MaxFlow membrane modules

- Patented, innovative MaxFlow membrane filtration module for the use in membrane bioreactor processes (MBR), in the tertiary treatment of wastewater treatment plant effluent, and for blank filtration of water and wastewater.
- Due to the use of durable and chemically stable membrane materials (PES / PVDF), the MaxFlow membrane module has a high filtration performance with low fouling potential. By using low differential operating pressures, scaling is effectively prevented.
- The innovative MaxFlow module “open channel design” provides optimal biofilm control and minimizes the quantity of chemical cleaning procedures. Multi-module arrangements guarantee extremely high energy efficiency plus a high packing density per square meter. This further reduces plant operating costs.
- The compact module design enables multi-stack module arrangements using shallow water levels. Therefore, a future plant upgrade to increase capacity is easy to implement.
- The MaxFlow membrane module is resistant to clogging due to its open-channel design. A simple screen or settling tank is sufficient as pre-treatment.
- The MaxFlow filtration modules can be cleaned inside the process tank using the “cleaning in place” (CIP) method. Depending on the wastewater source, cleaning intervals range between 2-6 months. The modules may also be cleaned outside the process tank if desired.
- The robust design and the safe, easy handling of MaxFlow membrane modules allow for simple plant layouts.
- Most existing conventional treatment plants can be retrofitted with MaxFlow membranes due to the flexible and compact nature of our membrane module design.

Benefits at a Glance

- Application in MBR and blank filtration
- Maximum filtration capacity
- Innovative multi-module arrangement
- Minimal cleaning requirements
- Low operating cost
- High packing density
- Long life module expectancy
- Excellent effluent quality
- High clogging and fouling resistance
- Simple plant design

The MaxFlow membrane module:

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The application of membrane bioreactor technology represents a quantum leap in the use of biological wastewater treatment processes. While conventional treatment processes focus on the degradation of organic contaminants and nutrients such as nitrogen and phosphorous, MBR processes also retain turbidity and microorganisms. This generates high-quality reuse water. MBR plants are extremely compact in size due to their high level of biomass and elimination of clarifiers.

Further, the modular nature of membrane modules provides for very flexible plant concepts that can "grow", allowing investments to be made only when needed.

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Membrane material

<table>
<thead>
<tr>
<th>Filtration system</th>
<th>Ultrafiltration</th>
<th>Microfiltration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Membrane module</td>
<td>M70, U06, U20</td>
<td>M06, M20, M70</td>
</tr>
<tr>
<td>Contact angle</td>
<td>&gt; 150° (wettability)</td>
<td>&gt; 150° (wettability)</td>
</tr>
<tr>
<td>Permeability, pure water</td>
<td>&gt; 100 l/(m²<em>h</em>bar)</td>
<td>&gt; 100 l/(m²<em>h</em>bar)</td>
</tr>
</tbody>
</table>

**Do you have any questions?**

**Please contact us!**

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**How to find us**

Directions: Exit highway A40 at Gelsenkirchen - Zentrum. Take the right onto Gelsenkirchen - Zentrum. Bear right onto Gewerkenstraße, which later changes to Maximstrasse. After approx. 100 m, MaxFlow Membrane Filtration GmbH will be on your left.