OSCILLATING FILTERS
BOOSTING THE PERFORMANCE OF MEMBRANES

Today membranes are used to clean wastewater, to remove turbidities from drinking water and to recover valuable products in the food industry.

A novel oscillating filter system can improve the profitability of micro, ultra and nano filtration as well as reverse osmosis. The cake-layer formation on the membrane is considerably reduced. In order to assess the separation behavior we carry out tests in various fields of application.

**Keywords**
- Membrane processes
- Analysis
- Mobile pilot plant stations
- Operation monitoring
- Evaluation of tests

**Industrial Sectors**
- Water/Wastewater technology
- Food technology
- Pharmaceutical industry
- Chemical industry
Oscillating filter from above

Our service
- research on the technical feasibility
- process development and engineering for technical integration
- process integration
- project monitoring and verifying of results in the analytical laboratory

Your benefit
- reduction of fouling and cake-layer formation during filtration
  → high capacity, less downtime, lower amount of maintenance
- reduced investment costs due to an increase of the permeate flow and thus reduction of the required membrane area
- lower operating costs due to reduced fouling and cake-layer formation and consequently reduced cleaning intervals

Technological Specification
- operating pressure from 0.1 to 160 bar
- frequency 5 to 50 Hz
- applicable in filtration of suspensions, dispersions and solutions (micro filtration, ultra filtration, nano filtration, reverse osmosis)
- sterilizable with steam
- membrane material: polymers, stainless steel
- media: depending on membrane up to pH 14

Boosting the performance by applying oscillation in a filter system

<table>
<thead>
<tr>
<th></th>
<th>quartz powder, 0.5 %, with oscillation</th>
<th>quartz powder, 0.5 %, without oscillation</th>
</tr>
</thead>
<tbody>
<tr>
<td>permeate flow, l/min</td>
<td>600</td>
<td>500</td>
</tr>
<tr>
<td>t, min</td>
<td>0</td>
<td>0</td>
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</tbody>
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Graph showing permeate flow over time with and without oscillation.