



## 青岛泽宇凯昇机械制造有限公司

Qingdao Zeyu Kaisheng Machinery Manufacturing Co.,Ltd

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Qingdao Zeyu Kaisheng  
Machinery Manufacturing Co.,Ltd  
青岛泽宇凯昇机械制造有限公司



## COMPANY PROFILE

Qingdao zeyu kaisheng machinery manufacturing co.,ltd was founded in 2011 and entered the poultry keeping equipment industry in 2012.

Our company intergrates product research and develpment production, sales and installation services. Our main products include: Ventilation and cooling equipment: Such as, exhaust fans, fiberglass fans, cooling pad, water lines, feeding lines, environmental control system...Pig farm equipment:Pig feeding trough, pig house fence, delivery fence ...Decontamination equipment: manure scraper system...Fermentation treatment equipment: organic fertiliser fermentation system...Harmless treatment equipment and so on. Suitable for pig farms, broiler farms, chicken farms, duck farms and other animal farms.



We have 2 factories in Qingdao, 1 branch factory in Chengdu, Sichuan province, 1 branch factory in guangdong province. Cover an area of more than 40000 square meters. We have a series of modern production equipment, such as turret computer punch, CNC bending machine, laser welding machine, traveling crane and so on.



We have gain great customers from Germany, USA, Canada, Brazil, Thailand, Vietnam, Malaysia, Indonesia, Philippines, more than sixty area and countries.

We are always willing to keep on growing up by investing on research and development of new products and to provide clients with strict production standard in response to the modern requirements. We warmly welcome customers to establish cooperation and create a bright future together.



## **Introduction to Model 40 inclined screen solid-liquid separator**



Qingdao Zeyu Kaisheng Machinery Manufacturing Co., Ltd independently develops innovative scientific and technological products- -a new generation of 40 inclined sieve solid-liquid separator.

With the development of modern livestock and poultry breeding industry and the rise of factory intensive factory breeding, while people's material needs have been met, and the pollution of animal husbandry sewage has gradually entered the public's view. At





the same time, faced with the situation of low treatment efficiency and high cost of the biogas digester and septic tank, the inclined sieve solid-liquid separator is also gradually accepted by everyone because of its excellent characteristics.

Sewage enters the biogas tank after solid-liquid separation, which can not only solve the precipitation problem of the biogas tank, but also enhance the treatment capacity of the biogas tank, and reduce the investment area of the biogas tank and septic tank. And after treatment of the solid material fluffy, reduced viscosity, small smell, easy to transport. At the same time, liquid organic fertilizer can also be used for the absorption of crops. Solid organic fertilizer should be used to improve part of the nutritional structure of the soil, and can also be transported to the fermentor or harmless processor for fermentation to make organic compound fertilizer.



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## 1. Equipment composition

The inclined sieve solid-liquid separator is mainly composed of main engine, sludge screw pump, control cabinet, steel wire hose and other equipment.

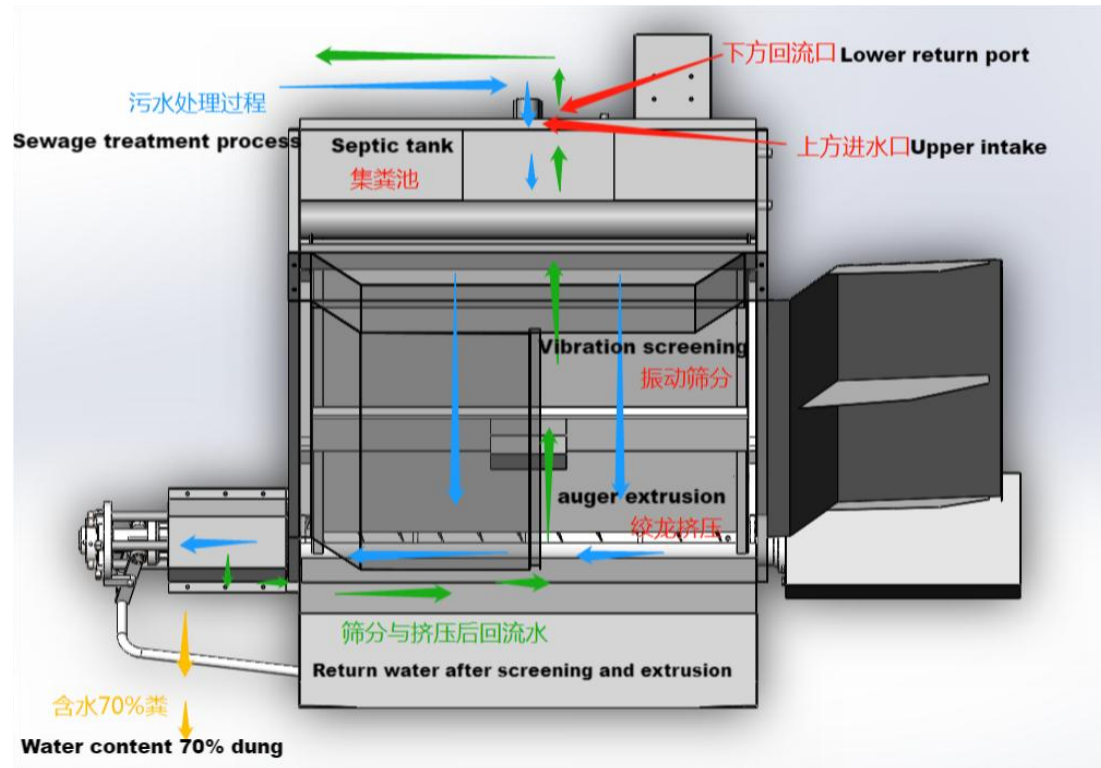
## 2. Boot preparation

- 1) 380V and 50 HZ shall provide three-phase, three-wire and five-wire power lines.
- 2) Flat the road surface to ensure that the transport vehicle can pass smoothly and unload the crane or forklift to enter and exit conveniently.
- 3) According to the weight of the equipment, prepare the crane or forklift in advance to determine the unloading plan.
- 4) In handling and release, the bottom or side of the box shall not receive impact and violent vibration, should not be excessive tilt, more not inverted.



