Technical Data
// UTE and UTL at a glance

<table>
<thead>
<tr>
<th>ULTRA-TURRAX® type</th>
<th>Typical batch volumes</th>
<th>Power rating</th>
<th>Speed</th>
<th>Max. viscosity*</th>
</tr>
</thead>
<tbody>
<tr>
<td>UTE 400</td>
<td>3,000 Gal.</td>
<td>175 Hp.</td>
<td>1,800 rpm</td>
<td>5,000 mPas</td>
</tr>
<tr>
<td>UTE 450</td>
<td>5,000 Gal.</td>
<td>200 Hp.</td>
<td>1,800 rpm</td>
<td>5,000 mPas</td>
</tr>
<tr>
<td>UTE 600</td>
<td>10,000 Gal.</td>
<td>300 Hp.</td>
<td>1,200 rpm</td>
<td>5,000 mPas</td>
</tr>
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<td>UTL 1000 / 20</td>
<td>3,000 Gal.</td>
<td>40 Hp.</td>
<td>3,600 rpm</td>
<td>up to 3,000 mPas</td>
</tr>
<tr>
<td>UTL 1000 / 30</td>
<td>5,000 Gal.</td>
<td>60 Hp.</td>
<td>1,800 rpm</td>
<td>up to 3,000 mPas</td>
</tr>
<tr>
<td>UTL 1000 / 40</td>
<td>10,000 Gal.</td>
<td>100 Hp.</td>
<td>1,800 rpm</td>
<td>up to 3,000 mPas</td>
</tr>
</tbody>
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*The use of an additional circulation pump is recommended for higher viscosities.

Process technology for the lubricating oil industry.
ULTRA-TURRAX® UTE & UTL – MADE BY IKA.

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Prices and technical specifications may be changed without prior notice.
Prices apply until 31 December 2017.
All prices are subject to VAT.

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Lubricating oils are the most important technical lubricants and find widespread use in the lubrication of machine components.

Viscosity index improvers, aka VI-Improvers, are added to oils during product formulation to improve lubricating performance. This guarantees better lubrication under high bearing loads and also at high temperatures. At the same time, the additives reduce the low-temperature viscosity of the lubricating oil to prevent problems when cold starting and pumping.

IKA can supply both individual machines and complete, fully-operational production systems. In a batch process, polymer blocks are broken up, granulated into small pieces with the aid of a high-performance ULTRA-TURRAX® UTE type mixer installed in the base of the vessel and then completely dissolved by a further IKA ULTRA-TURRAX® UTL high-performance inline disperser. As the entire process takes place in a single vessel, this leads to a significant reduction of production times.

The application
/// High lubricating performance and high bearing load

- Lubricating oils are the most important technical lubricants and find widespread use in the lubrication of machine components.
- Viscosity index improvers, aka VI-Improvers, are added to oils during product formulation to improve lubricating performance. This guarantees better lubrication under high bearing loads and also at high temperatures. At the same time, the additives reduce the low-temperature viscosity of the lubricating oil to prevent problems when cold starting and pumping.

The process
/// Benefits of the IKA process

- Easy process
- High flexibility with regard to raw materials (polymer blocks, pellets or granulate)
- Only one vessel for the entire process
- Fast dissolving of polymer additive
- Individual machines, plants and systems to order

The edges and corners of the blocks are cut off and the pieces are crushed. The pieces must be small enough to allow the next phase of the process to begin. After the crushing process, the UTE is at reduced speed to avoid separation of the crushed polymer and to guarantee homogeneous mixing quality for mixing vessel.

The recirculation process with the UTE mixer ensures that the blocks have been reduced to the set point size for the process. The mixture then leaves the mixer and is pumped back to the top of the mixer. After several cycles, the polymer is completely dissolved in the oil.