Manufacturer of Integrated Wastewater Treatment Systems

# ZHONG QIAO ENLIGHTENMENT

Focus on decentralized treatment · manufacture premium equipment



# 01 COMPANY PROFILE

Since
**2013**

Invention Patents
**18+**

Production Base Covering Over
**40000+**

Annual production capacity
**800+**

Shandong Zhongqiao Enlightenment Environmental Protection Equipment Co., Ltd. was founded in 2013. As a national high-tech enterprise specialized in the R&D, design, production and manufacturing of integrated wastewater treatment equipment, it has two production bases covering a total area of more than 40,000 square meters with an annual output of over 800 sets of integrated wastewater treatment equipment, making it a trustworthy manufacturer of high-end environmental protection equipment.

promotional video

For the carbon steel equipment production sector, the company is equipped with large-scale production machinery and equipment including bending machines, shearing machines, plate rolling machines, pipe rolling machines, laser cutting machines, laser pipe cutting machines and automatic welding machines.

For the new material processing sector, its equipment consists of an integrated forming PP new material tank production line, an MBBR production line, a PP welding rod production line, as well as large-scale extruded PP automatic welding machines, PP engraving machines, PP bending machines, PP butt welding machines and blanking machines.









R&D

Design

Manufacture

Sales







Meanwhile, the independently developed "Hundun Cloud" IoT platform supports one-click private deployment and enables cloud monitoring, cloud operation, cloud analysis and cloud management. The company has its own MBR production line with complete supporting facilities and stable quality, realizing independent and controllable whole industrial chain, and providing customers with efficient, reliable and one-stop wastewater treatment equipment solutions.

It has obtained more than 60 utility model patents, 18 invention patents and 27 software copyrights, and passed the CEP certification of China Association of Environmental Protection Industry, the three management system certification and the energy management system certification.The company's R&D department brings together high-end technical talents including process designers, industrial designers, mechanical engineers and environmental engineers. Together with a high-level and high-quality production team, a professional business team providing high-standard services, and a meticulous, efficient and responsive after-sales team, it forms a full-process service system to escort product quality and customer services.

Upholding the enterprise spirit of "Establishing the Enterprise with Quality, Honoring Integrity as the Foundation",Zhongqiao Enlightenment explores the market with high-quality products and serves customers with integrity, striving to create a more brilliant future.

# 02 DEVELOPMENT PROCESS

High-Tech Solutions for the Environmental Protection Industry

Innovation and the Future

ZHONG QIAO ENLIGHTENMENT

Set sail

## 2013-2017

Establishing a brand during the start-up phase of the company

Obtained multiple intellectual property rights

## 2018-2019

Obtained national high-tech enterprise certification

Obtain the qualification of general contracting for environmental protection engineering

## 2020

Establishing Chaos Intelligent Technology Company

Build our own IoT cloud platform The company has been renamed as "Zhongqiao Enlightenment"

## 2024

Gude Membrane Production Base Commences Operations

Company Headquarters Relocates

Grade II Specialized Contracting for Building Mechanical and Electrical Installation Engineering

Grade II Specialized Contracting for Environmental Protection Engineering

## 2022-2023

Designated as a Provincial Specialized, Refined, Distinctive, and Innovative Enterprise

Hidden Champion Enterprise

Expansion of Weicheng Equipment Production Base

## 2021

Invest in the construction of a new material production base, covering an area of 20000 square meters



# 03 SALES AREA




Our integrated sewage treatment equipment is not only sold well throughout the country, but also exported to multiple countries and regions such as Ethiopia, the United States, Mexico, Iraq, Romania, Indonesia, Rwanda, Pakistan, South Korea, France, the Philippines, Jordan, Saudi Arabia, etc.

**We don't just make products, we craft solutions for the world.**



Mexico



Myanmar




Malaysia




Saudi Arabia



New Zealand



Peru



Russia



USA

# 04 CORPORATE CULTURE

## Our Vision

To Become a Leading Environmental Equipment Manufacturing Company

## Our Mission

To Provide Decentralized Users with the Highest Quality Water Pollution Solutions and Supporting Equipment.

## Core Values

Customer-Centric, Driven by Strivers, Unity, Innovation, Integrity, Dedication, Passion

## Corporate Spirit

Dare to Innovate,Strive for Excellence

## Innovation Culture

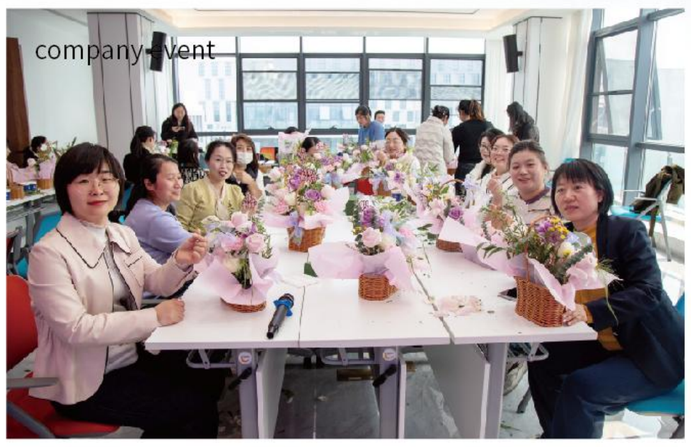
Improvement is Innovation,Everyone Can Innovate

## Quality Philosophy

Focus on Customer Needs, Continuous Improvement and Enhancement



office scenario


company event




precious•memory





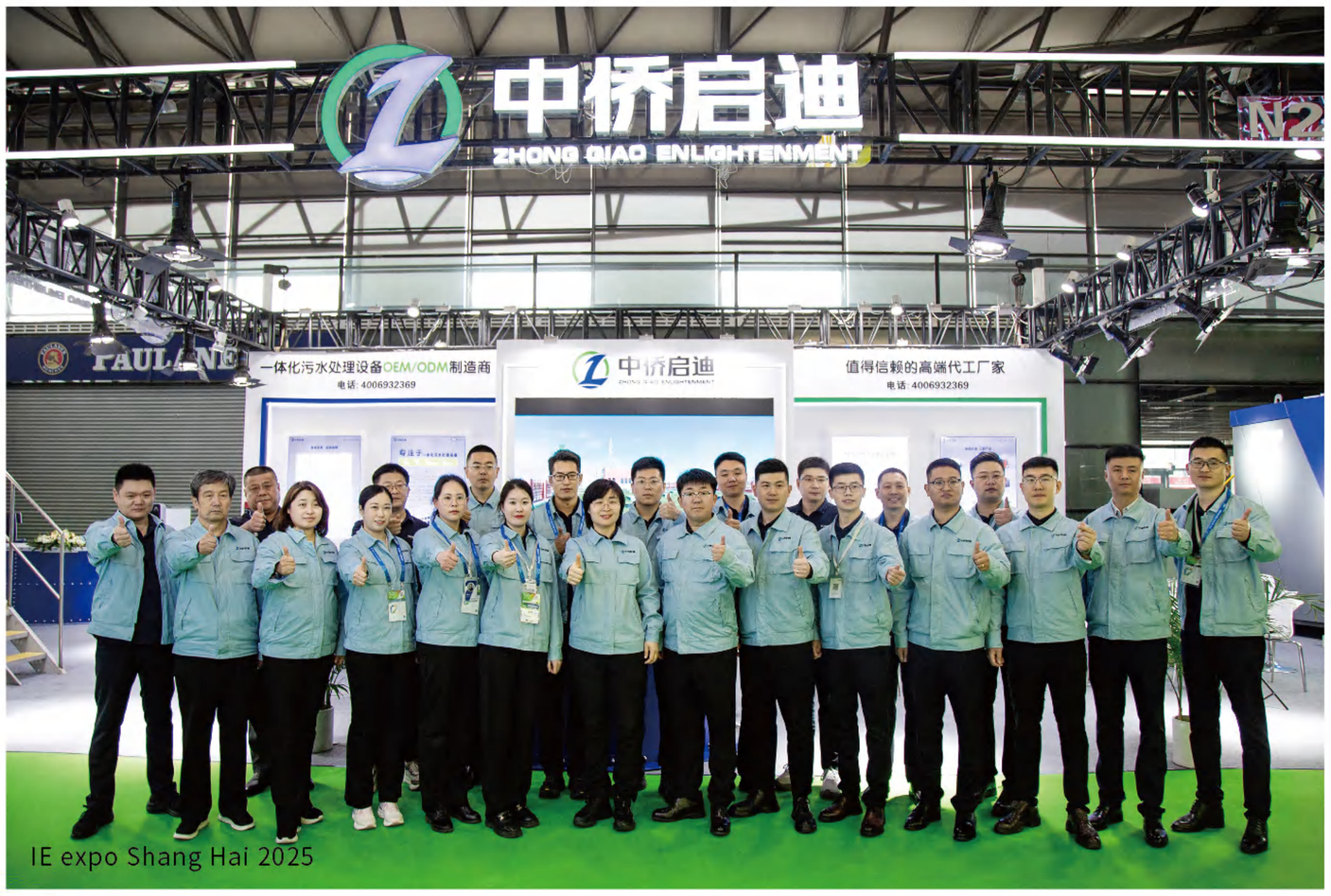







Growth • imprint

# 05 OUR TEAM



IE expo Shang Hai 2025

*Incentive • Outlook*


PP production staff


11 th anniversary

*Unity • Contribution*

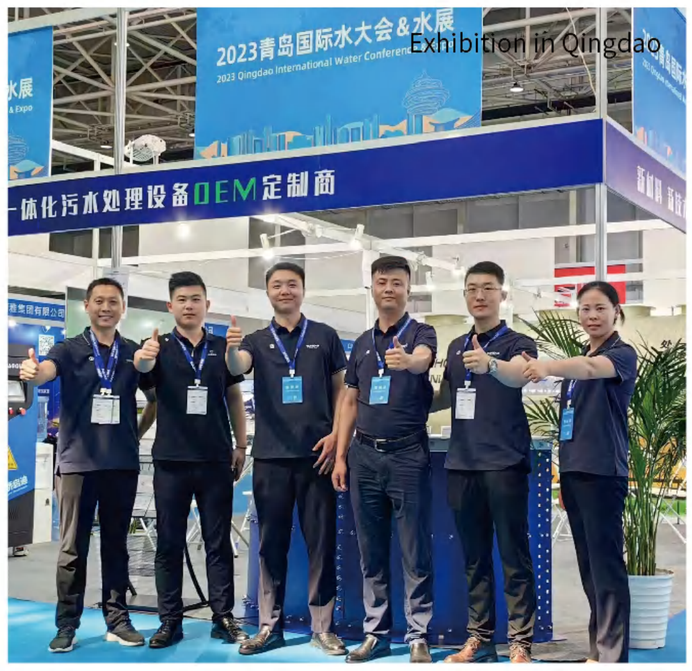

Employees of Weicheng Factory


2024 Beijing Exhibition



10 th anniversary


Spring hiking activities



Exhibition in Qingdao

# 06 HONOR

More than 100 nationally certified patents











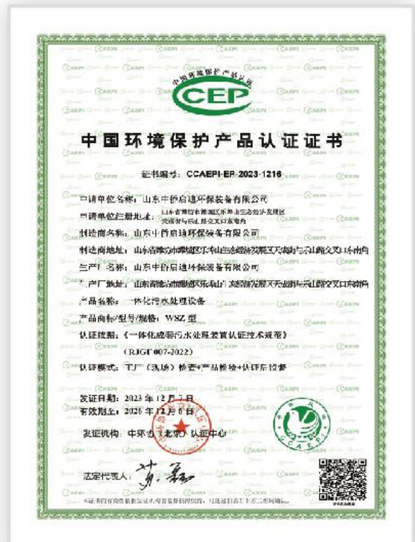




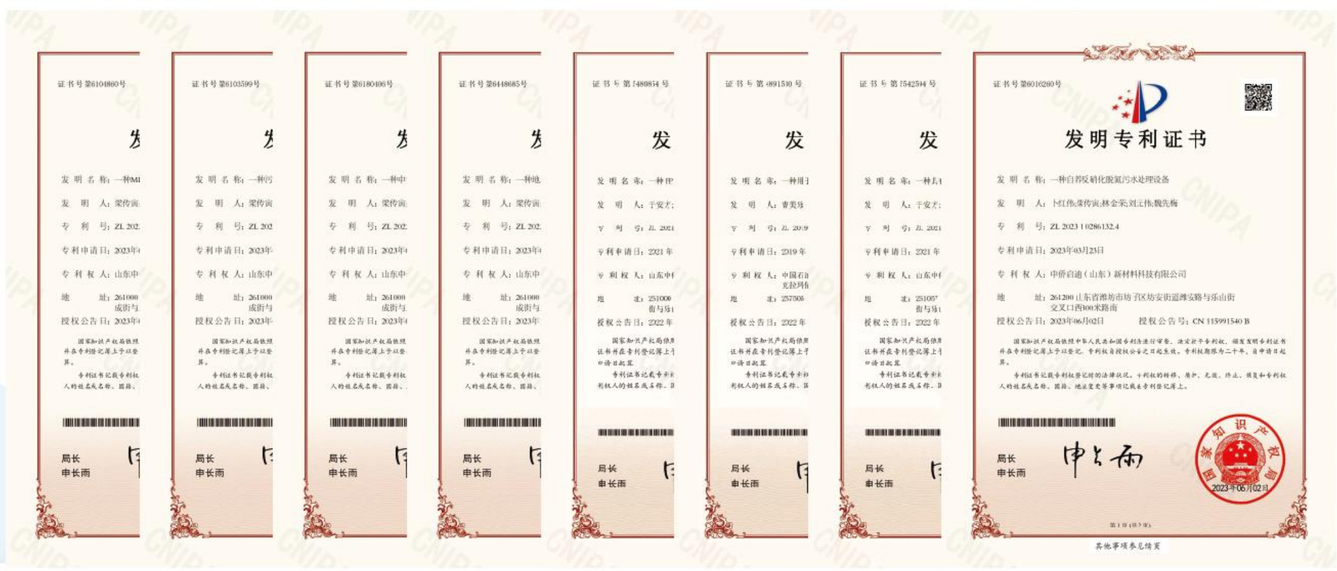








# 07 PRODUCTION EQUIPMENT


Bending machine


laser tube cutting machine


Laser cutting machine


QDPP winding machine

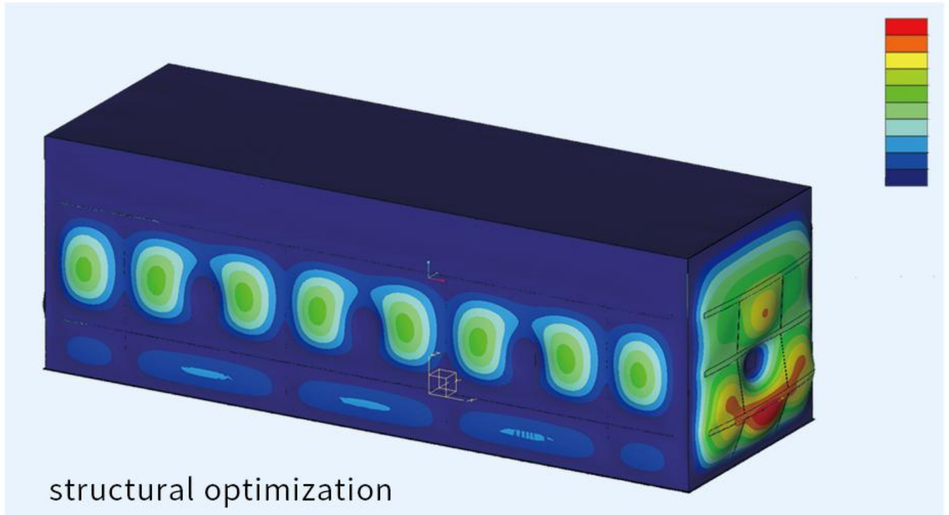

PP engraving machine


tile press


PPLong arm welding


MBR  Membrane packaging equipment

# 08 SOFTWARE STRENGTH



structural optimization

## Creo mechanical simulation modeling

Comprehensive mechanical and dynamic modeling, Creo mechanical simulation software, optimizes our equipment structure through 3D modeling, mechanical analysis, and fluid dynamics analysis of customer projects, solves complex mechanical pressure bearing practical scenarios, and ensures high reliability and stability of the equipment.



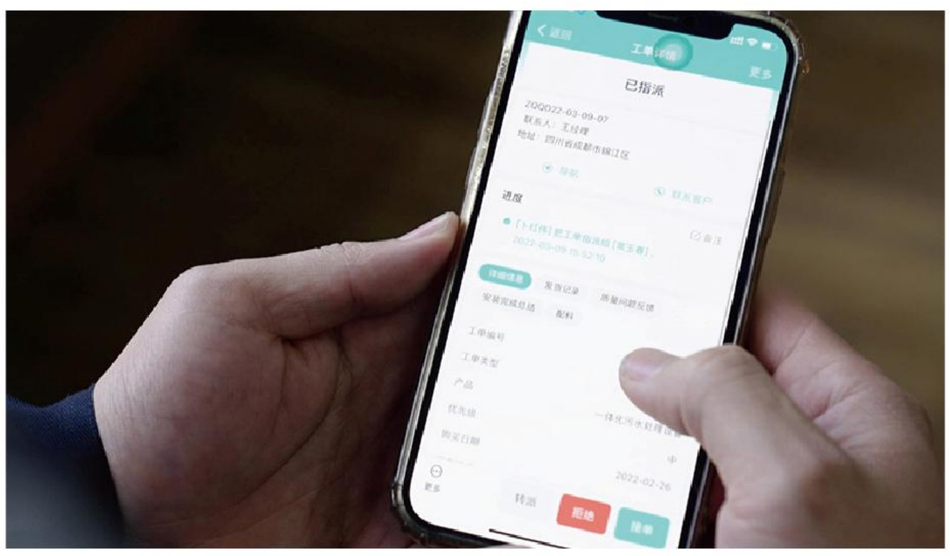

## Chaos Cloud Platform

The company has a "Chaos Cloud" IoT platform that can achieve one click privatization, cloud monitoring, cloud operation, cloud analysis, and cloud management according to demand. Assist in enhancing customers' brand image and improving the quality of operation and after-sales service.




## ERP system

The company has built an ERP system tailored to Kingdee Cloud, achieving optimal resource allocation and full process quality management.




## After sales service system

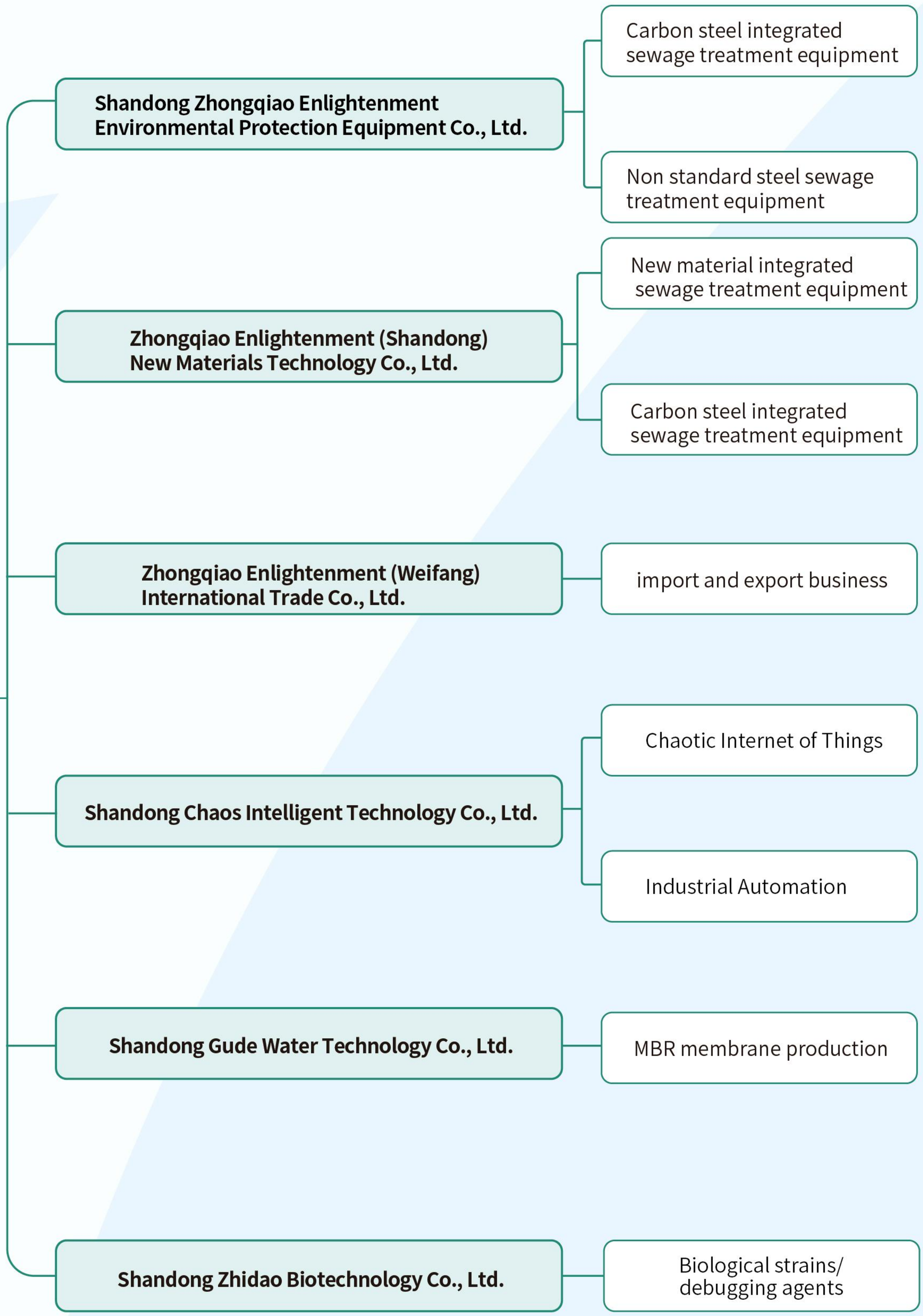
After sales service system to improve customer service efficiency and response speed.




## CRM system

The CRM management system improves operational efficiency and customer value by integrating customer data, optimizing business processes, and enhancing decision support.

# Organizational Structure



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- PP series equipment


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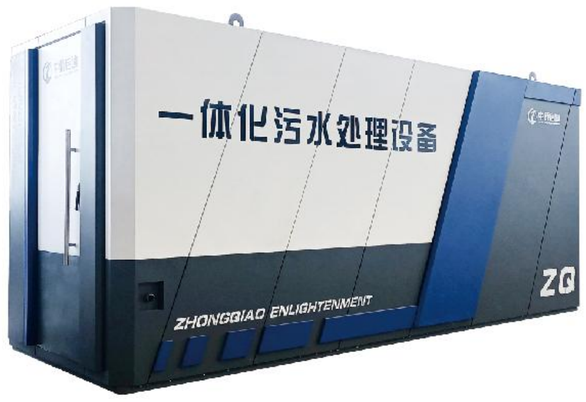
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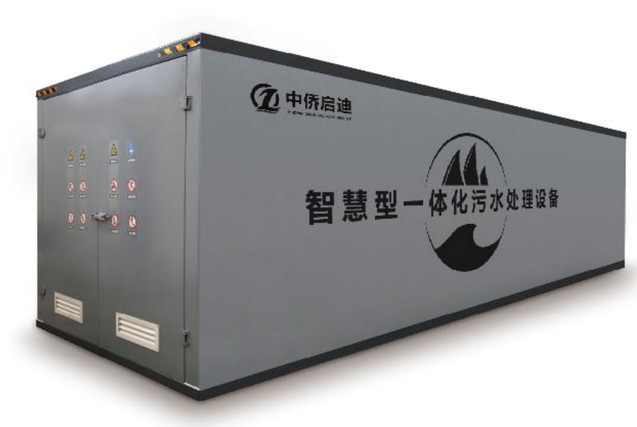
# Carbon steel series integrated sewage treatment equipment

## Introduction

Zhongqiao Enlightenmenti Carbon Steel Series Integrated Wastewater Treatment Equipment is available in various forms such as Zhongqiao Box, Flat Plate, Container, Submarine, and Assembled. The mainstream processes for the equipment include AO, AO+MBR, etc.




Zhongqiao Box Integrated Sewage Treatment Equipment




Flat integrated sewage treatment equipment




Container integrated sewage treatment equipment




Submarine style integrated sewage treatment equipment



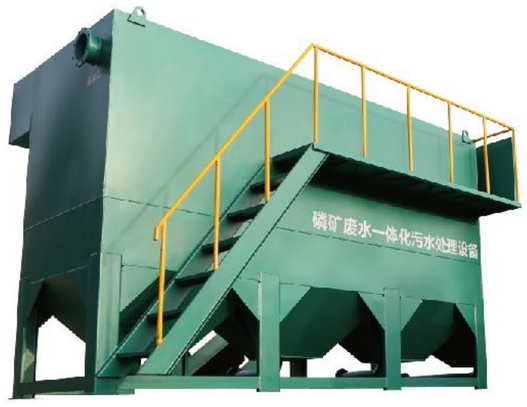
Assembled integrated sewage treatment equipment



Lanmeila sedimentation tank



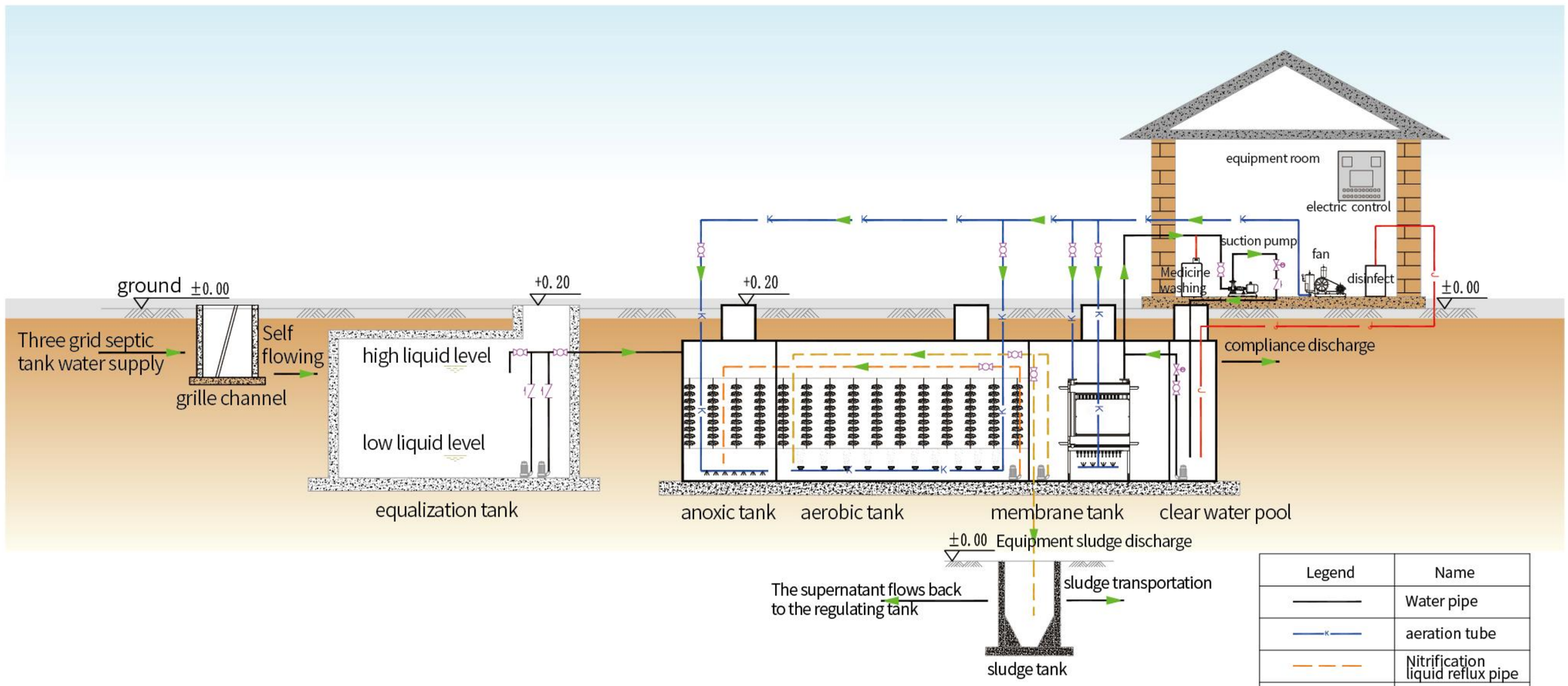
Small scale hospital sewage treatment equipment




