



Rotors from the Fristam series FSP

## Fristam shear pumps FSP

A three-dimensional shearing process to continuously produce perfect blends of consistent quality. Hygienic, effective, robust, highly economical. Fristam shear pumps achieve incomparably homogenous products, reducing raw material input while considerably shortening processing times.

**EXCEPTIONAL PRODUCT TEXTURE**  
 Fristam's FSP enables you to blend multiphase products efficiently, producing inseparable emulsions and absolutely homogenous end products. They prevent lumps and agglomerates in your product and produce consistent, repeatable results.

By improving disaggregation of ingredients, the shear pumps provide for considerable savings of raw materials.

Compared with conventional dissolving processes in large tanks or boilers, the use of Fristam's FSP can cut processing times significantly.

The shear pumps are suitable for various batch sizes, and are fully CIP-capable.

**CUSTOMISED USES**  
 As application possibilities vary in type and complexity, we offer process-oriented customised solutions, ranging from single units to large in-line installations.

**SPECIFIC CONSTRUCTION**  
 Fristam shear pumps were developed based on our proven centrifugal pumps of the FP series. In place of their impeller, a rotor-and-stator system draws inhomogeneous products through shearing clearances of just 0.3 mm at tip speeds of up to 38 m/s.

As a result of extremely high flow rates in the rotor-and-stator system, and the high shear rates of up to 125,000 1/s, multiphase products are blended with supreme efficiency.



- TECHNICAL DETAILS**
- 5 different sizes
  - Impeller Ø from 130 to 250 mm
  - Shear rates up to 125,000 1/s
  - Revolution speed up to 5,800 rpm
  - Viscosities up to 100,000 mPa s

