

## Introduction

KUMHO-MBR is a advanced wastewater treatment, using flat-sheet membrane, can change the condition of the anaerobic/anoxic switching tanks according to the pollutant loadings in influent wastewater.

## System Process



## Characteristics

Accumulated Module	Efficient Air-washing	Easy Chemical Cleaning

## Application

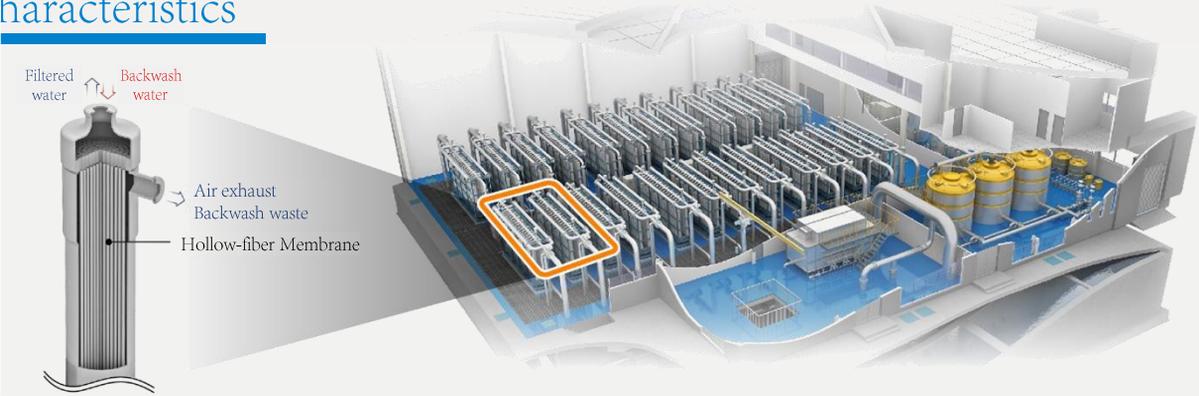
Sewage Treatment Plant and Capacity	
Gochang Asan	750 m <sup>3</sup> /d
Iksan Industrial Complex	5,500 m <sup>3</sup> /d
Gimhae Jillye	15,000 m <sup>3</sup> /d
Gunsan 2 national Industrial Park	13,000 m <sup>3</sup> /d
Jumunjin Industrial Complex of Rural Areas	1,500 m <sup>3</sup> /d
Osong 2nd Biopoilce Complex	11,800 m <sup>3</sup> /d
Pohang Bluevaley	6,000 m <sup>3</sup> /d



## Introduction

The membrane filtration process combined with streaming current control optimizes the pretreatment according to the characteristic of raw water, so that it can be operated steadily even at high flux.

## Characteristics



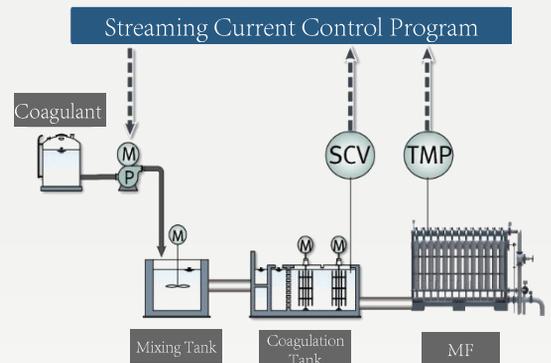
### Low Fouling Membrane

- Excellent water quality and antifouling
  - ➔ Turbidity below 0.04NTU
  - ➔ Small pore size (150kDa)
  - ➔ Long-term CIP period
- Pressurized membrane module
  - ➔ Excellent operational stability (Winter)

	Pore size(0.01 μm)	Pore size(0.05 μm)
<b>Membrane Fouling Phenomenon</b>	✓ Rejection of membrane foulants by small pore size(0.01 μm) ✓ Stable operation performance at high turbidity due to excellent backwash efficiency ✓ The CIP cycle is extended due to low irreversible resistance	- Fouling is increasing by similar pore size with NOM - Low recovery performance by backwash (increasing irreversible fouling)

### Coagulation Automatic Control System (NET)

- High Flux (2m/d) Reducing construction and membrane replacement cost
- Low fouling Long-term CIP period, Unnecessary CEB
- Coagulation Control Reducing of chemical consumption
- No Sedimentation Reducing construction cost And footprint



## Applications

Water Treatment Plant and Capacity	
Gongju (MF)	30,000 m <sup>3</sup> /d
Daesan Industrial Water (MF+RO)	119,000 m <sup>3</sup> /d
Imsil (MF)	10,000 m <sup>3</sup> /d
Yeosu Dundeok (MF)	92,000 m <sup>3</sup> /d
Yeosu Hakyong (MF)	42,000 m <sup>3</sup> /d
Boeun (MF)	9,000 m <sup>3</sup> /d

