

Data Sheet

ULTRA-TURRAX® UTL 2000/30



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The IKA ULTRA-TURRAX UTL 2000 is inline high-performance single-stage dispersing machine used for the production of emulsions and suspensions. The UTL 2000 uses the rotor-stator principle and is best suited for continuous applications that cannot be accomplished using conventional stirring methods.

The UTL single stage dispersing machine is equipped with a mixing tool (generator) that provides moderate shear for the general purpose of blending and homogenizing processes. In order to configure the UTL to meet a variety of application needs, IKA offers a wide selection of generators for all machine sizes. Different generator designs allow adjusting the level of dispersing energy. In addition, they are also designed to accommodate materials of different viscosities and initial particle size.

The ULTRA-TURRAX in-line machine UTL uses similar shear principles as the popular ULTRA-TURRAX machines UTC for batch operations. The UTL can be used for single pass operations or in a recirculation loop with a batch tank or reactor. Minimized volume of the mixing chamber ensures uniform shear on the product.

In batch process the machine UTL is arranged in recirculation over a mixing vessel.

During the full continuous process the components to be mixed are fed into the machine at an appropriate rate through various inlet connections. These components are then thoroughly mixed, dispersed or homogenized within the machine and discharged from the machine through the outlet. Thus, all particles or droplets are treated producing a narrow particle or droplet size distribution with minimal concentration/quality variations. Additionally, the UTL 2000 creates a pumping action which can be used for transfer purposes at low to moderate viscosities with a maximum of about 20 m (ca. 2 bar).

The high shear dispersing machine ULTRA-TURRAX UTL 2000 is available in eight sizes. The possible throughput varies from 50 l/h up to 125.000 l/h. All sizes of machines work with the same circumferential speed of the rotor which provides for a reliable scale-up.

Technical Data

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|---------------------------|---------------------|
| Flow rate (max.) | 40000 l/h |
| Viscosity (max.) | 5000 mPas |
| Motor power | 37 kW |
| Motor power EExe.. | 36 kW |
| Motor speed | 3000 rpm |
| Tip speed | 23 m/s |
| Speed regulation possible | yes |
| Process pressure (max.) | 16 bar |
| Process temperature, max. | 160 °C |
| Single mechanical seal | yes |
| Double mechanical seal | yes |
| Lipseal | no |
| Flame proof possible | yes |
| Dispersing tool | variable |
| Cleaning | yes CIP |
| Sterilisation | yes SIP |
| Ident. No. | 000UTL200030 |