Inclined Tube Sedimentation Tank

# Process Flow

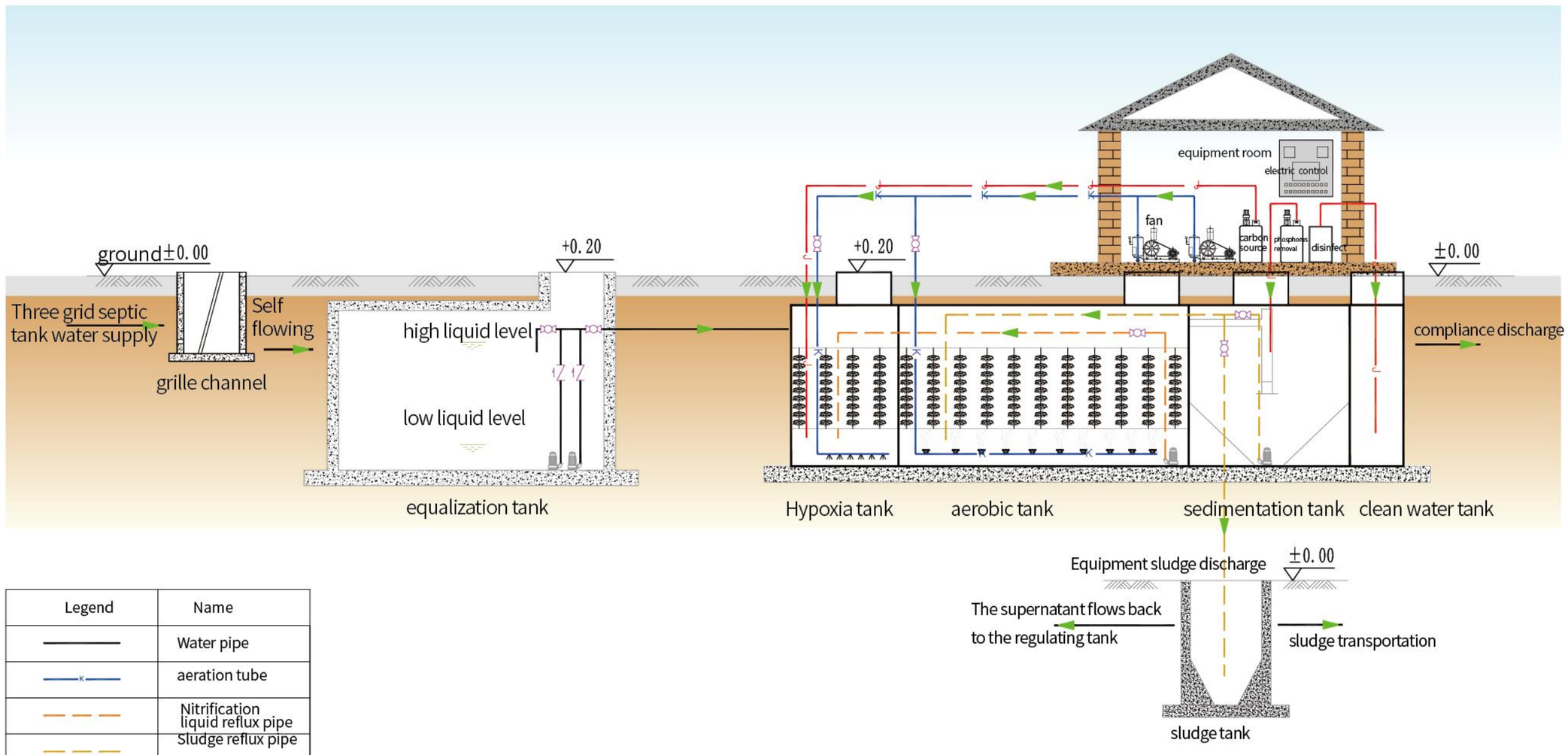
## Common processes for Grade A standard (The specific process depends on the situation)




| Legend | Name |
|---|---|
| | Water pipe |
| | aeration tube |
| | Nitrification liquid reflux pipe |
| | Sludge reflux pipe |
| | Dosing tube |
| | check valve |
| | butterfly valve |
| | ball valve |
| | solenoid valve |

**Process Flow Diagram**

## Common processes for Grade B standard (The specific process depends on the situation)




| Legend | Name |
|---|---|
| | Water pipe |
| | aeration tube |
| | Nitrification liquid reflux pipe |
| | Sludge reflux pipe |
| | Dosing tube |
| | check valve |
| | butterfly valve |
| | ball valve |
| | solenoid valve |

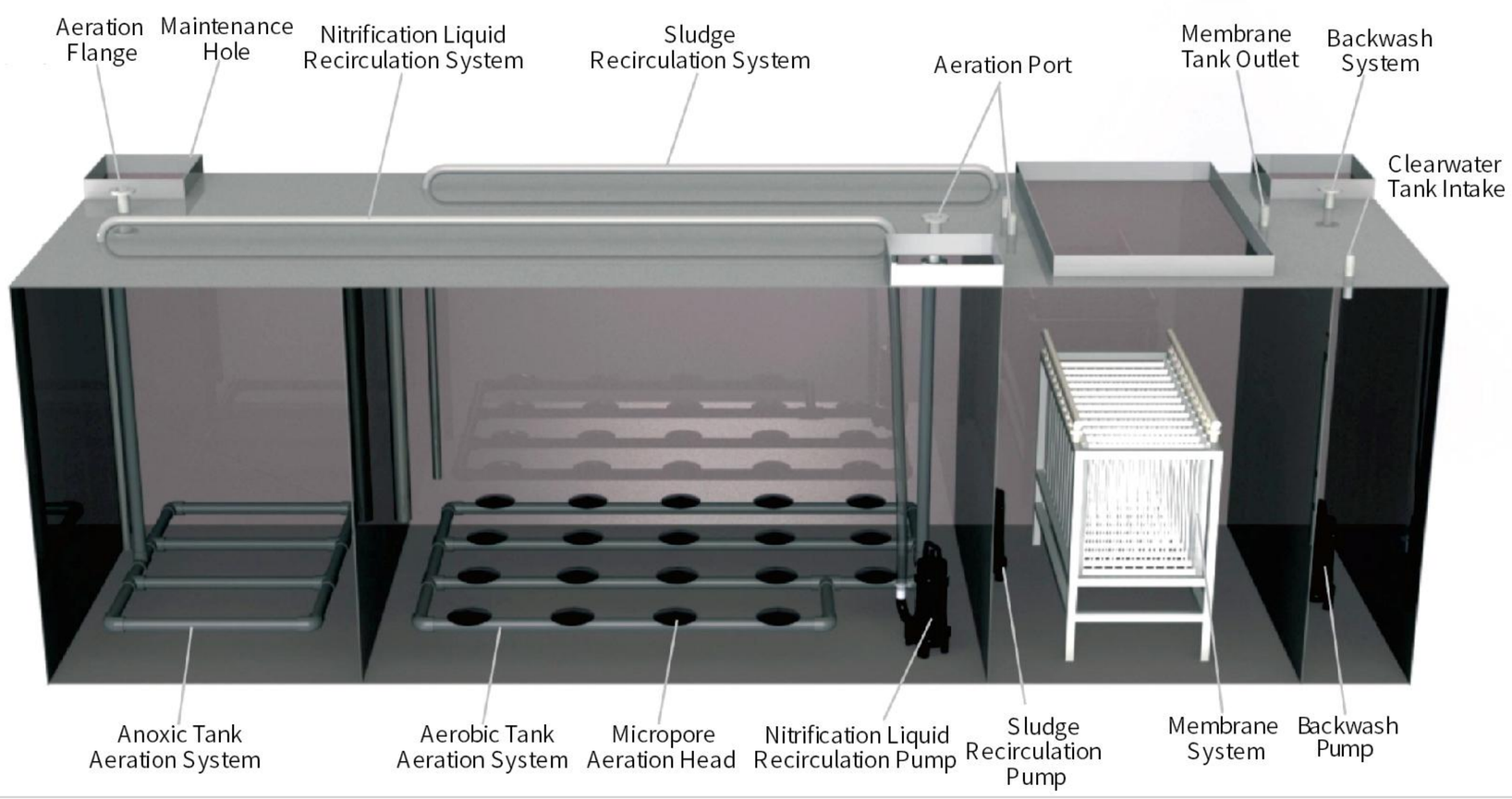
**Process Flow Diagram**

## Inlet and outlet water standards

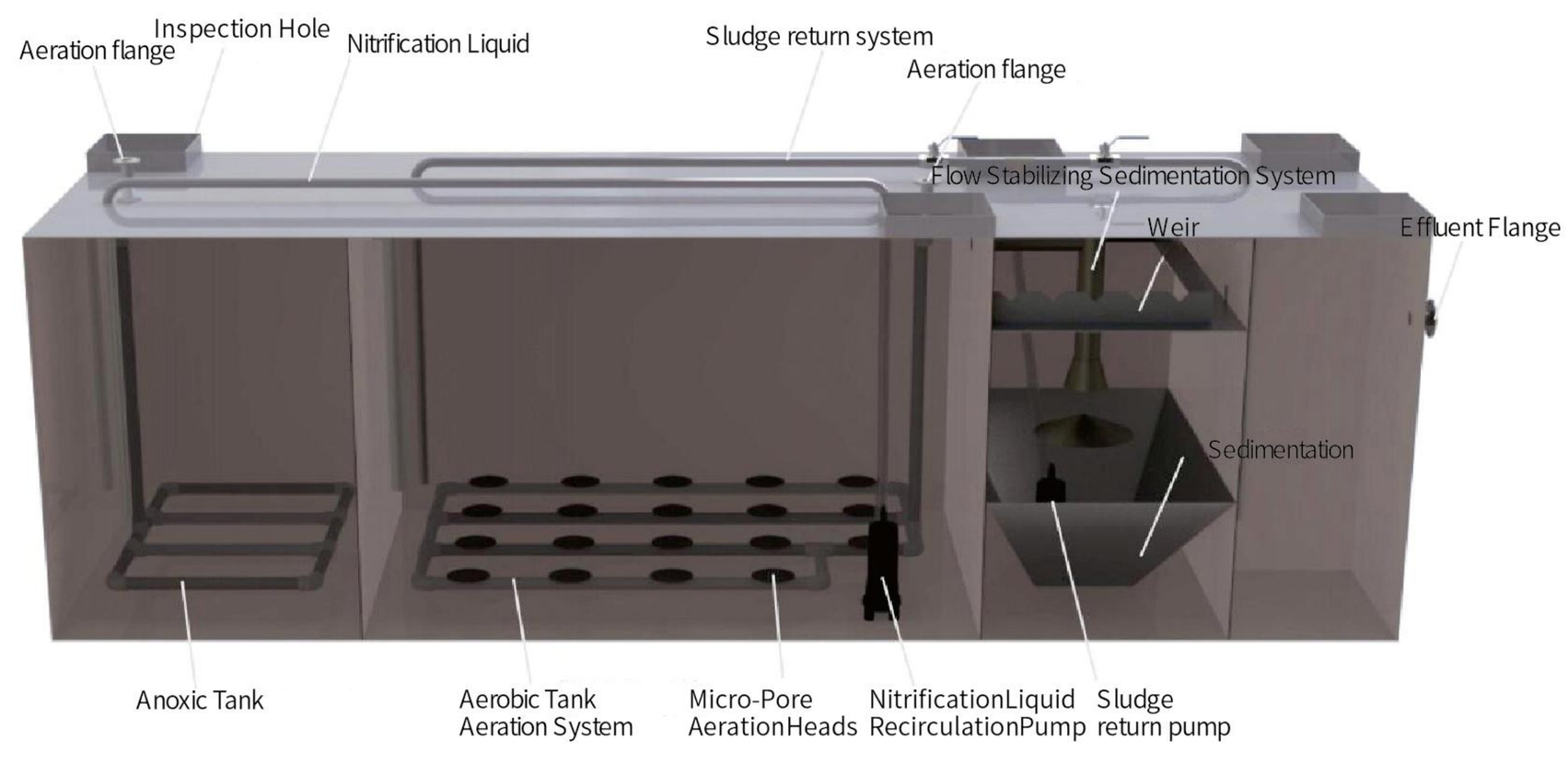
| Name | Inlet Water Main Indicators | Grade A Effluent Indicator | Grade B effluent indicator |
|---|---|---|---|
| Chemical Oxygen Demand (mg/L) | ⩽500 | ⩽50 | ⩽60 |
| Biochemical Oxygen Demand (mg/L) | ⩽350 | ⩽10 | ⩽20 |
| Ammonia nitrogen (mg/L) | ⩽45 | ⩽5(8) | ⩽15(8) |
| pH | 6.0-9.0 | 6.0-9.0 | 6.0-9.0 |
| Suspended solids (mg/L) | ⩽270 | ⩽10 | ⩽20 |
| Total phosphorus (mg/L) | ⩽5 | ⩽0.5 | ⩽1 |

## Structure

### Common processes for Grade A standard




### Common processes for Grade B standard



# Equipment Technical Parameters

## First level A standard technical parameters ( Suitable for Zhongqiao boxes and tablets)

| model | Water treatment capacity ($m^3/d$) | outline dimension L x W x H (mm) | weight of equipment (t) | running weight (t) | installed power (kW) | Power consumption (kW) | running expense (Yuan/ton of water) | running expense (CNY/day) | Cable specifications ($mm^2$) | floor space ($m^2$) |
|---|---|---|---|---|---|---|---|---|---|---|
| MBR-0.25 | 5 | 2500×1000×2000 | 1.12 | 6.12 | 5.365 | 3.245 | 4.08 | 20.41 | 2.5 | 19 |
| MBR-0.5 | 10 | 3000×1000×2000 | 1.25 | 7.25 | 5.365 | 3.245 | 2.04 | 20.41 | 2.5 | 20 |
| MBR-1 | 20 | 4000×1500×2000 | 1.92 | 13.92 | 7.165 | 4.145 | 1.14 | 22.87 | 4 | 24 |
| MBR-1.25 | 30 | 5000×1500×2000 | 2.24 | 17.24 | 7.27 | 4.25 | 0.92 | 27.73 | 4 | 27 |
| MBR-1.67 | 40 | 5000×2000×2000 | 2.68 | 22.68 | 7.87 | 4.55 | 0.87 | 34.78 | 4 | 31 |
| MBR-2 | 50 | 6500×2000×2000 | 3.90 | 29.90 | 7.87 | 4.55 | 0.70 | 34.78 | 4 | 40 |
| MBR-2.5 | 60 | 6000×2000×2500 | 4.28 | 34.28 | 7.87 | 4.55 | 0.67 | 40.07 | 4 | 39 |
| MBR-3 | 70 | 6500×2250×2500 | 4.87 | 41.43 | 8.63 | 5.31 | 0.57 | 40.07 | 4 | 43 |
| MBR-3.5 | 80 | 7500×2250×2500 | 5.38 | 47.57 | 10.23 | 6.11 | 0.58 | 46.12 | 4 | 48 |
| MBR-4 | 100 | 9000×2250×2500 | 6.15 | 56.78 | 11.73 | 6.86 | 0.60 | 59.62 | 4 | 53 |
| MBR-5 | 120 | 10000×2250×2700 | 7.34 | 68.09 | 13.73 | 7.86 | 0.76 | 91.58 | 6 | 58 |
| MBR-6 | 150 | 12500×2250×2700 | 8.68 | 84.61 | 18.82 | 11.07 | 0.61 | 91.58 | 6 | 67 |
| MBR-7 | 170 | 10500×3000×2700 | 9.12 | 94.17 | 18.82 | 11.07 | 0.54 | 91.58 | 6 | 71 |
| MBR-8 | 200 | 12500×3000×2700 | 10.35 | 111.60 | 21.02 | 12.57 | 0.51 | 101.26 | 10 | 81 |
| MBR-10 | 250 | 15500×3000×2700 | 13.08 | 138.63 | 26.07 | 15.27 | 0.51 | 127.18 | 10 | 102 |
| MBR-12.5 | 300 | 18500×3000×2700 (in two groups) | 15.37 | 165.22 | 26.25 | 15.45 | 0.45 | 133.63 | 10 | 116 |
| MBR-15 | 360 | 22500×3000×2700 (in two groups) | 17.84 | 200.09 | 34.65 | 20.35 | 0.48 | 171.94 | 16 | 133 |
| MBR-17 | 400 | 25000×3000×2700 (in two groups) | 19.82 | 222.32 | 35.85 | 21.15 | 0.45 | 179.31 | 16 | 145 |
| MBR-20 | 500 | 31000×3000×2700 (in three groups) | 24.41 | 275.51 | 39.45 | 22.95 | 0.36 | 179.31 | 16 | 173 |

Note: The specific dimensions depend on the process and water quality. The parameters in the table are for reference only and are subject to the actual product.

## Equipment Technical Parameters

### First level B standard technical parameters ( Suitable for Zhongqiao boxes and tablets)

| model | Water treatment capacity ($m^3/d$) | outline dimension L x W x H (mm) | weight of equipment (t) | running weight (t) | installed power (kW) | Power consumption (kW) | running expense (Yuan/ton of water) | running expense (CNY/day) | Cable specifications ($mm^2$) | floor space ($m^2$) |
|---|---|---|---|---|---|---|---|---|---|---|
| WSZ-0.25 | 5 | 2500×1000×1500 | 0.97 | 4.72 | 4.08 | 2.41 | 3.20 | 16.01 | 1.5 | 19 |
| WSZ-0.5 | 10 | 2500×1500×2000 | 1.65 | 9.15 | 4.08 | 2.41 | 1.60 | 16.01 | 1.5 | 21 |
| WSZ-1 | 20 | 5000×1500×2000 | 2.50 | 17.50 | 4.08 | 2.41 | 0.92 | 18.47 | 2.5 | 26 |
| WSZ-1.25 | 30 | 5000×2000×2000 | 2.90 | 21.70 | 4.08 | 2.41 | 0.78 | 23.33 | 2.5 | 26 |
| WSZ-1.67 | 40 | 6500×2000×2000 | 4.36 | 30.36 | 4.08 | 2.41 | 0.68 | 27.22 | 2.5 | 31 |
| WSZ-2 | 50 | 6500×2000×2500 | 5.07 | 37.57 | 5.88 | 3.31 | 0.54 | 27.22 | 2.5 | 34 |
| WSZ-2.5 | 60 | 7500×2000×2500 | 5.58 | 43.27 | 5.88 | 3.31 | 0.54 | 32.51 | 4 | 36 |
| WSZ-3 | 70 | 7000×2500×2500 | 6.31 | 51.31 | 6.26 | 3.69 | 0.46 | 32.51 | 4 | 41 |
| WSZ-3.5 | 80 | 8000×2500×2500 | 6.88 | 57.50 | 6.26 | 3.69 | 0.48 | 38.56 | 4 | 45 |
| WSZ-4 | 100 | 10000×2500×2500 | 8.30 | 72.98 | 6.26 | 3.69 | 0.44 | 44.06 | 4 | 52 |
| WSZ-5 | 120 | 11500×2500×2700 | 9.65 | 85.59 | 7.86 | 4.49 | 0.62 | 74.30 | 6 | 60 |
| WSZ-6 | 150 | 12000×3000×2700 | 11.22 | 108.42 | 9.35 | 5.60 | 0.50 | 74.30 | 6 | 72 |
| WSZ-7 | 170 | 16000×2500×2700 (in two groups) | 12.26 | 121.61 | 9.35 | 5.60 | 0.44 | 74.30 | 6 | 77 |
| WSZ-8 | 200 | 20000×2500×2500 (in two groups) | 15.53 | 142.09 | 9.75 | 6.00 | 0.41 | 82.37 | 6 | 91 |
| WSZ-10 | 250 | 24000×2500×2700 (in two groups) | 17.30 | 175.25 | 15.80 | 9.20 | 0.43 | 108.29 | 10 | 110 |
| WSZ-12.5 | 300 | 24000×3000×2700 (in two groups) | 20.05 | 210.40 | 15.80 | 9.20 | 0.36 | 108.29 | 10 | 127 |
| WSZ-15 | 360 | 34500×2500×2700 (in three groups) | 25.11 | 251.91 | 16.50 | 9.90 | 0.41 | 146.59 | 10 | 145 |
| WSZ-17 | 400 | 37500×2500×2700 (in three groups) | 27.24 | 278.34 | 21.70 | 12.70 | 0.37 | 146.59 | 10 | 159 |
| WSZ-20 | 500 | 39000×3000×2700 (in three groups) | 33.71 | 349.61 | 21.70 | 12.70 | 0.29 | 146.59 | 10 | 193 |

Note: The specific dimensions depend on the process and water quality. The parameters in the table are for reference only and are subject to the actual product.

## Technical Features

The Zhongqiao Enlightenment technology team is equipped with process engineers, civil engineers, automation design engineers, mechanical design engineers, etc. They have outsourced various complex structural processes, have a thorough understanding of the design concepts of each design process, and improve and optimize them based on actual operating experience.

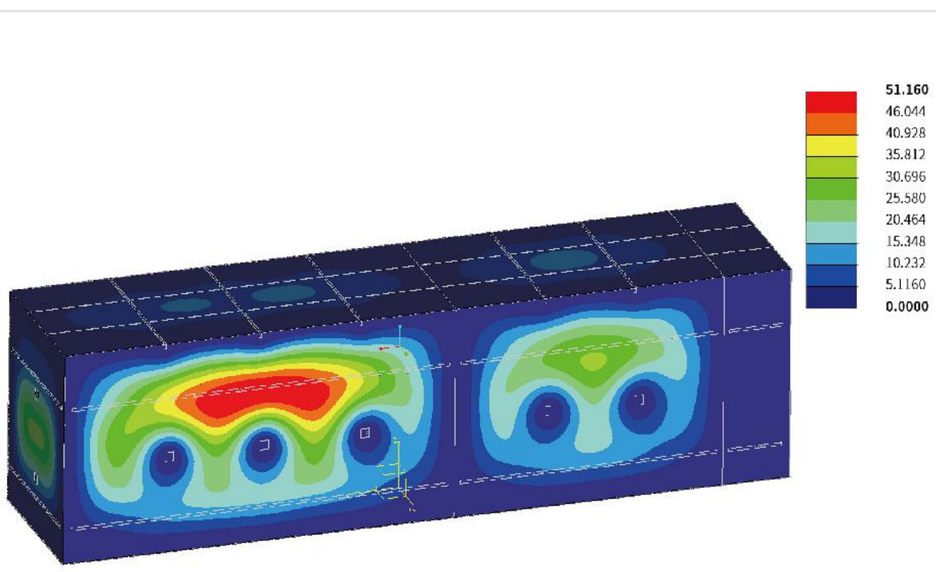
- The three core mode of "A2O+MBBR+efficient sedimentation+deep filtration" ensures stable effluent to the greatest extent possible
- Polyurethane Biocarrier (MBBR), maintenance free, high load,Save investment costs
- 55-60 ° scientific mud hopper design, no sludge accumulation, smooth discharge
- 24-hour continuous automatic operation, no need to stop and backwash
- 12 years of experience accumulation and professional structural design ensure that the equipment is sturdy and reliable, and there is no risk in all working conditions
- Equipped with a fully automatic electrical control system and equipment fault alarm system, it can be remotely controlled to achieve unmanned operation

## Creo mechanical simulation modeling

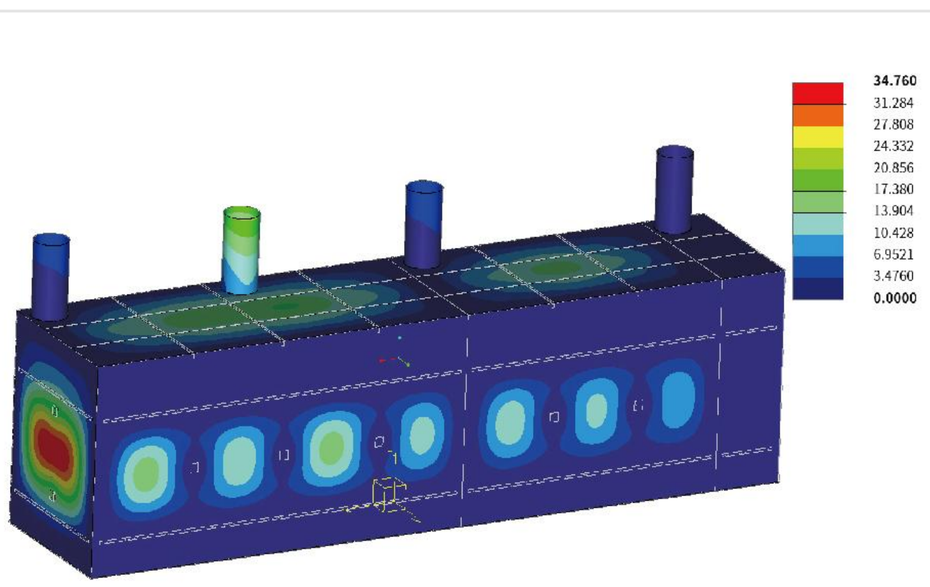
Comprehensive mechanical and dynamic modeling, fully independent design and construction, Zhongqiao Enlightenment leverages years of experience in integrated sewage treatment equipment research and development, production, and sewage plant design processes to optimize our process structure through 3D modeling, mechanical analysis, and fluid dynamics analysis of customer projects.

Creo mechanical simulation software solves complex mechanical pressure bearing practical scenarios and provides scientific and refined analysis of equipment structure. It optimizes design based on user water quality, ensuring high reliability and stability of the equipment.

3D Modeling → Simulation → Mechanical Analysis → structural optimization → Box Structure




Ground mounted equipment




Underground equipment

## Features of the equipment

Capable of treating comprehensive wastewater from living systems and similar organic wastewater

The equipment is equipped with reinforcing ribs inside, Buried at a depth of over 2 meters, it can also be used on the ground

Each device undergoes strict factory inspection, with a low failure rate and no maintenance required

### 01 Scale manufacturing

Our own large-scale bending machine ensures consistent quality of structural components; Manufacturing of pipe bending machines and wire pulling machines to reduce welding failure rates

### 02 Accurate cutting

Laser/shearing machine cutting, precise size, beautiful and smooth appearance, efficient assembly

### 03 Core component

Using high standard accessories and matching motor equipment from top brands, it can operate stably

### 04 Double deodorization

The deodorization method of buried sewage treatment equipment not only uses conventional high-altitude exhaust, but also includes soil deodorization measures.

### 05 Efficient water distribution

Each warehouse is equipped with a dedicated water distribution system, effectively avoiding water flow short circuits. The utilization rate of the pool body is as high as 89.8%, and the utilization rate is increased by 15% -30%

### 06 Stable water output

Each device is equipped with two independent systems for mixed liquid reflux and sludge reflux, which can independently adjust the reflux rate according to the incoming water quality.

The mixed liquid reflux is used for denitrification and denitrification, and the sludge reflux ensures the bacterial count in the tank and meets the effluent standards.

### 07 Micro porous aeration, thorough mixing

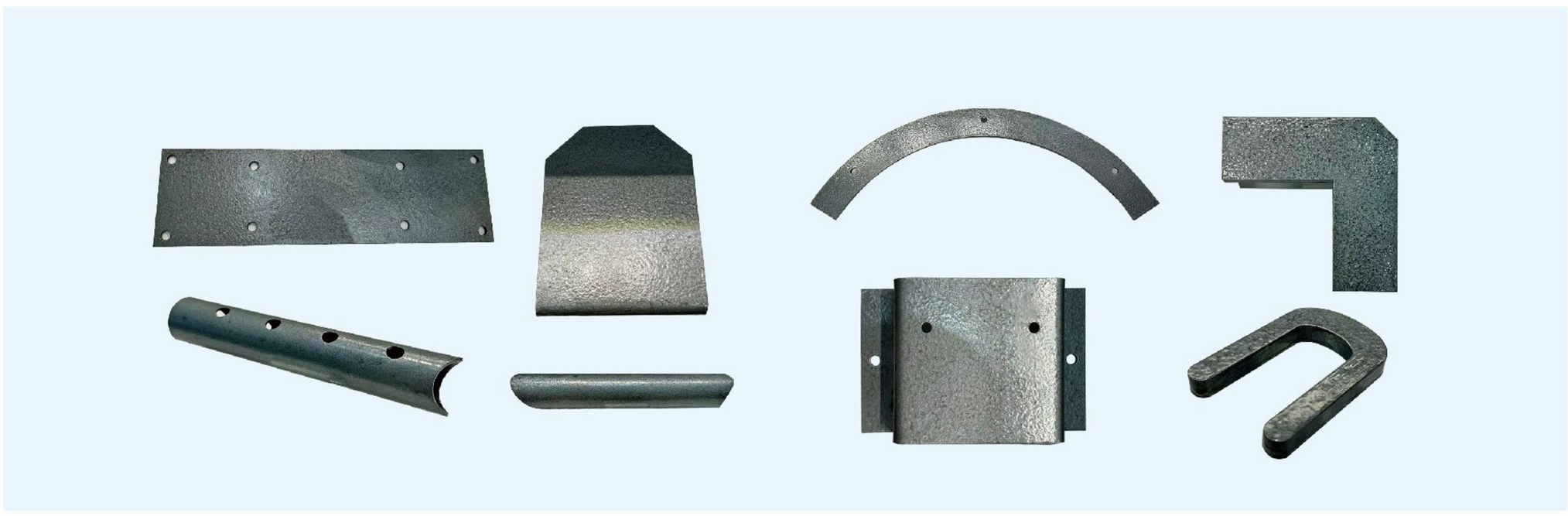
By using a specially designed microporous aeration device, there is no risk of blockage, which can fully mix sewage, activated sludge, and dissolved oxygen, greatly improving the efficiency of oxygen transfer and sludge biochemical activity, and further enhancing the sewage treatment capacity.

