Distillation is often used in refinery operations to purify the final product or specification material. The Chemical Engineering Department at Southwest Research Institute® (SwRI®) has over 50 years of experience with atmospheric and vacuum distillation of specification fuels, biofuels, oils, heavy oil, residuum, petrochemicals, specialty chemicals, and bulk chemicals.

SwRI can perform specialty or custom distillations such as reactive or cryogenic distillations. Custom distillations are performed at laboratory, bench, and pilot scales, using a variety of operating parameters. SwRI also has state-of-the-art columns for separating specialty chemicals with similar boiling points.

**Capabilities**

- Batch and continuous operations
- Liters per day to drums per day
- Pressure range: 0.5 torr to 30 psia
- Up to 100 theoretical stages
- Up to 1000°F cuts
- Experienced operators for 24/7 operations
- 24/7 analytical support
- High viscosity feedstock and product handling
- Modifiable units

**Applications**

- Separation of materials from a variety of processes:
  - Fischer-Tropsch liquid and wax products
  - Advanced biofuels and pyrolysis oils made from plastics, municipal solid waste, and biomass
  - Solvent recycling
  - Hydroprocessing
  - Crude oil fractionation
  - Heavy oil fractionation
- Fuel registration
- Fuel blending
- Reactive distillation
- Tolling for reduced capital investment
- Process design evaluation
# SwRI Distillation Specifications

Distillation units can be modified as needed for client-specific processes.

### SwRI Distillation Specifications

<table>
<thead>
<tr>
<th>Column diameter</th>
<th>Batch</th>
<th></th>
<th>Continuous</th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>2''</td>
<td>6''</td>
<td>2''</td>
<td>4''</td>
</tr>
<tr>
<td>Size/Feed rate</td>
<td></td>
<td>10-50L</td>
<td>120 gal</td>
<td>10 lb/hr</td>
<td>40 lb/hr</td>
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<tr>
<td>Pressure range</td>
<td></td>
<td>0.5-760 torr</td>
<td>0.5-30 psia</td>
<td>5-30 psia</td>
<td>5-30 psia</td>
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<tr>
<td>Cut point</td>
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<td>1000°F</td>
<td>800°F</td>
<td>850°F</td>
<td>850°F</td>
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<tr>
<td>Stages</td>
<td></td>
<td>10-100</td>
<td>50-100</td>
<td>40-75</td>
<td>40-75</td>
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</tbody>
</table>

We welcome your inquiries. For more information, please contact:

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