

Industrial Wastewater



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Challenge

Increasing municipal restrictions, tighter water quality standards and rising surcharges on discharge water can potentially reduce the profitability of your plant. Traditional wastewater treatment primarily uses biological degradation in reactors, followed by a clarification step, which is typically a sedimentation process. These plants tend to have a large footprint and do not produce water of a re-usable quality.

Solution

For more efficient wastewater treatment and to provide high quality water for re-use, the Membrane BioReactor (MBR) has been developed. The Norit Crossflow MBR is a compact purification system combining the biological degradation step with a membrane separation process. The influent is fed to the aerated bioreactor where the organic components are oxidized by the activated sludge. Next, the aqueous activated sludge solution passes through a membrane filtration unit, separating the water from the sludge. The latter returns to the bioreactor, while permeate is discharged or re-used as particle-free effluent.

The membranes are configured in a unique side stream set-up outside of the bioreactor. This offers a simple and easily maintainable stand-alone system that is fully enclosed and does not expose the operator to fumes or sludge. Norit X-Flow's ultrafiltration membrane provides a robust purification solution. The water can either be reused directly or further treated as required, such as through reverse osmosis, activated carbon or UV.



MBR

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Benefits

- Tight UF membrane
 - Turbidity < 0.1 NTU
 - Silt Density Index < 3
- Crossflow filtration
 - Limited energy consumption
 - Simple lay-out
 - High flux rates
- Cleaning In Place
 - Fully automated cleanings
 - Use of low cost chemicals
- Fully automatic operation
 - Logging of operating parameters
- Pressurized system
 - Fully enclosed
 - No operator exposure

Applications

- Industrial (typical application)
 - Beverage industry, where high COD loads need to be reduced
 - breweries
 - dairy plants
 - malt houses
 - Cruise ship/marine
 - Leachate, effluent coming from landfill sites
 - Other industries
 - automotive
 - chemical
 - textile
- Municipal (only for specific applications)



X-Flow BV

P.O. Box 739 • 7500 AS Enschede • The Netherlands

T +31 53 42 87 350 • F +31 53 42 87 351

E info@xflow.com • I www.xflow.com

Please visit our website to obtain information about your local support!

X-Flow BV reserves the right to make changes in the technical specifications at any time.

MBR