



**Comprehensive organic waste treatment industry chain provider**

**Professional aerobic fermentation tank manufacture**



## **AUTOMATIC PRODUCTION LINE**

The first fully automatic production line in China

Our company adopts TRUMPF intelligent automatic production line, which can achieve an annual output of 1,000 units. It is the first fully automated production line of fermentation tanks in China. The high-quality and high-standard production concept has been rooted in our corporate culture. This production line is integrated with fully automatic cutting, welding, and finishing to ensure 100% product yield. It has always been our company's eternal pursuit to allow customers to use worry-free, durable, and energy-saving solid manure fermentation products.



TRULASER TUBE 7000  
FIBER (T70)

TRULASER 2040 FIBER

TRULASER 2040 FIBER

TRUPUNCH 5000



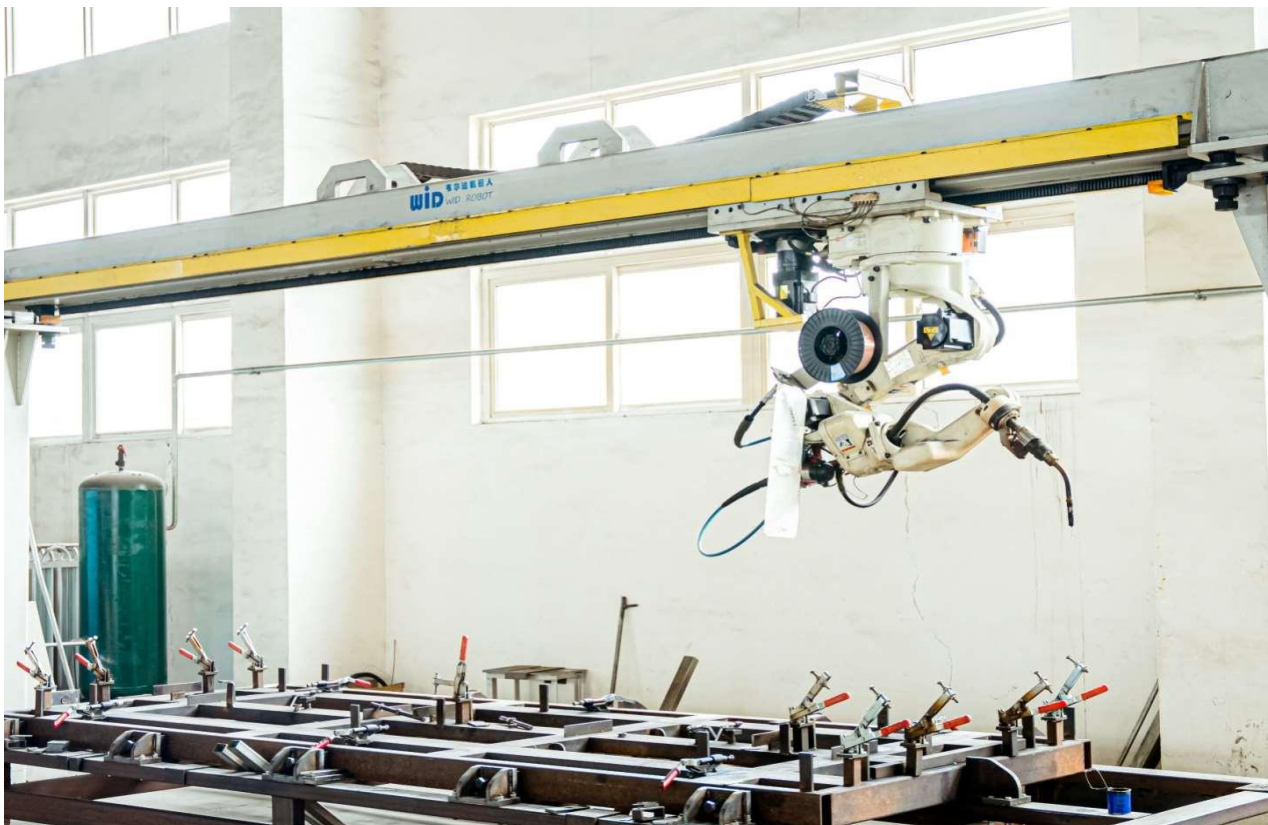
As a global leader in sheet metal processing equipment, TRUMPF is known for its outstanding reliability and high quality. The company introduced the first domestic automatic laser tube cutting machine TruLaser Tube 7000 fiber, which is the fastest laser cutting machine in the world. The tube machine can greatly increase the company's production capacity; the error of the two laser cutting machines can be maintained at  $\pm 0.3\text{mm}$  to ensure the high finish of the cutting surface; the 360-degree rotation of each mold, the automatic blanking of small parts, the simple and easy-to-learn operation is great Improved production efficiency, ensuring that each order can be delivered on time. The 5000R punch is called the fastest punch in the world, and the automatic loading and unloading system can achieve unmanned production.



