,000 square meters, the company currently has over 120 employees based at its headquarters. By providing customers with one-stop comprehensive resource utilization solutions, including project planning guidance, equipment R&D and manufacturing, technical guidance, and maintenance, Mingjia Eco aims to promote green empowerment and industrial upgrading.

Mingjia Eco has been constantly integrating relevant technical resources and experience in the livestock, environmental protection, and fertilizer industries, and has introduced professional technicians with high standards and specific expertise for product development. The company has independently designed and developed products such as slurry solid-liquid separation machines, composting tanks, systems for the harmless disposal of dead livestock, and insect breeding systems using livestock waste. The company's products have received professional certifications such as enterprise machinery promotion appraisal in Zhejiang Province, Zhejiang Excellent Manufacturing, and Zhejiang Provincial Industrial New Products. Currently, the company has formed long-term stable cooperative relationships with several industry leaders, and its equipment has an over 85% market share in Zhejiang Province and is distributed in all provinces and autonomous regions in China, as well as overseas.

Mingjia values technological innovation and has always adhered to the coordinated development of academia, industry and research. It has established the Mingjia Environmental Livestock Machinery High-Tech R&D Center at the municipal level, and actively engages in in-depth cooperation with multiple higher education institutions, such as Zhejiang University, to accelerate the industrialization of scientific and technological achievements. It has undertaken and completed two national Starfire Plan projects, has 123 national patents, including 22 invention patents, and has obtained certification for the intellectual property management system. Mingjia pays attention to production management and promotes the effective implementation of outstanding performance, and has passed the ISO9001:2015 quality system, ISO14001:2015 environmental management system, ISO45001:2018 occupational health and safety management system, and CE domestic and international certifications.

In the future, Mingjia will adhere to the corporate mission of "creating quality products and serving society" and the quality policy of "people-oriented and meticulous craftsmanship". We will strive to promote green treatment of organic waste and high-quality development, accelerate the growth of green economy, and establish a green low-carbon circular development system for customers, achieving a win-win goal of sustainable development.

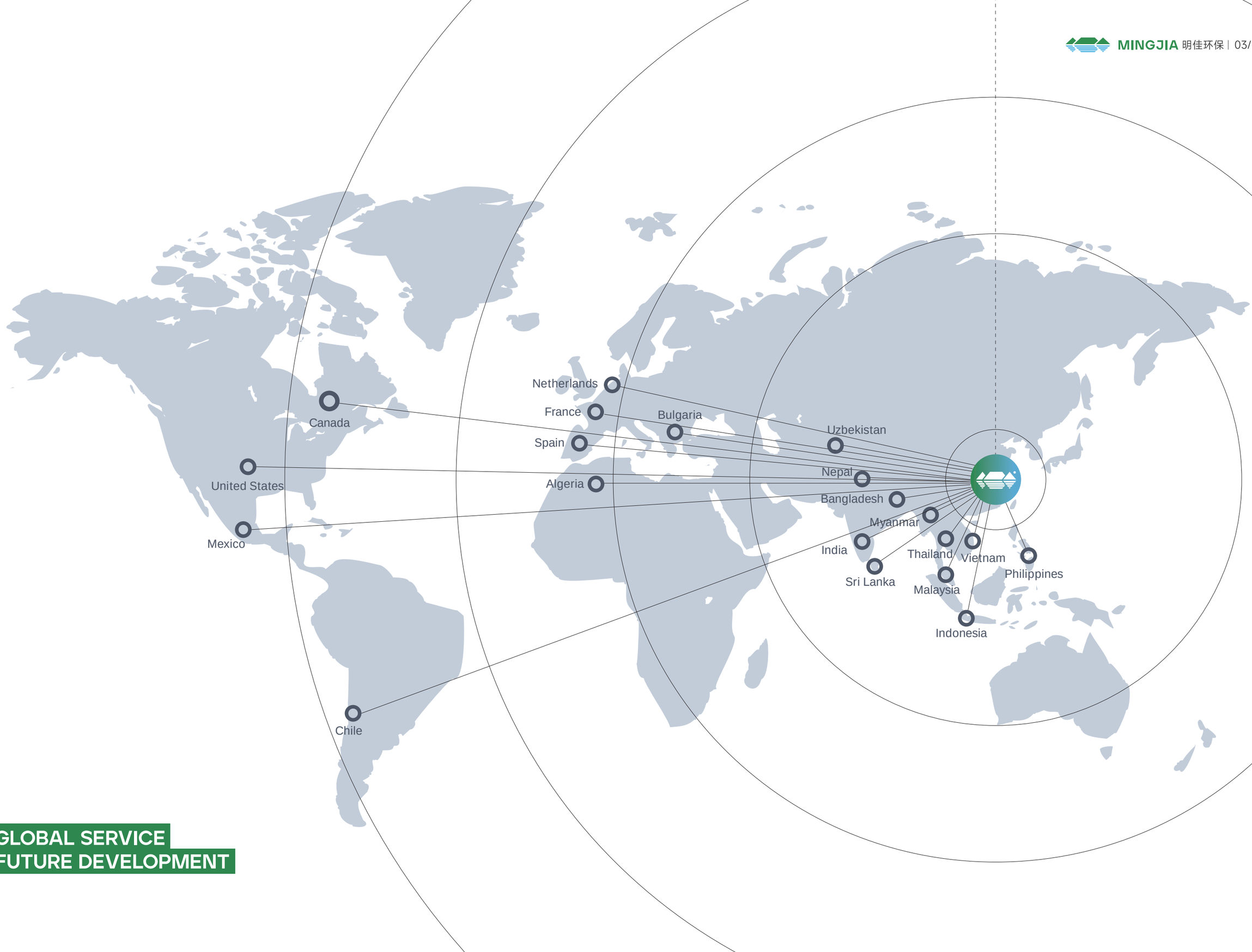
Let us work together to forge ahead in the field of organic waste resource utilization, creating a new future of environmental protection and deep integration with the industry!

