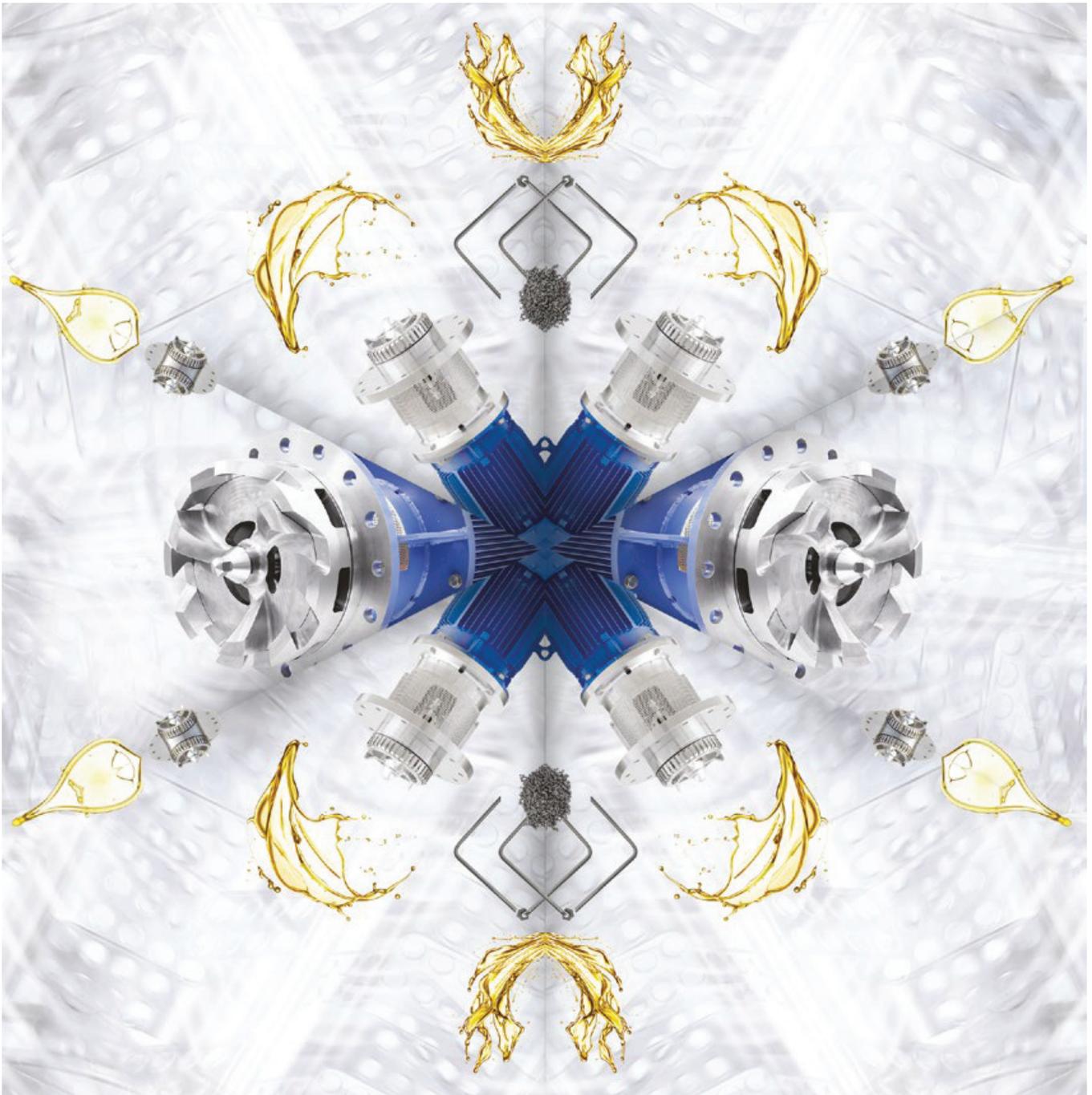


IKA

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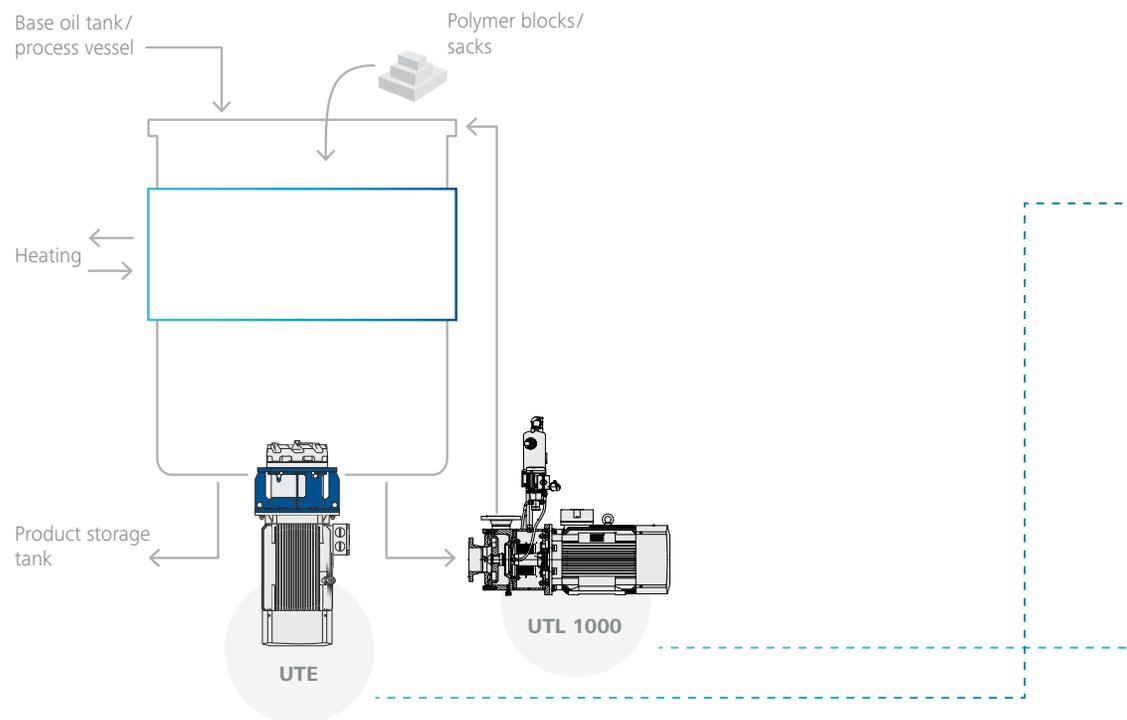
Process technology for the lubricating oil industry.
ULTRA-TURRAX® UTE & UTL – MADE BY IKA.

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.



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 process

/// Benefits of the IKA process

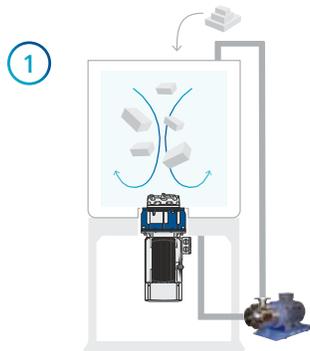
- › Easy process
- › High flexibility with regard to raw materials (polymer blocks, pellets or granulate)
- › Only one vessel for the entire process
- › Fast dissolving of polymer additive
- › Individual machines, plants and systems to order



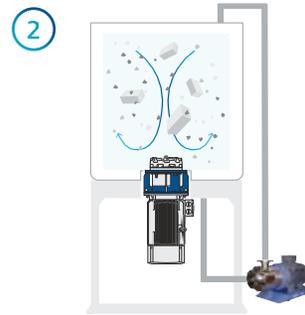
UTE 450



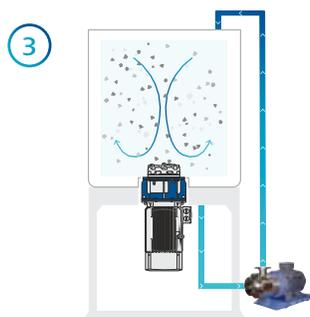
UTL 1000/20



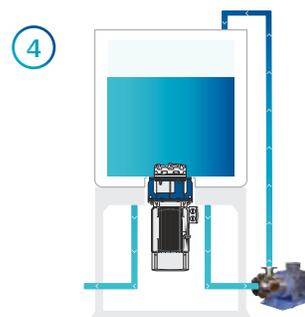
1 The preheated base oil is fed into the vessel and kept at a high process temperature. Polymer blocks or sacks of pellets are added into the vessel. The IKA mixer installed in the base of the vessel generates a powerful vortex that sucks the material down and into the disperser tool.



2 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 runs at reduced speed to avoid separation of the crushed polymer and to guarantee homogeneous mixing inside the mixing vessel.



