Dispersed micrometer-order droplets, which are too small for simple gravity-driven stratification, are captured by the ultrafine fibers in the this coalescer element and coalesce with other captured droplets as they move along the fibers, to from millimeter-size drops which readily undergo gravity-driven stratification immediately upon their emergency from the coalescer.

2. Coalescer System Configuration

A. One Stage Separation

The oil-in water or water-in-oil dispersion is fed under pressure to the coalescer bore; fine droplets merge in the coalescer element, forming drops that collect in a single layer immediately upon emergence from the coalescer. The oil and water layers leave the vessel via separate outlets. The coalescer also separates solid particle from the feed liquid, by rejection or entrapment in the coalescer element.
B. Two Stage Separation (Filter Separator)
Coalescer and separator (exclusion) cartridges in tandem, for high-volume flow in compact unit. After emergence from the coalescer, enlarged water drops collect in the water layer; oil passes through the pores of the separator cartridge while intermediate-size water drops are excluded by the hydrophobic separator surface. Oil and water leave the vessel through separate outlets.

3. Major Fields of Application

- **Petroleum refining**
  Oil / water separation at production process streams and shipment points for gasoline, kerosene, diesel fuel, jet fuel, other petroleum refining products.

- **Petrochemicals and Fine chemicals**
  Oil / water separation at production process streams for ethylene, styrene, benzene, other petrochemicals and derivatives.

- **Parts cleaning facilities**
  Separation of oil from aqueous solutions and rinse water for cleaning of automotive, precision, electronic, and other parts and components.

- **Others**
  Separation of oil from red water
  Separation of water from lubrication oil.

4. Standard Cartridge Specifications

<table>
<thead>
<tr>
<th>TYPE</th>
<th>COALESCER</th>
<th>SEPARATOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absolute filter rating (μm)</td>
<td>1 · 2 · 5 · 10 · 20 · 50</td>
<td>5 · 35</td>
</tr>
<tr>
<td>Dimension (mm)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diameter</td>
<td>70 · 150 · 152</td>
<td>70 · 150 · 152</td>
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<tr>
<td>Length</td>
<td>125 · 250 · 360 · 475 · 600 · 730 · 950 · 1100 · 1410 etc</td>
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</tr>
<tr>
<td>Material</td>
<td>PET · PA · PET · PA</td>
<td>PET · PET · PA</td>
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<tr>
<td>Adhesive</td>
<td>- · PET · Epoxy</td>
<td>- · Epoxy</td>
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<tr>
<td>Casing</td>
<td>PET · PA · SUS / Ni-Plate</td>
<td>PET · SUS / Ni-Plate</td>
</tr>
<tr>
<td>Max. oper. Temp. (℃)</td>
<td>80 · 90 · 80 · 90</td>
<td>80 · 90</td>
</tr>
</tbody>
</table>

We offer a total system from design and manufacturing through to maintenance and contribute to the society. Please consult TECHNICAL CENTER about the test necessary for the selection of the filter elements.

Technical tie-up with Daicel Corporation

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