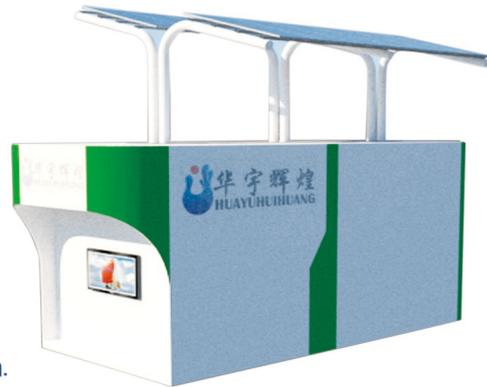


A “Swift” Solar-Powered Sewage Treatment Bioreactor



Adopt the traditional A/O + bacteria sieve filtration.

Solar energy and power grid realizes , energy saving and carbon reduction

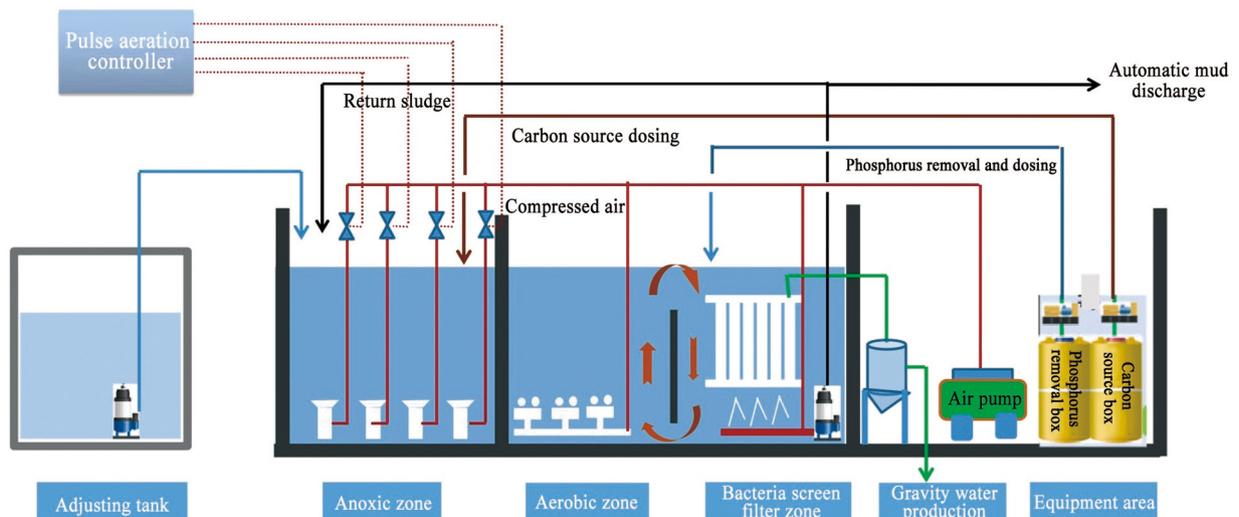
Intelligent remote control to realize visual operation of equipment

Carbon steel anti-corrosion material.

Meet the requirement for domestic sewage use in separate households

PROCESS FLOW

“Swift” Solar-Powered Sewage Treatment Bioreactor (“Swift” Solar Sewage Bioreactor) integrates solar power supply system, anoxic zone, aerobic zone, bacteria sieve filtration zone, etc., and adopts A/O process + bacteria sieve filtration. The effluent reaches the local discharge standards.



PRODUCT STRUCTURE



Microdynamics bacteria screen filter system

Innovative development of "Bacteria Screen Filter Layer"
Improved load and nitrification capacity
Improved water quality

Clear and turbid water identification system

Automatic identification, fully automatic gravity water production
Long regeneration period
Small footprint

Solar power supply system

Low equipment energy consumption
Dual power supply from solar energy and mains electricity

Intelligent control system

Automation control
Multi-mode operation



Microdynamics bacteria screen filter system

"Bacteria Sieve Filter Layer", a innovatively developed dynamic biological filtration layer formed by microorganisms and their EPS on the surface of a special base membrane can achieve high-efficiency solid-liquid separation of mud and water is achieved through microgravity. The layer also has the advantages of zero energy consumption, excellent water quality, and improved system volume and system nitrification capacity.



Clear and turbid water identification system

The system can automatically identify clear and turbid water and smartly controls the switching of the shunt electric ball valve to ensure the stability and quality of water production. The system enables automatic gravity water production, mud discharge, automatic water reuse irrigation, making operation and maintenance is relatively simple; long regeneration cycle (more than 30 days). And the flux can be restored only by high-intensity aeration without consuming chemicals; the process structure is compact and the floor space is small.



Solar power supply system (dual power supply from solar energy and power grid)

Installed power: Energy consumption can reduce by more than 50% compared to MBR integrated equipment of the same scale. Photovoltaic power supply: Green energy can be used to replace or as a supplement to the mains power. The dual power supply automatically switches to the optimal configuration, which can save more than 80% of mains power consumption.



Intelligent control system

Automatic equipment control and multi-mode operation of the system are realized by configuring PLC, touchscreen and supporting control electrical components. Remote control modules can be matched according to different needs.



"Swift" Solar-Powered Sewage Treatment Bioreactor

EQUIPMENT ADVANTAGES

Advanced technology	We utilize the microbial flora and EPS in activated sludge to form a nano-scale filtration membrane layer under the action of a special base membrane and hydraulic flow regime. Thereby achieving efficient solid-liquid separation through microgravity without the need for sedimentation tanks and deep treatment. Effluent water reaches discharge standards.
Energy efficient	Through process innovation and breakthroughs, the entire machine is designed to be super energy-saving, with very few power equipment, and the power is more than 50% lower than MBR equipment with the same processing scale.
Solar powered	Equipped with standard solar panels and energy storage system, it can achieve 100% green energy power supply with less than 50t/d, and the dual power switch of mains power and solar energy can realize millisecond-level automatic switching.
Pulse aeration	The pulse aeration method is used for hydraulic mixing in the anoxic zone, which not only solves the fluidization effect of low dissolved oxygen sludge, but also solves the problem of high energy consumption and proneness to damage of traditional mixers.
Simplicity and aesthetics	Simplicity and aesthetics appearance design concept, equipped with industrial LCD display, making the reactor smarter and simpler. The shape is combined with solar photovoltaic panels and looks like a flying swallow, hence the name "SWIFT".
Intelligent remote control	The Data generated by the equipment is collected into the PLC central control program through turbidity, flow meter, three-way valve, dissolved oxygen meter and other related sensors. The remote transmission and video image technology of the Internet of Things are used to realize remote transmission operation, monitoring and control. The operation of the reactor can be completely visualized.



This equipment has obtained 7 invention patents and 1 utility model patent.

PRODUCT SPECIFICATIONS

Model	Scale (m ³ /d)	Dimension L*W*H (m)	Power (kW)	Installation method	Power supply mode	Voltage (V)
YY-10	10	2.8X2.0X2.5	0.6	Standard overground type	Solar energy (mains power supplement)	220
YY-20	20	4.0X2.0X2.5	0.8	Standard overground type	Solar energy (mains power supplement)	220
YY-30	30	4.4X2.0X3.1	0.9	Standard overground type	Solar energy (mains power supplement)	220
YY-50	50	5.5X2.5X3.1	1.1	Standard overground type	Solar energy (mains power supplement)	220
YY-100	100	8.5X3.0X3.1	2.0	Standard overground type	Solar energy (mains power supplement)	220
YY-150	150	11.5X3.0X3.1	3.0	Standard overground type	Solar energy (mains power supplement)	220