3 The recirculation process with the IKA inline mixer begins as soon as the blocks have been reduced to the set point size for the process. The mixture is dispersed in the mixer and pumped back to the top of the vessel. After several cycles, the polymer is completely dissolved in the oil.



4 The batch is sampled to check the properties of the product. Checks on the viscosity and colour are sufficient for this. The mixing process is finished as soon as the polymer has been completely dissolved and the desired product properties have been confirmed by testing. The mixture in the vessel is discharged to a separate storage tank.

Technical Data

/// UTE and UTL at a glance

 **TECHNICAL DATA**
/// UTE in comparison

ULTRA-TURRAX® type	Typical batch volumes	Power rating	Speed	Max. viscosity*
UTE 400	3,000 Gal.	175 Hp.	1,800 rpm	5,000 mPas
UTE 450	5,000 Gal.	200 Hp.	1,800 rpm	5,000 mPas
UTE 600	10,000 Gal.	300 Hp.	1,200 rpm	5,000 mPas

 **TECHNICAL DATA**
/// UTL in comparison

ULTRA-TURRAX® type	Typical batch volumes	Power rating	Speed	Max. viscosity*
UTL 1000/20	3,000 Gal.	40 Hp.	3,600 rpm	up to 3,000 mPas
UTL 1000/30	5,000 Gal.	60 Hp.	1,800 rpm	up to 3,000 mPas
UTL 1000/40	10,000 Gal.	100 Hp.	1,800 rpm	up to 3,000 mPas

*The use of an additional circulation pump is recommended for higher viscosities.



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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.