ZHEJIANG MINGJIA

24 years of
of experience in waste management

22 patents
for inventions

2000+ units of
composting tanks have been installed



GLOBAL SERVICE
FUTURE DEVELOPMENT

Our products

- Composting Tank and its Accessories
- Equipment for Sterilization of Dead Livestock and Poultry
- Solid-liquid separation machine for manure
- Organic Fertilizer Production Line

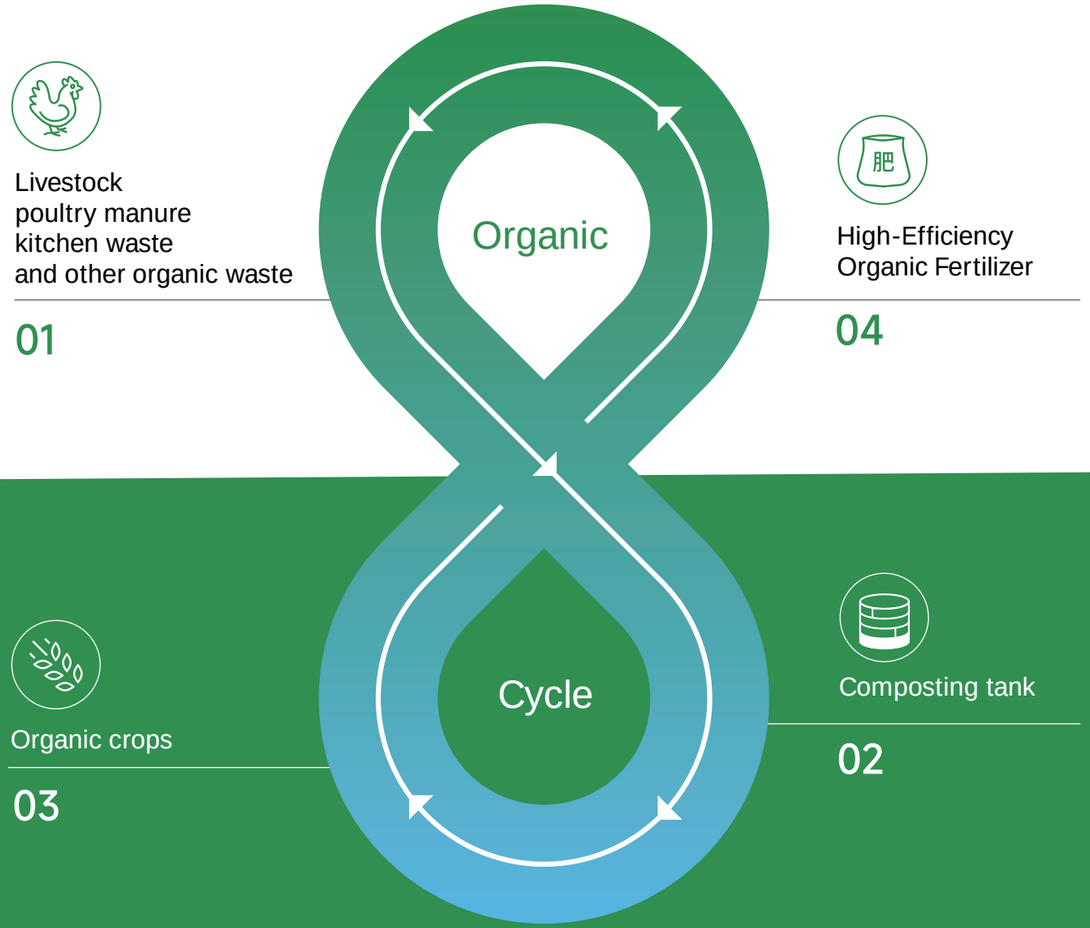
PRODUCT

Composting tank can handle most organic waste

Organic fertilizer composting tank

The Composting Tank is an integrated treatment device for organic waste from livestock farms, wastewater treatment plant sludge, etc. It is designed for high-temperature aerobic fermentation to biologically degrade the organic matter and achieve harmlessness, stabilization, energy conservation, and resource utilization. After fermentation, it can become high-quality organic fertilizer with moisture content of about 30%, which can be packed and transported directly.

Main applicable scenarios: livestock and poultry farming enterprises, wastewater treatment centers, organic fertilizer processing enterprises, centralized treatment centers for various organic waste such as kitchen waste, and zoos.



BIOLOGICAL RECYCLING

ZHEJIANG MINGJIA
ENVIRONMENTAL PROTECTION
TECHNOLOGY

Our advantages

1 Stainless steel inner and outer tank body

The inner and outer layers of the stainless steel tank are made of stainless steel, and the tank is made of a single piece of thick stainless steel plate. Compared to the common fermentation tank made of single layer stainless steel and small plate welding, it can more effectively ensure the anti-corrosion, sealing and durability of the equipment.

2 Forged and integral ratchet

The hydraulic transmission ratchet is one of the main components of the tank fermentation integrated machine, which supports the operation of the entire oxygen supply system and stirring system. The forged integral ratchet obtained by the forging process has a tight structure and no welding seams, ensuring that the overall tightness of the ratchet is higher, the load-bearing capacity is greater, and the equipment failure rate is greatly reduced, thereby extending the service life of the equipment.

3 High-density polyurethane insulation layer