### 08 High quality fillers enhance efficiency

The pool is equipped with a new type of composite packing material, which has biological affinity, a large specific surface area, fast microbial biofilm formation, easy detachment, and fast growth with strong activity;

Under the same organic load, the removal rate of organic matter is higher, and it can also improve the solubility of oxygen in water, enhancing the treatment effect.

# Accessories standard parts



Self made reinforced standard components

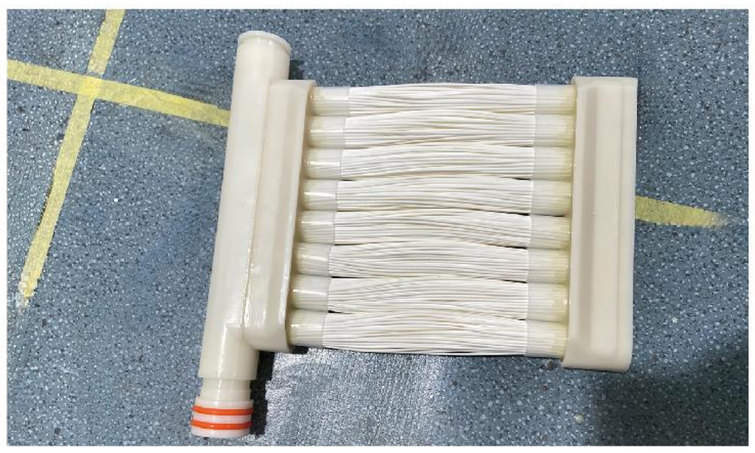


Flat plate aerator socket structure



Galvanized threaded steel filler bracket, as well as fillers with high specific surface area







MBR membrane adopts its own packaging process, and each membrane curtain is designed with a rubber sleeve

## Carbon steel series equipment

# Zhongqiao Box Integrated Sewage Treatment Equipment

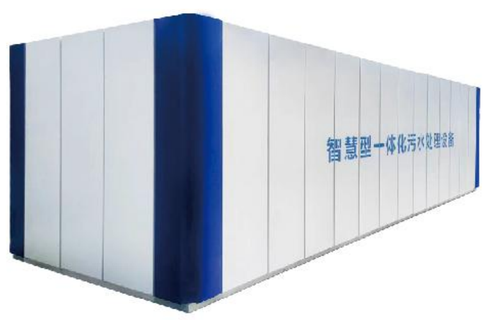



**Zhong Qiao Box 5.0**

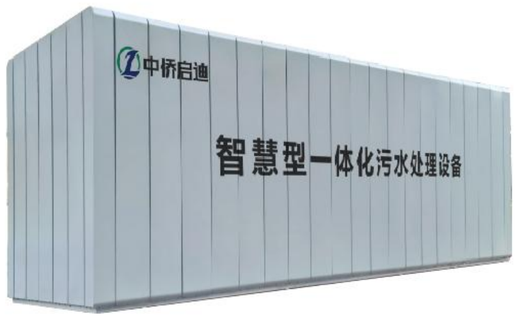
Research and development production in 2024




Zhong Qiao Box 1.0 | 2019




Zhong Qiao Box 2.0 | 2021




Zhong Qiao Box 3.0 | 2022




Zhong Qiao Box 4.0 | 2023

## Introduction

The Zhongqiao Box series products are high-end series equipment customized according to customer needs. They can be customized according to different customer needs and process characteristics for exclusive use and to create corporate IP, highlighting corporate culture and positioning.

## Equipment Composition

It mainly consists of four parts: box body, supporting electromechanical equipment, pipelines and accessories, and control system. It has a high degree of integration and is easy to install and maintain.

# Optional - electric heat tracing temperature control insulation type



Laying electric heating and temperature control tape

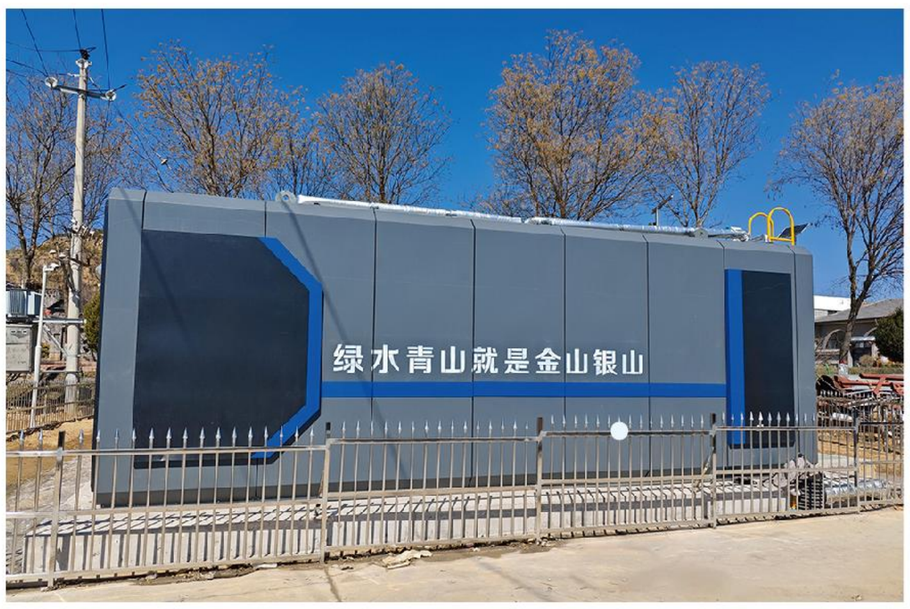


Laying insulation rubber cotton



Laying rubber cotton is completed

## Technical Features

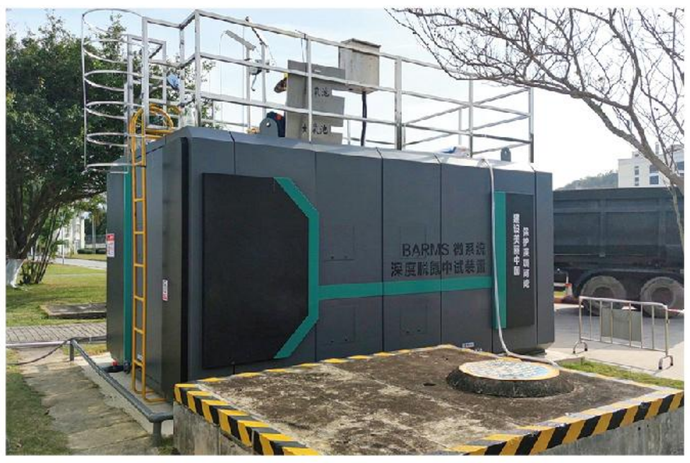



1. The cold plate is formed by CNC bending in one step, and anti-corrosion is achieved by powder electrostatic spraying+200 degree high-temperature melting, leveling, and solidification.

2. It can be used for electric heating and rubber cotton or rock wool insulation to cope with cold weather in the north.

3. Customizable patterns or logos, hand drawn.

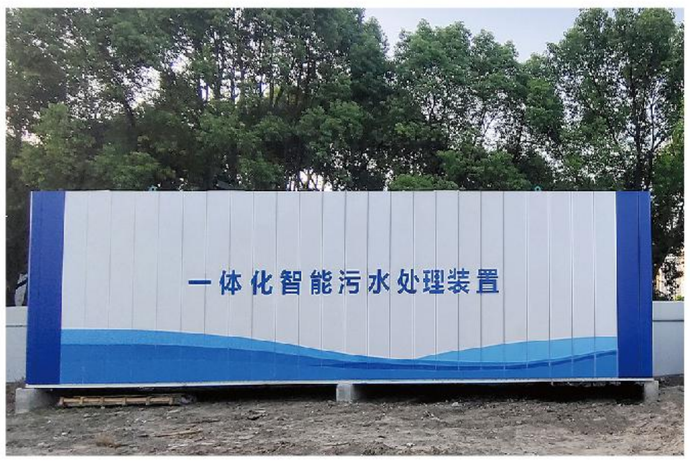













Carbon steel series equipment

# Flat integrated sewage treatment equipment

Patent No.ZL 2021 2 0165796.1




## Introduction

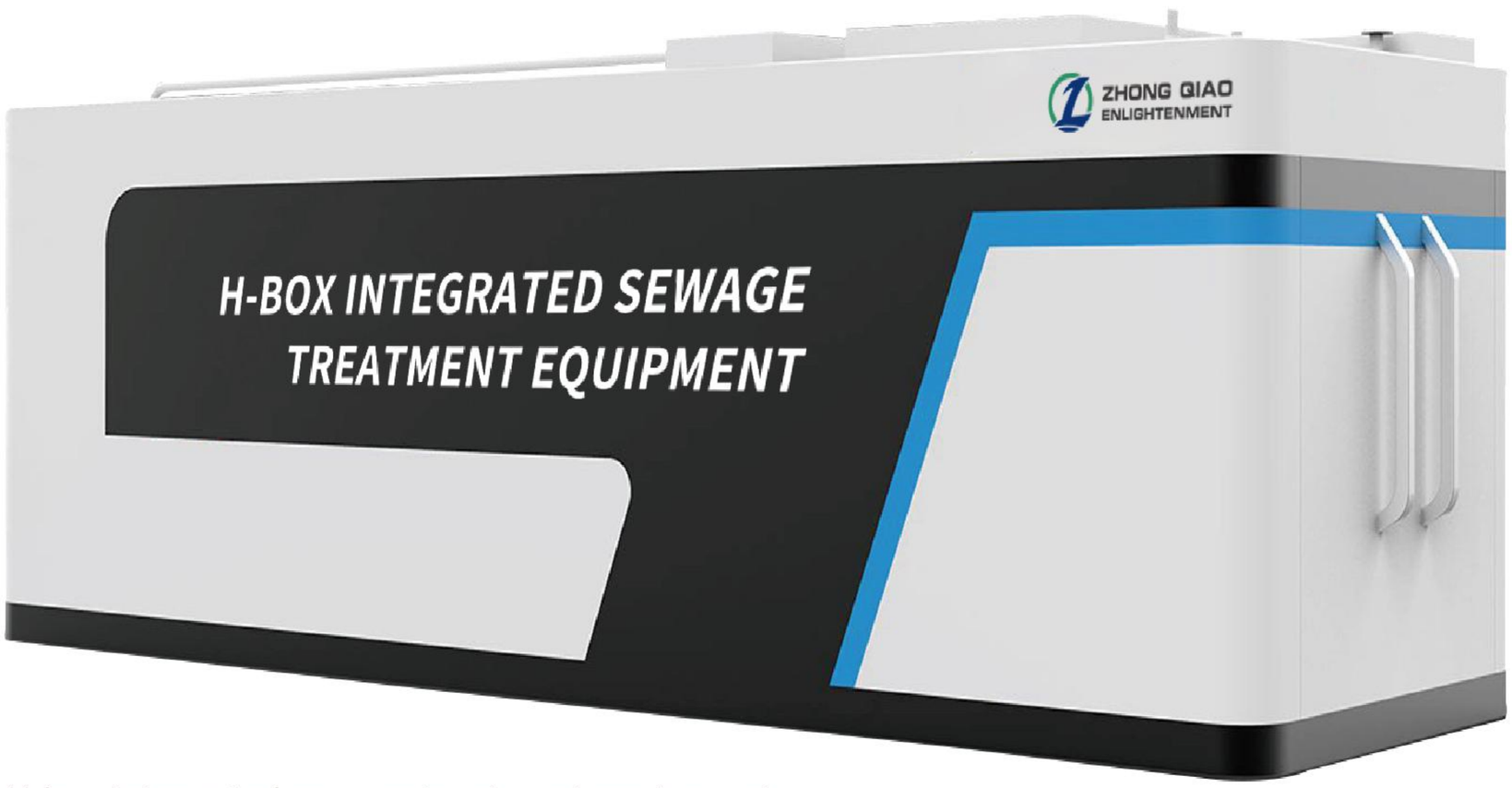
Flat integrated sewage treatment equipment, also known as conventional integrated sewage treatment equipment, has the advantages of high cost-effectiveness, simple production, and short construction period.

Conventional processes include AO, AAO, AO+MBR, AAO+MBR, fiber spinning disc, MBBR and other process combinations. The process, size and burial depth height can be customized. There is also an H-box type flat plate integration, with four corners designed without welding seams, formed as a whole, and good pressure bearing effect.



## Features of the equipment

- Capable of treating comprehensive wastewater from living systems and similar organic wastewater.
- The equipment is equipped with reinforcing ribs inside, with a burial depth of more than 2 meters. The surface above the equipment can be used for greening or other purposes, without the need for building houses, heating, or insulation.
- The deodorization method of buried sewage treatment equipment not only uses conventional high-altitude exhaust, but also includes soil deodorization measures.
- Each device is equipped with two systems: mixed liquid reflux and sludge reflux. The reflux rate can be adjusted independently according to changes in water quality. Denitrification is achieved through mixed liquid reflux, while sludge reflux ensures the number of bacterial strains and stable operation.




H-box integrated sewage treatment equipment

Design Patent Number:202230504688.2

















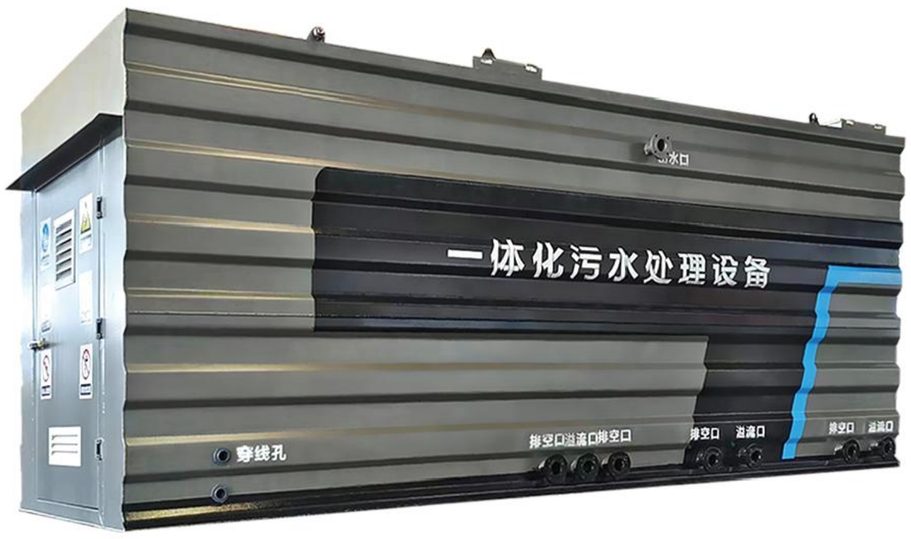

## Carbon steel series equipment

# Container integrated sewage treatment equipment

Patent No.ZL 2019 2 2488596.5




Container (vertical corrugated)




Container (horizontal corrugated)

## Introduction

Container integrated sewage treatment equipment, also known as corrugated board integrated sewage treatment equipment, refers to equipment whose external steel plates are all made of corrugated board, which has the characteristics of stylish and exquisite appearance, high strength, etc. **Our company has a 10mm tile press**, which can be used for vertical and horizontal corrugated container type.

# Technical Features



The appearance relies on corrugated board, which has the characteristics of beauty and high strength



The size is not limited to the standard container size and can be customized with flexible methods



Processing units can be designed as single or multiple groups, and can be customized according to site conditions



Unrestricted by process limitations, multiple processes such as AO, A2O, AO+MBR, MBBR, etc. can be used

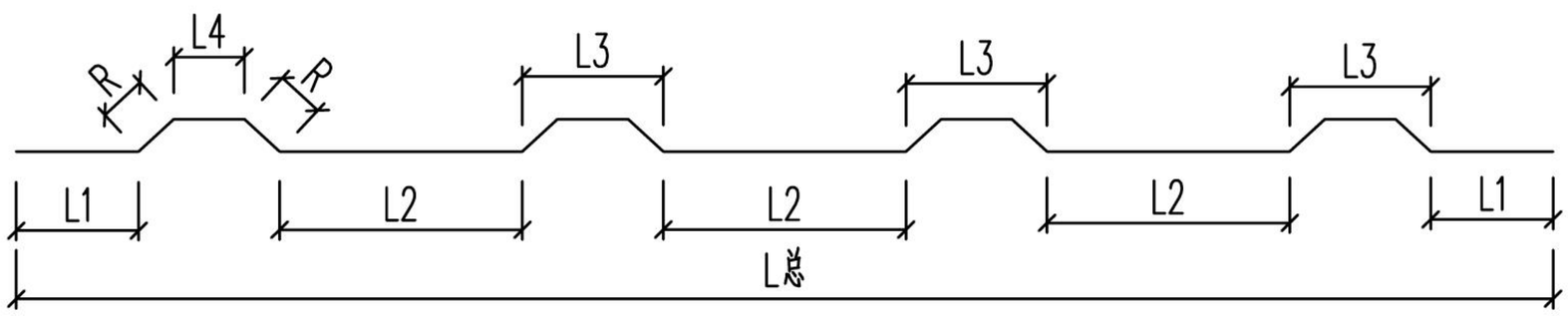



It can be buried underground or above ground




Can choose whether to bring equipment room/regulating pool

## Corrugated board diagram



## Equipment Technical Parameters

### First level A standard technical parameters (Applicable to containers)

| model | Water treatment capacity ($m^3/d$) | outline dimension L x W x H (mm) | weight of equipment (t) | running weight (t) | installed power (kW) | Power consumption (kW) | running expense (Yuan/ton of water) | running expense (CNY/day) | Cable specifications ($mm^2$) | floor space ($m^2$) |
|---|---|---|---|---|---|---|---|---|---|---|
| MBR-0.25 | 5 | 2720×1090×2160 | 1.18 | 7.58 | 5.365 | 3.245 | 4.08 | 20.41 | 2.5 | 19.38 |
| MBR-0.5 | 10 | 3440×1090×2160 | 1.35 | 9.45 | 5.365 | 3.245 | 2.04 | 20.41 | 2.5 | 20.75 |
| MBR-1 | 20 | 3890×1610×2160 | 1.83 | 15.36 | 7.165 | 4.145 | 1.14 | 22.87 | 4 | 24.26 |
| MBR-1.25 | 30 | 5340×1610×2160 | 2.23 | 20.80 | 7.27 | 4.25 | 0.92 | 27.73 | 4 | 28.10 |
| MBR-1.67 | 40 | 4910×2040×2160 | 2.45 | 24.09 | 7.87 | 4.55 | 0.87 | 34.78 | 4 | 31.02 |
| MBR-2 | 50 | 6360×2040×2160 | 3.55 | 31.57 | 7.87 | 4.55 | 0.70 | 34.78 | 4 | 39.97 |
| MBR-2.5 | 60 | 6360×2040×2660 | 4.05 | 38.56 | 7.87 | 4.55 | 0.67 | 40.07 | 4 | 39.97 |
| MBR-3 | 70 | 7090×2040×2660 | 4.36 | 42.83 | 8.63 | 5.31 | 0.57 | 40.07 | 4 | 42.84 |
| MBR-3.5 | 80 | 6890×2540×2660 | 4.91 | 51.46 | 10.23 | 6.11 | 0.58 | 46.12 | 4 | 48.63 |
| MBR-4 | 100 | 8340×2540×2660 | 5.60 | 61.95 | 11.73 | 6.86 | 0.60 | 59.62 | 4 | 53.93 |
| MBR-5 | 120 | 9060×2540×2860 | 6.21 | 72.03 | 13.73 | 7.86 | 0.76 | 91.58 | 6 | 58.51 |
| MBR-6 | 150 | 11230×2540×2860 | 7.62 | 89.20 | 18.82 | 11.07 | 0.61 | 91.58 | 6 | 67.40 |
| MBR-7 | 170 | 10510×2930×2860 | 8.04 | 96.11 | 18.82 | 11.07 | 0.54 | 91.58 | 6 | 70.29 |
| MBR-8 | 200 | 12680×2930×2860 | 9.19 | 115.45 | 21.02 | 12.57 | 0.51 | 101.26 | 10 | 80.65 |
| MBR-10 | 250 | 15580×2930×2860 | 11.16 | 141.72 | 26.07 | 15.27 | 0.51 | 127.18 | 10 | 101.15 |
| MBR-12.5 | 300 | 9780×2930×2860 (in two groups) | 14.49 | 178.40 | 26.25 | 15.45 | 0.45 | 133.63 | 10 | 117.81 |
| MBR-15 | 360 | 11230×2930×2860 (in two groups) | 16.02 | 204.23 | 34.65 | 20.35 | 0.48 | 171.94 | 16 | 131.31 |
| MBR-17 | 400 | 12680×2930×2860 (in two groups) | 17.56 | 230.07 | 35.85 | 21.15 | 0.45 | 179.31 | 16 | 144.30 |
| MBR-20 | 500 | 15580×2930×2860 (in two groups) | 21.45 | 282.56 | 39.45 | 22.95 | 0.36 | 179.31 | 16 | 171.30 |

Note: The specific dimensions depend on the process and water quality. The parameters in the table are for reference only and are subject to the actual product.

# Equipment Technical Parameters

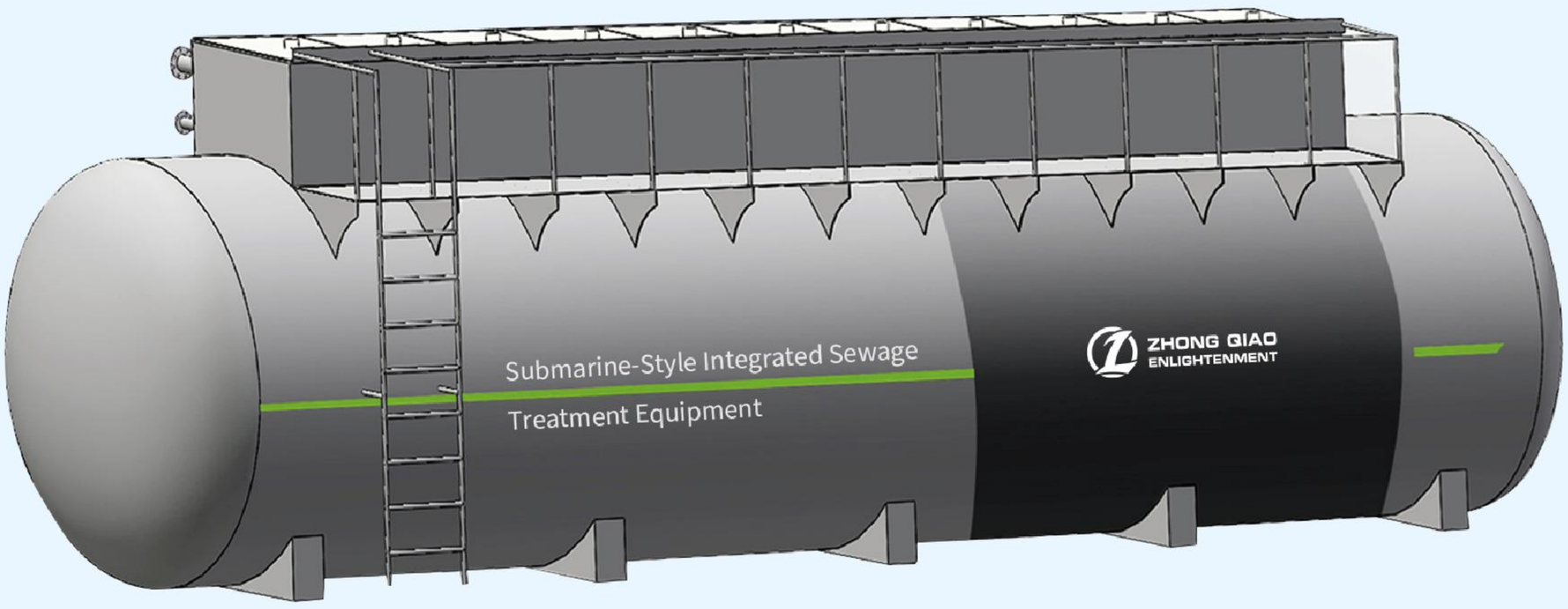
## First level B standard technical parameters (Applicable to containers)

| model | Water treatment capacity ($m^3/d$) | outline dimension L x W x H (mm) | weight of equipment (t) | running weight (t) | installed power (kW) | Power consumption (kW) | running expense (Yuan/ton of water) | running expense (CNY/day) | Cable specifications ($mm^2$) | floor space ($m^2$) |
|---|---|---|---|---|---|---|---|---|---|---|
| WSZ-0.25 | 5 | 2340x1200x1660 | 1.33 | 5.32 | 4.08 | 2.41 | 3.20 | 16.01 | 1.5 | 18 |
| WSZ-0.5 | 10 | 2350x1518x2160 | 1.72 | 9.42 | 4.08 | 2.41 | 1.60 | 16.01 | 1.5 | 21 |
| WSZ-1 | 20 | 4831x1518x2160 | 2.61 | 18.44 | 4.08 | 2.41 | 0.92 | 18.47 | 2.5 | 25 |
| WSZ-1.25 | 30 | 4705x2030x2160 | 3.09 | 23.70 | 4.08 | 2.41 | 0.78 | 23.33 | 2.5 | 29 |
| WSZ-1.67 | 40 | 6125x2030x2160 | 3.68 | 30.53 | 4.08 | 2.41 | 0.68 | 27.22 | 2.5 | 33 |
| WSZ-2 | 50 | 6125x2030x2660 | 4.25 | 37.32 | 5.88 | 3.31 | 0.54 | 27.22 | 2.5 | 39 |
| WSZ-2.5 | 60 | 6596x2262x2660 | 4.78 | 44.47 | 5.88 | 3.31 | 0.54 | 32.51 | 4 | 42 |
| WSZ-3 | 70 | 7659x2262x2660 | 5.30 | 51.38 | 6.26 | 3.69 | 0.46 | 32.51 | 4 | 46 |
| WSZ-3.5 | 80 | 8722x2262x2660 | 5.81 | 58.29 | 6.26 | 3.69 | 0.48 | 38.56 | 4 | 50 |
| WSZ-4 | 100 | 10850x2262x2660 | 6.85 | 72.14 | 6.26 | 3.69 | 0.44 | 44.06 | 4 | 57 |
| WSZ-5 | 120 | 12975x2262x2660 | 8.16 | 86.23 | 7.86 | 4.49 | 0.62 | 74.30 | 6 | 64 |
| WSZ-6 | 150 | 11215x3060x2860 | 9.30 | 107.45 | 9.35 | 5.60 | 0.50 | 74.30 | 6 | 73 |
| WSZ-7 | 170 | 12631x3060x2860 | 10.15 | 120.69 | 9.35 | 5.60 | 0.44 | 74.30 | 6 | 78 |
| WSZ-8 | 200 | 15469x3060x2860 | 15.72 | 146.29 | 9.75 | 6.00 | 0.41 | 82.37 | 6 | 92 |
| WSZ-10 | 250 | 18884x3060x2860 (in two groups) | 17.71 | 182.98 | 15.80 | 9.20 | 0.43 | 108.29 | 10 | 113 |
| WSZ-12.5 | 300 | 22426x3060x2860 (in two groups) | 20.25 | 216.51 | 15.80 | 9.20 | 0.36 | 108.29 | 10 | 129 |
| WSZ-15 | 360 | 26682x3060x2860 (in two groups) | 25.38 | 258.89 | 16.50 | 9.90 | 0.41 | 146.59 | 10 | 147 |
| WSZ-17 | 400 | 30450x3060x2860 (in three groups) | 28.13 | 294.61 | 21.70 | 12.70 | 0.37 | 146.59 | 10 | 163 |
| WSZ-20 | 500 | 36834x3060x2860 (in three groups) | 33.74 | 356.09 | 21.70 | 12.70 | 0.29 | 146.59 | 10 | 193 |

Note: The specific dimensions depend on the process and water quality. The parameters in the table are for reference only and are subject to the actual product.

Carbon steel series equipment

# Submarine style integrated sewage treatment equipment




## Introduction

The MBBR+MBR process is the main process, and other processes can also be customized. The equipment room is located directly above the equipment, saving space and making operation convenient.

## Application field

Suitable for the treatment and reuse of domestic sewage projects such as residential communities, villages, towns, office buildings, shopping malls, hotels, restaurants, nursing homes, government agencies, schools, hospitals, highways, railways, factories, mines, tourist attractions, as well as organic wastewater from small and medium-sized industries such as slaughter, aquatic product processing, and food.



