CERAMIC MEMBRANE DISCS
Rotation Filtration
Dynamic Cross Flow Filtration
Rotation Filtration with Ceramic Filter Discs

Why Rotation Filtration?
- Extreme cross flow velocity
  (High efficient cleaning of the filter surface)
- Very low energy consumption
  (Compared to conventional cross flow techniques)

✓ Maximum filter efficiency

Rotation Filtration (Dynamic Cross Flow Filtration)
- The cross flow effect (tangentially flow cleaning of the filter surface)
  is generated by the rotating of the filter discs and not by pumping
  of large volumes.

Why Ceramic Filter Discs?
- Resistance to chemical and thermal stresses
- High filtration flux and very long service life
- Regeneration by backflushing or hot steam sterilisation

✓ Maximum process safety

Ceramic Filter Disc 374 mm, 312 mm and 152 mm,
Microfiltration and Ultrafiltration
- Optimal filter geometry for the plant engineering

First Steps for Engineering Companies
Kerafol is an independant filter producer and provides you with the parameters
for installation of the Ceramic Filter Discs in your filtration units (sealing, fixing,
process parameters). You can rent:

✓ Test Filtration Plants for Piloting
- An excellent choice for project planning of large filtration units
  (e.g. 100m² filter surface)
Diagram of a Rotation Filtration Plant

Rotating Ceramic Filter Discs are assembled in a pressurised housing. The design of the discs shows drainage channels in the inside. The filtrate is transported from the outside to the inside of the discs. The rotation of the discs generates shear forces on the membrane surface. With this technique an increase of a filter cake is avoided resulting in a high filtration flux.

Main Parameters
- Rotation Speed (rotating Ceramic Filter Discs)
- Transmembrane Pressure TMP (pressurised housing)
- Solid Content (concentration of liquids due to the removal of filtrate)

Rotation Filtration Modul with Ceramic Filter Discs: Membrane Surface 35 m²
Ceramic Filter Discs
Dynamic Cross Flow Filtration

**Ceramic Filter Disc 374**
- Diameter Øo 374 mm / Øi 91 mm
- Thickness d = 5.85 mm
- Membrane surface 0.20 m²

**Ceramic Filter Disc 312**
- Diameter Øo 312 mm / Øi 91 mm
- Thickness d = 5.85 mm
- Membrane surface 0.14 m²

**Ceramic Filter Disc 152**
- Diameter Øo 152 mm / Øi 25.5 mm
- Thickness d = 4.5 mm
- Membrane surface 360 cm²

- Filtration from outside to inside
- Support: pore size 2.0 µm
- Support: coating with layers of lower pore size (micro and ultra filtration)
- Chemical and thermal resistance
- Backflushing

<table>
<thead>
<tr>
<th>Ceramic Filters</th>
<th>Micro Filtration</th>
<th>Ultra Filtration</th>
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<tbody>
<tr>
<td>Mean Pore Size</td>
<td>2.0 µm</td>
<td>0.8 µm</td>
</tr>
<tr>
<td>Material</td>
<td>Al₂O₃</td>
<td>Al₂O₃</td>
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</tbody>
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Oil and Gas

... in fact in all areas of solid/liquid filtration.

Applications

- Waste Water Treatment
- Food Technology (wine, juice, ...)
- Pharma / Biotechnology
- Chemical Industry
- Digester Effluents
- Oil and Gas

Applications Examples.
A new dimension in Membrane Technology.
We are looking forward to receiving your inquiry!

Kerafol Ceramic Membranes are applied in Waste Water Treatment, Food Technology, Pharma / Biotechnology, Chemical Industry, Digester Effluents and Oil & Gas – in fact, in all areas of solid / liquid filtration.

Discover our broad range of products and take advantage of the diverse application possibilities!