- 5) The equipment has been checked and tested before leaving the factory. In order to ensure the working accuracy and service life of the equipment, it must be correctly installed. Level of the equipment shall be checked during installation with the allowable deviation of 0.5mm/m.
- 6) To install the required tools, such as welding machine, oxygen welding, cutter and wrench, etc. The installation of this machine needs to raise the main equipment, or dig at the discharge position to facilitate the installation of discharge screw or belt conveyor.
- 7) For the newly installed users, before the normal startup operation, fill the material with the solid extrusion end discharge port, and run into a pressure layer. It is strictly prohibited to start up without filling pressure to prevent sewage from discharging port under no pressure.
- 8) Coordinate with 2-3 people to assist in handling the equipment installation matters.

## 3. operational principle



The sewage is pumped into the solid-liquid separator on the sludge screw pump, and evenly distributed to the inclined screen surface through the overflow. Due to the small and smooth clearance on the mesh surface, the large back clearance, smooth drainage and not easy to block. After the solid substance is trapped, under the combined action of the vibration motor

and the inclined filter plate, the water flows to the sewage tank through the sieve and filter, placing the excess





water under the extrusion of the mesh sieve. Out of the drainage outlet and reflux, because the work of the extrusion drying box is continuous, with the material constantly squeeze into the box, the pressure at the front end of the extrusion box is increasing, when large to a certain extent, the unloading port will be opened, the extrusion mouth, to achieve the purpose of extrusion. In order to master the speed and water content of discharge, the counterweight under the host can be adjusted to satisfy the appropriate discharge state. Finally, the water content is about 70%, which is transferred to the fermenter or harmless treatment equipment for fermentation treatment.

## **4. Application field**

The inclined sieve solid-liquid separator is designed and produced for small-scale treatment such as water flushing, blister dung, solid-liquid separation of slaughtering sewage treatment, biogas slurry and biogas residue separation. This equipment integrates inclined sieve gravity separation and spiral extrusion separation technology, and realizes the resource utilization of livestock manure waste in the farm.

1) After solid-liquid separation and dehydration treatment, sewage is fluffy, reduced viscosity and small odor.

After fermentor or harmless treatment equipment, granulation can be made into compound organic fertilizer.

2) After fermentation treatment, it can also be made into pellet feed, a nutritional feed for feeding fish.

3) It can also be fertilized for flowers / special cash crops to transform the organic matter of the soil.

4) Solid-liquid separator can also be used in industrial production for solid-liquid separation and recovery of useful substances, is an excellent filtration or recovery of suspended substances, floating objects, sediment and other solid or colloidal substances equipment.

## 5. main parameter:

model	Type 40	Length (mm)	2500	Filter Diameter (mm)	0.5
Main engine power (KW)	4	Width (mm)	1600	Power supply (V)	380
Host material	stainless steel	Height (mm)	1800	Operating weight (KG)	590
Total power (KW)	6.72	Amount of treated treated (m3/H)	15-40	Extruded solid volume MAX (m3/H)	2.5
Diameter of submersible pump inlet (mm)	60	Separation outlet diameter (mm)		76	



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## 6. Equipment characteristics

- 1) The fuselage is small, small area, flexible and convenient installation, can be used for a single set, can also achieve multiple parallel, independent operation of each other, save civil engineering resources;
- 2) Using the gravity effect of the water flow itself, the power load is small, the separation efficiency is high, according to the water content of the site sewage, the treatment capacity of a single machine can reach 15-40 m<sup>3</sup>/H;
- 3) Wide application range: the diameter of the sieve cylinder is 0.5-1mm, different livestock farms such as pig farms, cattle farms can choose the solid-liquid separator of the sieve hole according to the different composition of feces;
- 4) The equipment is the four side support, the spiral axis for both ends of the support, high stability;

- 5) Using vibrating sieve and spiral extrusion technology, the separated products cause little environmental pollution, the water content of solid feces is about 50% -70% for storage and transportation; the solid content of liquid part is about 1.5%, it is not easy to produce crust and precipitation;
- 6) The whole separation system has a high degree of automation, the control system can realize the automatic operation and closure of sludge screw pump and solid-liquid separator through the collection tank liquid level control, reduce the labor intensity of equipment management personnel, but also support manual control;
- 7) According to the scale and layout of the farm, the power of sludge screw pump and mixer in the system is generally 5.5kw-8.5kw, the power is 8.5 kW, and the energy consumption of the whole system is low;
- 8) The core parts and pipe fittings of the sieve solid-liquid separator are made of stainless steel, with strong corrosion resistance, high reliability and long service life;
- 9) In general, the separator does not need to clean, daily management, maintenance and convenient operation.