# Technical Features

## Durable and sturdy structure

The tank has high rigidity, strength, long service life, and excellent burial performance

## Convenient transportation and installation

Reasonable product size design, convenient for rural lifting and transportation

## Can be equipped with anti floating tape

Optional adjustable metal fixing straps for easy anti floating installation, suitable for buried structures and projects with high groundwater levels

## Save construction costs

Standard equipment room, no need for earth construction spare room, saving time and cost

## Flexible placement method

Flexible and versatile placement methods, with multiple options including above ground, underground, and semi underground

## Intelligent remote control

Smart Internet of Things "control can achieve unmanned operation, real-time online connection between mobile apps and computer web, and timely feedback of data and faults



















Carbon steel series equipment

# Assembled integrated sewage treatment equipment



## core technology




The assembled integrated sewage treatment equipment is a type of sewage treatment equipment independently developed by our company, which is structurally modular and has modular treatment units. Using stainless steel or carbon steel, it can be combined with various processes and has a long service life. Its unique mechanical structure can make the steel plate of the water tank reach more than three times the strength of conventional structures.

At the same time, due to the use of modular design, the water plant occupies about 60% less land than traditional water plants, and can achieve prefabricated production in the factory, effectively reducing the amount of assembly work on the construction site, thereby greatly enhancing the stability and reliability of the product.

## Integrated structure

Traditional sewage treatment plants, due to their technological requirements and structural limitations, have relatively independent structures, resulting in high costs and large land occupation.

Our company relies on more than ten years of water treatment experience to develop integrated structural units, integrating water plants into 3-4 units including pretreatment, biochemistry and sedimentation, and post-treatment, significantly saving land, accelerating construction, and reducing operating costs.

energy saving

low-carbon

convenient

environment protection



**Material Selection** Carbon steel, 304 stainless steel

## Application scenarios

1. Large scale sewage treatment plants with shorter construction period requirements

2. Emergency sewage treatment plant

3. Special location sewage treatment plants (such as near residential areas, complete sets of equipment cannot enter due to space constraints)

4. Expansion and upgrading of sewage treatment plants

## Product advantages

**Save 60% of floor area**

Due to the modular structure design that conforms to fluid mechanics characteristics, highly integrated equipment, special water, gas, and sludge distribution structures, and the use of microbial bacteria, the efficiency is significantly improved, and the footprint is saved by about 60% compared to traditional sewage treatment plants.

**80% reduction in construction period**

Due to the prefabrication of various standard modules on the factory CNC assembly line, high efficiency and on-site assembly save about 80% of the construction period.

**Save investment by 30%**

A 50000 ton/day sewage treatment plant saves over 30% of investment.

**90% reduction in civil engineering projects**

Due to a reduction of over 90% in the amount of civil engineering work during the construction process, the generation of pollution sources such as dust, noise, sewage, earthwork, and construction waste has been greatly reduced.

**Reduce the design workload by 80%**

Due to the standard modular design of the boxes, the design institute only needs to design the overall layout, inlet pump room, and a small amount of reinforced concrete structure when designing the sewage treatment plant. The design workload will be reduced by more than 80%, which is fast and convenient.

Carbon steel series equipment

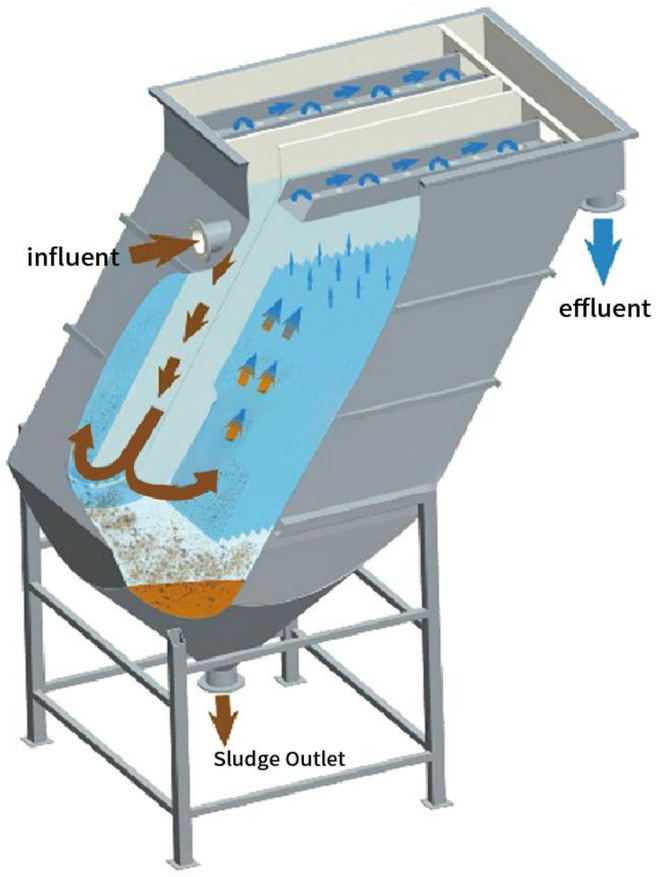
# Lamella sedimentation tank



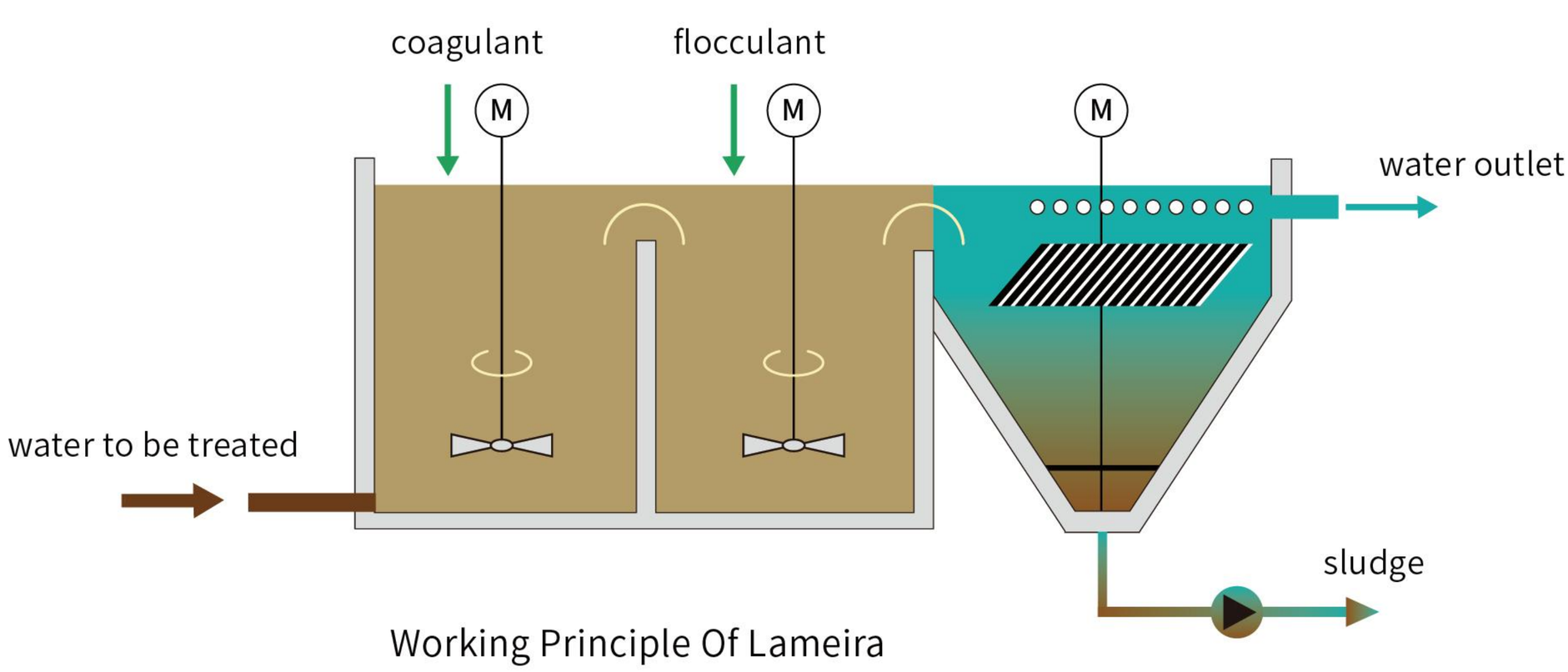
## Introduction

Lameila is a new type of high-efficiency water purification and clarification technology, featuring rapid sedimentation characteristics, mainly used to remove solids and particulate matter from water bodies.

It has been widely applied in solid-liquid separation processes such as raw water clarification, wastewater treatment, and sludge thickening. This technology demonstrates more significant advantages under conditions with higher suspended solids concentration, enabling efficient sedimentation of all solids within a specified timeframe. The separation process is straightforward and economical.



| Comparative items | Lanmeila Sedimentation Pond | Conventional inclined tube sedimentation tank |
|---|---|---|
| Structural form | Parallel inclined plate structure, plate spacing 50–100mm, inclination angle 50°–60° | Honeycomb hexagonal / rectangular tubular components, pipe diameter 25–50mm, inclination angle 60° |
| Hydraulic conditions | Laminar flow of water, Reynolds number <200, Froude number $10^{-3}$~$10^{-1}$ | Smaller hydraulic radius, Reynolds number ＜200, more stable flow, Froude number $10^{-3}$~$10^{-4}$ |
| Processing Efficiency | Surface load is 2–4 times that of traditional sedimentation tanks, treatment capacity is 9–25 times that of horizontal flow tanks, sedimentation efficiency is 3–5 times that of inclined tube tanks, flow rate can be increased by 15%–35% | Surface load 3–5 $m^3/(m^2 \cdot h)$, removal rate of particles above 10 μm 90%, retention time 15–30min |
| Shock Resistance and Adaptability | Stronger resistance to shock load, suitable for high load scenarios | Stronger adaptability to raw water with high turbidity |
| Space Occupation and Installation | Modular design, occupying only 1/25 of the area of a horizontal flow sedimentation tank | Higher installation space requirements |
| Maintenance Characteristics | Equipped with online backwashing system, can be cleaned without stopping the water supply, sludge discharge system is optimized, not prone to blockage | Structurally dense, prone to silt accumulation, requires regular cleaning, maintenance costs are high |
| Investment and Operation | Material costs are 20%–30% higher, operating costs are low | Less material consumption, low initial investment |
| Application Scenarios | Limited space, sewage treatment upgrades, oil-containing / fibrous impurity wastewater (e.g., papermaking) | Low flow rate, high turbidity water treatment (e.g., Yellow River water purification) |




Working Principle Of Lameira







## Carbon steel series equipment

# Small scale hospital sewage treatment equipment

Patent Number: ZL 201922488795.6




## Introduction

The wastewater from small clinics, dental hospitals, beauty salons, and other institutions is highly hazardous: the water quality not only contains a large number of pathogenic pathogens such as bacteria, viruses, and insect eggs, but also contains chemical agents and radioactive isotopes, and has multiple characteristics such as space pollution, acute infection, and latent infection.

In response to the above characteristics of sewage, the WSZX series medical sewage treatment equipment has emerged. At present, this series of small-scale sewage treatment equipment has been widely used in medical institutions in multiple provinces, cities, and towns across the country, and has received unanimous praise from customers.



## Scope of Application



Sewage treatment for small comprehensive medical institutions and all other medical institutions



Suitable for small and medium-sized medical clinics with tight housing supply, dental clinics, hospital outpatient clinics, beauty salons, etc



Laboratory specific sewage treatment equipment

## Equipment process

**Medical wastewater**
Wastewater is collected and pumped or flows automatically to small-scale hospital sewage treatment equipment

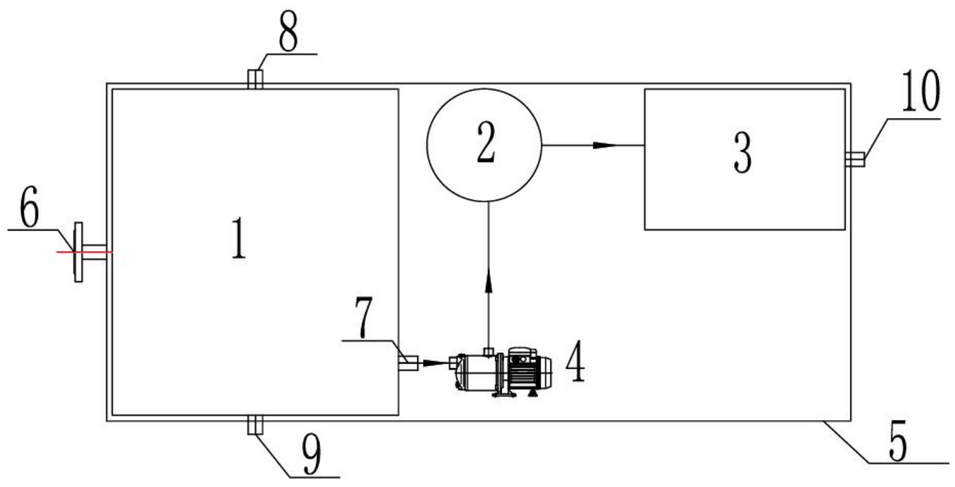
**Biochemistry**
After being filtered by cotton, it undergoes biochemical treatment

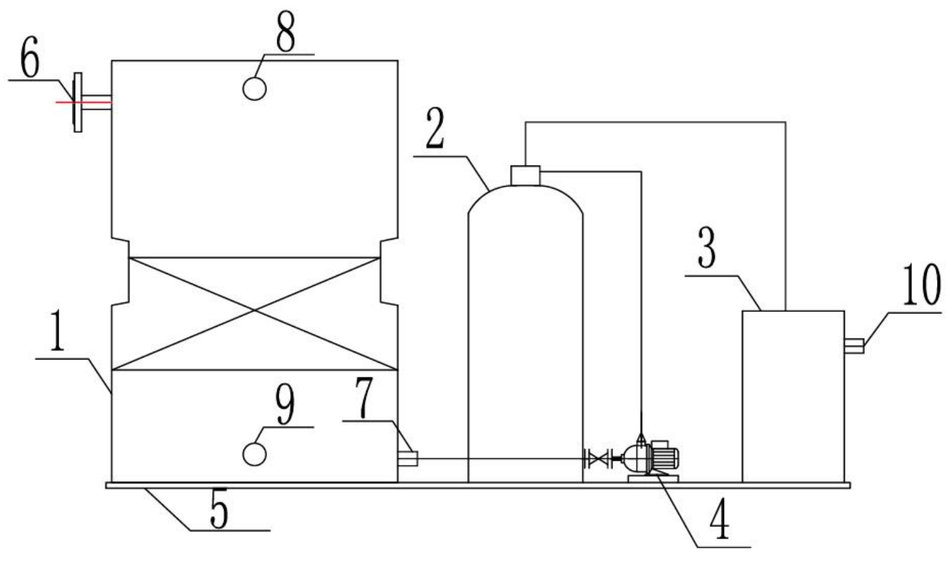
**Filter**
Pump in filter or column MBR membrane

**Disinfect**
Flow through disinfection equipment for disinfection

**Emission**
After treatment, the sewage meets the standard for discharge

This type of wastewater treatment first removes impurities from the water through a filter screen, and then disinfects the wastewater. Based on past engineering experience and the regulations in the discharge standards for such water pollutants, filtration and disinfection are used to purify the sewage. The process route of this sewage treatment project is as follows:




1 - Biochemical warehouse 2 - Filter tank/MBR membrane 3 - Disinfection chamber 4 - Suction pump 5 - Base
6 - Water inlet 7 - Suction port 8 - Overflow port 9 - Exhaust port 10 - Water outlet

## Features of the equipment

Compact structure, small footprint, easy installation, and convenient mobility

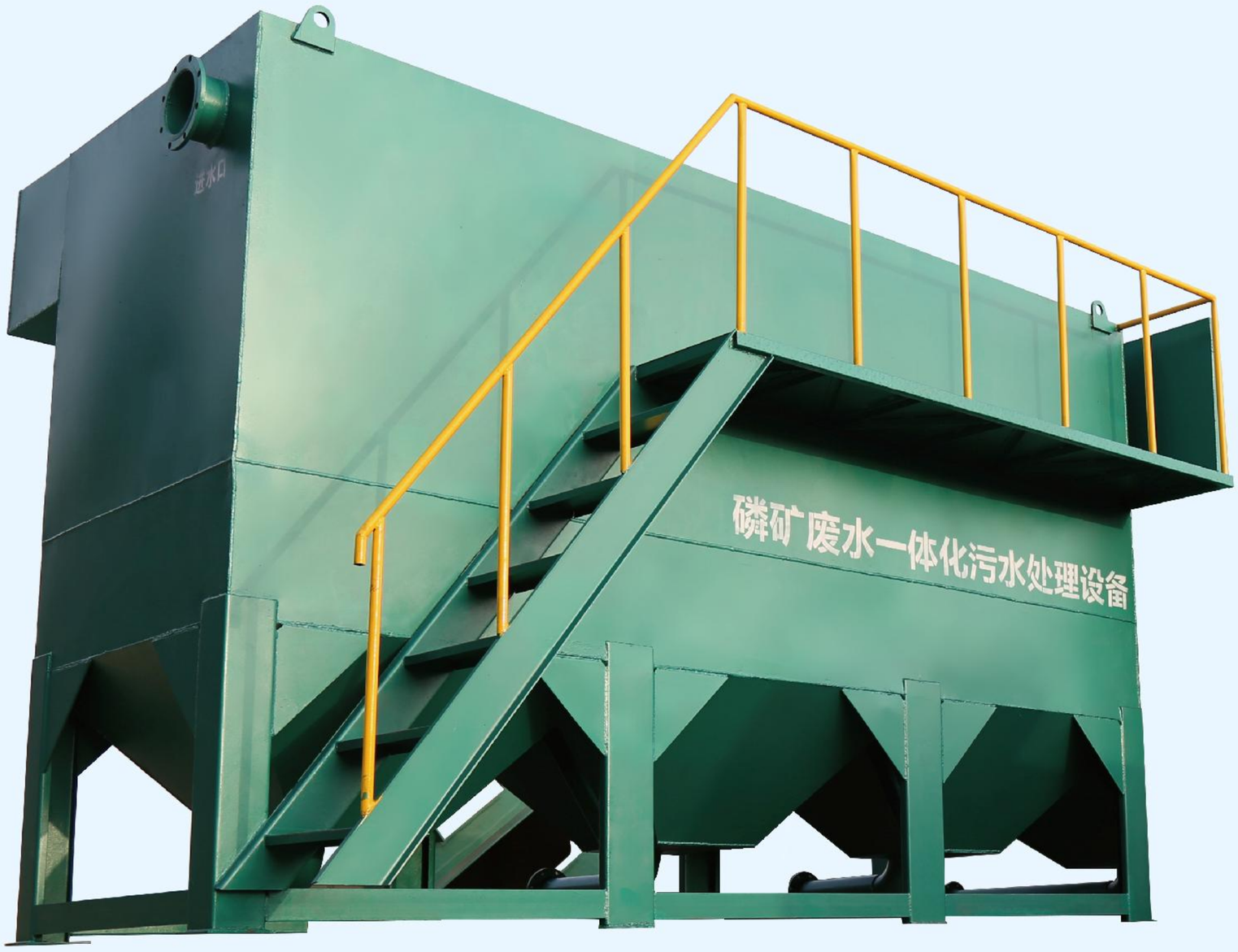
Automatic operation, simple operation, and no need for dedicated personnel to manage the entire systemi

The system processing effect is stable and reliable

The sterilization rate of the slow-release sterilizer reaches 99%, and the disinfection is thorough

Carbon steel series equipment

# inclined tube settling tank




## Introduction

The inclined tube (plate) sedimentation tank is an efficient combination sedimentation tank designed based on the theory of shallow tank sedimentation, also known as a shallow tank sedimentation tank.

Set up many dense inclined pipes or plates in the settling area to allow suspended impurities in the water to settle in the inclined pipes or plates. The water rises and flows along the inclined pipes or plates, and the separated sludge slides down along the inclined pipes (plates) under the action of gravity to the bottom of the pool and is then discharged in a concentrated manner.

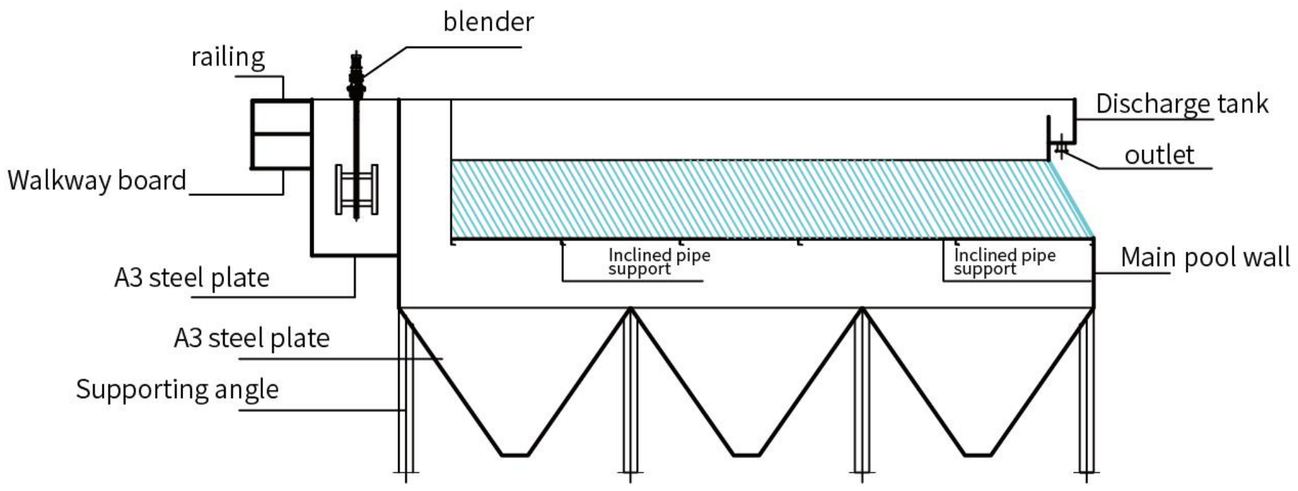


## Features of the equipment

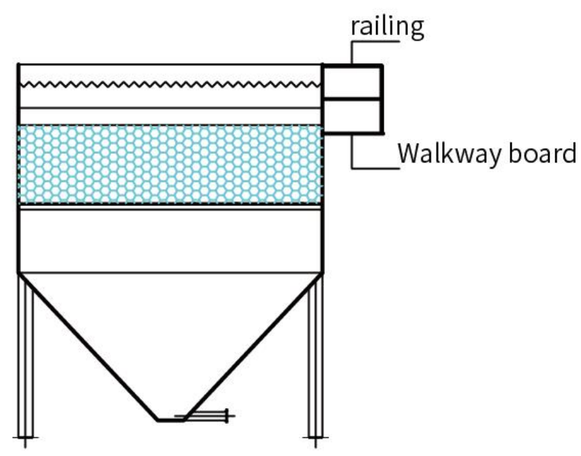
This structure can improve precipitation efficiency by 50-60% and increase processing capacity by 2-4 times on the same area. According to the experimental data of the original wastewater, inclined tube sedimenters with different flow rates can be designed, and coagulants are generally added during use.

## Structure and principle

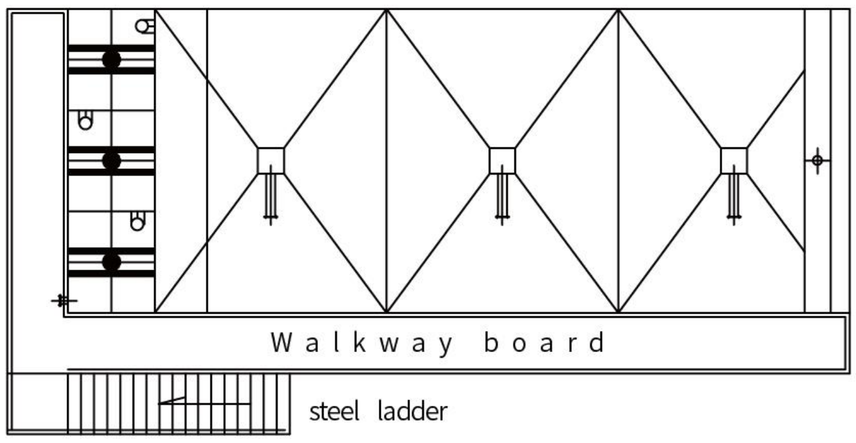
The inclined tube sedimentation purification method is to install inclined tube components with a tilt angle of 60 degrees above the sludge suspension layer, so that suspended solids, solids or flocs formed by adding coagulants in the raw water can aggregate into a thin sludge layer on the bottom surface of the inclined tube, slide back to the sludge suspension layer by gravity, and then sink into the sludge collection hopper. The sludge is discharged into the sludge tank through the discharge pipe for further treatment or comprehensive utilization, and the supernatant gradually rises to the clean water area for discharge, which can be directly discharged or reused.



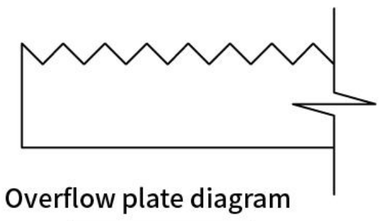

Elevation view of inclined plate sedimentation tank




Side view of inclined plate sedimentation tank




Flat plate diagram of inclined plate sedimentation tank



Overflow plate diagram

## Technical Specifications

| outline dimension Length x Width x Height (mm) | Water treatment capacity ($m^3$/d) | weight of equipment (t) | running weight (t) |
|---|---|---|---|
| 3500×1500×2700 | 5 | 2.8 | 8 |
| 4600×1700×2700 | 10 | 3.3 | 13 |
| 6000×1700×2700 | 15 | 3.8 | 18 |
| 6500×2000×2700 | 20 | 4.2 | 25 |
| 6700×2000×3000 | 25 | 5 | 31 |
| 6900×2000×3000 | 30 | 6 | 37 |
| 8200×2200×3000 | 40 | 6.8 | 48 |
| 9800×2200×3000 | 50 | 8.1 | 60 |

Note: The specific dimensions depend on the process and water quality. The parameters in the table are for reference only and are subject to the actual product.

PP Series Equipment

# PP series integrated sewage treatment equipment




- **Main color** The main color is beige, and customizable colors are available
- **Equipment structure** Can be divided into solid wall structure/hollow structure

## Introduction

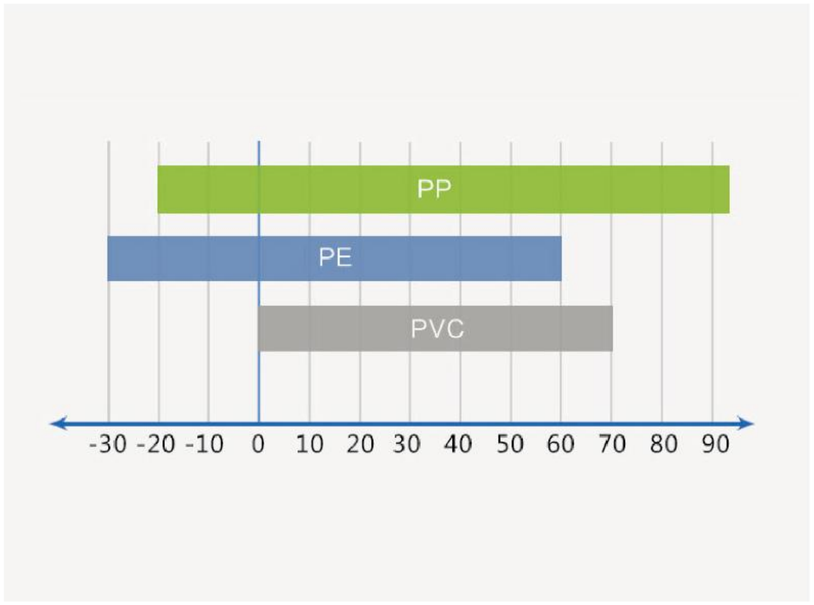
PP series integrated sewage treatment equipment, also known as new material integrated sewage treatment equipment, is made of polymer materials. This device is produced through the mold winding integrated molding process, therefore it is presented in the form of a tank.

The internal partition of the tank adopts fully automatic welding technology to ensure precise and reliable connection; The two side heads are injection molded together to further ensure the stability and durability of the overall structure.