The double-walled stainless steel tank of the composting tank is filled with high-density rigid polyurethane, which has a much higher density than that of common refrigerators, water heaters, etc. Compared to traditional fire-resistant rock wool, it has the characteristics of low thermal conductivity, high heat resistance, high aging resistance, long service life.

4 Stainless steel hydraulic oil tank

The hydraulic system tank and dirt guard are made of stainless steel and have a seamless connection design. This effectively prevents the traditional oil tank from contaminants such as rainwater, rust from the oil tank, and peeling paint that inevitably enter the tank during use, thereby causing faults in the entire hydraulic system. It eliminates the potential for small problems to cause major malfunctions.

5 Heat recovery system

The waste heat generated during fermentation is recovered by an external heat exchanger and transferred back into the fermentation tank, reducing the pressure of fermentation temperature rise and helping to maintain the fermentation temperature. This system not only helps to shorten the fermentation time but also reduces electricity consumption, saving costs for users.

6 Intelligent Control System

The equipment control system uses a stainless steel double-door dustproof electrical cabinet, and the internal electrical equipment is equipped with top brands such as Schneider and Zhengtai. The microcomputer operating system monitors all relevant data throughout the process and can use full automatic, semi-automatic, and manual operation modes. At the same time, according to customer needs, mobile phone remote monitoring and operation can be achieved.

Specification

Model	11FFG-55	11FFG-80	11FFG-100	11FFG-120	11FFG-140	11FFG-160
Diameter	4.45m	5m	6m	6.4m	6.95m	7.6m
Volume	55m³	80m³	100m³	120m³	140m³	160m³
Total power	27.25kW	34.25kW	39.25kW	43.75kW	43.75kW	43.75kW
Operational power	15.95kW	20.5kW	23.75kW	26.5kW	26.5kW	26.5kW
Hydraulic power	5.5kW	7.5kW	7.5kW	11kW	11kW	11kW
Material	Stainless steel of inner and outer layer					
Insulation material	High-density polyurethane					
Material of hopper	Stainless steel					
Hopper capacity	1.0m³	1.5m³	1.5m³	1.5m³	1.5m³	1.5m³
Elevator power	Hydraulic power					
Outfeed drive	Hydraulic power					
Exhaust fan power	3kW	3kW	3kW	4kW	4kW	4kW
Number of blower	2	2	2	2	2	2
Blower power	2×7.5kW	7.5+12.5kW	2×12.5kW	2×12.5kW	2×12.5kW	2×12.5kW
Control cabinet	Double-door stainless steel electrical cabinet					
Electrical component parts	Schneider, Chint					
Deodorization device	Stainless Steel Spray Tower					