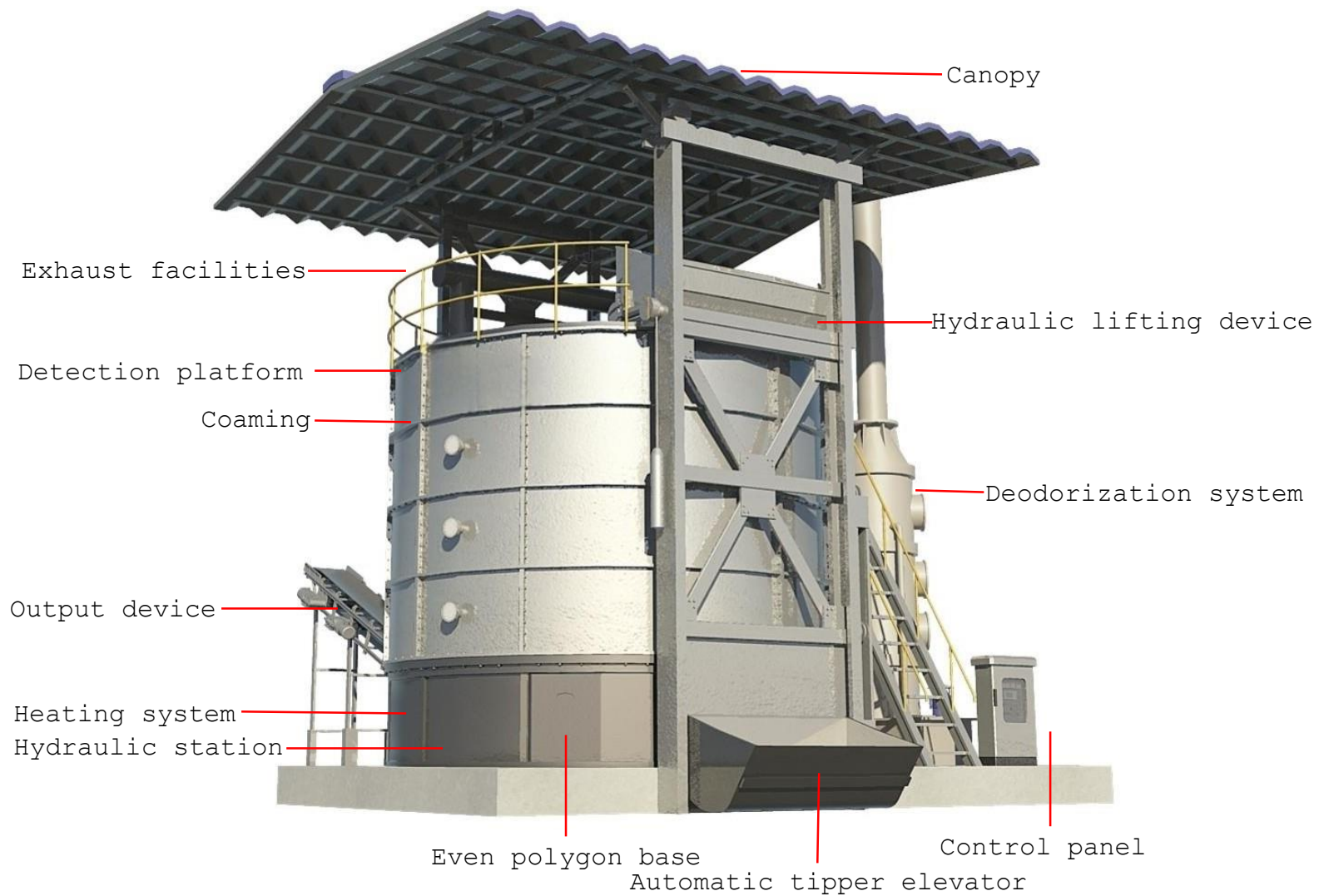
## **WELDING ROBOT**







### **Yaskawa Robot MA2010/OTC and Robot FD-V6S**

Our company are also equipped with 10 sets of Japanese Yaskawa welding robots, 5 sets of OTC welding robots, 6 sets of domestic welding robots, and 1 set of FANUC bending robot, which liberates manpower while ensuring efficiency and quality. Each welding workpiece has special welding tooling ensures the standardization of the welding of each product component, facilitates subsequent assembly, and greatly improves production efficiency.



# Thermophilic aerobic fermentation tank



TECHNICAL PARAMETERS		RAW MATERIALS	
Tank diameter(mm)	6000		
Total height(mm)	8440		
Tank height(mm)	3900		