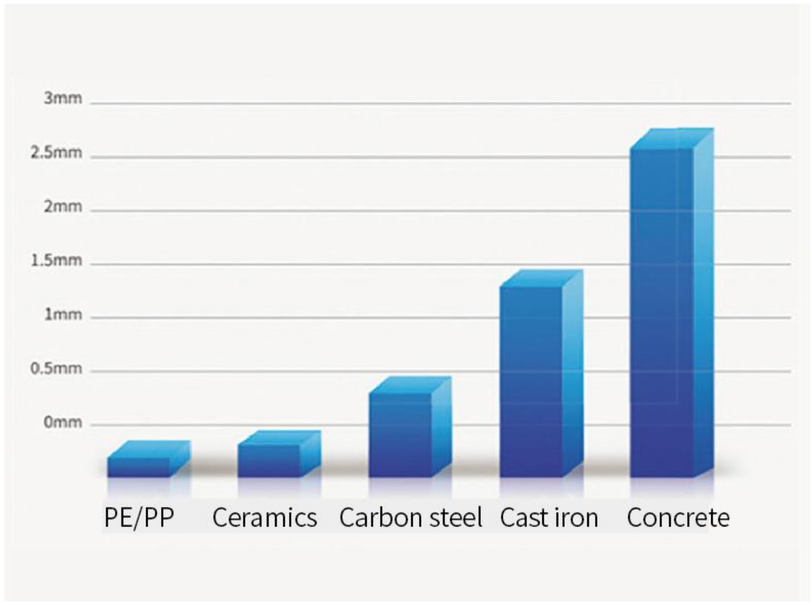


## Raw materials

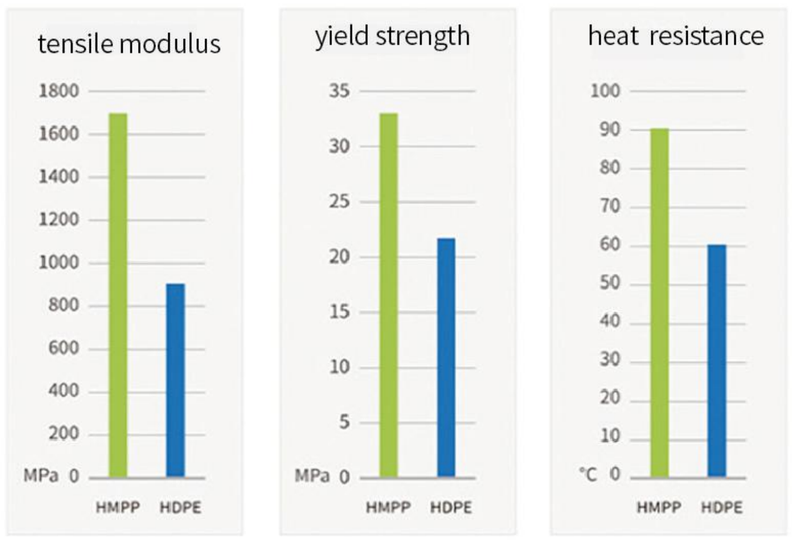
High modulus polypropylene is selected as the winding material for raw materials, which is an ideal choice for plastic materials used in underground drainage, sewage treatment, and wastewater treatment. Its elastic modulus is ⩾ 1500MPA, which is higher than the 800MPA of HDPE. The elastic modulus determines the product ring stiffness, and the higher the elastic modulus, the higher the product ring stiffness.



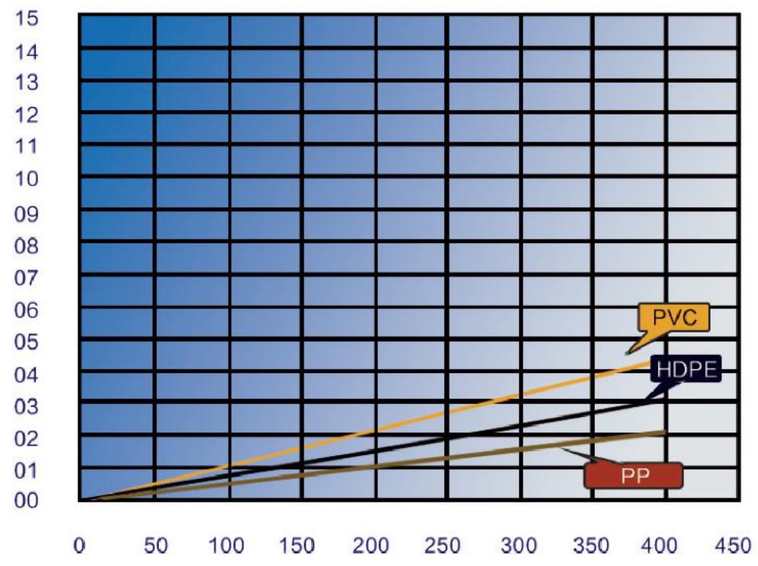

Temperature resistance | PP is superior to HDPE and PVC in high temperature resistance




Inner wall roughness




PP is superior to HDPE in terms of tensile modulus, yield strength, and temperature resistance




Corrosion resistance: PP>HDPE>PVC

Polypropylene itself is a non-toxic, odorless, and tasteless milky white high crystalline polymer with a density of only 0.90-0.91g/cm $^3$, making it one of the lighter density varieties among all plastics currently available; It has extremely strong stability to water, with a water absorption rate of only 0.01%, good molding performance, and high surface glossiness of the products made.

In addition, polypropylene has better strength, stiffness, hardness, and heat resistance than low-pressure polyethylene, and can be used stably in environments around 100 °C. It also has good dielectric properties and high-frequency insulation, and its insulation effect is not affected by humidity. It has little effect on common organic solvents such as acids and alkalis, and is not only suitable for drainage and sewage scenarios, but can also be used to make tableware.

Good chemical stability, stable to other chemical reagents except concentrated sulfuric acid and concentrated nitric acid; Suitable for manufacturing chemical equipment and accessories, with good anti-corrosion effect.

## production process

The new material integrated sewage treatment equipment adopts a one-time molding and multiple winding production process, with a wall thickness of 10-80mm. Multiple winding refers to the process of winding the bottom layer of the tank body, and after sufficient air cooling, the crystallization of the bottom layer material is completed, and the internal material is fully stress released. Then, the bottom layer surface is heated for the next layer of winding. The number of winding times varies according to the different thicknesses of the tank body joints.

The high modulus polypropylene ring has high stiffness and elastic modulus up to 1850MPa. The winding structure wall and inner wall are reasonably combined, and the structure is scientifically reasonable with good sealing performance and zero leakage.

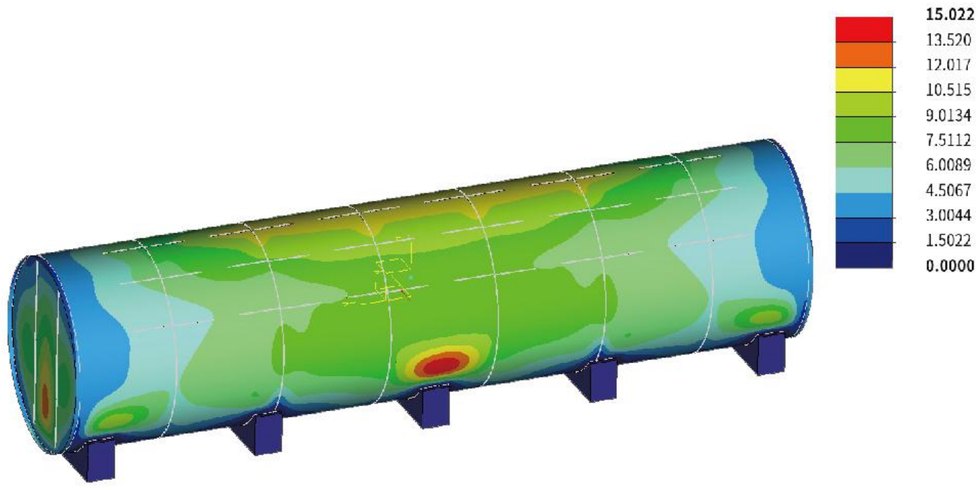


Adopting the hot state winding molding process, the quality of the fusion joint is high, and the socket and plug have integrated electric welding joints. Electric fusion welding is used to form a closed plastic pipeline system, preventing any harmful substances from entering the soil and causing pollution. We not only focus on cleanliness above ground, but also on environmental protection underground.

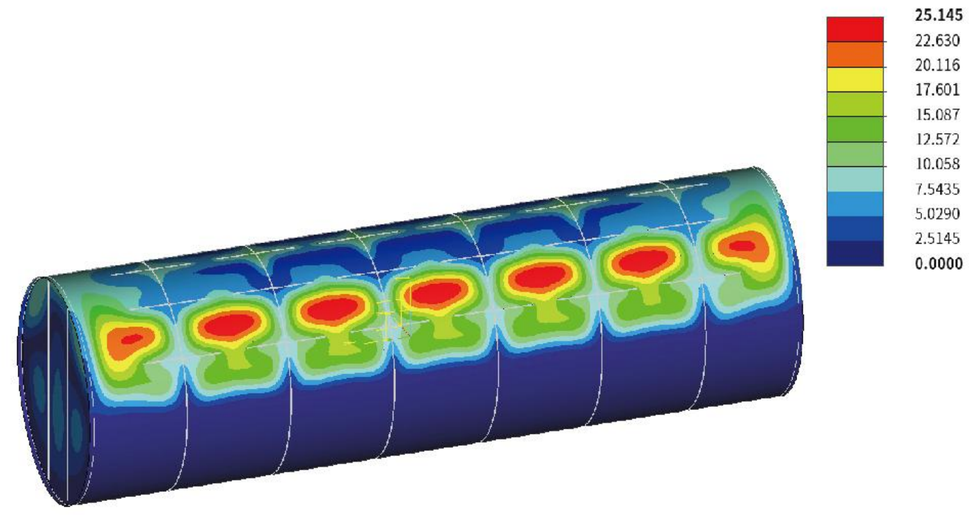
## Performance parameters of polypropylene

| Polypropylene (PPH) Performance Table | | | |
|---|---|---|---|
| Item | Typical value | Unit | Test Method |
| Density | 905 | $kg/m^3$ | ISO 1183 |
| Melt Flow Rate (230℃/2.16kg) | 0.3 | g/10 min | ISO 1133 |
| Melt Flow Rate (190℃/5.0kg) | 0.6 | g/10 min | ISO 1133 |
| Yield Stress (50 mm/min) | 36 | MPa | ISO 527-2 |
| Yield Deformation (50 mm/min) | 10 | % | ISO 527-2 |
| Tensile Modulus (1mm/min) | 1650 | MPa | ISO 527-2 |
| Charpy Impact Strength, Notched (+23℃) | 7 | $kJ/m^2$ | ISO 179/1eA |
| Notched (-20°C) | 2 | $kJ/m^2$ | ISO 179/1eA |
| Vicat Softening Temperature B(50N) | 95 | °C | ISO 306 |

# Creo mechanical simulation modeling




Ground equipment




Buried equipment

# Device characteristics

## 1. Security

The tank body is made using spiral extrusion winding one-time molding technology, which is directly molded from particle masterbatch through a mold to achieve the goal of seamless overall molding of the tank body.

## 2. Durability

Anti UV and anti-aging additives are added to the raw materials, which improves the disadvantage of short outdoor service life of plastic equipment, with a service life of more than 30 years.

## 3. Economy

The thickness of the tank can reach over 80mm, and the lower part of the tank that experiences greater stress can have its thickness increased accordingly, allowing the raw materials to be used where needed.




## 4. Corrosion resistance

Has good corrosion resistance to various acids and bases

## 5. Easy to install

Lightweight, easy to install and maintain, non-toxic, non scaling, non polluting medium, easy to operate, can be customized according to customer needs.

## 6. Wide applicability

Suitable for industries such as sewage treatment, exhaust gas treatment, lithium battery new energy, chemical industry, metallurgy, electroplating, chemical fiber, printing and dyeing, environmental protection, petroleum, electronics, medicine, food, oil and fat, light industry, acid production, acid washing, battery materials, etc.

## 7. No pollution

No sustainable pollutants, recyclable

## 8. Mechanical analysis

Each device has been analyzed by mechanical software and can be buried up to a maximum depth of 3 meters

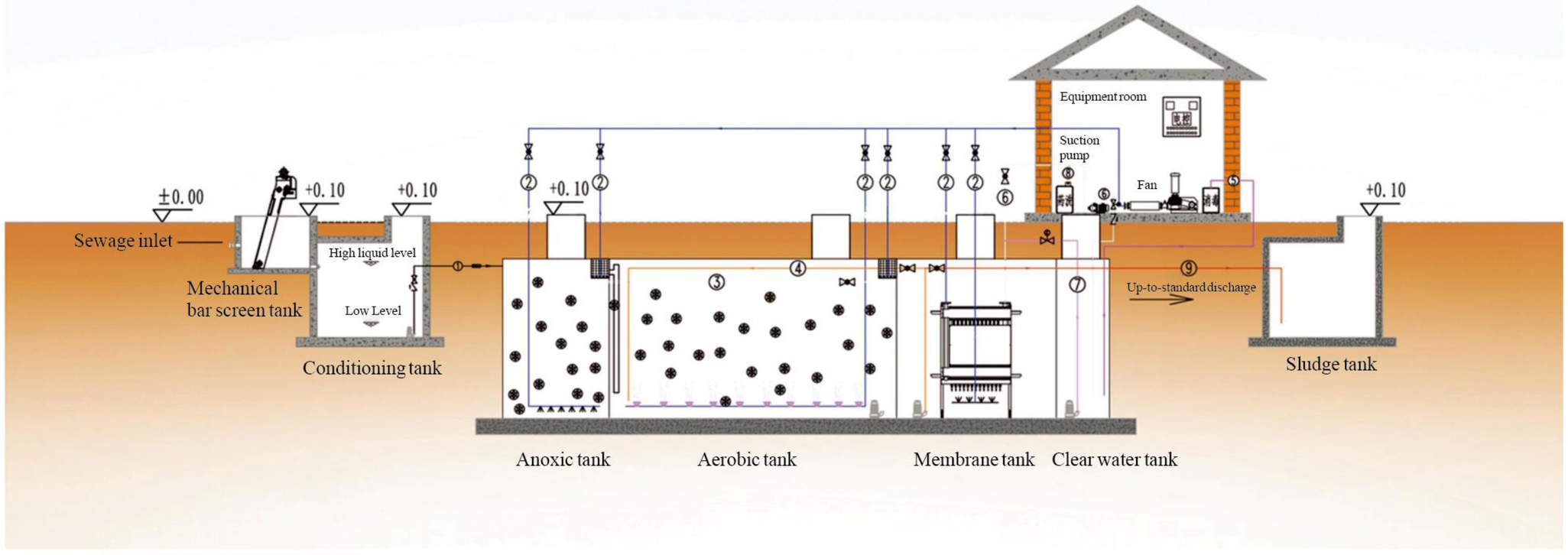
# Horizontal Tank

Patent Number:202230504668.5

## Process Flow

Horizontal Tank A Process Diagram

Note: The process in Tank A can achieve Class A discharge standards.

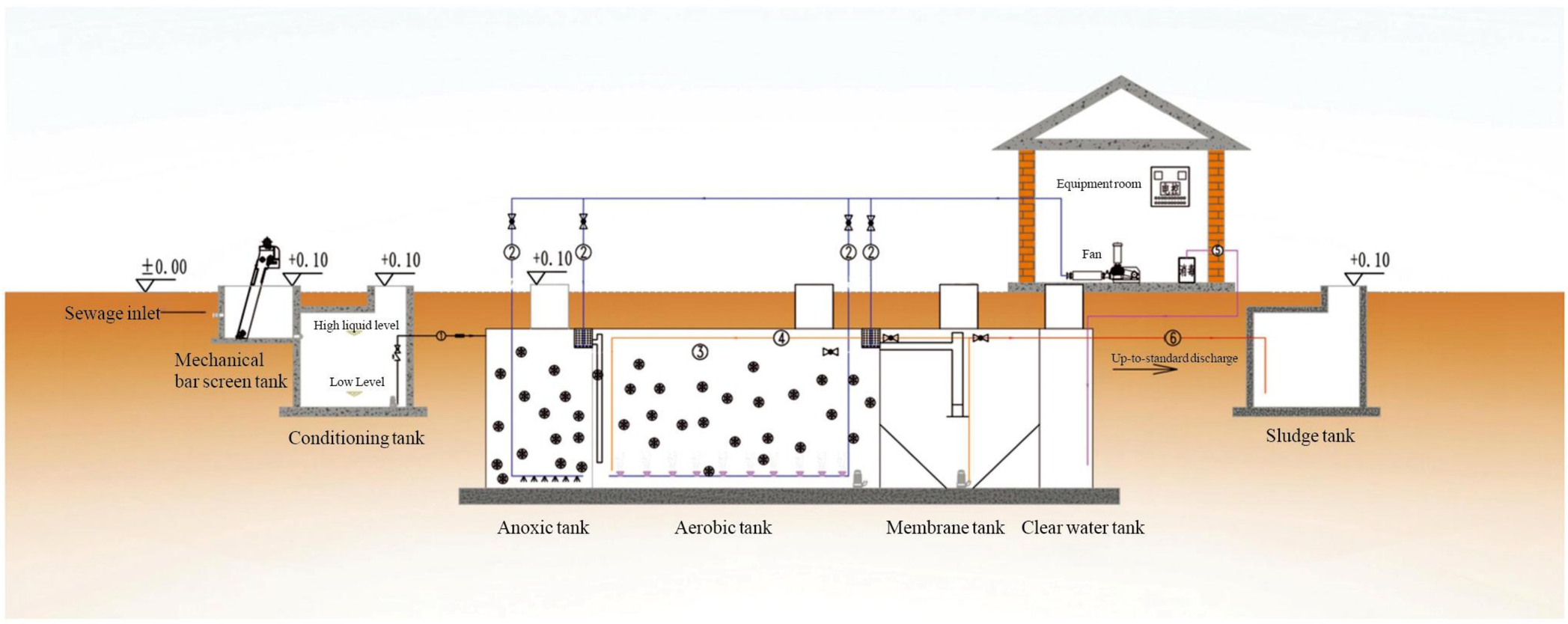



| Legend | Name |
|---|---|
| ① | Water passing pipe |
| ② | Air duct |
| ③ | Reagent return pipe |
| ④ | Sludge return pipe |
| ⑤ | Disinfection pipe |
| ⑥ | Membrane outlet water pipe |
| ⑦ | Membrane backwash pipe |
| ⑧ | Chemical cleaning pipe |
| ⑨ | Sludge discharge pipe |

**Process Flow Diagram**

Horizontal Tank B Process Diagram

Note: The process in Tank B can achieve Class A discharge standards.




| Legend | Name |
|---|---|
| ① | Water passing pipe |
| ② | Air duct |
| ③ | Reagent return pipe |
| ④ | Sludge return pipe |
| ⑤ | Disinfection pipe |
| ⑥ | Sludge discharge pipe |

**Process Flow Diagram**

| Name | Legend |
|---|---|
| Ball valve | |
| Solenoid valve | |
| Check valve | |
| Electromagnetic Flowmeter | |

## Technical parameters of tank A

Note: Parameters are for reference only

| model | Water treatment capacity ($m^3/d$) | outline dimension Length x Width x Height (mm) | weight of equipment (t) | running weight (t) | total installed power (kW) | service rating (kW) | running expense (Yuan/ton of water) | running expense (CNY/day) | Cable specifications ($mm^2$) | floor space ($m^2$) |
|---|---|---|---|---|---|---|---|---|---|---|
| WSZ-0.25 | 5 | Φ2×4.7m | 0.67 | 14.07 | 7.45 | 4.1 | 7.38 | 36.9 | 4 | 19 |
| WSZ-0.5 | 10 | Φ2×4.8m | 0.68 | 14.38 | 7.45 | 4.1 | 3.69 | 36.9 | 4 | 20 |
| WSZ-1 | 20 | Φ2×5.3m | 0.97 | 16.27 | 9.25 | 5 | 2.25 | 45 | 6 | 24 |
| WSZ-1.25 | 30 | Φ2×6.2m | 1.05 | 19.15 | 9.25 | 5 | 1.5 | 45 | 6 | 27 |
| WSZ-1.67 | 40 | Φ2.5×6m | 1.45 | 27.9 | 9.85 | 5.3 | 1.2 | 47.7 | 6 | 31 |
| WSZ-2 | 50 | Φ2.5×6.6m | 1.6 | 31.5 | 9.85 | 5.3 | 0.95 | 47.7 | 6 | 40 |
| WSZ-2.5 | 60 | Φ2.5×7.3m | 1.7 | 35 | 9.85 | 5.3 | 0.8 | 47.7 | 6 | 39 |
| WSZ-3 | 70 | Φ2.5×8.1m | 1.9 | 39.1 | 9.85 | 5.3 | 0.68 | 47.7 | 6 | 43 |
| WSZ-3.5 | 80 | Φ 2.5×8.8m | 2 | 42.7 | 11.45 | 6.1 | 0.69 | 54.9 | 6 | 48 |
| WSZ-4 | 100 | Φ2.5×10.3m | 2.4 | 50.4 | 12.95 | 6.85 | 0.62 | 61.65 | 10 | 53 |
| WSZ-5 | 120 | Φ3×9.2m | 2.8 | 63.6 | 15.65 | 8.2 | 0.615 | 73.8 | 10 | 58 |
| WSZ-6 | 150 | Φ3×10.8m | 3.1 | 75.2 | 15.65 | 8.2 | 0.49 | 73.8 | 10 | 67 |
| WSZ-7 | 170 | Φ3×11.9m | 3.5 | 83.4 | 18.65 | 9.7 | 0.51 | 87.3 | 10 | 71 |
| WSZ-8 | 200 | Φ3×13.6m | 4 | 95.9 | 22.35 | 10.8 | 0.486 | 97.2 | 16 | 81 |
| WSZ-10 | 250 | Φ3×16.4m | 5 | 116.7 | 25.9 | 13.5 | 0.486 | 121.5 | 16 | 102 |
| WSZ-12.5 | 300 | Φ3×10.2m (in two groups) | 5.7 | 137.1 | 25.9 | 13.5 | 0.4 | 121.5 | 16 | 116 |
| WSZ-15 | 360 | Φ3×12.2m (in two groups) | 6.9 | 166.6 | 35.5 | 18.5 | 0.46 | 166.5 | 25 | 133 |
| WSZ-17 | 400 | Φ3×13.3m (in two groups) | 7.7 | 183 | 35.5 | 18.5 | 0.42 | 166.5 | 25 | 145 |
| WSZ-20 | 500 | Φ3×16.1m (in two groups) | 9.7 | 224.5 | 35.5 | 18.5 | 0.33 | 166.5 | 25 | 173 |

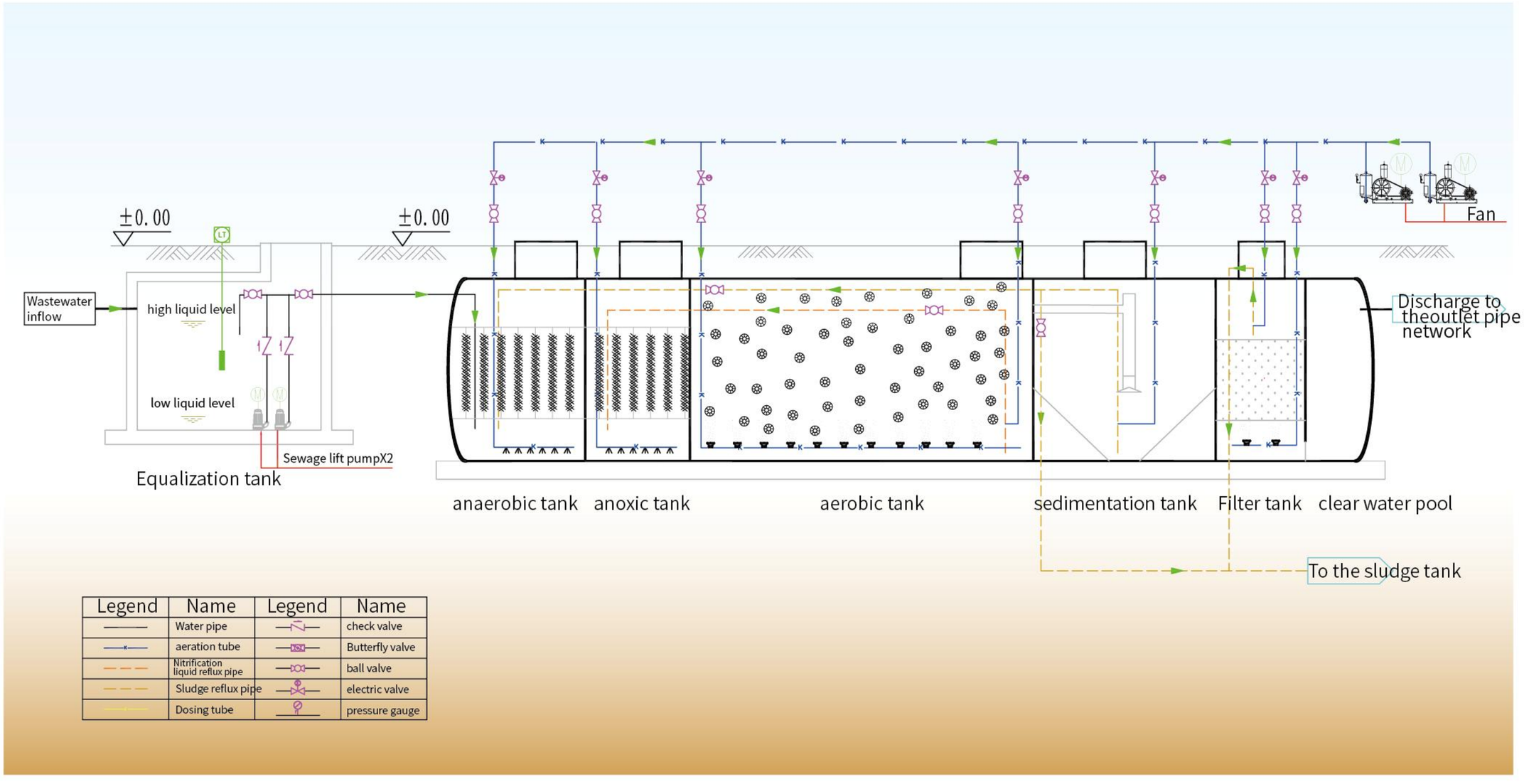
## Technical parameters of tank B

Note: Parameters are for reference only

| model | Water treatment capacity ($m^3/d$) | outline dimension Length x Width x Height (mm) | weight of equipment (t) | running weight (t) | total installed power (kW) | service rating (kW) | running expense (Yuan/ton of water) | running expense (CNY/day) | Cable specifications ($mm^2$) | floor space ($m^2$) |
|---|---|---|---|---|---|---|---|---|---|---|
| WSZ-0.25 | 5 | Φ1.5×3.9m | 0.41 | 6.7 | 5.7 | 3.65 | 6.57 | 32.85 | 4 | 16 |
| WSZ-0.5 | 10 | Φ1.5×4.5m | 0.45 | 7.85 | 5.7 | 3.65 | 3.28 | 32.85 | 4 | 18 |
| WSZ-1 | 20 | Φ2×4.9m | 0.7 | 14.8 | 5.7 | 3.65 | 1.64 | 32.85 | 4 | 23 |
| WSZ-1.25 | 30 | Φ2×6.1m | 1 | 18.8 | 5.7 | 3.65 | 1.1 | 32.85 | 4 | 26 |
| WSZ-1.67 | 40 | Φ2.5×5.8m | 1.4 | 27.3 | 5.7 | 3.65 | 0.82 | 32.85 | 4 | 31 |
| WSZ-2 | 50 | Φ2.5×6.8m | 1.63 | 32.53 | 7.5 | 4.55 | 0.82 | 40.95 | 6 | 34 |
| WSZ-2.5 | 60 | Φ2.5×7.7m | 1.75 | 37.05 | 7.5 | 4.55 | 0.68 | 40.95 | 6 | 36 |
| WSZ-3 | 70 | Φ2.5×8.7m | 1.95 | 42.15 | 7.5 | 4.55 | 0.58 | 40.95 | 6 | 41 |
| WSZ-3.5 | 80 | Φ2.5×9.7m | 2.2 | 47.3 | 7.5 | 4.55 | 0.51 | 40.95 | 6 | 45 |
| WSZ-4 | 100 | Φ2.5×11.7m | 2.6 | 57.5 | 7.5 | 4.55 | 0.41 | 40.95 | 6 | 52 |
| WSZ-5 | 120 | Φ3×10.5m | 3.2 | 73.2 | 9.45 | 5.7 | 0.43 | 51.3 | 6 | 60 |
| WSZ-6 | 150 | Φ3×12.7m | 3.65 | 89.15 | 9.45 | 5.7 | 0.34 | 51.3 | 6 | 72 |
| WSZ-7 | 170 | Φ3×14.2m | 4.2 | 100.3 | 9.45 | 5.7 | 0.3 | 51.3 | 6 | 77 |
| WSZ-8 | 200 | Φ3×16.5m | 4.9 | 117.3 | 11.85 | 7.1 | 0.32 | 63.9 | 6 | 91 |
| WSZ-10 | 250 | Φ3×10.8m (in two groups) | 6.3 | 146.2 | 12.9 | 7.8 | 0.28 | 70.2 | 10 | 110 |
| WSZ-12.5 | 300 | Φ3×12.7m (in two groups) | 7.1 | 173.9 | 16.6 | 10 | 0.3 | 90 | 10 | 127 |
| WSZ-15 | 360 | Φ3×15m (in two groups) | 8.7 | 208 | 17.8 | 10.8 | 0.27 | 97.2 | 10 | 145 |
| WSZ-17 | 400 | Φ3×16.5m (in two groups) | 9.8 | 230.3 | 21.8 | 12.8 | 0.288 | 115.2 | 16 | 159 |
| WSZ-20 | 500 | Φ3×14m (in three groups) | 12 | 287.6 | 21.8 | 12.8 | 0.23 | 115.2 | 16 | 193 |

