Clean water for all

NX Filtration is your membrane partner for treating water and filtering beverages. We produce advanced hollow fiber membrane modules for nanofiltration, ultrafiltration and microfiltration applications.

Our world is increasingly confronted with challenges around water scarcity and water contamination. NX Filtration’s membrane technology is capable of selectively removing organics from polluted water, including micropollutants, color, antibiotics, PFAS, bacteria and viruses. This has resulted in new and simple processes for the treatment of water, the reuse of wastewater and the production of potable water. We deliver robust products and innovative solutions enabling our partners to excel in sustainable membrane filtration applications.

Our coating process for nano-filtration membranes applies water-based chemistry, in contrast to conventional solvent-based coating processes. Our membrane spinning process is highly energy efficient thanks to our unique in-line polymer mixing concept. Our membranes realize significant energy savings and carbon footprint reduction during operation compared to conventional technologies such as reverse osmosis, adsorption (activated carbon) and oxidation processes.

Green chemistry

Our solution avoids the use of flocculants and coagulants in pre-treatment and requires a very low chemical cleaning frequency.

Our membrane portfolio

<table>
<thead>
<tr>
<th>Filtration objective</th>
<th>Nano</th>
<th>Ultra</th>
<th>Micro</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suspended solids and micro plastics</td>
<td>40</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Bacteria</td>
<td>40</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Viruses</td>
<td>40</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Protein and residual silica</td>
<td>40</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Micropollutants color and nano plastics</td>
<td>40</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Selective salts, softening and pharmaceuticals</td>
<td>40</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Cut-off
- 500 Da
- 100kDa
- 100 Da
- 500kDa
- 100 Da
- 500kDa

Typical Flux (lmh)
- 20-40
- 50-100
- 25-100

MgSO4 rejection (%)
- 90
- 80
- 70

Nanofiltration

Worldwide unique nanofiltration concept, designed to remove organics from water in one single step: without pre-treatment and without the use of chemicals.

Ultrafiltration

The best choice for the removal of small particles, bacteria and viruses from water, used for RO pre-treatment, potable water and wastewater treatment.

Microfiltration

Ideally suited for high-quality – low energy clarification of beverages, such as wine and beer, as well as for dairy and pharmaceutical applications.

Chemical free operation

Our solution avoids the use of flocculants and coagulants in pre-treatment and requires a very low chemical cleaning frequency.
Wordwide unique nanofiltration concept: filtration in one single step

Our Direct Nanofiltration membranes offer the unique combination of a low fouling hollow fiber configuration with the ability to remove organics and salinity (hardness) from water in one simple step. Other than a strainer, no further pre-treatment is required.

Benefits

- Energy efficient
- Low fouling
- Chlorine resistant
- Chemical free
- Back washable
- Simple process

Unique and patented technology

NX Filtration’s hollow fiber membranes are based on unique recipes and innovative patented production methods. The base material for our membranes is PolyEtherSulfone (PES). This provides an ideal chemical and thermal stability for use in robust filtration processes. Compared to other membrane materials, PES enables the production of membranes with very small pore sizes and narrow pore size distribution. We manufacture our membranes with a patented layer-by-layer process, where nano-scale layers are deposited on a membrane support. This method enables very precise and controlled rejection and permeability properties of the membrane.

Pilots

The complete range of our membranes is also available in laboratory and pilot scale modules that can be used in pilot installations, ranging from lab-scale to full-scale pilots. This provides the opportunity to perform a quick filtration and fouling test and select the best membranes for your application.

Drinking water certifications

Our Direct Nanofiltration (dNF) membranes are the next generation polymer membranes. They provide the ideal solution for emerging problems around micro-pollutants, including the residues from antibiotics, hormones, pesticides, pharmaceuticals and nano-plastics. dNF replaces the more traditional multi-step filtration processes with a simple single step process. This results in a significant reduction in capital and operating cost, while reducing the footprint of the installation.

— Prof.dr.ir. Erik Roesink
founder NX Filtration