Model	11FFG-220	11FFG-280
Diameter	8.3m	9.6m
Volume	220m³	280m³
Total power	70.25kW	87kW
Operational power	40.8kW	51.2kW
Hydraulic power	15kW	18.5kW
Material	Stainless steel of inner and outer layer	
Insulation material	High-density polyurethane	
Material of hopper	Stainless steel	
Hopper capacity	1.5m³	1.5m³
Elevator power	Hydraulic power	
Outfeed drive	Hydraulic power	
Exhaust fan power	2×4kW	2×4kW
Number of blower	3	4
Blower power	3×12.5kW	4×12.5kW
Control cabinet	Double-door stainless steel electrical cabinet	
Electrical component parts	Schneider, Chint	
Deodorization device	Stainless Steel Spray Tower	

Productivity (m³/d)						
Chicken manure (65% moisture)	3~5m³	6~8m³	8~10m³	10~12m³	12~14m³	14~16m³
Dung (70% moisture)	4~6m³	5~7m³	8~10m³	10~12m³	12~14m³	14~16m³
Pig manure (70% moisture)	4~6m³	6~8m³	8~10m³	10~12m³	12~14m³	14~16m³

Productivity (m³/d)		
Pig manure (75% moisture)	20~22m³	24~28m³
Dung (70% moisture)	18~20m³	24~28m³
Chicken manure (60% moisture)	20~22m³	24~28m³

*The data is for reference only, please refer to the actual situation.

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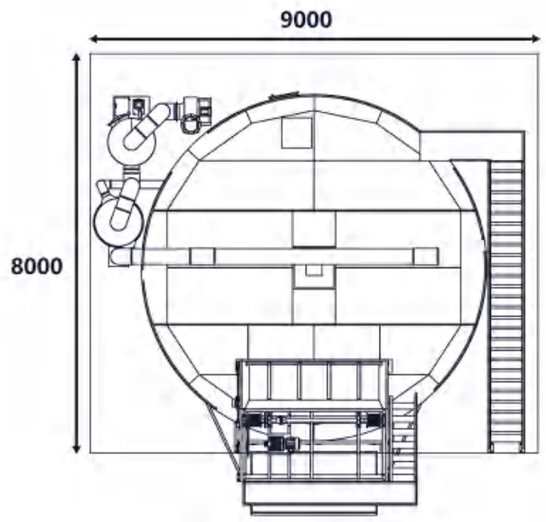
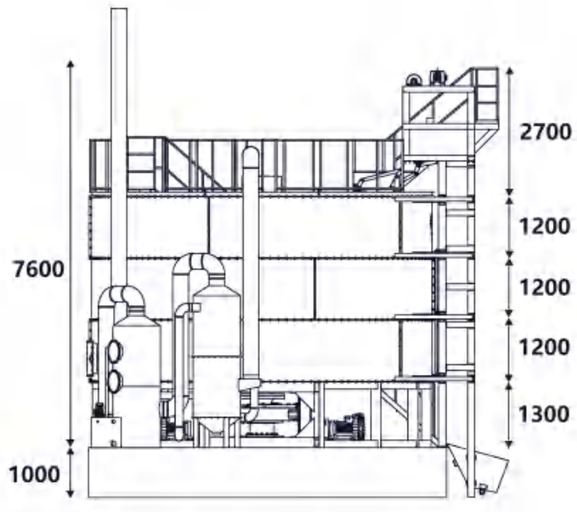
11FFG-120





*This diagram is for reference only. The specific dimensions should be based on the actual situation.

Intelligent Automated Fully Enclosed I/O System

Through a fully enclosed automatic feeding and discharging system, the manure material is automatically conveyed to each device. This effectively eliminates the need for manure to touch the ground and prevents odors from escaping, while also reducing labor costs. The entire system is equipped with an electronic control terminal that can be used to control all devices via a computer or other devices. It can also synchronize data from temperature sensors, pressure sensors, and other devices on the equipment in real time on the same terminal for easy monitoring and management.

