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ENVIRONMENTAL PROTECTION SYSTEM



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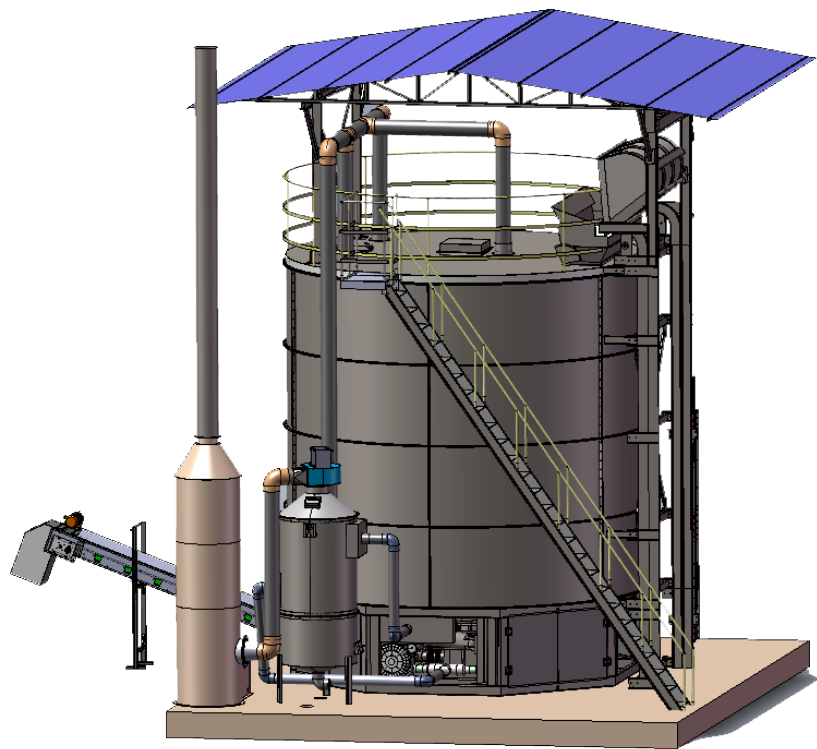
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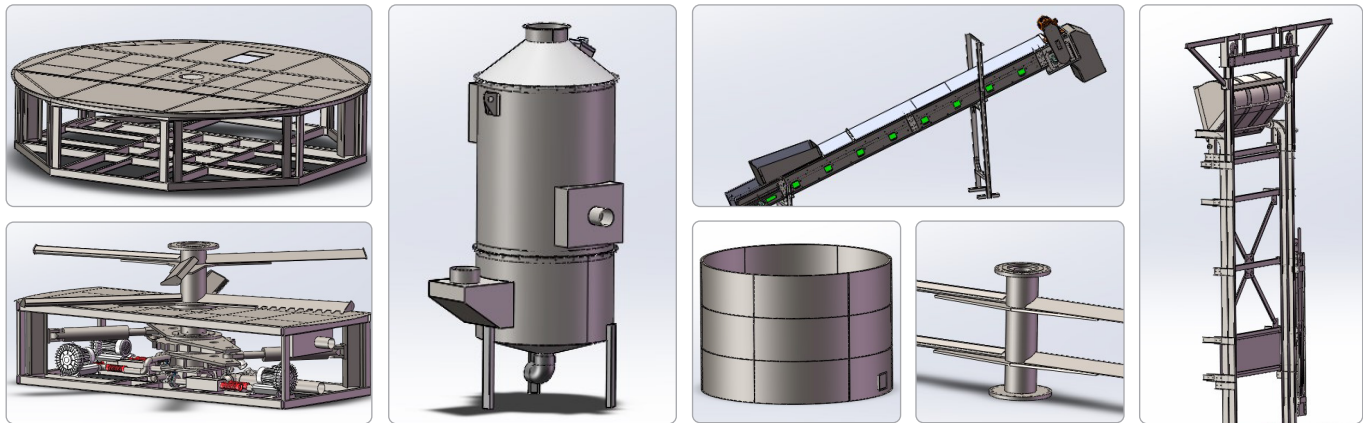


System description



System structure

Vertical tank design comprising the base, tank, feeding, discharging, stirring, air-supply, drive and electrical-control systems, plus exhaust treatment with heat recovery.



