About Us

TORAY Industries, Inc. fuses nanotechnology into its operations, using organic synthetic chemistry, polymer chemistry and biotechnology as its core technologies. In addition to the "Foundation Businesses" of fibers & textiles and plastics & chemicals, TORAY has promoted the global development of IT-related products, carbon fiber composite materials, pharmaceuticals and medical products as well. We are also involved in environment & engineering including water treatment and making progress in other pivotal business fields. While we will continue to strengthen our existing plant engineering business, the environment & engineering segment is expected to expand, especially in the water treatment business.

http://www.toraywater.com

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PVDF Hollow Fiber UF Membranes
TORAYFIL™
Pressured Type and Submerged Type
High Cost-Performance PVDF Hollow Fiber Membrane Products
Long Membrane Life with High Filtration Flux

High Chemical Resistance & High Mechanical Strength
TORAY’s special spinning method with PVDF (polyvinylidene fluoride) enables high mechanical and chemical strength without fiber breakage.

Low Fouling Property
TORAY’s unique membrane structure and Outside-to-Inside flow direction enable higher flux operation for a long period.

Safe Water Provided
Pressured HFU series and Submerged HSU series are certified for drinking water production.

- ANSI/NSF 61
- CDPH (California Department of Public Health)
- AMST (Association of Membrane Separation Technology of Japan)
- KWWA (Korean Water and Wastewater Works Association)

Large Amount of Filtration Flow
TORAY’s large module produces 60 - 200 m³ per day and enables cost savings for your water treatment plants.

Two Types of UF Product
TORAY has two types of UF product, the pressured type and the submerged type, and you can choose the best one for your water treatment plants.

TORAY Advanced Membrane Technology
for a Sustainable Future

Outstanding References Worldwide
TORAY’s membrane modules provide high-quality water on a daily basis for drinking, RO pretreatment, water reuse and many other applications.

Worldwide Research & Development Organization
TORAY has been developing our innovative membrane products with polymer science and membrane fabrication technologies accumulated in our global R&D organizations for more than 30 years.

Comprehensive Global Production Network
TORAY has a comprehensive global production network of RO, UF and MBR products. We supply high-quality full-range water treatment products worldwide.
<table>
<thead>
<tr>
<th>TORAY TORAYFIL™ Main Product List</th>
<th>1st June, 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Series</strong></td>
<td><strong>HFU Series</strong></td>
</tr>
<tr>
<td>Filtration Method</td>
<td>Pressured</td>
</tr>
<tr>
<td>Model</td>
<td>HFU-2020N</td>
</tr>
<tr>
<td>Molecular Weight Cut Off</td>
<td>150,000 Da</td>
</tr>
<tr>
<td>Nominal Pore Size</td>
<td>0.01 micrometer</td>
</tr>
<tr>
<td>Membrane Surface Area [Outer Surface]</td>
<td>72 m² (775 ft²)</td>
</tr>
<tr>
<td>Design Flow (m³/hour)</td>
<td>2.6 - 8.0</td>
</tr>
<tr>
<td>Dimensions</td>
<td></td>
</tr>
<tr>
<td>Diameter</td>
<td>216 mm (8.50 inches)</td>
</tr>
<tr>
<td>Length</td>
<td>2,160 mm (7.087 ft.)</td>
</tr>
<tr>
<td>Weight</td>
<td>110 kg (Full of water)</td>
</tr>
<tr>
<td>Membrane</td>
<td>PVDF (Polyvinylidene fluoride)</td>
</tr>
<tr>
<td>Potting</td>
<td>Epoxy Resin or equivalent</td>
</tr>
<tr>
<td>Others</td>
<td>Casing : Polyvinyl chloride</td>
</tr>
<tr>
<td>Connection</td>
<td>Feed &amp; Filtrate nozzles : Housing type joint 80A</td>
</tr>
<tr>
<td>Max. Inlet Pressure</td>
<td>300 kPa (44 psi)</td>
</tr>
<tr>
<td>Max. Filtrating Trans-Membrane Pressure</td>
<td>200 kPa (29 psi)</td>
</tr>
<tr>
<td>Operating Temperature Range</td>
<td>0 - 40 degree C</td>
</tr>
<tr>
<td>pH range</td>
<td>1 - 10 at Filtration</td>
</tr>
</tbody>
</table>

*Specifications subject to change without notice.*