



## High-Shear Impeller Types

### Sawtooth Impeller



The Sawtooth impellers is high speed disperser disc, which consists as a large number of upward and downward pointing teeth around the periphery, are typically used in dispersion applications, e.g. breakup of droplets in liquid-liquid systems or for mixing a powder into the product to a smooth mixture.

The blade rotates at up to 3000 rpm and creates a radial flow pattern within a stationary mix vessel. The blade creates a vortex that pulls in the contents of the vessel to the blades sharp edges. The blade surfaces then mechanically tear apart solids thereby reducing their size, and at the same time dispersing them among the liquid used as the carrier fluid. Designed to process a wide range of materials of varying viscosities.

#### Advantages

- The High-Speed Disperser (HSD) is the basic tool used by all paint, ink, chemical, plastic and adhesive manufacturers.
- The HSD is often misused or misapplied.

#### Technical features

- High-speed dispersers are ideal for dispersions that are up to a maximum of approx. 50,000 cps.
- When used in conjunction with multi-shaft mixers, they can be useful to several hundred thousand cps.

#### Applications

- Coatings, ink, dye, chemical and adhesives industries.