Technical specifications

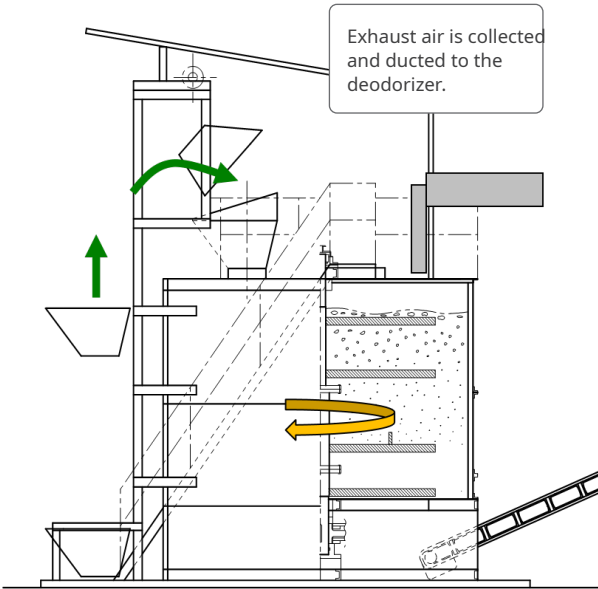
Product name	35m³	45m³	60m³	90m³	90m³	116m³	116m³	140m³	140m³	160m³	160m³
Type	11FFG-35 (Model E)	11FFG-45 (Model E)	11FFG-60 (Model E)	11FFG-86 (Model E)	11FFG-86 (Model H)	11FFG-116 (Model E)	11FFG-116 (Model H)	11FFG-140 (Model E)	11FFG-140 (Model H)	11FFG-160 (Model E)	11FFG-160 (Model H)
Weight	17T	18T	20T	35T	35T	36T	36T	38T	40T	40T	40T
Minimum floor space	40 m²	40 m²	40 m²	64 m²	64 m²	64 m²	64 m²	70 m²	70 m²	70 m²	70 m²
Effective volume	34.5m³	34.5m³	34.5m³	86m³	86m³	114.5m³	114.5m³	140m³	160m³	160m³	160m³
Daily capacity (50-70% water)	1.5-3m³/d	2-4m³/d	3-6m³/d	4-10m³/d	4-10m³/d	6-13m³/d	6-13m³/d	8-16m³/d	8-16m³/d	9-18m³/d	9-18m³/d
Daily output	0.75-1.5m³/d	2-2m³/d	1.5-3m³/d	2-5m³/d	2-5m³/d	3-6.5m³/d	3-6.5m³/d	4-8m³/d	4.5-9m³/d	4.5-9m³/d	4.5-9m³/d
Installed power	34.3kw	34.3kw	34.3kw	46.5kw	39.5kw	55.2kw	40.2kw	78.2kw	55.9kw	78.2kw	55.9kw
Operating power	~16 kW/h	~16 kW/h	~16 kW/h	~22 kW/h	~18 kW/h	~28 kW/h	~20 kW/h	~42 kW/h	~30 kW/h	~42 kW/h	~30 kW/h
Model H upgrades Model E with 304 stainless-steel-clad paddles and a magnetic-levitation energy-saving blower — 25-30% more efficient than standard fans.											

Manure aerobic fermenter

Aerobic fermentation for livestock and poultry manure — suited to many manure types and climates, reducing pollution and improving nutrient utilization.

Microorganisms break down the organic matter, composting it into raw material for organic fertilizer.

Automated, hygienic processing that turns farm manure into a usable resource.



01Manure aerobic fermenter

Reference projects



	Key features
Long service life:	Material-contact surfaces in 2 mm SUS304 stainless steel — corrosion-resistant for a long service life.
	Outer shell in 5 mm hot-dip galvanized carbon steel.
	Grade 8.8 high-strength bolts; joints sealed with high-density gaskets and structural adhesive.
Thermal insulation:	Clad in 50 mm polyurethane insulation (35–45 kg/m³), shielding the process from ambient conditions for year-round fermentation.
Sealed design:	Fully enclosed: fermentation is unaffected by outside temperature or humidity, and the composted output meets industrial standards.
	Contains fermentation off-gas, eliminating secondary pollution.
Energy-saving design:	Hot-air recirculation feeds the process, cutting power consumption and lifting energy efficiency.
Heavy-duty drive:	High-torque drive runs safely under a full load of composted material, with low maintenance costs.
Automatic control:	PLC control with automatic and manual modes — simple operation.
Land-saving design:	Tank format makes maximum use of the site footprint.

