

# AquatiCube™

## Package Wastewater Treatment Plant



Integrated and Compact Solutions for  
Onsite and Clustered Wastewater Treatment Systems



# AquatiCube™ Package Treatment Plant

Integrated and Compact Solutions for Onsite and Clustered Wastewater Treatment

## Features

### ■ Compact, pre-assembled, and factory tested plants for wastewater treatment

The ancillary equipment, including process pumps, valves, instruments and control systems are housed in a single container. The self-contained system will outperform conventional treatment alternatives, offering superior quality effluent, reduced operating costs, smaller footprints, and more reliable performance.

### ■ Easy and quick installation

Pre-engineered and fabricated, then delivered to the site in 20 feet or 40 feet ISO open-top shipping container. After connected to flow equalization tank, the plant will run for treatment.

### ■ Custom design for specific requirements of the site

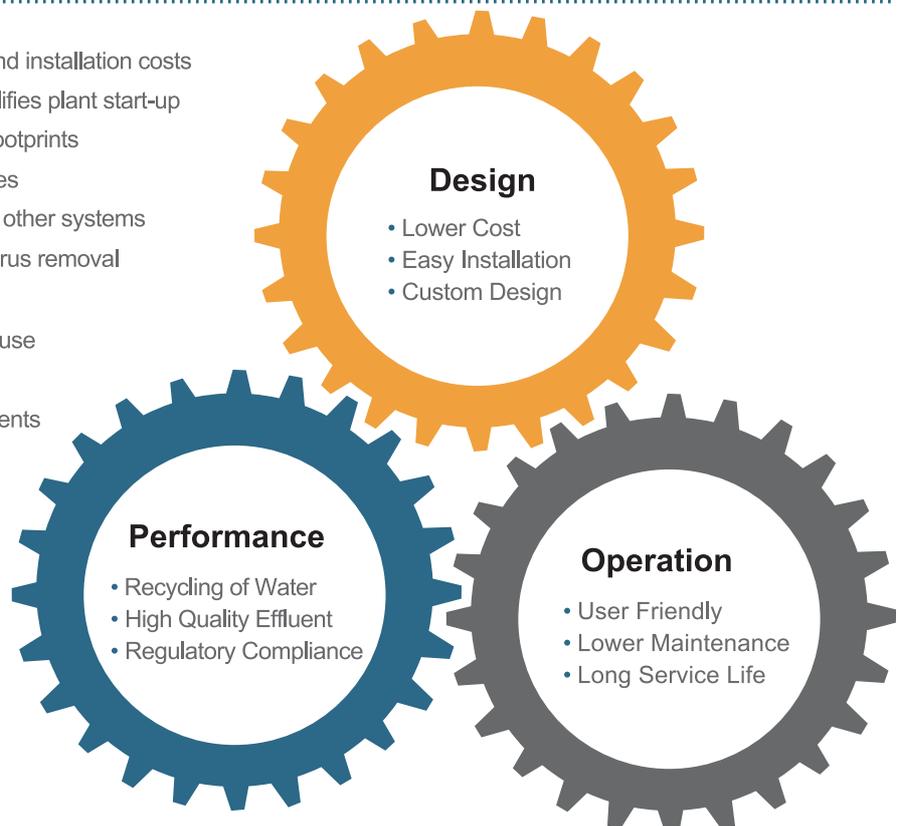
Two types of package plants are available depending on effluent water quality and flow capacity. Patented Submerged Block Membranes (SBM) are key to high quality effluent. Patented modular surface oxidation units can be substituted for SBM to meet the requirements of large quantity treatment. Several package units can be connected in parallel to serve the total design flows.

### ■ Low cost and low maintenance operation

PLC monitors the entire system and automatically makes adjustments to ensure the plant is operating at peak efficiencies. The Plant can be operated by the staff directly, or remotely via internet.