Improve the cleanliness of the workplace
Reduce manual labor and costs

Manure Mixer

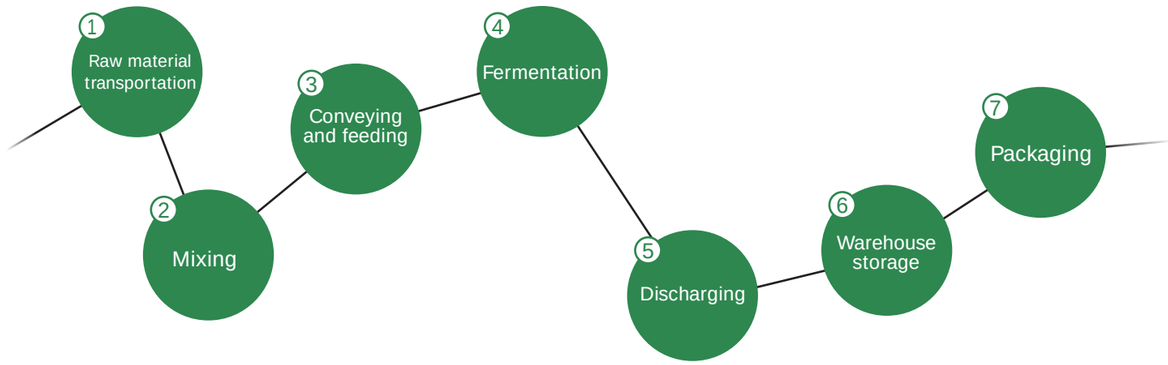
The entrance of the slurry material can evenly transport the material from the lower input port to the conveyor system and mix it at the same time. The dry material used in the mainstream is: rice husk, mushroom residue, wood chips, other drier manure and finished organic fertilizer, etc. The whole machine is made of stainless steel and can be customized (recommended to match the size of the material transport vehicle in the user's site). It is durable, corrosion-resistant and rust-proof,

In-house developed control system

Mingjia's self-developed composting tank dedicated control system supports local operation and remote control, allowing users to easily set and adjust the working sequence, power switch and other parameter of each device with just one press.

Conveyor system

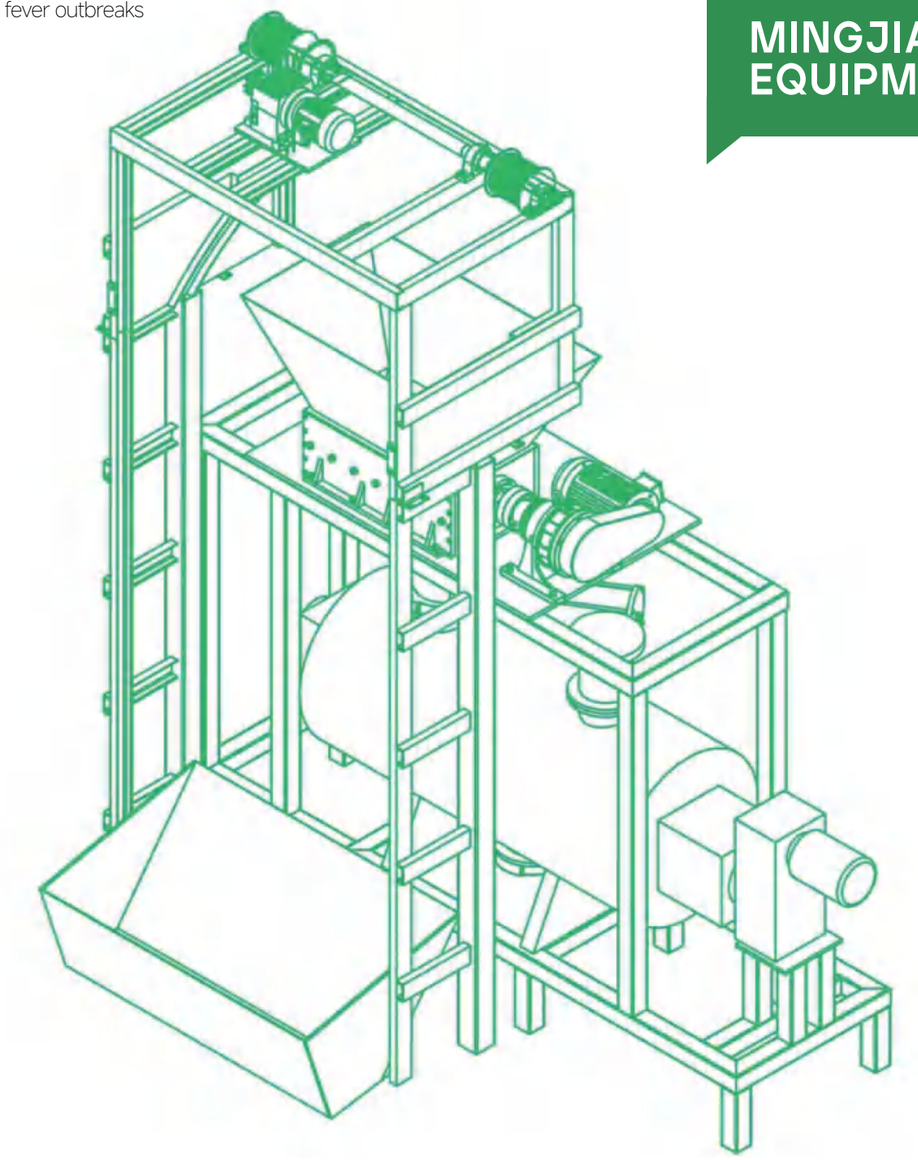
The conveyor system can be made up of two types of conveyors: screw conveyors or belt conveyors. Both types of equipment have different applications and can be mixed and matched, supporting point-to-point valve control methods or running pre-set conveyor modes.