Minimum footprint(m <sup>2</sup> )	60		
Tank volume(m <sup>3</sup> )	102		
Daily water consumption(m <sup>3</sup> )	1		
Hopper volume(m <sup>3</sup> )	1.35		
Handling capacity(containing 50-70% moisture, faeces, animal carcasses)	8~12		
Output(m <sup>3</sup> )(Water content about 30%)	4~5		
Power	380v/50hz		
Bottom blower(KW)	12.5*2		
Hydraulic station(KW)	7.5+3		
Induced draft fan(KW)	3		
Spray tower(KW)	1.5		
Auxiliary heater(KW)	4		
Discharge device(KW)	2.2		
Installed power(KW)	46.5		
Operate power(KW)	27		
		Municipal sludge	Crop straw

# Thermophilic aerobic fermentation tank

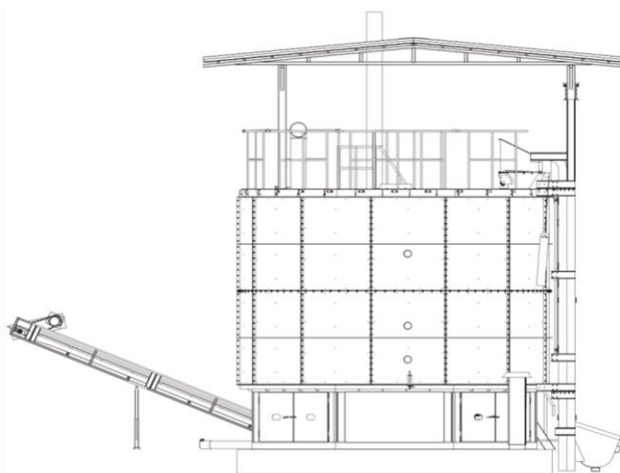
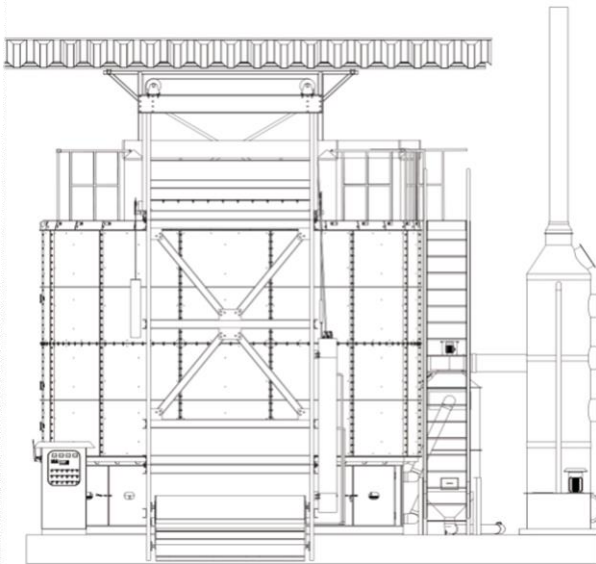
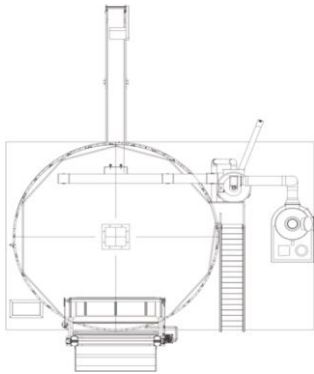
## EQUIPMENT OPERATING PRINCIPLE

