

MBR



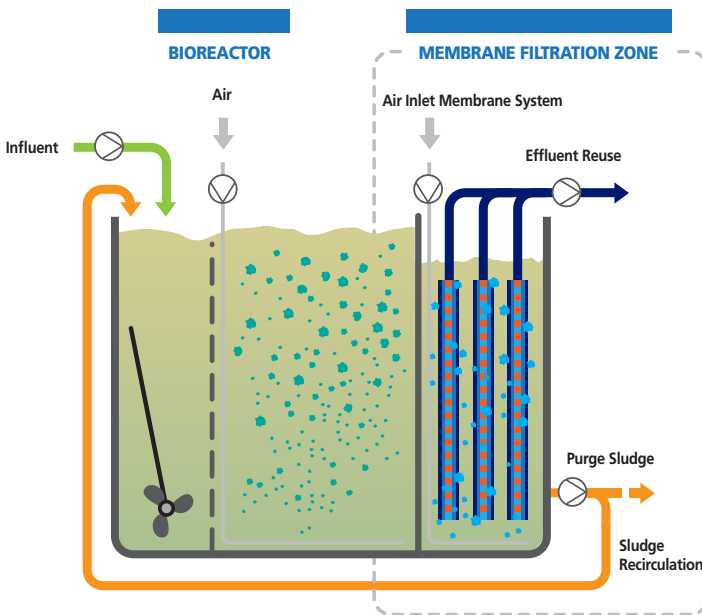
Membrane Bioreactor (MBR)

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 uses biological degradation to suspend solids that are then separated from the treated water by a membrane filtration unit.

MBR System Advantages

- High quality effluent - Suitable for reuse
- Better solids removal
- No secondary clarifier needed
- Less sludge production
- Smaller footprint and can be containerized
- Easy operation



How CWT's MBR Works

CWT's compact MBR consists of a bioreactor in which air is injected into the mixed liquor by means of a blower. A settling tank, known as a final clarifier or secondary clarifier, allows biological flocks to settle, thus separating the biological sludge from the clear treated water. This process greatly reduces chemical oxygen demand (COD) and biological oxygen demand (BOD) and nutrients.

The process continues in the membrane filtration zone where an ultra filtration (UF) unit separates fine particles resulting in a high quality effluent that can be reused.



CWT

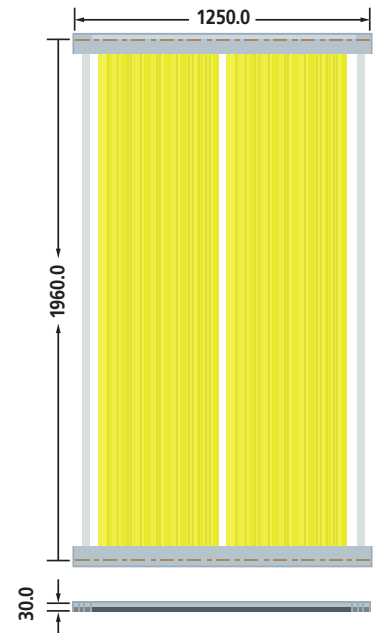
CLEAN WATER TECHNOLOGY



Membrane Bioreactor (MBR)

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 efficiency	< 90%
COD removal efficiency	< 90%
TSS in treated effluent (ppm)	< 5
Quality of treated effluent *	Suitable for reuse
Start-up time (days)	15-30



Differences in the CWT MBR

The CWT MBR uses a proprietary hollow fiber membrane producing better and cleaner effluent.

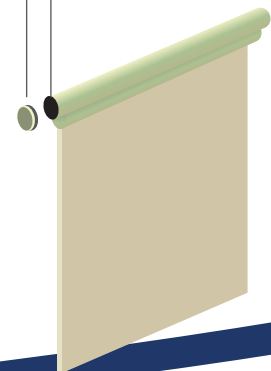
Space requirements are less than a traditional activated sludge process due to the higher concentration of total suspended solids (TSS) in the mixed liquor.

The units produce cleaner reusable effluent suitable for many sustainable applications. CWT's compact MBR's are also fabricated in containers for easy use and mobility.

Clean Water Technology Membrane

Product Water Socket Joint

DN32 Socket Interface
(Outer Diameter 40mm, Inner Diameter 32mm)



Ready to Get Started?

Contact us today to begin a conversation!



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