# PP Codex

## process flow




| Legend | Name | Legend | Name |
|---|---|---|---|
| | Water pipe | | check valve |
| | aeration tube | | Butterfly valve |
| | Nitrification liquid reflux pipe | | ball valve |
| | Sludge reflux pipe | | electric valve |
| | Dosing tube | | pressure gauge |

## Technical parameters of tank A

Note: The parameters in the table are for reference only

| model | Water treatment capacity ($m^3/d$) | outline dimension Length x Width x Height (mm) | weight of equipment (t) | running weight (t) | total installed power (kW) | service rating (kW) | running expense (Yuan/ton of water) | running expense (CNY/day) | Cable specifications ($mm^2$) | floor space ($m^2$) |
|---|---|---|---|---|---|---|---|---|---|---|
| CD50A-2021 | 50 | Φ2.5×10m | 2.9 | 47.1 | 3.14 | 2.77 | 0.50 | 24.93 | 4 | 50 |
| CD75A-2021 | 75 | Φ2.5×13.5m | 3.7 | 63.3 | 3.62 | 3.25 | 0.39 | 29.25 | 4 | 68 |
| CD100A-2021 | 100 | Φ2.8×13.9m | 4.9 | 81.9 | 6.02 | 5.65 | 0.51 | 50.85 | 6 | 78 |
| CD150A-2021 | 150 | Φ2.8×10m two groups | 6.6 | 117.4 | 8.22 | 7.47 | 0.45 | 67.23 | 10 | 107 |
| CD200A-2021 | 200 | Φ2.8×13.5m two groups | 8.6 | 158.1 | 10.14 | 9.39 | 0.42 | 84.51 | 10 | 144 |

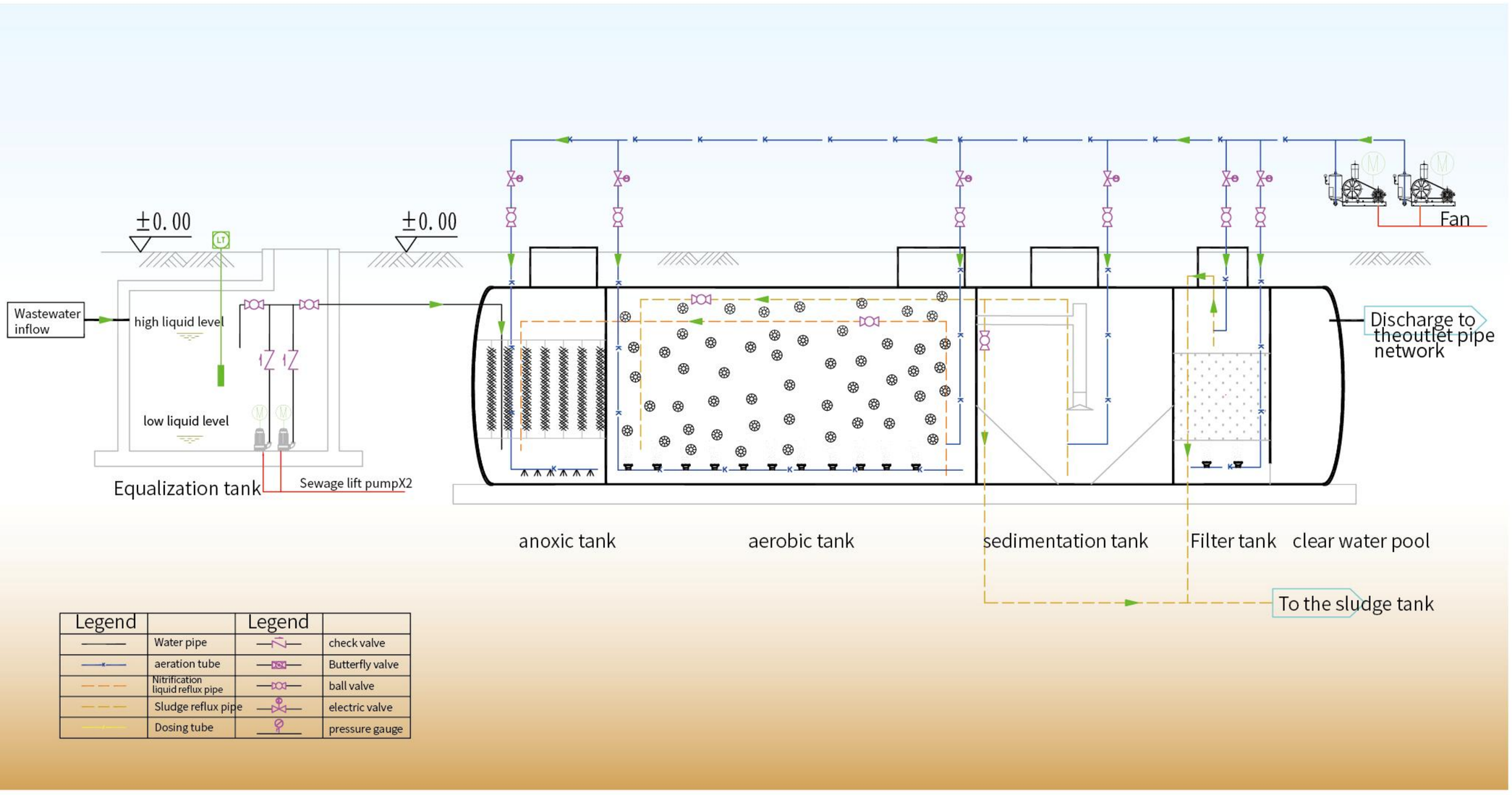
## Technical parameters of tank B

Note: The parameters in the table are for reference only

| model | Water treatment capacity ($m^3/d$) | outline dimension Length x Width x Height (mm) | weight of equipment (t) | running weight (t) | total installed power (kW) | service rating (kW) | running expense (Yuan/ton of water) | running expense (CNY/day) | Cable specifications ($mm^2$) | floor space ($m^2$) |
|---|---|---|---|---|---|---|---|---|---|---|
| CD100B-2021 | 100 | Φ2.5×13.5m | 3.7 | 63.3 | 3.62 | 3.25 | 0.29 | 29.25 | 4 | 68 |
| CD150B-2021 | 150 | Φ2.8×13.9m | 4.9 | 81.9 | 6.78 | 6.03 | 0.36 | 54.27 | 10 | 78 |
| CD200B-2021 | 200 | Φ2.8×10m two groups | 6.6 | 117.4 | 8.22 | 7.47 | 0.34 | 67.23 | 10 | 107 |
| CD250B-2021 | 250 | Φ2.8×13.5m two groups | 8.6 | 158.1 | 10.84 | 9.74 | 0.35 | 87.66 | 10 | 144 |

# PP Clear

## process flow




## Technical Specifications

Note: The parameters in the table are for reference only

| model | Water treatment capacity (m³/d) | outline dimension Length x Width x Height (mm) | weight of equipment (t) | running weight (t) | total installed power (kW) | service rating (kW) | running expense (Yuan/ton of water) | running expense (CNY/day) | Cable specifications (mm²) | floor space (m²) |
|---|---|---|---|---|---|---|---|---|---|---|
| CL7C2-2021 | 5 | | | | | | | | | |
| CL8C3-2021 | 8 | Φ2×4.14m | 0.9 | 12.6 | 0.97 | 0.6 | 0.68 | 5.4 | 1.5 | 17 |
| CL10C4-2021 | 10 | | | | | | | | | |
| CL10C2-2021 | 10 | | | | | | | | | |
| CL10C3-2021 | 10 | Φ2×5.18m | 1.1 | 15.7 | 1.46 | 1.09 | 0.98 | 9.81 | 1.5 | 21 |
| CL15C4-2021 | 15 | | | | | | | | | |
| CL15C2-2021 | 15 | | | | | | | | | |
| CL15C3-2021 | 15 | Φ2×6.34m | 1.4 | 19.3 | 1.7 | 1.33 | 0.80 | 11.97 | 1.5 | 26 |
| CL25C4-2021 | 25 | | | | | | | | | |
| CL20C2-2021 | 20 | | | | | | | | | |
| CL20C3-2021 | 20 | Φ2×8.74m | 1.8 | 26.5 | 2.18 | 1.81 | 0.81 | 16.29 | 2.5 | 35 |
| CL35C4-2021 | 35 | | | | | | | | | |
| CL25C2-2021 | 25 | | | | | | | | | |
| CL30C3-2021 | 30 | Φ2.5×7.9m | 2.4 | 37.3 | 2.66 | 2.29 | 0.69 | 20.61 | 2.5 | 40 |
| CL40C4-2021 | 40 | | | | | | | | | |
| CL35C2-2021 | 35 | | | | | | | | | |
| CL40C3-2021 | 40 | Φ2.5×9.2m | 2.6 | 43.3 | 3.14 | 2.77 | 0.62 | 24.93 | 4 | 46 |
| CL50C4-2021 | 50 | | | | | | | | | |
| CL40C2-2021 | 40 | | | | | | | | | |
| CL45C3-2021 | 45 | Φ2.5×10.6m | 3 | 49.8 | 3.62 | 3.25 | 0.65 | 29.25 | 4 | 53 |
| CL60C4-2021 | 60 | | | | | | | | | |
| CL45C2-2021 | 45 | Φ2.8×9.9m | 3.4 | 58.2 | 4.1 | 3.73 | 0.67 | 33.57 | 4 | 56 |
| CL50C3-2021 | 50 | | | | | | | | | |
| CL50C2-2021 | 50 | | | | | | | | | |
| CL60C3-2021 | 60 | Φ2.8×10.9m | 3.7 | 64.1 | 4.58 | 4.21 | 0.63 | 37.89 | 6 | 61 |
| CL70C4-2021 | 70 | | | | | | | | | |
| CL65C2-2021 | 65 | Φ2.8×13.1m | 4.5 | 77.1 | 5.54 | 5.17 | 0.72 | 46.53 | 6 | 74 |

PP Series Equipment

# Vertical Tank




## Introduction

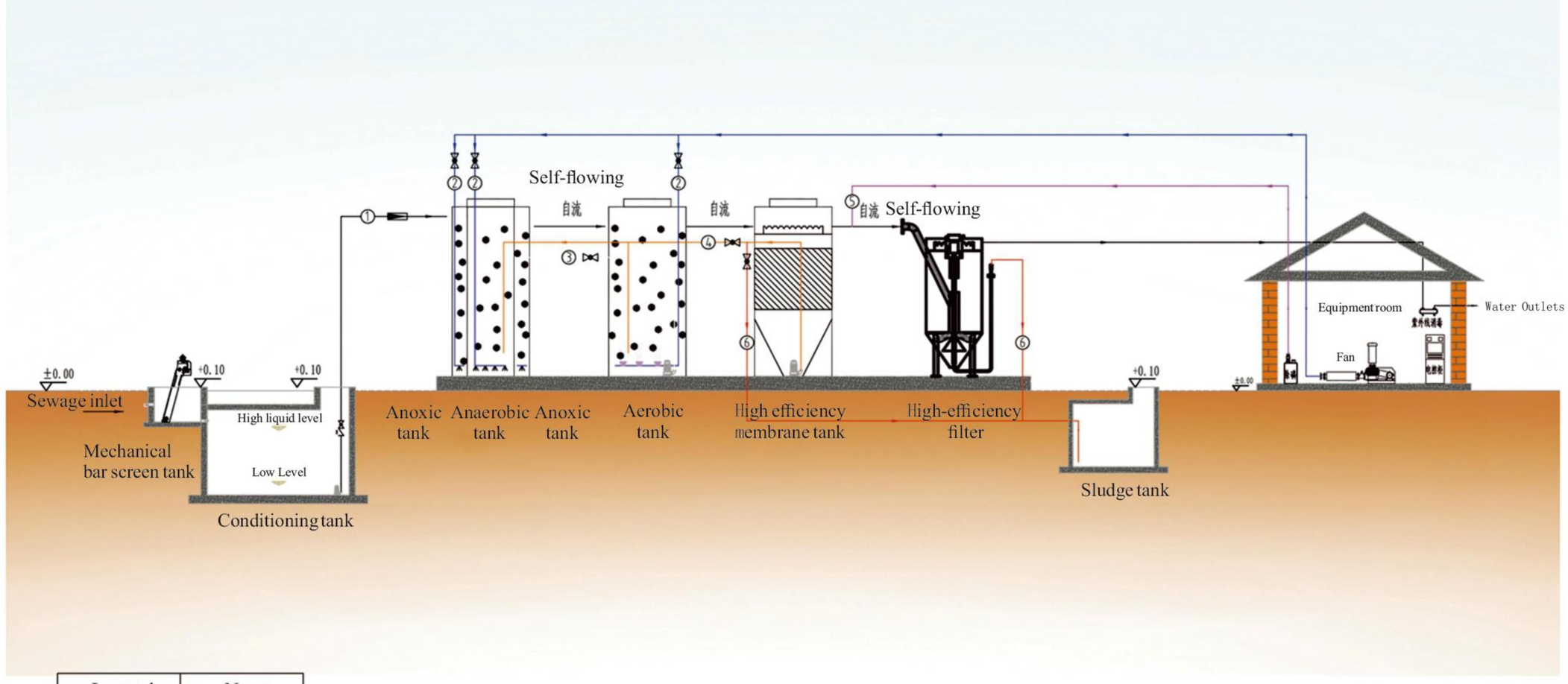
The vertical tank is a monolithic vertical vessel manufactured using new material properties. It can be configured with either Class A or Class B processes based on discharge standards. Given its structural characteristics, it incorporates proprietary MBBR media and novel aeration devices. All internal baffles are automatically welded, while both end caps utilize injection-molded monolithic components.



## Process Flow

Process Diagram for Vertical Tank A

Note: The Tank A process can achieve Class A discharge standards.




| Legend | Name |
|---|---|
| ① | Water passing pipe |
| ② | Air duct |
| ③ | Reagent return pipe |
| ④ | Sludge return pipe |
| ⑤ | Phosphorus removal pipe |
| ⑥ | Sludge discharge pipe |

**Process Flow Diagram**

| Name | Legend |
|---|---|
| Ball valve | |
| Solenoid valve | |
| Check valve | |
| Electromagnetic flow meter | |

## Technical Specifications

Technical parameters of vertical tank A

| Water treatment capacity ($m^3/d$) | outline dimension Length x Width x Height (mm) | weight of equipment (t) | running weight (t) | total installed power (kW) | service rating (kW) | running expense (Yuan/ton of water) | running expense (CNY/day) | Cable specifications ($mm^2$) | floor space ($m^2$) |
|---|---|---|---|---|---|---|---|---|---|
| 30 | Φ1.5×4m×3 sets | 1.75 | 20.1 | 5.7 | 3.65 | 1.1 | 32.85 | 4 | 28 |
| 60 | Φ2×4.5m×3 sets | 2.64 | 40.6 | 7.5 | 4.55 | 0.68 | 40.95 | 6 | 39 |
| 90 | Φ2.5×4.5m×3 sets | 3.42 | 64.2 | 9.1 | 5.35 | 0.535 | 48.15 | 6 | 57 |
| 125 | Φ3×4.5m×3 sets | 4.29 | 91.5 | 11.45 | 6.7 | 0.48 | 60.3 | 6 | 60 |
| 150 | Φ3×5m×3 sets | 4.65 | 103.4 | 11.45 | 6.7 | 0.4 | 60.3 | 6 | 74 |

PP Series Equipment

# HMPP integrated pump station

Patent Number:ZL 2022 2 2423439.8




## introduction

The integrated sewage treatment pump station is a new type of buried sewage, rainwater, and water collection and lifting system. It is easy to install, requires less construction work, occupies less land, has a high degree of automation, and can replace traditional concrete pump stations. It has high integration and significant volume optimization.

Integrated prefabricated pump stations can greatly improve installation efficiency, save labor hours, and have characteristics such as small size, high efficiency, and intelligence. Compared with traditional pumping stations, it has fewer civil engineering works, shorter manufacturing and installation cycles, and can reduce investment by more than half. It is easy to install and has reliable quality, making it a substitute for traditional concrete sewage lift pumping stations.



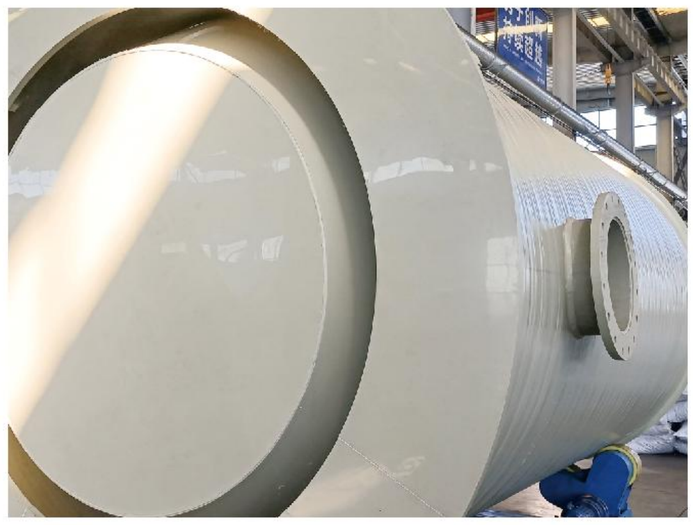
## Equipment structure



Pump station top cover



Three layer sandwich tube structure with cylindrical wall



The cylinder is formed by winding twice

The main body consists of new material PP wellbore, submersible/feedwater pump, lifting chain, pipeline, valve, liquid level sensor, control system, grille system, ventilation system and other components. Choose the appropriate configuration according to different working conditions to adapt to the usage conditions.

## Features of the equipment

**01** Compact structure, small footprint, and can be buried underground

**02** New technology, good effect, long service life, no impact on the surrounding environment, low sludge output, and low noise

**03** Each unit is fully composed, easy to operate, easy to maintain, fully automatic control, and does not require professional personnel management

**04** Stable effluent quality, using gravity flow to save energy

**05** The equipment can be manufactured according to standards or specially designed and arranged according to user needs

**06** This device is centered around biochemical treatment and integrates unit treatments such as biochemical treatment, sedimentation, filtration, and disinfectioni

## Applicable fields



Municipal drainage



Large scale construction of highway and railway underpasses



Emergency drainage



Midway water supply pump station

Air flotation machine series equipment

# GW type air flotation machine

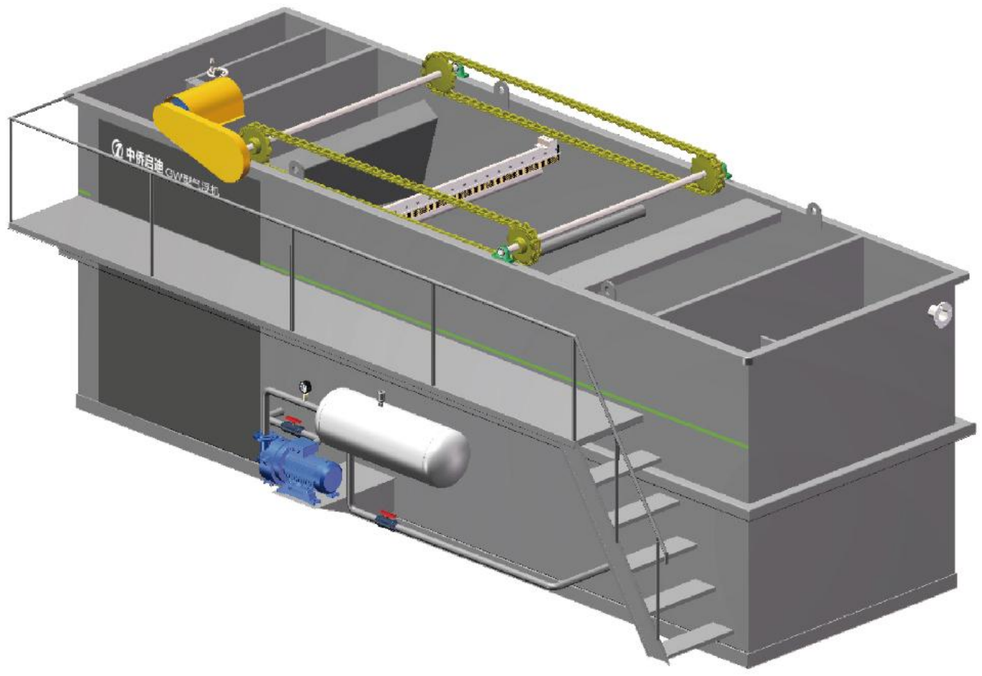
Patent Number：ZL 202120168243.1




## introduction

This air flotation machine adopts pump internal pressure mixing, while sucking water in, producing fine bubbles with a particle size of 25-40 microns, omitting complex designs such as reflux pump, air compressor, jet generator, and dissolved air tank.

The dissolved gas system of the automatic gas-liquid separation tank can be automatically adjusted, with stable performance and "one minute" debugging. It can be frequently turned on and off without the need for re debugging.



## Scope of application

Suitable for applications in suspended solids, coagulation reaction flocs, and oil-water separation in industries such as municipal, papermaking, chemical, beverage, printing and dyeing, textile, oil refining, electroplating, food, slaughter, leather, etc.



## Process Principle

The inflation section of the device is completed by a gas-liquid mixing pump, and the treated clean water flows back to the pump; When the pump sucks in liquid, a certain negative pressure is formed at the pump port, and air is sucked in together with the liquid through the suction hole. After being sheared by the high-speed rotary cutting pump impeller, the gas dissolves in the liquid; By adjusting the operating conditions and gas-liquid mixing ratio, highly dispersed microbubbles can be obtained or meet the maximum gas carrying capacity requirements. Depending on the pump specifications, the gas content in the liquid can reach up to 30%.

After saturated (or even supersaturated) dissolved water enters the Nicolney jar and stabilizes, it is instantly depressurized by the release device to release highly dense, 25-40 micron sized microbubbles; Untreated sewage enters the air flotation tank, where it rises and mixes thoroughly with the dissolved air reflux water before entering the air flotation section. The sewage, which has been flocculated with chemicals, enters the air flotation section and mixes with microbubbles, which attach to suspended solids and carry them to the water surface.

The suspended solids on the water surface are continuously removed by a scraper, which moves along the entire liquid surface and pushes the suspended solids from the inlet end to the outlet end of the air flotation tank. The scraper is fixed at both ends of the chain and driven by a motor to scrape the pollutants onto the inclined metal plate, and then pushed into the floating slag discharge tank for discharge; The purified sewage is discharged through the outlet pipe, and a liquid level adjustment device is installed at the outlet pipe to adjust the liquid level height of the sedimentation floating slag area.







Air flotation machine series equipment

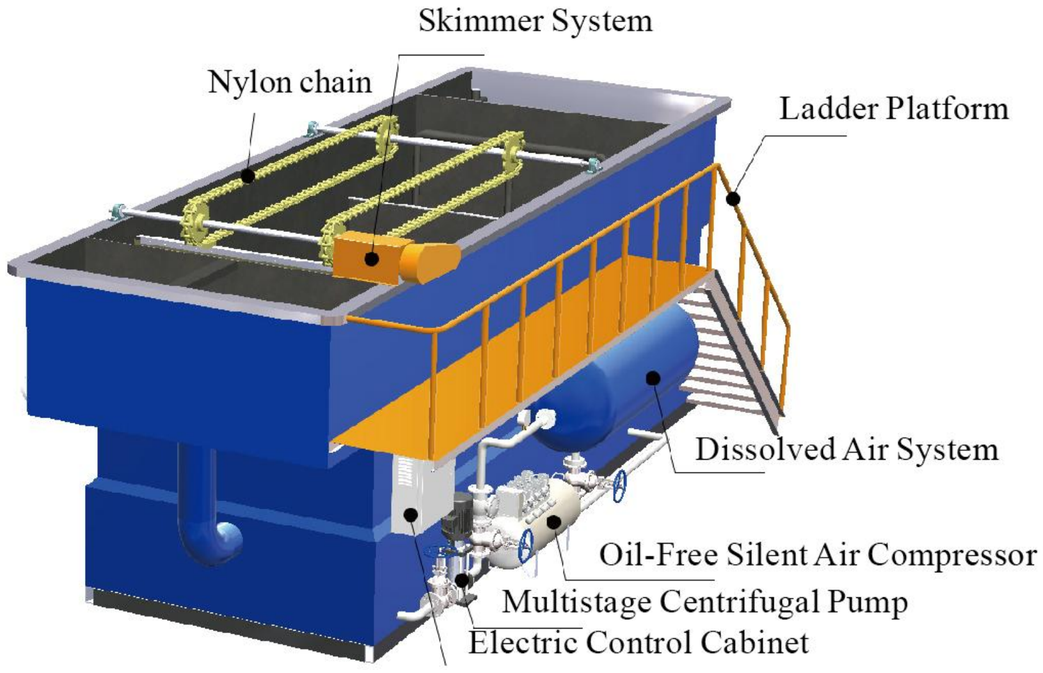
# YW type air flotation machine

Patent Number：ZL201620927225.6



## introduction

In recent years, air flotation technology has been widely used in water supply and drainage as well as wastewater treatment. It can effectively remove light flocs, flocculent colloidal substanc-es, oil substances, etc. that are difficult to precipi-tate in wastewater.