The harmless treatment equipment for livestock and poultry waste is suitable for the treatment of different manure corpses, kitchen waste, and domestic sewage sludge. The moisture content of organic waste should be less than 70% without any auxiliary materials. It can be directly put into the tank. This equipment can adapt to different regions of high humidity and high coldness. It adopts a vertical closed tank structure, which reduces the installation area. The equipment adopts the principle of aerobic microbial aerobic fermentation, so that the microorganisms can use the organic matter and residual protein in livestock and poultry manure and carcass to multiply rapidly under a certain temperature, humidity and sufficient oxygen environment to realize the harmlessness of livestock and poultry wastes.

It is a continuous system that can put waste every day, and organic fertilizer is produced every day. The bucket elevator extracts organic waste and automatically puts it into the tank. The organic waste is mixed in the tank through the mixing blade. A special heat exchanger uses the waste heat to heat the fresh air and make it enter the tank, and the hot air is blown out from the holes in the blades. The warm air accelerates the aerobic fermentation of organic waste and the evaporation of water. After 7 days, the organic waste is converted into high-quality organic fertilizer.

## EQUIPMENT COMPONENTS

The whole equipment structure consists of three parts, the lower base part is distributed with hydraulic station, scroll air pump, oil cylinder, heating system and stirring shaft, etc., the middle part consists of double-layer insulation tank, automatic control system, blocking device, etc. The inner wall is lined with 304 stainless steel plate, which effectively prolongs the life of the tank and reduces the residual clinker. There is an insulation layer filled with polyurethane foaming agent in the middle, and the outer wall is supported by a thick steel plate; the upper part is composed of a shelter and a testing platform, exhaust facilities and other installations. The ancillary equipment includes automatic tipping bucket elevator, exhaust gas filtering and deodorizing system and heat exchange system device.



# PRODUCT PATENT



## STACKED RATCHET

Exclusively designed stacked ratchet can ensure smooth operation to a considerable extent and avoid a series of problems caused by raw material dark lines in case of occurrence. The use of high-strength welding technology makes the structure appearance like an stacked ratchet, which reduces the difficulty of maintenance and shortens the installation period.

## HEAT EXCHANGE DEODORIZATION DEVICE

When the gas passes through the device, it will be quickly condensed, which will further reduce emissions while the heat is recovered and re-entered into the tank for recycling, reducing energy consumption. The recycling of heat energy in the tank avoids the waste of electric energy caused by the continuous heating from the heating fan, and plays a role of energy saving and environmental protection. The liquid organic fertilizer produced by the deodorization system can be directly returned to farmland for use.



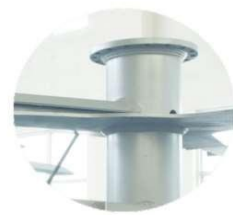
## FEED ENTRANCE OPENING DEVICE

The feed entrance is a double-sided door which is controlled by a mechanical drive mechanism. After pouring the raw materials, the upper hopper rises away from the control rod, the wire rope is loosened, and the feeding door is closed by its own weight, thereby reducing labor costs and shortening the feeding time.

## EVEN POLYGONAL BASE

It adopts the even-numbered polygonal base design with equal sides or unequal sides, and the square tube is welded into a tic-tac-shaped layout. The upper and middle appearance is attached by an arc-shaped outer plate, which makes the structure more solid and stable, the appearance is more flexible and beautiful, and it saves land.

# PRODUCT PATENT



## HYDRAULIC LIFTING SYSTEM

The hydraulic pressure distance 1:6 mechanical processing method is adopted, and the advantages of large hydraulic power, simple operation, long life, small weight, small motion inertia, and fast response speed are used. In addition, the wire rope is easy to install, low in cost, and in the lifting process. The characteristics of strong stability, large lifting power, low noise, easy maintenance, and long life can greatly improve work efficiency.

## STIRRING FIN

It adopts rhombus shape and 30 ° inclined installation angle to reduce mixing resistance. The use of tapered support and fixing plates to fix the fins is more robust and durable. The internal air outlet direction of the rhombus mixing business is designed to be the back and bottom, which improves the ventilation effect, avoids the increase of power consumption for improving the ventilation of the tank, and has a significant energy saving effect.