Dead Livestock and Poultry Sterilization Equipment

Equipment for harmless disposal developed in response to the normalized situation of African swine fever outbreaks

MINGJIA EQUIPMENT



Model	Productivity(T/4h)	Work cycle(h)	Power(kW)	Sterilization temperature
11FHS-1.5	1.5	4	73.5	140°C
11FHS-2	2	4	73.5	140°C

Features

High-Temperature Disinfection

The 140°C high-temperature sterilization method uses high-pressure saturated steam to quickly liquefy fats, coagulate proteins, and completely kill pathogens within two hours. The energy source for the steam generator can be electricity, natural gas, or biomass fuel.

Fully-enclosed

The entire process from crushing to final product is carried out in a fully enclosed system, ensuring safety and **cleanliness.**

Pre-crushing

The whole pig is crushed into 3cm block-shaped pieces before processing (the crushing time for a 300kg pig is about 3 minutes), which makes the sterilization more complete and efficient. The core parts of the crusher are made of special alloy materials, which have a long service life.

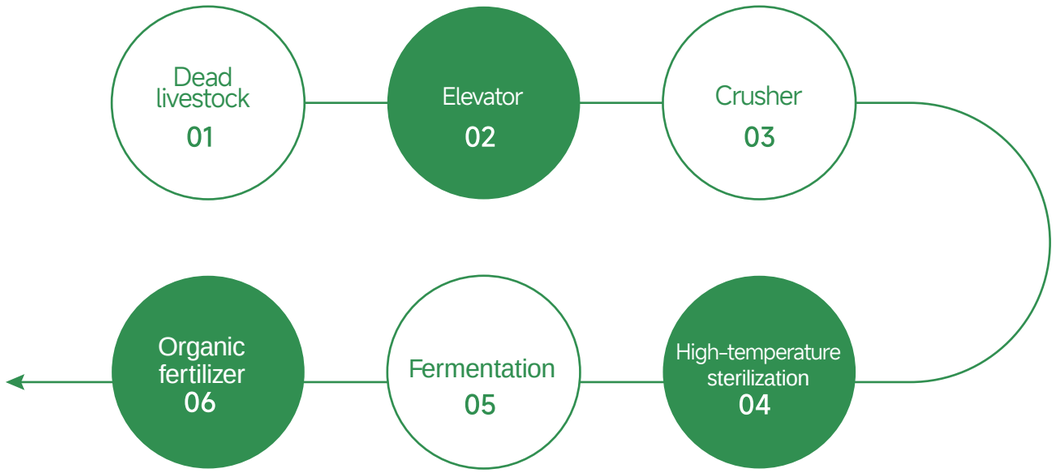
Intelligentization

The system adopts a microcomputer control system, with the entire system monitored by **computer automatically throughout the process.** One person can operate the entire system.

Perfectly integrated with the organic fertilizer system

The processed materials can be directly connected to a composting tank, where they can be mixed with pig manure and excess sludge to generate high-quality organic fertilizer after fermentation.

Workflow diagram



Cylindrical screen solid-liquid separator

The cylindrical filter screen solid-liquid separator is a large-scale solid-liquid separation equipment specifically designed for wastewater, manure water, and other liquids with low solid content and high water content.

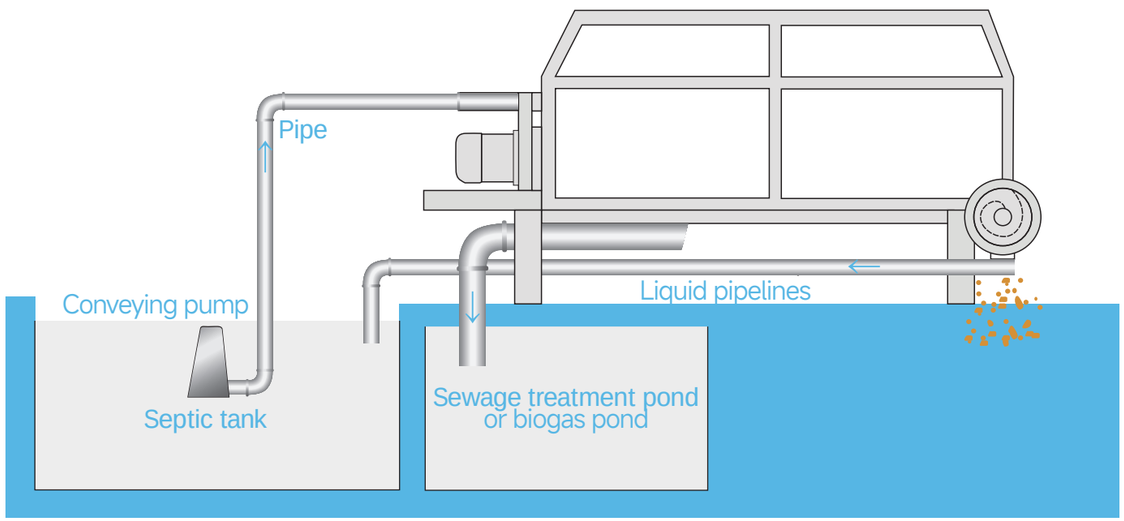
The product has a large processing capacity and is particularly suitable for separating fine impurities. The screen mesh specifications can be customized according to the material to be processed by the customer, and the screen mesh density can also be adjusted for multi-stage filtration.