## Features of the equipment

**Efficient and compact, with high space utilization**

The overall footprint of the equipment is small, with high processing capacity and efficiency

**Easy operation and maintenance, strong practicality**

The process and equipment structure are simple, easy to use, and maintain

**Effectively solve the problem of sludge expansion**

Effectively eliminate sludge swelling that is prone to occur during water treatment processes

**Combining deodorization and pre-treatment functions**

Aeration into water during air flotation has a significant effect on removing surfactants and odors from water

## Model significance

YW — □

Processing capacity: m ³/h

Feature code: Air flotation equipment

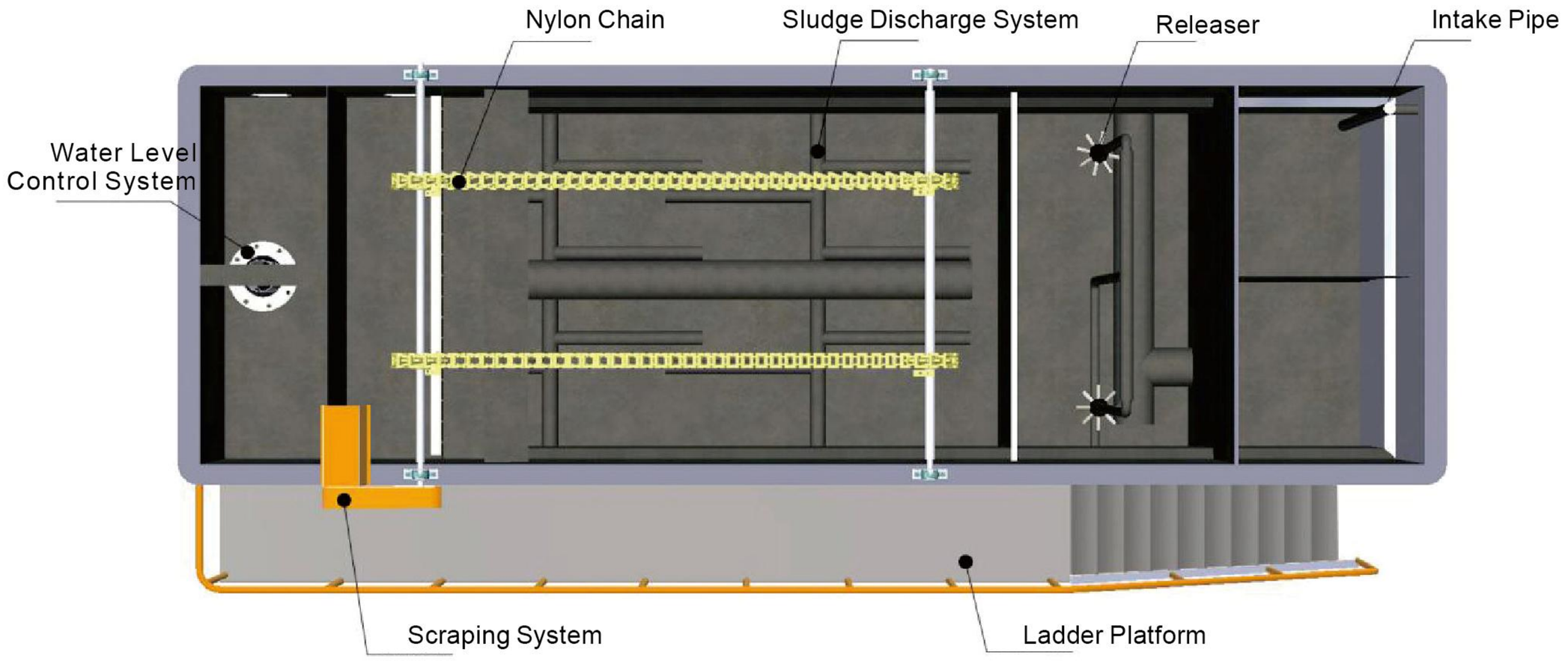


## parameter table

| category \ Item | 色% | CODcr% | BOD5% | SS% |
|---|---|---|---|---|
| Alcohol Wastewater | 30 | 30 | 30 | 77 |
| Electroplating wastewater | —— | —— | —— | —— |
| Dyeing wastewater | 40 | 30 | 30 | 70 |
| Chemical industry wastewater | 40 | 30 | —— | —— |
| Edible oil wastewater | —— | 30 | —— | 85 |
| Papermaking wastewater | —— | 30 | —— | 85 |
| Leather tanning wastewater | —— | 30 | —— | 85 |

Note: The data in this table is for reference only

## structure




### Our air flotation machine features

- Oil free silent air compressor
- Nylon chain
- multistage centrifugal pump















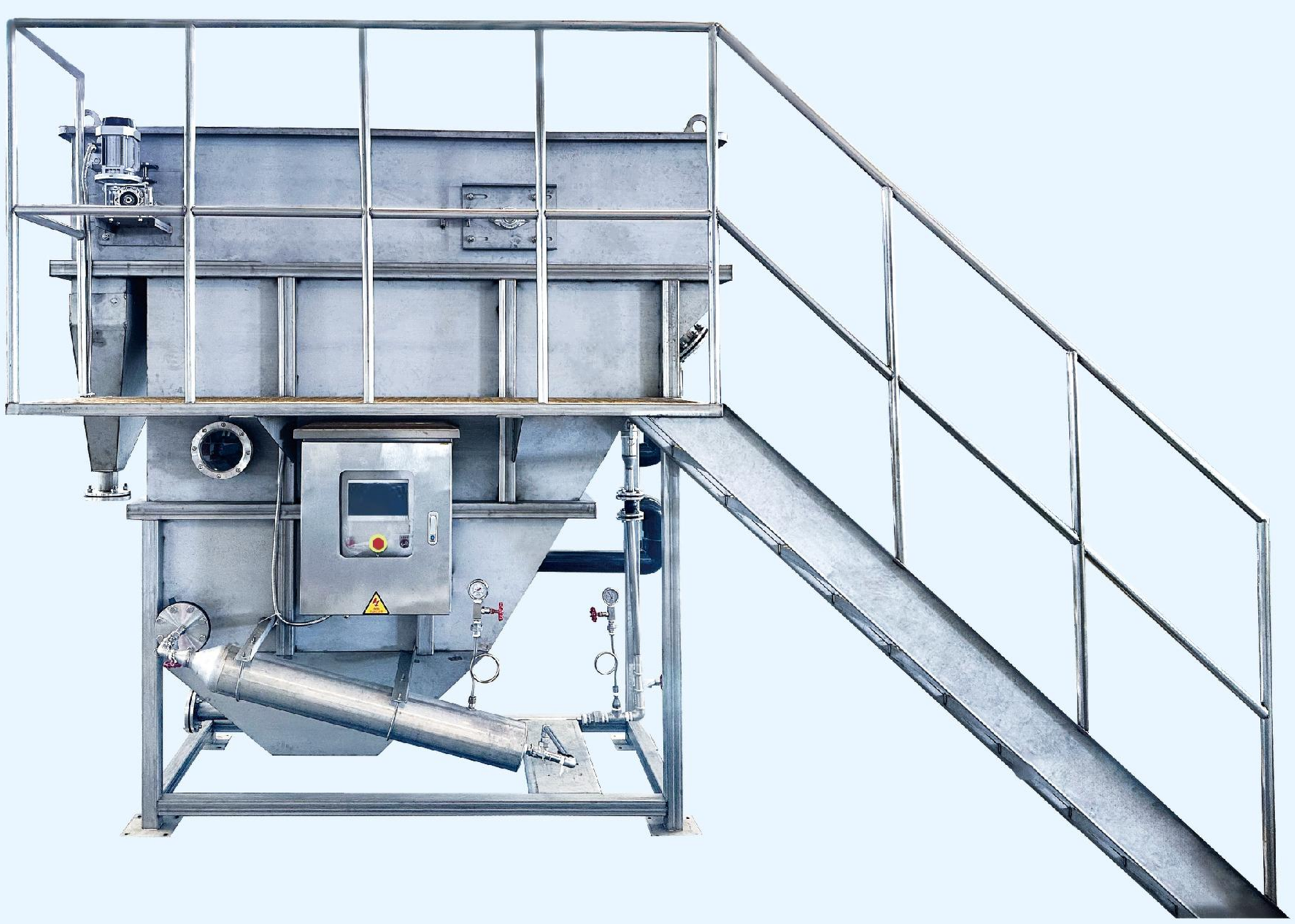

# Technical Specifications

| model | Water treatment capacity ($m^3$/d) | Dissolved water volume ($m^3$/h) | Total power (kW) | Power of foam scraper(kW) | Air compressor model | Clear water pump model | Specification of dissolved gas tank (mm) | outline dimension (m) | Equipment deadweight (t) |
|---|---|---|---|---|---|---|---|---|---|
| YW-3 | 2—2 | 1~2 | 4.47 | 0.37 | OTS-1100-40L | 40-200A | DN400×900 | 2.76x1.9×2.1 (guardrailDN20) | 1.5 |
| YW-5 | 5 | 1~2 | 4.47 | 0.37 | OTS-1100-40L | 40-200A | DN400×1000 | 3.46x1.9×2.1 | 1.8 |
| YW-10 | 10 | 2~3 | 5.05 | 0.55 | OTS-750X2-50L | 40-200A | DN400×1000 | 4.46x2x2.1 | 2.2 |
| YW-15 | 15 | 3~5 | 5.05 | 0.55 | OTS-750X2-50L | 40-200A | DN500×1000 | 4.86×2.4x2.1 | 2.6 |
| YW-20 | 20 | 5~6 | 5.75 | 0.55 | OTS-1100X2-60L | 40-200A | DN500×1000 | 5.46x2.4×2.3 | 3.1 |
| YW-25 | 25 | 6~8 | 6.75 | 0.55 | OTS-1100X2-60L | 50-200A | DN500×1000 | 5.56x2.7×2.3 | 3.3 |
| YW-30 | 30 | 8~10 | 6.75 | 0.55 | OTS-1100X2-60L | 50-200A | DN600×1880 | 6.96×2.7×2.3 (guardrailDN25) | 3.6 |
| YW-35 | 35 | 10~12 | 6.75 | 0.55 | OTS-1100X2-60L | 50-200A | DN600×1880 | 7.46x2.8×2.3 | 3.9 |
| YW-40 | 40 | 12~13 | 7.85 | 0.55 | OTS-1100X3-100L | 50-200A | DN600×1880 | 8.1×2.8×2.6 | 4.1 |
| YW-45 | 45 | 13~15 | 11.35 | 0.55 | OTS-1100X3-100L | 65-200A | DN600×1880 | 8.06x2.95×2.5 | 4.5 |
| YW-50 | 50 | 15~17 | 11.35 | 0.55 | OTS-1100X3-100L | 65-200A | DN600×1880 | 9.06×2.95×2.55 | 5.7 |
| YW-55 | 55 | 17~20 | 11.9 | 1.1 | OTS-1100X3-100L | 65-200A | DN600×1880 | 9.56×2.95×2.55 | 6 |
| YW-60 | 60 | 20~25 | 13 | 1.1 | OTS-1100X4-160L | 65-200A | DN600×1880 | 10.06×2.95×2.85 | 8 |
| YW-70 | 70 | 27~30 | 13 | 1.1 | OTS-1100X4-160L | 65-200A | DN600×2100 | 11.56×2.95×2.85 | 8.6 |
| YW-80 | 80 | 35~38 | 16.5 | 1.1 | OTS-1100X4-160L | 80-200A | DN600×2100 | 11.86×3.2x2.85 | 9.2 |
| YW-90 | 90 | 41~44 | 18.1 | 1.1 | OTS-1500X4-160L | 80-200A | DN600×2100 | 13.16×3.2x2.85 | 10.4 |
| YW-100 | 100 | 46~50 | 18.1 | 1.1 | OTS-1500X4-160L | 80-200A | DN800×2100 | 14.36×3.2x2.85 | 11.2 |
| YW-150 | 120 | 60~80 | 20.5 | 1.5 | 1600X5-230L | 80-200A | DN800×2100 | 14.46×3.7x2.85 | 12.3 |
| YW-200 | 150 | 80~100 | 32.2 | 2.2 | 1600X5-230L | 100-200A | DN800×2100 | 17.36x3.7×3.1 | 13.4 |

Note: The parameters in the table are for reference only

Air flotation machine series equipment

# Efficient dissolved air flotation machine



## introduction

This air flotation machine adopts pump internal pressure mixing, while sucking water in, producing fine bubbles with a particle size of 10-50 microns, omitting complex designs such as reflux pump, air compressor, jet generator, and dissolved air tank.

The dissolved gas system of the automatic gas-liquid separation tank can be automatically adjusted, with stable performance and "one minute" debugging. It can be frequently turned on and off without the need for re debugging.



## Product Features

### Unique structural design

The water flow inside the air flotation machine is in a completely laminar state, which improves the separation efficiency.

### Inclined plate design

The air flotation machine is equipped with inclined plates to allow secondary flocculation of flocs during flotation, increasing particle size and improving separation efficiency.

### Anti blocking release device

Designed for different water qualities, suitable for treating various types of wastewater and not easily clogged.

### High pressure gas dissolution technology for inclined tanks

No need for a large gas tank, but with a high gas solubility, it enhances the pollutant carrying capacity and is suitable for high oil content and high suspended solids wastewater.

## Technical Features

### Tubular reactor technology

The tubular reactor has excellent mixing performance, saves chemicals, is energy-efficient and space-saving, uses high-quality materials, and can intelligently adjust the pH of wastewater.

### Non-clogging dissolved air release technology

The non-clogging dissolved air releaser is composed of a pressure relief valve and an air release pipe, which is adjustable and non-clogging.

### Inlet-direction slag scraping technology

The slag is scraped in the reverse direction, and plates are installed on the entire tank surface, resulting in high slag discharge efficiency, good scum concentration, and reduced treatment costs.

### Shallow pool principle technology

The air flotation machine uses the shallow tank principle, and is equipped with inclined tubes to improve sedimentation efficiency, shorten time, and reduce sludge treatment costs.

## Application Fields

Oil industry

Oil and gas fields

Coal and Metallurgy

Food processing and dairy products

Breeding and slaughtering

Paper making and printing and dyeing

leather industry

Non-standard equipment

# IC internal circulation anaerobic reactor



## introduction

IC anaerobic reactor is a new type of anaerobic reactor after UASB and EGSB, which has the characteristics of high volumetric load, strong shock load resistance, good effluent stability, large gas production, low sludge volume, low operating cost, and obvious economic benefits. It is particularly suitable for medium and high concentration wastewater treatment projects.

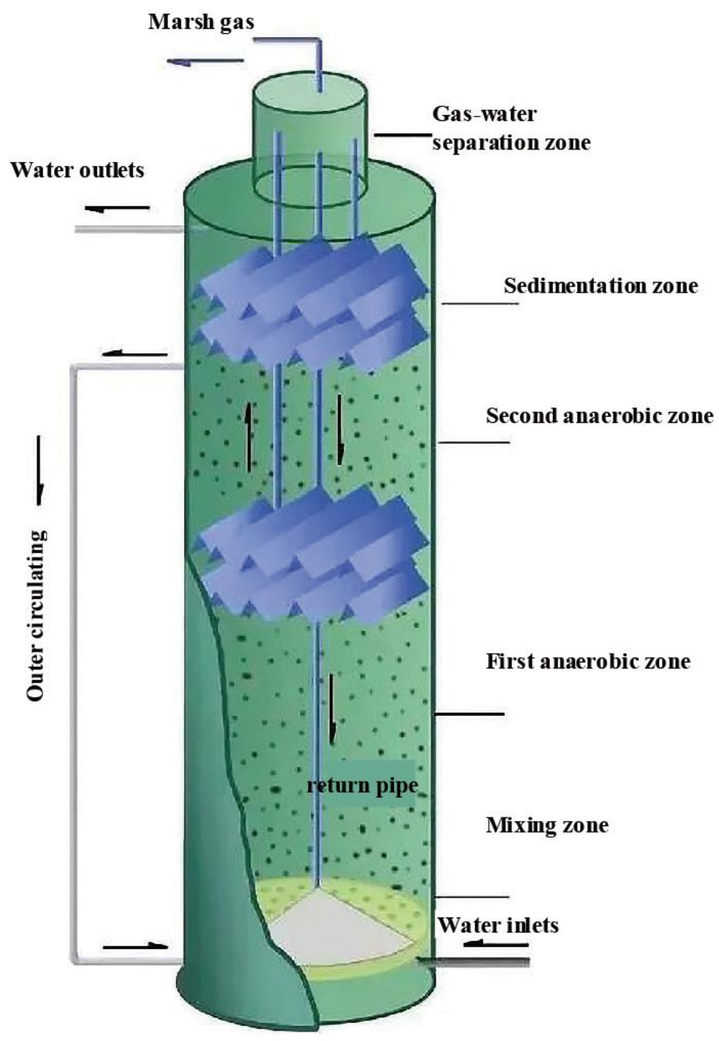
Because the IC reactor is equivalent to the series operation of two UASB reactors, the lower reactor has a high organic load rate and plays a "coarse" treatment role, while the upper reactor has a low load and plays a "fine" treatment role, resulting in good and stable effluent quality.



## Technical Specifications

| Model | Diameter (mm) | Height (mm) | Volumetric load kgCODcr/$m^3$·d | Biogas production rate |
|---|---|---|---|---|
| UASB-4/16 | 4000 | 16000 | 10~15 | 0.2-1.0$m^3$/kgCODcr |
| UASB-6/19 | 6000 | 19000 | 10~15 | |
| UASB-7/22 | 7000 | 22000 | 12~17 | |
| UASB-8/25 | 8000 | 25000 | 15~20 | |
| UASB-9/28 | 9000 | 28000 | 20~25 | |
| UASB-10/28 | 10000 | 28000 | 21~28 | |

Note: The above parameters are for reference only



















Non-standard equipment

# Mechanical filter tank



Classification of filling media

- Quartz sand filter
- Activated carbon filter

## Introduction

Mechanical filters are suitable for industrial or domestic water treatment equipment in enterprises and urban areas that require filtered water with a turbidity generally within 5mg/L and meet drinking water quality standards.

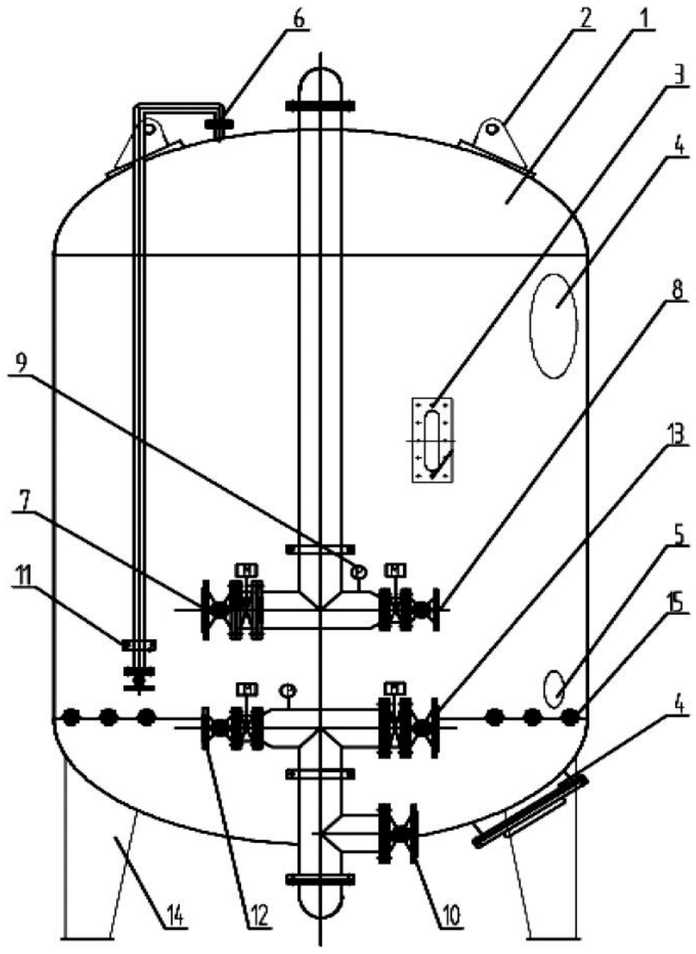
Suspended solids, condensed flakes, sediment, iron, manganese, and adhesive colloidal particles that cannot be removed by precipitation methods in water can be filtered through the filter layer installed inside the filter to make the water transparent. It also has a good removal effect on suspended solids and solid substances in industrial wastewater.

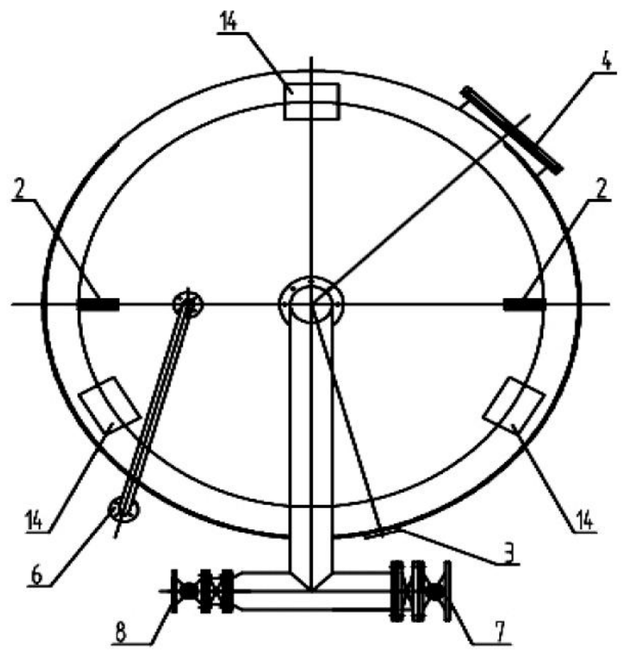


# Technical Specifications

| model | Water treatment capacity ($m^3$/d) | outline dimension (mm) | total height(mm) | inlet pipe | outlet pipe | Backwash tube |
|---|---|---|---|---|---|---|
| SZ-4 | 4 | Φ800×1500 | 2450 | DN50 | DN50 | DN50 |
| SZ-6 | 5 | Φ900×1500 | 2500 | DN50 | DN50 | DN50 |
| SZ-8 | 8 | Φ1000×1500 | 2550 | DN65 | DN65 | DN65 |
| SZ-10 | 10 | Φ1200×1800 | 2850 | DN65 | DN65 | DN65 |
| SZ-15 | 15 | Φ1500×1800 | 3100 | DN65 | DN65 | DN65 |
| SZ-20 | 20 | Φ1800×1800 | 3280 | DN80 | DN80 | DN80 |
| SZ-25 | 25 | Φ2000×2000 | 3580 | DN80 | DN80 | DN80 |
| SZ-30 | 30 | Φ2200×2000 | 3680 | DN80 | DN80 | DN80 |
| SZ-35 | 35 | Φ2400×2000 | 3780 | DN80 | DN80 | DN80 |
| SZ-40 | 40 | Φ2500×2200 | 4050 | DN80 | DN80 | DN80 |
| SZ-45 | 45 | Φ2600×2200 | 4100 | DN80 | DN80 | DN80 |
| SZ-50 | 50 | Φ2800×2200 | 4200 | DN100 | DN100 | DN100 |
| SZ-55 | 55 | Φ3000×2000 | 4100 | DN100 | DN100 | DN100 |

Note: The parameters in the table are for reference only




Head 1
2 hanging ears
3 Mirrors
4 manholes
5 discharge ports
6 Exhaust pipe
7 backwash outlet
8 Raw water inlet
9 Pressure gauge
10 emptying ports
11 Fixed bracket
12 purified water outlet
13 Backwash inlet
14 legs
15 drainage cap

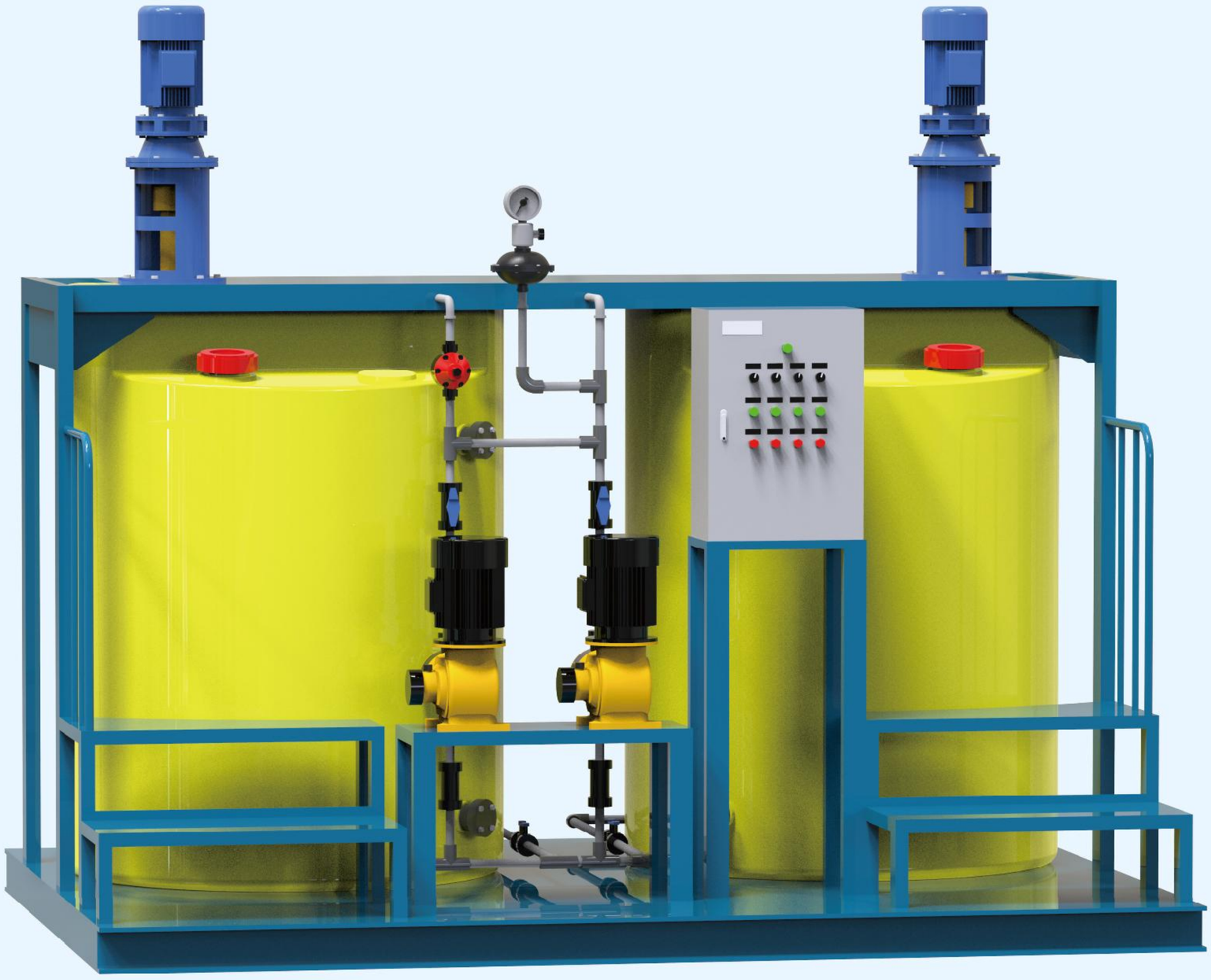







Non-standard equipment

# Dosing Device



## Introduction

**blender**

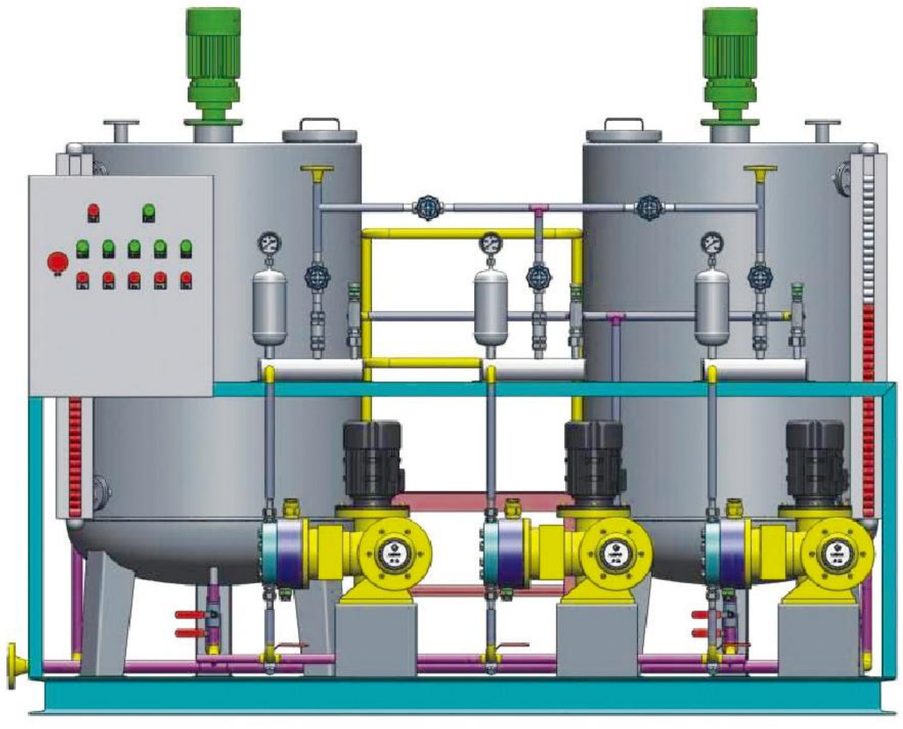
Composed of a reducer and a mixing device. Its function is to mix the solute and water (solvent) that need to be added in a certain proportion, so that they are fully mixed.

**Solution tank**

Store the mixed medicinal solution for later use.

**Measurement device and dosing method**

The flocculant dosing equipment adopts a metering pump for dosing.



# Technical Specifications

## Single barrel dosing equipment

| model | dosage (L/h) | Medicine box size Φ×h (mm) | tank capacity ($m^3$) | Dosing caliber(mm) | power (W) | floor space L×W×H(mm) |
|---|---|---|---|---|---|---|
| ZQ-JY-0.1- I | 0-16 | Φ460×760 | 0.1 | Φ160 | 385 | 820×520×1240 |
| ZQ-JY-0.2- I | 0-16 | Φ580×960 | 0.2 | Φ160 | 430 | 940×640×1440 |
| ZQ-JY-0.3- I | 0-16 | Φ680×1000 | 0.3 | Φ160 | 565 | 1040×740×1490 |
| ZQ-JY-0.5- I | 0-60 | Φ800×1150 | 0.5 | Φ260 | 610 | 1160×1130×1640 |
| ZQ-JY-1.0- I | 0-60 | Φ1070×1250 | 1 | Φ400 | 840 | 1440×1400×1740 |
| ZQ-JY-1.5- I | 0-120 | Φ1200×1460 | 1.5 | Φ400 | 840 | 1750×1550×1990 |
| ZQ-JY-2.0- I | 0-120 | Φ1320×1620 | 2 | Φ400 | 1190 | 1860×1660×2150 |
| ZQ-JY-3.0- I | 0-240 | Φ1580×1850 | 3 | Φ400 | 1590 | 2160×1940×2390 |
| ZQ-JY-5.0- I | 0-500 | Φ1850×2100 | 5 | Φ400 | 1870 | 2440×2200×2700 |
| ZQ-JY-6.0- I | 0-500 | Φ1850×2100 | 6 | Φ400 | 1870 | 2440×2200×3050 |
| ZQ-JY-8.0- I | 0-500 | Φ2230×2300 | 8 | Φ400 | 2750 | 2820×2580×2950 |
| ZQ-JY-10.0- I | 0-500 | Φ2230×2800 | 10 | Φ400 | 2750 | 2820×2580×3450 |

## Double barrel dosing equipment

| model | dosage (L/h) | Medicine box size Φ×h (mm) | tank capacity ($m^3$) | Dosing caliber(mm) | power (W) | floor space L×W×H(mm) |
|---|---|---|---|---|---|---|
| ZQ-JY-0.1- II | 0-16 | Φ460*760 | 0.1 | Φ160 | 770 | 1320×520×1240 |
| ZQ-JY-0.2- II | 0-16 | Φ580×960 | 0.2 | Φ160 | 860 | 1560×640×1440 |
| ZQ-JY-0.3- II | 0-16 | Φ680×1000 | 0.3 | Φ160 | 1130 | 1760×740×1490 |
| ZQ-JY-0.5- II | 0-60 | Φ800×1150 | 0.5 | Φ260 | 1220 | 2000×1140×1640 |
| ZQ-JY-1.0- II | 0-60 | Φ1070×1250 | 1 | Φ400 | 1130 | 2240×1400×1740 |
| ZQ-JY-1.5- II | 0-120 | Φ1200×1460 | 1.5 | Φ400 | 1220 | 3050×1550×1990 |
| ZQ-JY-2.0- II | 0-120 | Φ1320×1620 | 2 | Φ400 | 1130 | 3220×1660×2150 |
| ZQ-JY-3.0- II | 0-240 | Φ1580×1850 | 3 | Φ400 | 1220 | 3820×1940×2390 |
| ZQ-JY-5.0- II | 0-500 | Φ1850×2100 | 5 | Φ400 | 1680 | 4360×2200×2700 |
| ZQ-JY-6.0- II | 0-500 | Φ1850×2100 | 6 | Φ400 | 1680 | 4360×2200×3050 |
| ZQ-JY-8.0- II | 0-500 | Φ2230×2300 | 8 | Φ400 | 2380 | 5100×2580×2950 |
| ZQ-JY-10.0- II | 0-500 | Φ2230×2800 | 10 | Φ400 | 3180 | 5120×2580×3450 |

Note: The parameters in the table are for reference only








# Non-standard equipment

## Other non-standard sewage treatment equipment

Zhongqiao enlightenment mainly engages in high-end OEM integrated sewage treatment equipment, air flotation machines, non-standard sewage treatment equipment (including mechanical grilles, dosing devices, cyclone desander, sand water separator, scraper suction mud machine, magnetic coagulation, fiber disc filter, mechanical filters, IC tanks, etc.).