## UNIFORM DISCHARGE DEVICE

The discharge volume is controlled to prevent the raw and clinker from being mixed and discharged together. In order to improve the processing quality, the double-side discharge port control mode is adopted to increase the discharge speed and improve work efficiency.

## BROKEN BRIDGE INSULATION TECHNOLOGY

While selecting special materials with extremely low import coefficients as the internal and external filling insulation materials, creatively introducing new technologies from outside the industry to carry out a unique additional insulation design for the tank body, reducing the heat conduction between the internal and external walls.

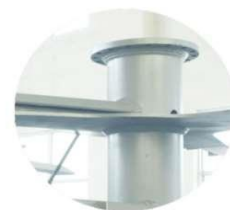
# PRODUCT PATENT



## PUSH ARM OPERATION SYNCHRONIZER      PUSH POSITION DETECTION SYSTEM

The invention of this patent ensures the safety of the synchronous operation of the cylinder and the operation of the push arm, reduces the use and maintenance of the proximity switch, simplifies the complexity, has high reliability, reduces the wear of the push arm sleeve, and prolongs the service life of the push arm , improve the efficiency of the equipment.

This patent is equipped with a detection sensor that can detect the working condition of the spring. When the spring is damaged at the engagement, the system will give an alarm and the device will stop working to avoid damage to the device and ensure the normal operation of the device.



## NEW DEVICE OF MATERIAL FALLING AND DOOR OPENNING      STIRRING FIN FLANGE CONNECTION DEVICE

At present, the door opening mechanism of the non-hazardous treatment equipment for livestock and poultry waste mostly adopts manual mechanical design scheme. This design method system must be equipped with special personnel to look after or add necessary imaging equipment, which increases equipment cost and labor cost. This patent scientifically utilizes reaction force and prestress, so that the feed door will not produce a strong impact, and will close by itself, reducing operating costs, reducing equipment costs, shortening feeding time, and saving energy.

This patent adopts the assembly method of the stirring fin connecting flange and the supporting connecting plate, which is convenient for assembly and disassembly, solves the problem of difficult transportation, is easy to maintain, saves work efficiency, and can greatly improve the result.



# PRODUCT PATENT

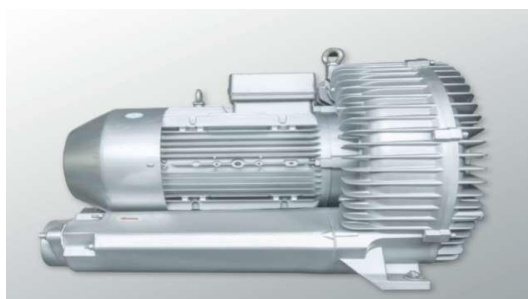


## DOUBLE VERTICAL BODY CYCLONE DUST REMOVAL AND DRAINAGE DEVICE

At present, the heating system of the commonly used poultry waste innocuous treatment equipment adopts high-power motors and fans, which causes an increase in fermentation costs, and does not achieve the effect of energy saving and environmental protection. This patent adopts the advanced cyclone heat exchange, pollution discharge and dust removal principle, recycling the heat energy of the fermentation of livestock and poultry waste innocuous treatment equipment, avoiding secondary air pollution, reducing energy consumption, extending service life, and improving work efficient.

## DOUBLE CONE CYCLONE BLOWDOWN DUST COLLECTOR

Because this patent adopts the advanced cyclone heat exchange, sewage and dust removal principle, the heat energy from the fermentation of the livestock and poultry waste innocuous treatment equipment is recycled, and the liquid organic fertilizer after the cyclone sewage and dust removal treatment is directly returned to the field for use, avoiding Secondary pollution of the air.



## HIGH POWER HOT AIR FAN

The high-power hot air blower can quickly introduce hot air in a short time to speed up the fermentation. The fan is not started around the clock, and only runs when needed. It stops when the temperature of the fermentation process is appropriate. Therefore, the power is large enough and does not consume much electricity, but only shortens the running time and improves the efficiency of the equipment.

## HOT DIPPED GALVANIZATION

The anti-corrosion of the outer wall of the product adopts the hot-dip galvanizing process, which can greatly reduce the probability and speed of the outer wall being corroded. The hot-dip galvanizing process requires high technical equipment, and we take this treatment process as an upgrade option for users to choose by themselves.