



Enviro-STEP
Technologies inc.

*Innovative Eco-Efficient Solutions
for Onsite Wastewater Treatment*

Step-MBR

GRAVITY FLUX MEMBRANE BIOLOGICAL REACTOR

Enviro-STEP Technologies, distributor of the unique Gravity Flux Hollow sheet Membranes from Alfa Laval is proud to offer the **STEP-MBR**, the most simple fully integrated Membrane Biological Reactor on the market.

STEP-MBR combines the robustness and efficiency of the extended aeration activated sludge process to the superior solid/liquid separation of the gravity flux Hollow Sheet Membranes. These unique membranes are grouped into Membrane Filtration Modules (MFM), entirely preassembled with air scouring and recirculation systems. Compared with standard membrane bioreactors requiring vacuum pumps to generate effluent with complex process control, membranes in the **STEP-MBR** unit generate effluent only with minimal hydrostatic pressure head. This breakthrough characteristic assures not only an exceptional effluent quality, but the most simple operation and maintenance possible.

The **STEP-MBR** unit is offered in a fully preassembled configuration including the biological reactor, aeration system, membrane modules, cleaning system, blowers and control panel. Each prefab module can handle from 20 to 80 m³/d depending on influent characteristics. A multi-module configuration can easily handle larger flow such as those found in small communities and larger industrial applications.

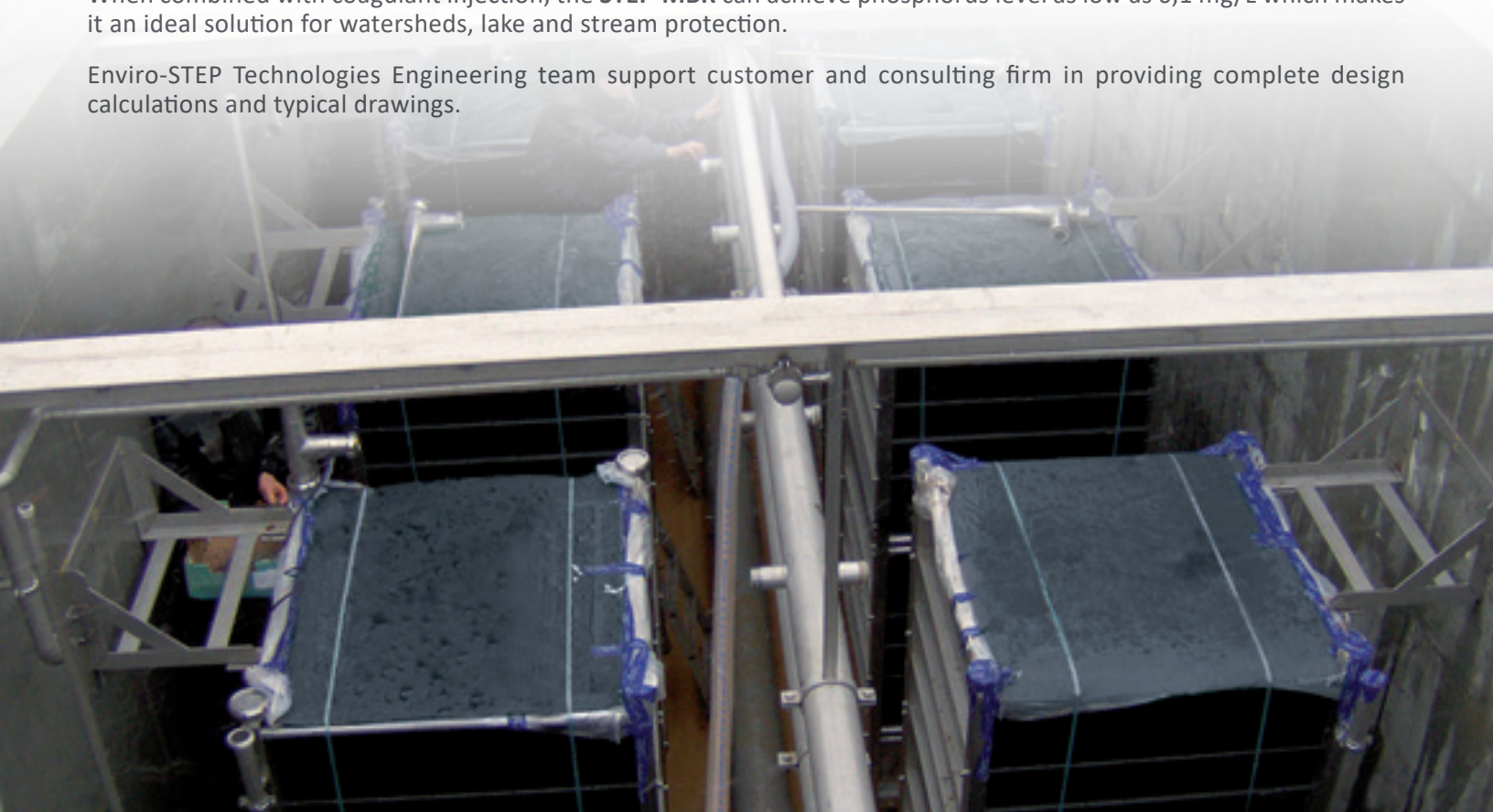
When combined with coagulant injection, the **STEP-MBR** can achieve phosphorus level as low as 0,1 mg/L which makes it an ideal solution for watersheds, lake and stream protection.