## Benefits

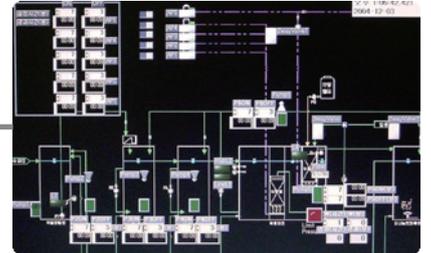
- Minimizes on-site construction and installation costs
- Ensures quick delivery and simplifies plant start-up
- Modular containers have small footprints
- Expandable to larger custom sizes
- Competitive pricing compared to other systems
- Advanced nitrogen and phosphorus removal
- Safe effluent for direct discharge
- Applicable treatment for water reuse
- Easy to operate
- Minimum maintenance requirements
- Biological solid reduction
- Energy saving operation
- Low maintenance cost



Benefits of Package Wastewater Treatment Plant



SBM modules or Fixed-film reactor



System control and process monitoring



Pumps, blowers, and control valves



FRP sheet insulation



Exterior design with wood siding

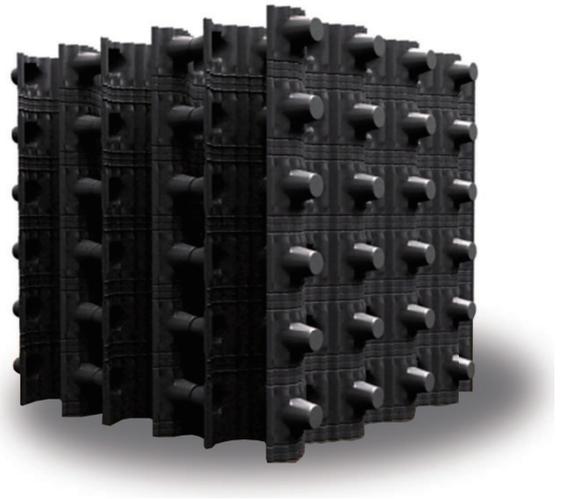
## F-Reactor

### ■ Modular surface oxidation unit with artificial grass

Modular fixed-film reactor with the bundles of grass-like fibers inside the honeycombs to increase surface area. Large biofilm attachment area enables compact and efficient designs.

### ■ Reduces BOD<sub>5</sub> and TSS to levels that meet local environmental standards

Modular surface oxidation unit is a state-the-art fixed film reactor capable of performing secondary and tertiary treatment to meet all federal and state required effluent standards.



## M-Reactor

### ■ Modular block-type membranes for submerged membrane bioreactor

Submerged block membrane(SBM) is new modular flat membrane system. It includes 15 membrane elements with an area of 0.3 m<sup>2</sup> and the demension of 63×30cm. The size of membrane block is 70×30cm, and the thickness is 19.5cm. Eight membrane blocks are installed within a cassette, which treat 13.4 m<sup>3</sup>/day.



### ■ Automated in-situ and in-line chemical cleaning

For the conventional MBR system, the general preventive cleaning has to be done manually in every 6 month. Automated in-situ and in-line cleaning procedures eliminate frequent intensive manual cleaning in place. MBR plant with SBM modules requires minimal operator attendance and maintenance. Manual membrane cleaning schedule can be extended to 1 year or more.



Typical Effluent Quality of an AquatiCube Package Plant

Parameters	F-Reactor	M-Reactor
Flow (gpd)	18,000~40,000	6,500~13,000
BOD <sub>5</sub>	10~20	<5
TSS	10~20	<1
TN	<10	<3
TP	<3	<0.5

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## Installation of Package Wastewater Treatment Plant

Package plants which are pre-engineered and fabricated, then delivered to the site, have usually been the preferred option for the construction of small sewage treatment works serving population equivalents of less than 2000. They can minimize on-site construction and installation costs as well as ensure specific performance and compliance requirements.



## Applications

- Decentralized sewage treatment for suburban new development area
- Industrial and municipal wastewater treatment
- Hotels, resorts and restaurants
- Military camps and construction sites
- Refineries and oil fields
- Food processing plants
- Cruise ships and off-shore locations
- RV park



**Our Vision is to integrate urban development with nature,  
creating ecologically sustainable cities and communities.**

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