It is suitable for water flush manure in livestock farms, water-soaked powder, and wastewater treatment, as well as sludge and liquid filtration in biogas fermentation. Its application range is wide, efficiency is high, treatment effect is good, and the solid removal rate is above 90%.

Specification

Model	MJYS-640	MJYS-640Li	MJYS-780Li
Power(kW)	3.75	5.25	6.25
Material	Stainless steel	Stainless steel	Stainless steel
Filter size(mm)	60-40holes/inch	60-40holes/inch	60-40holes/inch
Weight(kg)	600	800	1000
Size(mm)	4000×1000×1800	4800×1000×1800	5500×1100×1800
Productivity(m^3/h)	10~20	20~30	30~40

Workflow diagram



Spiral pressure solid-liquid separator

The spiral pressure solid-Liquid separator is a device that separates liquid from livestock and poultry manure and obtains solid and liquid organic fertilizers.

After separation, the solid has a low moisture content, making it easy to pack and transport. It can be made into organic fertilizer and transported to farmland or distant areas with a shortage of fertilizer, which can improve the soil environment. It can also be used as an excellent fertilizer for crop cultivation and a good feed for chickens, ducks, and fish. The liquid separated afterward can be further solid-liquid separated by entering the cylindrical screen solid-liquid separator and then enter the sewage treatment pipeline. It can also be sent to anaerobic digesters to be converted into fuel energy, while solving the high failure rate and short service life of anaerobic digesters caused by solid residues blocking.

ZM-045-8

Features

The new model has the motor located inside the body at the bottom of the machine, reducing the amount of space it occupies. It also avoids the possibility of the motor getting water, reducing the failure rate. Small-scale users can directly feed the material without using a pump, reducing the size of the septic tank and saving costs for the user. Compared to the old model, the new model has improved its work efficiency and treatment effect significantly.

Specification

Model	ZM-045-8	ZM-068-9.5
Power(kW)	4	7.5
Material	Stainless steel	Stainless steel
Filter specifications(mm)	1.0/0.7/0.5	1.0/0.7/0.5
Weight(kg)	400	600
Size(mm)	1500×1100×800	2100×1100×800
Productivity(m^3/h)	10~15	15~20

MINGJIA

Inclined screen solid-liquid separator

The inclined screen solid-liquid separator is specially designed for small-scale treatment situations involving chicken and duck manure, water-soaked manure, and sludge from biogas fermentation. This equipment integrates inclined screen gravity separation and spiral squeezing separation technologies to realize the resourceful utilization of livestock and poultry waste from farms.

Features

The entire equipment is made of stainless steel, which has strong corrosion resistance and a long service life. The stress-bearing parts of the spiral shaft are reinforced and thickened, and tungsten steel is used for wear-resistant treatment, which greatly extends the service life of the spiral auger and reduces the number of maintenance and repair operations. The filter screen and filter strips are made of advanced wedge-shaped design.

Specification

Model	ZM-XBS1000	ZM-XBS1500
Power(kW)	3	4
Material	Stainless steel	Stainless steel
Filter specifications(mm)	0.6	0.6
Weight(kg)	380	500
Size(mm)	2100×1300×1500	2600×1300×1500
Productivity(m^3/h)	20~30	30~40

Specialized separatior for dung

We based on its years of experience in processing cow manure with traditional solid-liquid separators and developed a special solid-liquid separator specifically for cow manure, taking into account the large volume of manure handled in cow farms and the coarse fiber content of cow manure.

Effectively addressing the disadvantages of traditional **solid-liquid separator:** high attrition, low processing efficiency, and unwanted water spray.

