



Moving Bed Biofilm Reactor **SmartMBBR** Package Plants for Sewage Treatment



Cost Effective & Compact Technology for Wastewater Reuse

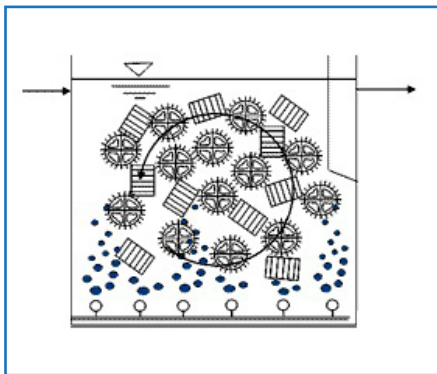




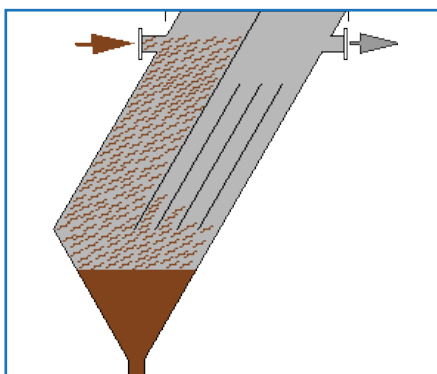
SmartMBBR Package Plant



Plastic Media as Bacteria Carrier



Moving Bed Aeration



Lamella Settler



Complete Plant (SmartMBBR)

Wastewater Treatment with MBBR Technology

MENA-Water **SmartMBBR** is a compact **Moving Bed Biofilm Reactor (MBBR)** used for wastewater treatment. The plastic media acts as suitable carriers for biological colonies of bacteria. Aeration and mixing is provided via coarse bubble diffusers to aid biological process. If de-nitrification is needed anaerobic step with mechanical agitation will be applied in the first chamber before aeration. After aeration, lamellar settler acts as clarifier. The water is then passed through a filtration treatment step and disinfected with chlorine.

Main Features of SmartMBBR

MENA-Water offers complete MBBR package plants, pre-assembled as containerized system (ISO sizes). This facilitates easy transportation, fast availability and straight start-up of the MBBR plant. Included inside the package housing are all main components such as:

- Durable / long life (stainless steel components)
- Stainless steel process tank in ISO container with Alu Cladding
- Completely closed (top cover) ensure low odors
- All components built in the container (plug and play)
- Duty / Standby for main rotating equipment
- European / German manufactures
- Automatic PLC control with web monitoring system

For optimized performance of the entire plant, all necessary equipment for installation in the external structures are included in our scope of supply:

- Equipments for lifting station and mechanical pre-treatment
- Diffusers, pumps and mixers for balancing tank
- Equipment for sludge treatment and clean water pumping

If desired, MENA-Water provides comprehensive support for installation, start-up and maintenance activities and can consult anytime via remote monitoring from back office.

Beyond our **SmartMBBR** scope of supply, we can also offer solutions for further plant equipment such as:

- Sludge treatment
- Mobile power generator
- Odor control
- Containerized operator room



Benefits of our MENA-Water Package Plants

- Well-proven, complete and clean system solution
- Compact footprint combined with convenient accessibility
- Minimum works for site installation and civil structures
- Fully automatic system operation with online monitoring facility
- Adaptable to future demand due to modular system design



Fields of Application

MENA-Water **SmartMBBR** package plants are capable to handle a wide range of capacities, starting from a daily throughput of a few cubic meters, reaching to some thousands of cubic meters per day. Our plants can be arranged custom-fit to serve your desired wastewater application.

Typical applications are:

- Common municipal sewage treatment
- Independent sewage treatment system for stand-alone operation (hotels / business areas / housing complexes etc...)
- Sanitation solution for outlying locations
- Sanitation solution for close and densely populated residential areas due to minimized smell, dirt and footprint
- Process step for industrial wastewater treatment
- Pre-treatment step for reverse osmosis plants

Standard Sizes	Capacity m³/d	Population Equivalent	Approx. Footprint
SMBBR50	50	up to 330 PE	8 x 5 m
SMBBR100	100	up to 660 PE	15 x 6 m
SMBBR200	200	up to 1300 PE	16 x 6 m
SMBBR250	250	up to 1600 PE	16 x 8 m
SMBBR300	300	up to 2000 PE	20 x 8 m

Other sizes are available on demand





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