Enviro-STEP Technologies Engineering team support customer and consulting firm in providing complete design calculations and typical drawings.

Domestic Wastewater

Industrial Wastewater

*The simplest Membrane
Technology on the
market offering superior
performance for sensitive
receiving environment.*



WHERE EXCEPTIONAL PERFORMANCES MEETS SIMPLICITY

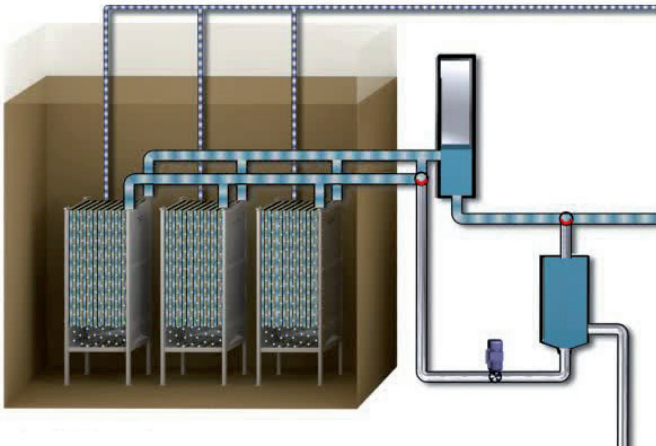
With the **STEP-MBR**, times where membrane technologies were synonym of complex, mechanized, expensive and hard to operate systems are over. Combining the simplicity and robustness of extended aeration with the unmatched performance of the Alfa Laval Gravity Flux Hollow Sheet Membranes, the **STEP-MBR** becomes a revolutionary technology accessible to anyone.

Enviro-STEP Technologies with the support of Alfa Laval technical assistance team, optimizes the design of every project to make it the most efficient and cost effective as possible. Developed in a fully preassembled configuration, the **STEP-MBR** is easy to install and commission. Manual or fully automated membrane cleaning is performed by our service team during the inspection visits, part of our annual maintenance agreement.

Contact us to get a technical or budget evaluation of your project.

PERFORMANCES

Parameter	STEP-MBR (without coagulant)	STEP-MBR (with coagulant)
CBOD ₅ (mg/L)	≤ 5	≤ 5
TSS (mg/L)	≤ 10	≤ 10
Total Phosphorus (mg/L)	N/A	≤ 0,1
Fecal Coliform (CFU/100 ml)	≤ 200	≤ 200

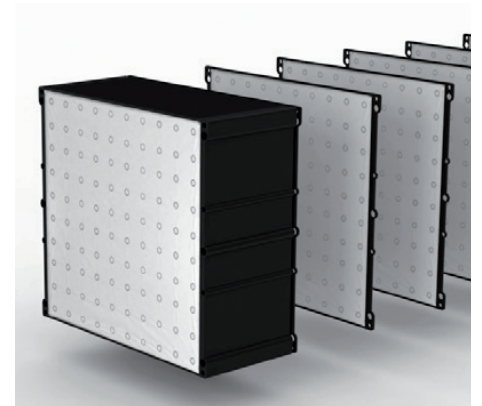
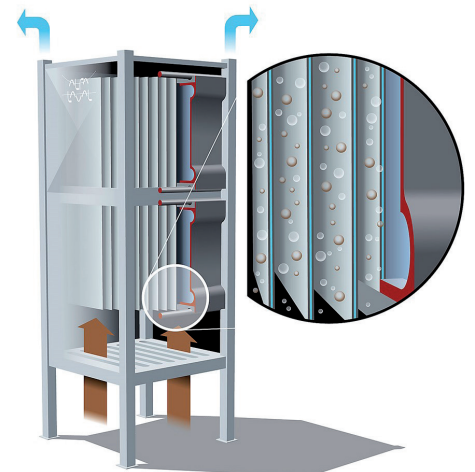


APPLICATIONS

- Small communities
- Residential Developments
- Campgrounds
- Food Processing Plants
- Any project in an environmentally sensitive area

FEATURES & AVANTAGES

- Superior Performances
- Fewer mechanical components
- Available as prefab units
- Compact
- Reduced cleaning frequency
- Lower Energy Costs



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