02Wheel compost turner

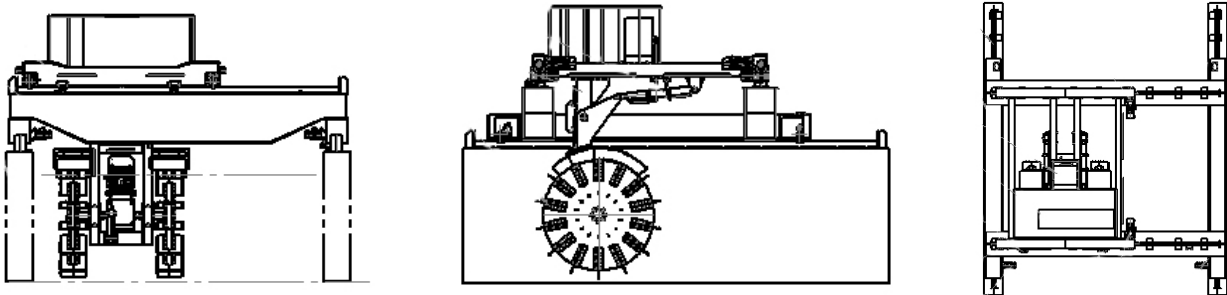
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Product range

No	Name	Model	Wheel diameter (m)	Turning span	Motor power
1	Wheel compost turner	11FFP-015	1.5	6–20 m	55 kW
2		11FFP-020	2.0		55 kW / 75 kW
3		11FFP-023	2.3		55 kW / 75 kW

System structure

The compost turner consists of the cart track, traveling gantry, moving trolley, turning unit, hydraulic system and electrical control system.



Configuration

Model	FP015	FP023
Turning wheel diameter	1500mm	2300mm
Span	12 / 18 / 24 / 30 m (customizable)	
Gantry drive motor	2×2.2KW	
Trolley drive motor	2×1.5KW	
Hydraulic unit power	4KW	
Main motor power	55KW	55KW/75KW
Wheel spindle speed	103rpm	62rpm
Travel speed (theoretical)	0–9.32m/min	
Throughput (m³/h)	100–300	

02Wheel compost turner

Applications

Widely used for fermentation, maturing and moisture removal in organic and compound fertilizer plants, sludge and waste plants, horticulture sites and Agaricus mushroom farms.

Product features

- Hygienic fermentation with a small footprint, high space utilization and better environmental performance.
- Full travel with no dead corners and high throughput.
- Crushes large lumps; the turning wheel runs forward and reverse to make better use of the scrapers.
- Hydraulic-mechanical dual drive with high-efficiency hydraulic control: simple structure, fast lifting, high output.

