CWT
CLEAN WATER TECHNOLOGY

Membrane Bioreactor (MBR)

SECONDARY WASTEWATER TREATMENT

Membrane Bioreactor

Accomplish exceptional outcomes with CWT's Advanced Aerobic Wastewater Treatment

Clean Water Technology's (CWT) Membrane Bioreactor (MBR) combines two processes: an aerobic biological degradation process and a membrane separation process. The aerobic process employs biological degradation of organic contaminants to suspended solids, which are subsequently separated from the treated water using a membrane filtration unit.

MBR System Advantages

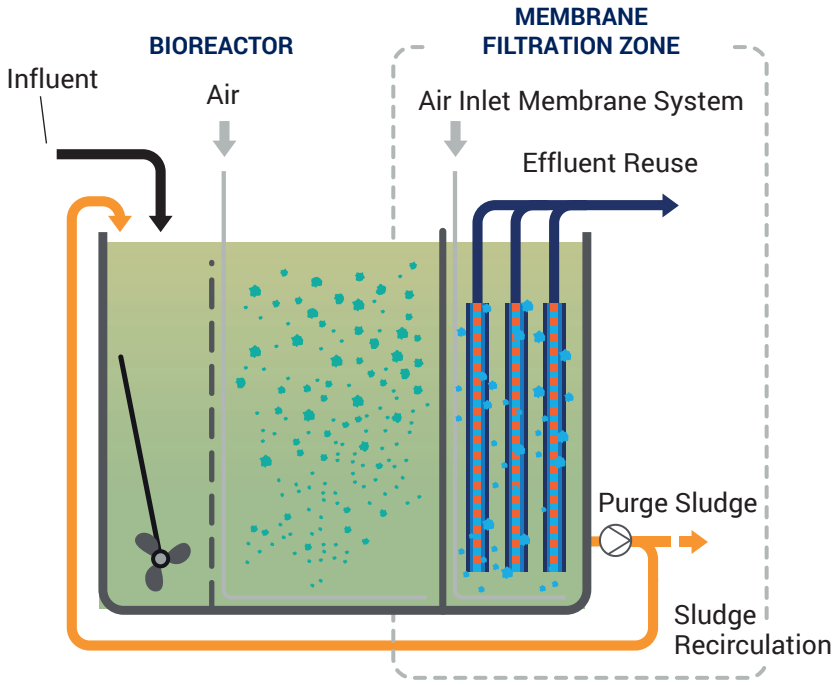
- High-quality effluent - Suitable for reuse
- Improved solids removal
- Elimination of a secondary clarifier
- Reduced sludge production
- Smaller footprint and potential for containerization
- Simplified operation

Transforming Businesses with CWT's MBR. Here's How It Works:

CWT's compact MBR comprises a bioreactor in which air is injected into the mixed liquid using a blower. The mixed liquid is then directed to a settling tank, commonly known as a final clarifier or secondary clarifier, where biological flocks settle, effectively separating the biological sludge from the clear treated water.

This efficient process significantly reduces both chemical oxygen demand (COD), biological oxygen demand (BOD) and nutrients.

The treatment journey continues in the membrane filtration zone, where a cutting-edge ultrafiltration (UF) unit effectively separates fine particles, resulting in a remarkable effluent quality that can be readily reused.



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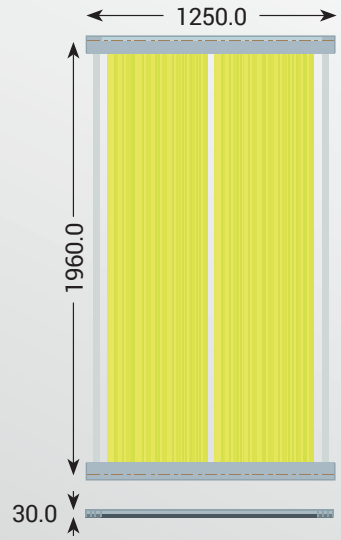
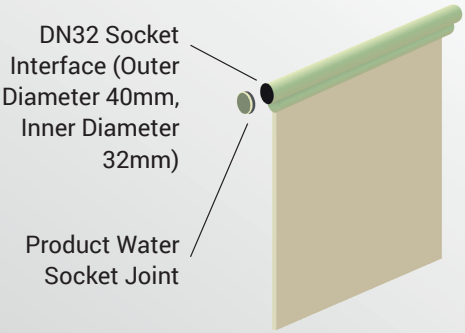
Characteristics

- Building material: Carbon steel, concrete, stainless steel 4.5 - 17
- Flux (LMH): 12.5 - 25
- Membrane pore size (μm): 0.08 - 0.4
- Module housing material: Stainless steel 304 - 316
- Membrane sheet material: Chlorinated polyethylene and PVDF
- Concentration of mixed liquor suspended solids (mg/L): 10,000 - 15,000
- Hydraulic retention time (hours): 7 - 15
- BOD removal efciency: < 90%
- COD removal efciency: < 90%
- Quality of treated efuent*: Suitable for reuse
- Start-up time (days): 15 - 30



Hollow Fiber Membrane



Flat Sheet Membrane

Experience the Unmatched Advantages of CWT's MBR Technology

Benefit from a cleaner effluent with CWT MBR's fiber membrane.

With a reduced space requirements, the CWT MBR occupies less space compared to traditional activated sludge processes, thanks to the higher Concentration of Total Suspended Solids (TSS) in the mixed liquid. CWT's MBRs have a much smaller footprint than traditional activated sludge processes, because of the higher concentration of Total Suspended Solids (TSS) in the mixed liquid.

Produce cleaner and reusable effluent, perfect for a wide range of sustainable applications.

Enjoy easy use and mobility with CWT's compact MBRs, expertly fabricated in containers.

Watch video

Ready to get started?

Contact us today to begin a conversation!

info@cwt-global.com

www.cwt-global.com

CLEAN WATER TECHNOLOGY
13008 S. Western Avenue
Gardena, CA 90249, USA
+1 310 380 4648 I info@cwt-global.com
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