Features

This separator is made of stainless steel, with a large processing capacity, effectively solving the problems of fast wear and low efficiency in traditional solid-liquid separation machines when processing cow manure. It can widely apply to medium and large dairy farms. After separation, the solid content has a moisture content of about 60%, which can be returned to the bedding after simple treatment. It is particularly suitable for large dairy farms in dry areas.

Specification

Model	MJYS-800
Power(kW)	**7.5**
Material	Stainless steel
Filter size(mm)	**0.7**
Weight(kg)	1000
Size(mm)	**3500×1300×2000**
Productivity(m^3/h)	**25~30**

Diseased livestock and poultry crusher

Features

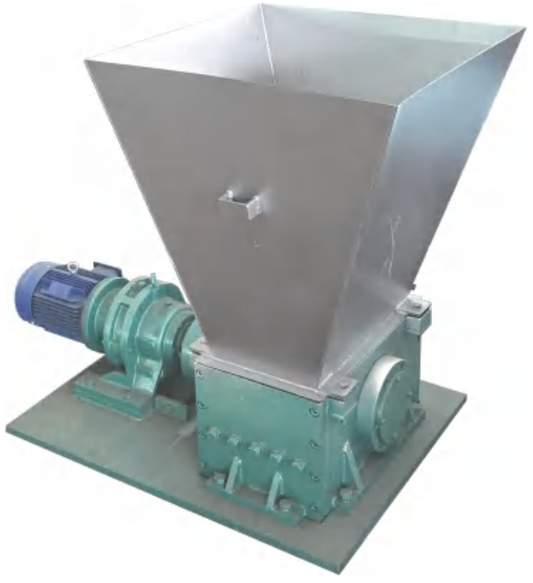
The livestock crusher was introduced by Mingjia Eco from European crushing technology. The crushing blades are made of special materials and processed by specialized techniques. The crusher consists of the main shaft, blades, fixed blades, box body, feeding hopper, and power system.

Specification

Power(kW)	4	11	15
Blade amount	4	10	17
Blade Material		Alloy Steel	
Capacity(T/h)	0.5	2.5	4.5
Discharging size(mm)		30×50	
Equipment size(mm)	1200×1100×1000	1800×1350×1000	2300×1300×1100

The dead livestock are crushed by the fixed blade and the blade, and the equipment uses a single-axis design to provide large cutting force to ensure high crushing output. Imported bearings and multiple composite sealing methods ensure high load capacity, long service life, waterproof and dirt-resistant, and ensure stable operation of the machine over a long period of time. The equipment supports customization to meet different crushing needs of different types of animals, such as a 400-pound dead pig, which can be completely crushed in 4-5 minutes with a solid size of 5cm after crushing.

Besides using crushers for dead pigs, there are other specifications of different sizes suitable for use in scenarios such as poultry farms, livestock breeding, and so on, to meet customers' needs in various situations.



Organic Fertilizer Production Line

Self-propelled fermentation turning machine

The self-propelled fermentation turner is a device used in the industrialized fermentation process of organic solid materials such as livestock manure, household waste, sludge, and crop straw to help with the fermentation process. It can also be used for feed fermentation.

Organic fertilizer pulverizer

This machine is specially designed for the organic fertilizer made from livestock and poultry manure. It can grind the fermented organic fertilizer, which has the advantages of small size and easy mobility. It also has a unique anti-blocking design, greatly improving the work efficiency.

Sifting machine

During the production of organic fertilizer, the fermented and crushed raw materials are continuously screened. This separates the return materials and grades the finished product, among other things. The organic fertilizer is evenly refined and impurities are separated. A combination of screen meshes can be used, allowing different sized meshes to be selected and changed as needed.

Fertilizer mixer

During the manufacturing process of organic fertilizer from livestock and poultry manure, N, P, K and other inorganic fertilizer elements can be mixed in to produce organic compound fertilizer. This can improve the fertilizer efficiency and reduce the pollution of soil caused by common fertilizers. The ratio of the elements can be adjusted according to the characteristics of the crops to be planted, and the mixing speed and uniformity of the equipment are fast and high, without any segregation or residual material.

Granulator

The fermented powdered organic fertilizer is made into granules with a size of about 6mm by the action of gear meshing. No drying is needed, saving a lot of drying costs and space. The daily maintenance cost is low, with a long service life. The service life of the pelleting mold is about 3000 tons.

Packaging machine

After being crushed, sifted and mixed, the organic fertilizer is finally sent to the packaging machine for packaging. This equipment integrates automatic material discharge, automatic conveying, and automatic bag sewing into a single unit. It typically features a heavy-duty, corrosion-resistant, and wear-resistant structural design, enabling it to perfectly adapt to the harsh working environment of organic fertilizer production, which is characterized by high dust levels and a tendency to absorb moisture.