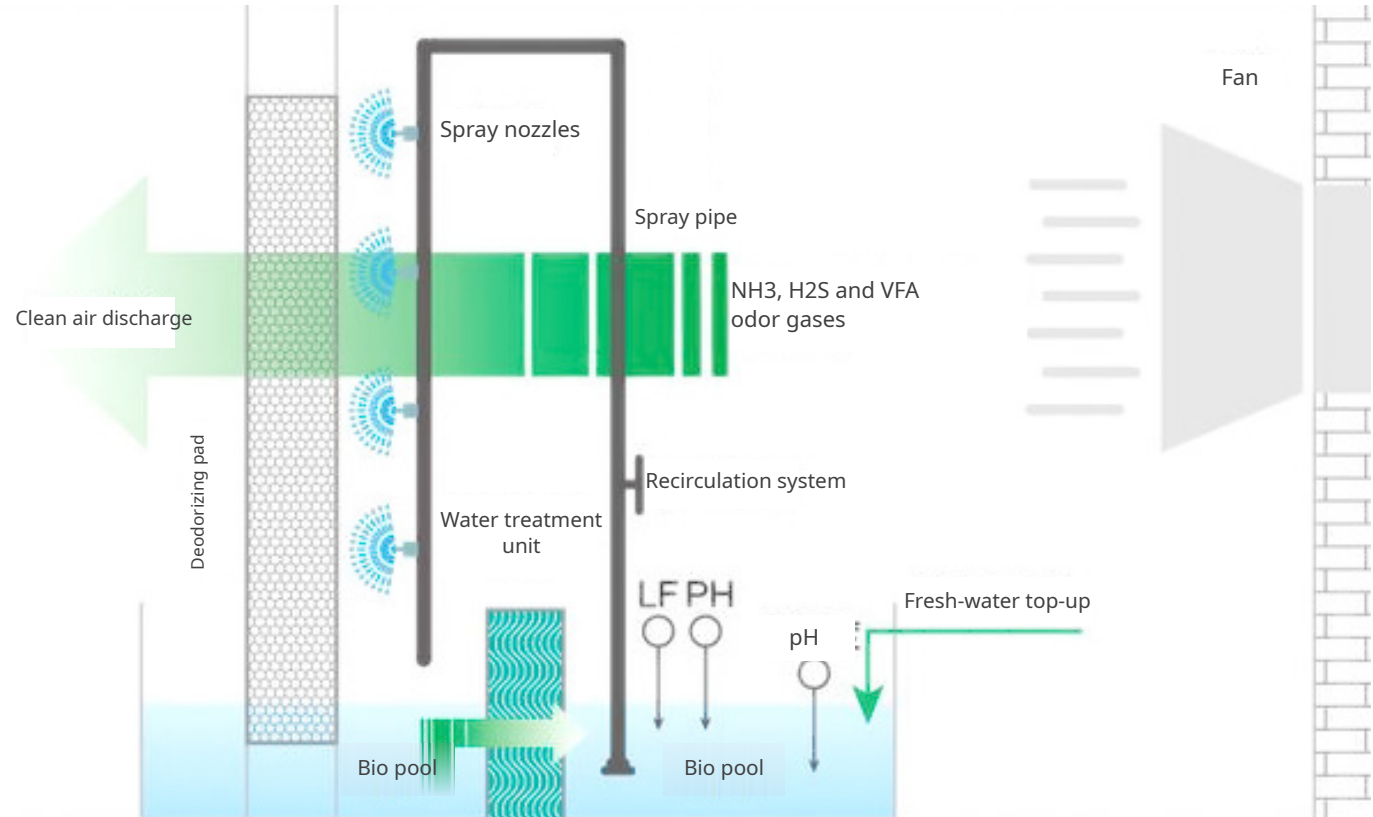
Application examples



03Vertical spray deodorization

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Working principle



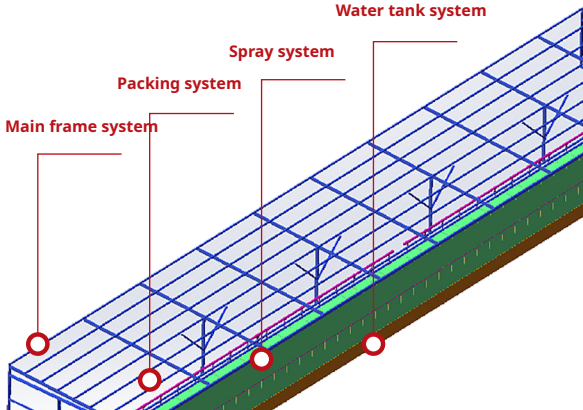
Horizontal-ventilation deodorization — schematic

Exhaust air from the poultry house is discharged by the gable fans into main frame system (1), where it is mixed. After passing spray system (3) and packing system (2), up to 85% of the ammonia nitrogen in the exhaust is removed before discharge to the atmosphere. Spray water recirculates through the pool system, with a float valve automatically topping up the pool level.

System composition

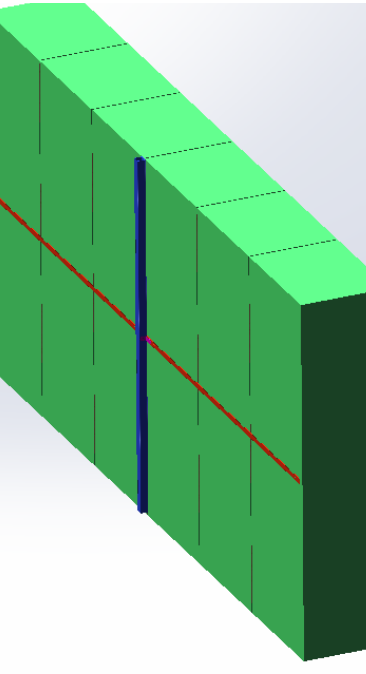
Main deodorization systems: main frame, packing, spray, water tank, and optional dosing system.

