OXYMEM
a DuPont brand

OxyMem – The MABR Solution for Treating Municipal and Industrial Wastewater

Our History

Our journey began as a spin out from the School of Chemical and Bio-process Engineering at University College Dublin...

2004 – 2008
After a biofilm control patent was granted the next challenge was looking at commercial viability and funding for MABR.

2008 – 2012
After years of rigorous testing, research, pitching and strategising the team received funding from Enterprise Ireland.

2012 – 2014
Our first field scale MABR was built and deployed with Severn Trent Water. OxyMem were the first to make MABR commercially available.

OxyMem Module

OxyMem Clean Membranes

OxyMem Membranes with Biofilm

About OxyMem

With population growth, industrial expansion and tightening of legislation, Wastewater Treatment Plants (WWTPs) are being pushed to their design limits. OxyMem offers an easy means of increasing plant capacity and improving effluent standards by intensifying existing biological processes. OxyMem offers a much better alternative. Deployment is fast and simple. Treatment plants acquire the capacity needed and do not have to interrupt the process or drain the tanks for installation. Our advanced technology offers a significantly improved performance with the lowest OPEX vs conventional technologies and helps owners meet their sustainability goals.

- Additional Biological Capacity
- No Need to Drain Tank
- Zero Additional / Minimal Footprint Required
- Easy and Fast Installation
- High Energy Efficiency
- Resilient Process
- No Need for Bubbles

...and grew to a market leader with a state of the art MABR module production to serve the global market as part of DuPont Water Solutions.

2014 – 2016
Our solution became the 'drop-in' MABR a risk-free solution to current problems.

2016 – 2019
Continuous product improvements and a global client base have led us to fine-tune our product. During this time the OxyFAS-for easy capacity enhancement was released and we continued on a universal, fast growth trajectory.

2019 – 2021
DuPont fully acquired OxyMem "With the ownership of DuPont, we look forward to scaling MABR to meet the growing demand for the treatment and purification of municipal and industrial wastewater."

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OxyFAS – Easy capacity increase

The OxyFAS solution offers a drop-in solution for upgrading existing treatment plants. OxyMem MABR modules provide owners and operators with a cost-effective means of increasing effluent quality and increasing throughput while maintaining (or improving) the same effluent quality, without the need for additional tanks or modifications to the existing assets.

- Existing plant upgrades
- MABR IFAS system – MABR works in conjunction with activated sludge.
- Easy gradual expansion possible.
- Zero-add footprint approach.
- Usually no need to drain the tanks. Easy deployment

OxyFILM – Unlocks the potential of fixed film

The OxyMem OxyFILM is suitable for new builds who require a small footprint low energy solution. OxyFILM can also be used as a pre-treatment for existing plants.

- No MLSS – Only biofilm
- All steps in a single process – low footprint - SND
- New build plants is the main market
- High-rate pre-treatment
- Post aerobic/anaerobic polishing
- Modular package plant possible

OxyMem MABR small scale systems

The OxyLab and OxyPilot can be used by clients to carry out treatability or academic studies to test the suitability of OxyMem MABR. Both of the small-scale units will provide meaningful results for treatability studies.

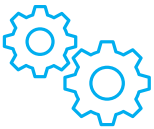
OxyMem Solves WWTP's CAPEX & OPEX Challenges

Process Intensification

- Existing plants: OxyMem modules provide owners and operators of existing activated sludge systems a non-disruptive, resilient means of increasing nutrient removal capacity within existing assets.
- New build plants: Minimal footprint is required for new build plants.

Robust Performance

- MABR nitrifiers are easily maintained for consistent treatment throughout the year, offering a more stable and reliable process.
- With oxygen readily available and a protected aerobic biofilm layer, the MABR system is not as susceptible to process upsets.



Non Disruptive Deployment

- Our simple drop-in solution allows easy upgrade of existing systems, often without needing to stop treatment process, drain tanks or bypass flows.
- Flexible approach enables easy incremental expansion; plant owners can increase treatment capacity as plant load increases.

WWPT Sustainability

- Getting more out of existing tanks, no new construction needed.
- Significant reduction in energy consumption for air delivery compared with conventional aeration systems.
- No chemicals required to maintain performance.

Awards

2020

- WEX Global Innovation in Process Technology Award
- GWI Breakthrough Technology Company of the year

2019

- WEX Global 2019 Operations Award
- Member of the Solar Impulse Foundation #first500

2018

- Imagine H_2O Water Technology Award China 2018
- Global CleanTech Company 2018

2017

- Global CleanTech Company 2017

Key References

Acciona, Spain

- Municipal/Industrial

Tarragona, Spain

- Municipal

VCS, Denmark

- Municipal/Industrial

Severn Trent, UK

- Municipal

Huzhou, China

- Munipical

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