Mechanical grille



Fiber rotary filter



Cyclone desander



sand-water separator



Scraping and suction mud machine



Magnetic coagulation



Three chamber dosing device



spiral stacking machine



Belt dewatering machine

Specialized cloud platform for sewage treatment industry

# Chaos Cloud Platform




The "Chaos Cloud" IoT platform independently developed by the automated production workshop provides customers with a one-stop IoT solution, supports one click private deployment, and has core functions such as cloud monitoring, cloud operation, cloud analysis, and cloud management, effectively helping enterprises improve their brand image and maintenance after-sales service quality.

The workshop covers an area of 1500m $^2$ and is divided into two parts: the electrical control assembly workshop and the membrane curtain assembly workshop. Mainly used for producing non-standard automation control cabinets and MBR membrane curtains.



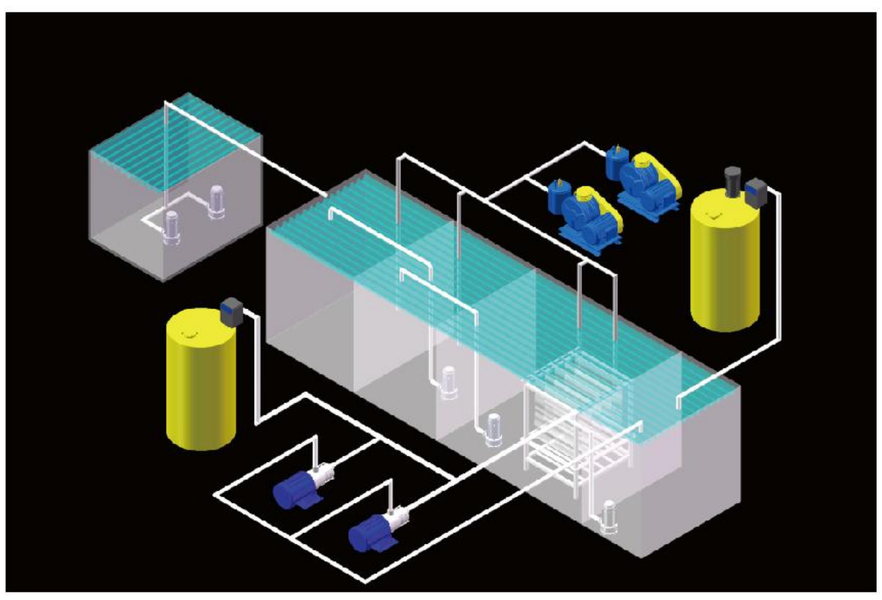


## Chaos Cloud Intelligent System




**01** Our independently developed platform monitors on-site equipment and displays real-time device status information (operating status, fault alarms, traffic, etc.). Accounts can be logged in through computers, mobile apps, and WeChat mini programs.

**02** Operation and maintenance permissions, engineer permissions, and administrator permissions can be assigned through different account permissions.



**03** One account can control multiple devices, and when one of the devices fails, a message will be sent to the phone.




**04** The VPN transparent transmission function allows engineers to modify programs online, saving time and other expenses incurred during travel.

**05** When the device malfunctions and alarms, the phone will receive a message reminder. If the alarm is not resolved within 24 hours, our company's backend operation and maintenance personnel will inform the customer by phone and assist the customer in resolving the on-site fault issues. It is also possible to retrieve data from the backend during the time period of the malfunction for cause analysis. (such as voltage, flow rate, etc. when an alarm occurs)

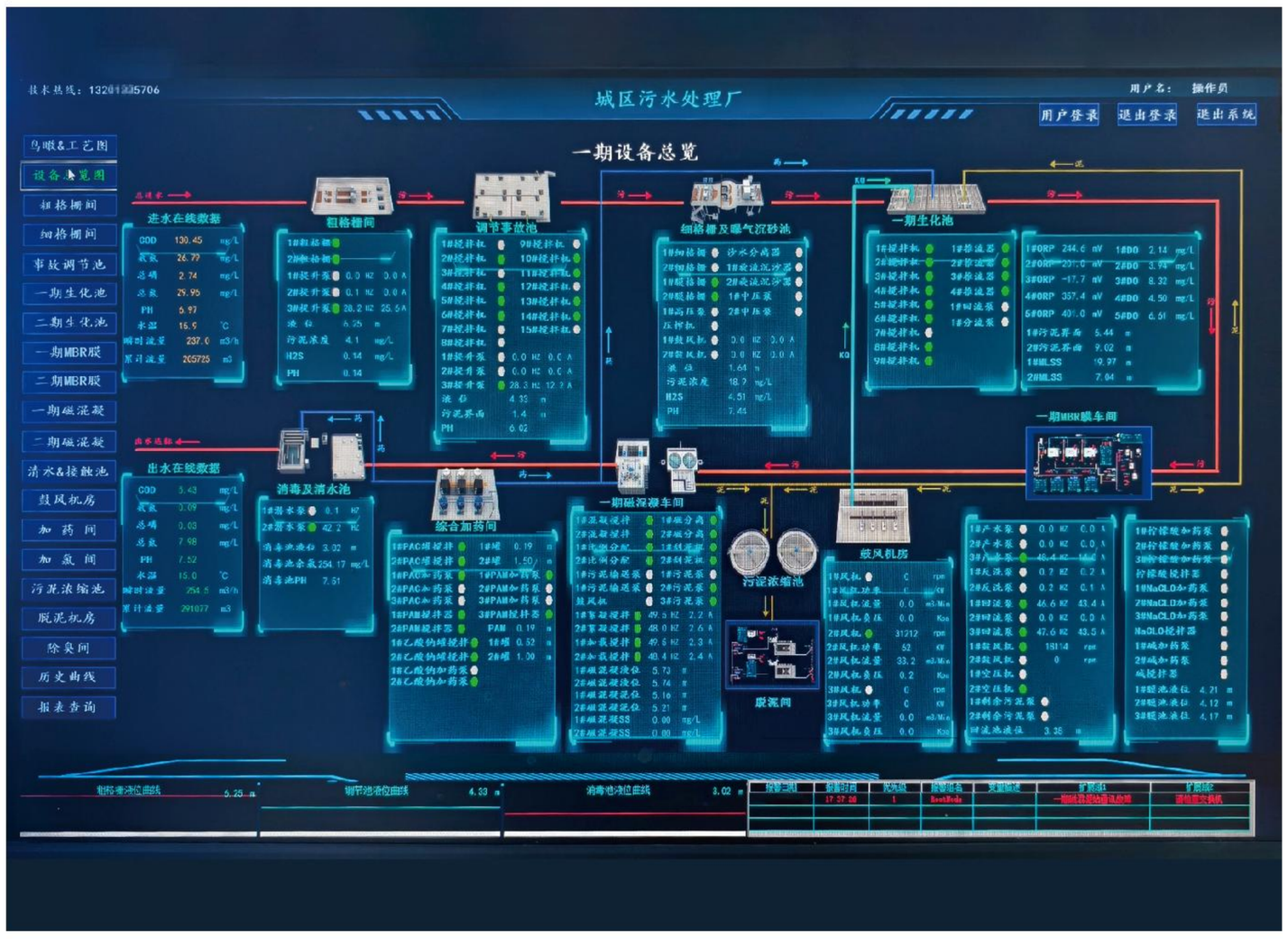


**06** When the number of devices reaches a certain level, a private cloud can be built, and customers can have their own exclusive platform.

## Feature




- The electrical control cabinet has a design patent and product certification certificate, and can customize the product appearance (including logo, color, style, etc.) according to needs
- Add an anti loss file box to the electric control cabinet door.
- Add upper and lower heat dissipation louvers on both sides of the cabinet to prevent excessive temperature inside the electrical control box from affecting the service life of electrical components
- The rear door adopts anti-theft design
- The lock is a connecting rod cabinet lock, which is more beautiful and practical
- Bottom inlet, detachable partition with reserved inlet holes to prevent insects from entering the cabinet
- Add waterproof grooves and sealing strips to the cabinet door to prevent rainwater from seeping in, making it safer
- The thickness of the base plate is 2.0mm, and it adopts an internal hidden fixing method, which is more beautiful








# Project Case

## Project Case - Henan

water treatment capacity:

10000m³/d

Treatment of water quality:

domestic sewage

Discharge standard：

The first level standard for key control areas in the "Discharge Standards for Water Pollutants in the Yellow River Basin of Henan Province" (DB41/2087-2021)





## Project Case - Shan xi

water treatment capacity:

10000m³/d

Treatment of water quality:

domestic sewage

Discharge standard：

GB18918-2002 "Pollutant Discharge Standards for Urban Sewage Treatment Plants" Level A Standard

## Project Case - Si chuan

water treatment capacity:

10500m³/d

Treatment of water quality:

domestic sewage

Discharge standard：

Class V of the Environmental Quality Standards for Surface Water GB3838-2002



ZHONG QIAO ENLIGHTENMENT

# Project Case

## Project Case - Xinjiang

water treatment capacity:

20000m³/d

Treatment of water quality:

domestic sewage

Discharge standard：

GB18918-2002 "Pollutant Discharge Standards for Urban Sewage Treatment Plants" Level A Standard






## Project Case - Saudi Arabia

water treatment capacity:

1200m³/d

Treatment of water quality:

domestic sewage

Discharge standard：

Implement Saudi Aramco's standard for recycled water (same level A standard)

## Project Case - Xinjiang

water treatment capacity:

2000m³/d

Treatment of water quality:

domestic sewage

Discharge standard：

GB18918-2002 "Pollutant Discharge Standards for Urban Sewage Treatment Plants" Level A Standard



# Project Case




Indonesia




Ethiopia




Singapore



Russia




Ethiopia



New Zealand



Singapore



Mexico

# Project Case



Russia



Indonesia



USA




Saudi Arabia (Phase 1)



Costa Rica




Saudi Arabia (Phase 2)



Peru



Myanmar

# Partial Performance Table

| | Project Name | Treated water volume | Process |
|---|---|---|---|
| Municipal Wastewater | Henan Province Wastewater Treatment Plant | 10000m³/d | A2O+MBR |
| | Sichuan Province Kangding City Wastewater Treatment Plant | 10000m³/d | AO+MBR |
| | Shaanxi Province Xianyang City Wastewater Treatment Plant (Two Phases) | 10500m³/d、4500m³/d | AO+MBR |
| | Xinjiang Kashgar Wastewater Treatment Plant Construction Project (Two Phases) | 10000m³/d、10000m³/d | Screen+Vortex grit chamber+Five-stage Bardenpho biological pool+MBR+Disinfection |
| | Binzhou Waste Treatment Plant Municipal Pipe Network Sludge Wastewater Treatment Project | 1000m³/d | A2O |
| | Henan Province Zhengzhou City Wastewater Treatment Plant | 20000m³/d | Skid-mounted dosing device |
| Highway Wastewater | Henan Lianhuo Expressway Service Area Environmental Remediation Project | 100m³/d、200m³/d、400m³/d | A2O+Filtering++Disinfection |
| | Hebei Qu-Gang Expressway Wastewater Treatment Project | 120m³/d | AO+MBR |
| | Henan Hedingshui Expressway Environmental Remediation Project | 100m³/d | A2O+MBBR+Disc filter |
| | Shandong Qixia Service Area Wastewater Treatment Project | 300m³/d | A2O+AO+Sedimentation+Sand filtration |
| Sewage | Saudi Arabia Construction Campsite Domestic Wastewater Treatment | 1200m³/d | AO+MBR |
| | Xinjiang Bayinbuluke Wastewater Treatment Station | 1500m³/d | AO+MBR |
| | Lhasa Airport Domestic Wastewater | 2000m³/d | AO+MBR |
| | Indonesia Domestic Wastewater Integrated Treatment Equipment | 2000m³/d | AO+Sedimentation+Disinfection+Equipment room |
| | Guizhou Province Tongren City River Basin Water Pollution Prevention and Control Project | 2000m³/d、4000m³/d | AO+MBR |
| | Singapore Domestic Wastewater Treatment Project | 1000m³/d | A2O+MBR |
| | Xinjiang Kashgar Logistics Park Wastewater Treatment | 600m³/d | AO+MBR |
| | Anhui Province Taihe County Wastewater Treatment Project | 500m³/d | A2O+Inclined tube sedimentation+Sand filtration |
| | Shanxi Province Jinzhong City Domestic Wastewater Treatment | 500m³/d | A2O+AO+Inclined tube sedimentation+Disinfection |
| | Gansu Province Lanzhou QDPP Integrated Domestic Wastewater Equipment | 300m³/d | Septic tank+Equalization tank+AO+Flexible flat membrane |
| | Gansu Province Jiuquan Suzhou Rural Wastewater Treatment Project | 100m³/d-300m³/d | A2O |
| | Hainan Zhonghe Park Domestic Wastewater | 1000m³/d | AO+MBR+Disinfection |
| | Shandong Dezhou Leling Multiple Rural Wastewater Treatment Projects | 50m³/d-200m³/d | A2O+Filtering |
| | Tianjin Ninghe District Ecological Migration Peasant Housing Construction Project | 1500m³/d | A2O+MBR+Disinfection |
| | Russia Factory Domestic Wastewater Project | 1000m³/d | AO+MBR+Disinfection |
| Industrial wastewater | Tianjin Binhai Logistics Processing Area Wastewater Treatment Plant Project | 2000m³/d | A3O+MBR+Disinfection |
| | Heilongjiang Province Shuangyashan Cold Chain Wastewater Park Wastewater Treatment Project | 1350m³/d | AO+Sedimentation+Disinfection |
| | Hubei Province Liquor Factory Wastewater Treatment Project | 20m³/d | Anaerobic+Primary sedimentation+Secondary aerobic+Tertiary filter treatment |
| | Jiangsu Yancheng Bicycle Accessories Co., Ltd. | 50m³/d | Flotation machine+Secondary sedimentation+AAOO+Secondary sedimentation tank+Sludge concentration+Disinfection |
| | Inner Mongolia Hohhot City Detergent Wastewater Treatment Project | 20m³/d | Equalization tank+AO+Sedimentation+Disinfection |
| Hospital wastewater | Anhui Maanshan City Traditional Chinese Medicine Hospital Wastewater Treatment System | 600m³/d | AO+MBR+Disinfection |
| | Heilongjiang Province Qitaihe City Hospital Wastewater Treatment Construction Project | 500m³/d | AO+Disinfection+Plate and frame |
| | Shandong Jinan Hospital Wastewater Project | 300m³/d | Equalization tank+AO integration |
| Food wastewater | Taoli Food Group Co., Ltd. | 200m³/d-1000m³/d | A2O+MBR |
| | Guangdong Zhaoqing Beverage Wastewater Treatment Project | 400m³/d | Flotation machine+AAO integration |
| | Hunan Shaoyang Rice Noodle Wastewater Treatment Project | 200m³/d | pH adjustment+AAO integration |
| | Henan Luohe City Meat Processing Production Wastewater | 50m³/d | A2O process |
| Aquaculture wastewater | Hebei Baoding Multiple Wastewater Treatment Projects for Aquaculture | 5m³/d-20m³/d | Flotation machine+A2O+MBR+Disinfection |
| | Zhejiang Province Shengzhou City Aquaculture Wastewater Treatment Project | 25m³/h | Flotation machine+Inclined tube sedimentation tank |
| Slaughterhouse wastewater | Guangdong Zhuhai Slaughterfish Wastewater Treatment Project | 168m³/d | Flotation machine+AAO integration |
| Rainwater purification | Shandong Weifang Integrated Sponge Purification Equipment | 3600m³/d | Inclined tube sedimentation+MBBR+Nitrogen removal+Filter pool |
| | Hunan Dongjiang Bay Urban Park Rainwater Treatment | 100m³/d | Inclined tube sedimentation+Filtering |
| Seawater purification | Shandong Qingdao Zhonghe Wastewater Treatment Device Renovation | 80m³/h | Flotation machine |
| Landfill leachate | Inner Mongolia Leachate Wastewater Treatment Project | 100m³/d | Physical and chemical+Biological |

ZHONG QIAO ENLIGHTENMENT

# Patent List

| patent of invention | | | patent for utility models | | |
|---|---|---|---|---|---|
| order number | patent name | patent number | order number | patent name | patent number |
| 1 | international patent for invention | | 1 | A type of lift-up packing device | ZL 2024 2 1635892.8 |
| 2 | A Structure and Treatment Method of Sewage Treatment Based on Hollow Fiber Biofilm | ZL 2025 1 0926137.8 | 2 | A MBR Membrane Frame | ZL 2024 2 0316890.6 |
| 3 | A treatment system and method for nitrogen and phosphorus removal in mine wastewater | ZL 2024 1 0107503.2 | 3 | A kind of lift-type aeration device | ZL 2024 2 0203701.4 |
| 4 | An Integrated Sewage Treatment Equipment for Aquaculture | ZL 2024 1 0714247.3 | 4 | A kind of filter cloth rotary filter equipment | ZL 2023 2 3216948.4 |
| 5 | A kind of buried SBR sewage treatment device | ZL 2023 1 0719755.6 | 5 | A kind of biological rotary disk sewage treatment equipment | ZL 2023 2 3216943.1 |
| 6 | A Hollow Fiber Composite Biofilm Sewage Treatment Equipment | ZL 2023 1 0456662.9 | 6 | A kind of prefabricated box structure and integrated sewage treatment equipment | ZL 2023 2 1824829.4 |
| 7 | A MBR Sewage Treatment Device and Its Sewage Treatment Method | ZL 2023 1 0474347.9 | 7 | A prefabricated housing structure and wastewater treatment equipment comprising the housing structure | ZL 2023 2 1805529.1 |
| 8 | Aeration Device for Sewage Tank | ZL 2023 1 0456669.0 | 8 | Small hospital wastewater treatment equipment | ZL 2022 2 3197657.0 |
| 9 | A Vertical Dissolved Air Flotation Unit | ZL 2023 1 0416619.X | 9 | A Medical Wastewater Treatment Device | ZL 2022 2 2901182.2 |
| 10 | A self-nitrogen removal denitrification wastewater treatment equipment | ZL 2023 1 0286132.4 | 10 | A Horizontal Corrosion-resistant PP Metering Tank | ZL 2022 2 2735021.0 |
| 11 | An Intelligent Self-adjusting Electrolytic Phosphorus Removal Device | ZL 2021 1 0036667.7 | 11 | An Integrated HMPP Prefabricated Pump Station | ZL 2022 2 2423439.8 |
| 12 | An Integrated Electrolytic Ammonia Nitrogen Removal Device for Wastewater Treatment | ZL 2021 1 0035477.3 | 12 | A HMPP buried pumping station | ZL 2022 2 2361525.0 |
| 13 | Production Technology of PP Material Environmental Protection Equipment | ZL 2021 1 0204848.6 | 13 | A30+MBBR Process of PP Material Sewage Treatment Equipment | ZL 2022 2 2280054.0 |
| 14 | A combination of electrical control equipment room with moisture-proof function | ZL 2021 1 0042257.3 | 14 | A PP Reactor Tank with High Temperature and High Pressure Resistance | ZL 2022 2 2225385.4 |
| 15 | A multi-point water intake emergency nitrogen and phosphorus removal sewage treatment system | ZL 2019 1 0594134.3 | 15 | A PP Material Sewage Treatment Tank | ZL 2022 2 2173663.6 |
| 16 | A gap oil-removing mechanism for sewage treatment | ZL 2019 1 0440737.8 | 16 | IC internal circulation anaerobic reactor | ZL 2022 2 1377763.4 |
| 17 | A multi-function biogas bulking sewage treatment device | ZL 2018 1 1079494.1 | 17 | Horizontal Integrated Sewage Treatment Equipment | ZL 2022 2 1377760.0 |
| design patent | | | 18 | A Laboratory Sewage Treatment Equipment | ZL 2022 2 1344704.7 |
| order number | patent name | patent number | 19 | UASB anaerobic reactor | ZL 2022 2 1289447.1 |
| 1 | Handicraft (Dijin Whale) | ZL 2024 3 0262604.8 | 20 | Submarine Integrated Sewage Treatment Equipment | ZL 2022 2 1230285.4 |
| 2 | integrated sewage treatment equipment | ZL 2024 3 0262761.9 | 21 | An Integrated MBBR Sewage Treatment Plant | ZL 2022 2 1230249.8 |
| 3 | Sewage treatment equipment (Ecopac integrated) | ZL 2023 3 0868915.4 | 22 | MBBR Integrated Sewage Treatment Equipment | ZL 2022 2 1184247.X |
| 4 | Water tank | ZL 2023 3 0332902.5 | 23 | Laboratory Sewage Treatment Equipment | ZL 2022 2 1161673.1 |
| 5 | head of pot | ZL 2023 3 0332906.3 | 24 | A New Type of Micro-nano Bubble Emitter | ZL 2021 2 3176811.1 |
| 6 | Bottom of the pot | ZL 2023 3 0332901.0 | 25 | A New Type of High Efficiency Solvent Gas Tank | ZL 2021 2 3088435.0 |
| 7 | maintenance hole of tank | ZL 2023 3 0332909.7 | 26 | A new type of filter cloth rotary welding fixture | ZL 2021 2 1764272.0 |
| 8 | control cabinet | ZL 2022 3 0504690.X | 27 | A rotary filter for deep filtration of sewage | ZL 2021 2 1391499.5 |
| 9 | Sewage treatment equipment (Zhongqiao Box) | ZL 2022 3 0785431.9 | 28 | An Integrated Sewage Treatment Plant Based on A3O+MBBR Process | ZL 2021 2 1391482.X |
| 10 | Sewage treatment equipment (Zhongqiao Tank) | ZL 2022 3 0504668.5 | 29 | A kind of embedded parts of civil engineering filling scaffold | ZL 2021 2 0616550.1 |
| 11 | integrated sewage treatment equipment | ZL 2022 3 0504688.2 | 30 | A Adjustable Type of Overflow Weir | ZL 2021 2 0535180.9 |
| 12 | Sewage treatment equipment | ZL 2022 3 0504674.0 | 31 | A Anaerobic Reactor of PP Material | ZL 2021 2 0535178.1 |
| software copyright | | | 32 | A MBR Membrane Cell Liquid Level Meter | ZL 2021 2 0535172.4 |
| order number | dynacomm | registration mark | 33 | A new type of slag discharge device for air flotation machine | ZL 2021 2 0533541.6 |
| 1 | Integrated Hospital Wastewater Treatment Management Platform | 2023SRO050592 | 34 | A Sewage Recycling Mixing Device | ZL 2021 2 0345983.8 |
| 2 | Hospital Wastewater Management Platform for Infectious Disease Hospitals | 2023SRO050591 | 35 | A New Type of Water Distribution Structure for Air Floating Machine | ZL 2021 2 0345982.3 |
| 3 | Management Platform for Wastewater Treatment in Mobile Hospitals | 2023SRO048129 | 36 | A PP Material Environmental Protection Equipment Production System | ZL 2021 2 0345599.8 |
| 4 | Food Waste Treatment Management Platform | 2023SRO048128 | 37 | A PP Sewless Winding One-time Molding Sewage Treatment Equipment | ZL 2021 2 0336501.2 |
| 5 | Wastewater Treatment Management Platform for Service Area | 2023SRO048125 | 38 | A kind of civil engineering overflow weir device | ZL 2021 2 0314180.6 |
| 6 | River Management Platform | 2023SRO048124 | 39 | A containerized heat preservation sewage treatment equipment | ZL 2021 2 0314179.3 |
| 7 | Smart Cloud Platform for Purification Tank | 2022SRO584361 | 40 | A Vertical Bio-suspension Integrated Sewage Treatment Equipment | ZL 2021 2 0311377.4 |
| 8 | Intelligent Cloud Platform of Air Floating Machine | 2022SRO582282 | 41 | A vertical biological suspension deep treatment integrated sewage treatment equipment | ZL 2021 2 0311204.2 |
| 9 | Zhongqiao Cloud Platform | 2022SRO582281 | 42 | A New Type of Air Pump Air Floating Machine | ZL 2021 2 0168243.1 |
| 10 | Smart Cloud Platform | 2022SRO577266 | 43 | A type of gas lift pump | ZL 2021 2 0165816.5 |
| 11 | intelligent water management system | 2022SRO484729 | 44 | A Sludge and Nitration Liquid Gas Lift Reflux Device | ZL 2021 2 0165805.7 |
| 12 | Chaos Cloud Control Unmanned System | 2022SRO484728 | 45 | A Filter Cloth Rotary Disk Filter | ZL 2021 2 0165796.1 |
| 13 | Zhongqiao Enlightens Smart Water Management | 2022SR0582277 | 46 | A combination of electrical control equipment room | ZL 2021 2 0082656.8 |
| 14 | Smart Cloud Platform for Village and Town Wastewater Management | 2022SR0580550 | 47 | Electrolysis device for removing ammonia nitrogen and phosphorus with electrode passivation function | ZL 2021 2 0082644.5 |
| 15 | Chaos Cloud Control Device Management APP | 2022SR0488640 | 48 | An Electrolytic Phosphorus Removal Device to Prevent Electrode Passivation | ZL 2021 2 0071527.9 |
| 16 | distributed equipment centralized control system | 2022SR0488609 | 49 | A treatment device for ammonia nitrogen removal from wastewater by electrolysis | ZL 2021 2 0069840.9 |
| 17 | chaotic cloud control interactive system | 2022SR0484253 | 50 | A Small Medical Sewage Treatment Device | ZL 2019 2 2488795.6 |
| 18 | Chaos Cloud Control Device Management Mini Program | 2022SR0484252 | 51 | A Solar Energy Sewage Treatment Device | ZL 2019 2 2488676.0 |
| 19 | chaotic cloud configuration | 2021SR1416020 | 52 | A container type sewage treatment device | ZL 2019 2 2488596.5 |
| 20 | chaotic cloud control platform | 2021SR1416019 | 53 | An Integrated Sewage Treatment Equipment | ZL 2019 2 2488569.8 |
| 21 | Chaos Cloud Control BOX Management | 2021SR1415161 | 54 | A MBR Sewage Treatment Equipment | ZL 2019 2 2484954.5 |
| 22 | Intelligent Control System of Sewage Treatment Equipment Based on MBR | 2019SRO667553 | 55 | A container type sewage treatment equipment | ZL 2019 2 2484925.9 |
| 23 | Integrated Control Software for Sewage Treatment Based on Household Membrane Tank | 2019SRO667279 | 56 | A Flexible Flat Membrane Filtration Device | ZL 2019 2 2484921.0 |
| 24 | Intelligent Control System for Industrial Wastewater Treatment | 2018SR429186 | 57 | A flexible flat membrane sewage treatment equipment | ZL 2019 2 2484906.6 |
| 25 | Expert System for Total Calculation of Water Pollutant | 2018SR427301 | 58 | Self-responsive bioreactor for wastewater treatment | ZL 2017 2 0838477.6 |
| 26 | Software of Industrial Wastewater Automation Operation Monitoring System | 2018SR427151 | 59 | integrated sewage treatment equipment | ZL 2015 2 1138799.7 |
| 27 | Industrial wastewater treatment automation monitoring software | 2018SR427150 | 60 | MBR Integrated Sewage Treatment Equipment | ZL 2015 2 1138591.5 |

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**WEI CHENG:** South of 300 meters west of the intersection of Wei 'an Road and Leshan Street, Fang 'an Street, Fangzi District, Weifang City, Shandong Province

**FANG ZI:** Southeast corner of the intersection of Tiancheng Street and Leshan Road, Lebushan Eco-economic Development Zone, Weicheng District, Weifang City, Shandong Province