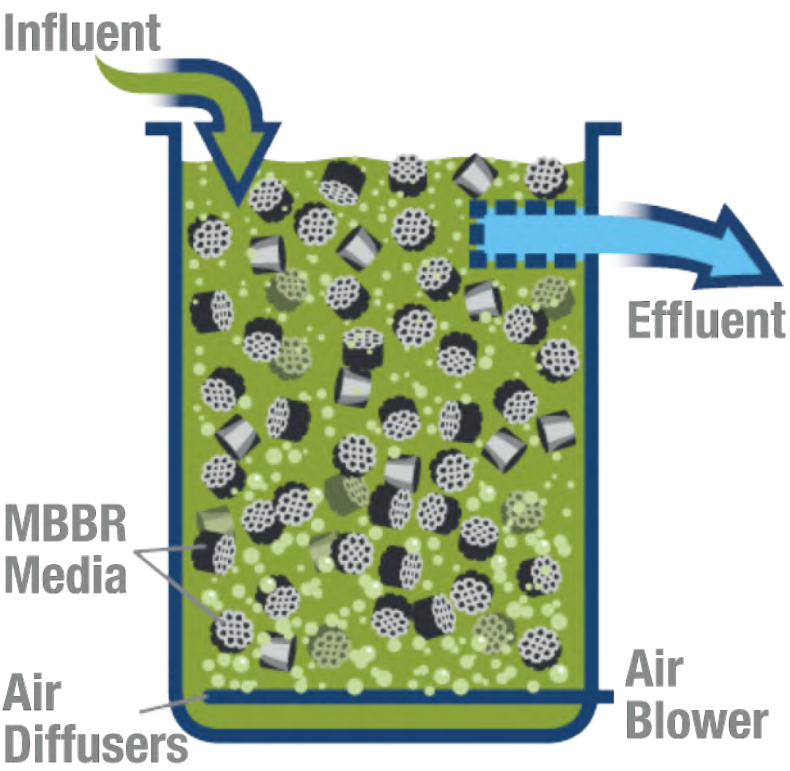
Moving Bed Biofilm Reactor (MBBR)

Moving Bed Biofilm Reactor (MBBR) processes improve reliability, simplify operation, and require less space than traditional wastewater treatment systems.This technology provides cost-effective treatment with minimal maintenance since MBBR processes self-maintain an optimum level of productive biofilm.



Additionally, the biofilm attached to the mobile bio-carriers within the system automatically responds to load fluctuations.

FEATURES:

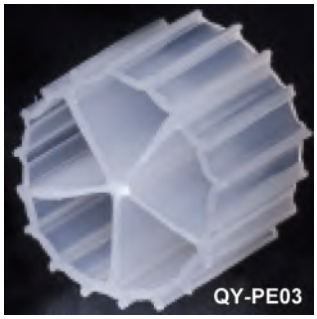
More COD load: Up to 6~10kg/m^3.d, about 2-4 times comparing with active sludge process.

More NH_3 load: Up to 1kg NH_3-N/m3.d(35 ^{0}C). Traditional active sludge process can only handle 0.1-0.3kg NH3-N/m^3.d.

Core technology of QY series MBBR media

- Special material to strength bio-film adhesiveness;
- Large specific surface area, high porousness to ensure more biomass to grow;
- Unique structure and shape design according to hydromechanics to strength three-dimensional flow dynamics of carrier in water;
- Adding hydrophilic material and other trace elements to shorten the biofilm formation time, from 3 to15 days;
- Excellent impact strength and strong gas shear capacity;
- Easy to install, easy to cure, less space required.

MBBR MEDIA TECHNICAL SPECIFICATIONS



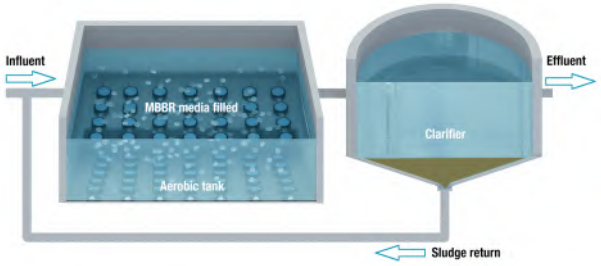
Model No.	QY-PE02	QY-PE03	QY-PE04	QY-PE08	QY-PE09	QY-PE05	QY-PE38	QY-PE10
Dimensions (mm)	Ø11x7	Ø10x7	Ø16x10	Ø5x10	Ø15x15	Ø25x10	Ø25x10	Ø25x4
Hole nos.	4	5	6	8	40	19	38	64
Material	Virgin HDPE+anti-UV, hydrophilic material, FDA food grade			PS	Virgin HDPE+anti-UV, hydrophilic material, FDA food grade			
Effective Surface Area (m^2/m^3)	>900	>1000	>800	>3500	>900	>600	>800	>1200
Density (g/cm^3)	0.96-0.98			1.02-1.05	0.96-0.98			
Packing nos. (pcs/m^3)	>930000	>990000	>260000	>2000000	>210000	>118000	>118000	>210000
Porosity (%)	>85	>85	>85	>80	>85	>90	>90	>85
Dosing ratio (%)	15-68	15-70	15-67	15-70	15-65	15-65	15-70	15-65
Membrane-forming time (days)	3-15							
Nitrification efficiency ($gNH_4\text{-}N/m^3.d$)	400-1200			500-1400	500-1400	400-1200	500-1200	500-1400
BOD_5 oxidation efficiency ($gBOD_5/m^3.d$)	2000-10000			2500-15000	2500-15000	2000-10000	2000-10000	2500-20000
COD oxidation efficiency ($gCOD/m^3.d$)	2000-15000			2500-20000	2500-20000	2000-15000	2000-15000	2500-25000
Applicable temperature （°C）	5-60							
Lifespan (year)	>15							

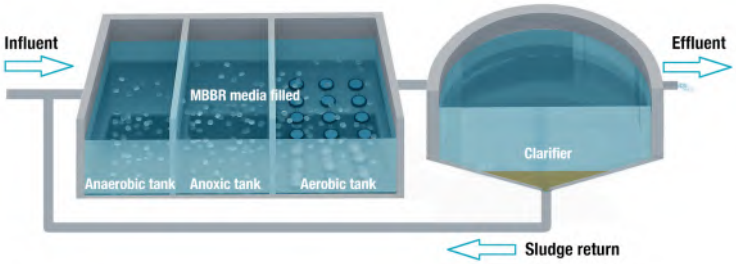
MBBR MEDIA APPLICATIONS

MBBR-SBR process

In SBR process, MBBR media can do

- Increase processing capacity
- Combine nitrification and de-nitrification in one process
- Increase dissolved air efficiency





MBBR-AAO process

In AAO press, MBBR media can do

- Reduce hydraulic retention time
- Increase effluent water quality
- Increase tolerance to load fluctuations
- Improve performance in low temperature

Contact Us

WUXI QIUYUAN ENVIRONMENTAL ENGINEERING CO., LTD.

Email:info@bioetp.com
Tel:+86-510-68992117
Add:Zhoutie Industry Zone, Yixing City,
Jiangsu Province214200, China