No	Name	Remark
1	Main frame system	Hot-dip galvanized profiles; FRP roof tile
2	Packing system	Deodorizing black mesh; frame
3	Spray system	PP snap-fit spiral nozzles; PVC fittings; corrosion-resistant circulation pump
4	Water tank system	Water reservoir; drainage pump
5	Dosing system	1. Solenoid valve 2. Stand-alone dosing unit (optional)



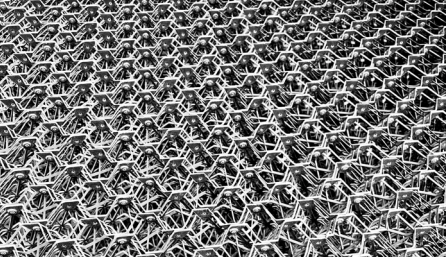
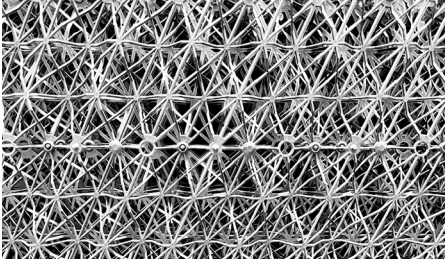
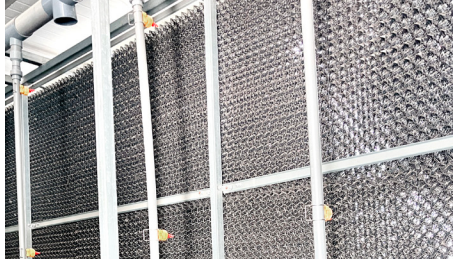
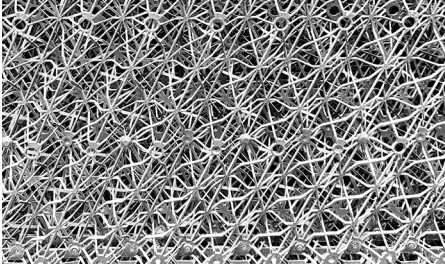
Deodorization system schematic

Frame



No	Name	Remark
1	Mesh mounting plate	304 stainless steel / FRP profiles
2	Mesh baffle	
3	Mesh outer baffle	
4	Fixings	

Packing system

Packing media (deodorizing black mesh)					
Material	PP engineering plastic	Model	910×450×20 mm / sheet 600×450×20 mm / sheet	Recommended module size	910 × 600 × 450 mm 600 × 600 × 450 mm
     					

Reference projects



Project gallery

System description

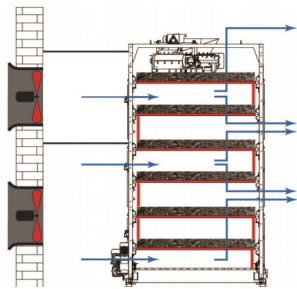
Intelligent manure air-drying system

Manure air-drying is widely used across Europe and by large-scale producers in China. House exhaust air dries the manure naturally: above 10 °C and below 70% humidity no additional heat source is needed, putting waste airflow back to work.



Working principle

The dryer is built with 4 (or 6) drying tiers and 2 (or 3) air tunnels, with drying fans mounted on the side of the unit. The fans blow house exhaust or ambient air through the manure in cross-flow via the upper or lower tunnel. Manure depth on each perforated drying belt is kept at 15–18 cm. The drying cycle is 48 hours, with continuous feeding twice a day, so all manure produced within 48 hours enters the dryer rather than accumulating in the house.



System features

1. Energy saving
2. High capacity
3. Smart structure
4. Automated operation
5. Quality end product



System advantages

1. Customizable modular structure

- Custom length
(up to 40 m)
- Technical advantages
(more drying area, higher throughput)
- Custom height
(up to 8 tiers)
- Fully customizable
(suits different heights and terrain)

2. Flexible design options

- Option 1: one dryer per house — captures the full exhaust airflow and runs in sync with the house equipment.
- Option 2: one dryer serving two houses — collects exhaust air from both houses for a lower investment.

3. High-grade materials

- Selected baffles in 304 stainless steel.
- Columns hot-dip galvanized for greater corrosion resistance.

Reference projects

