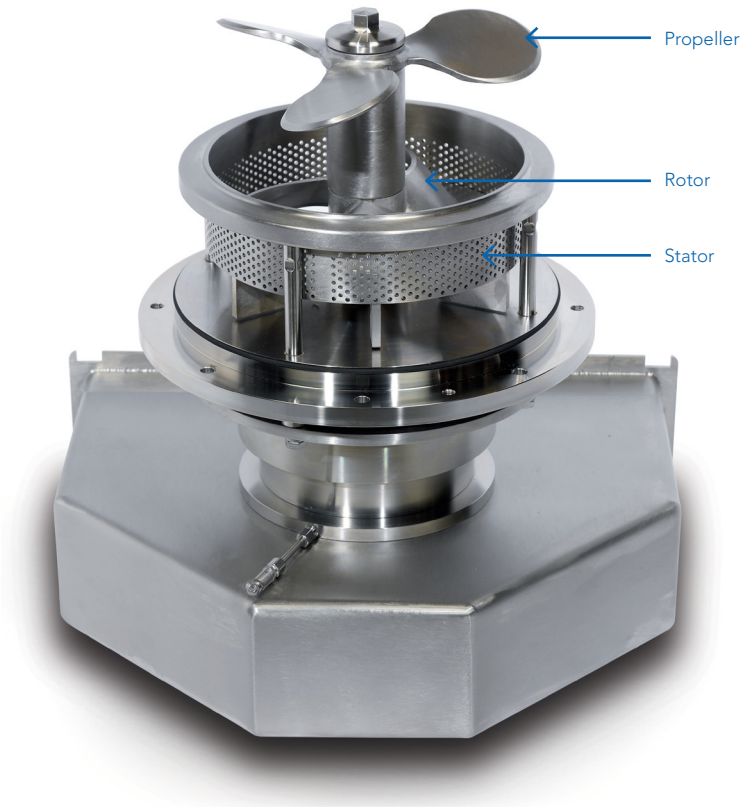
Tetra Pak®

Mixing unit/Dynamic stator suitable for Tetra Pak® High Shear Mixers



The stator in lowered position.
High shear mixing.

The stator in upper position.
Low shear mixing.

High Shear Mixing Unit

The high shear mixing unit can process up to 25.000 litres per batch - or typically 10.000 to 70.000 litres per hour when used in recirculation.

As a result, liquid/liquid, liquid/powder or liquid/solid ingredients can be mixed, dispersed, homogenised and emulsified within minutes or seconds, depending on the formulation.

Application

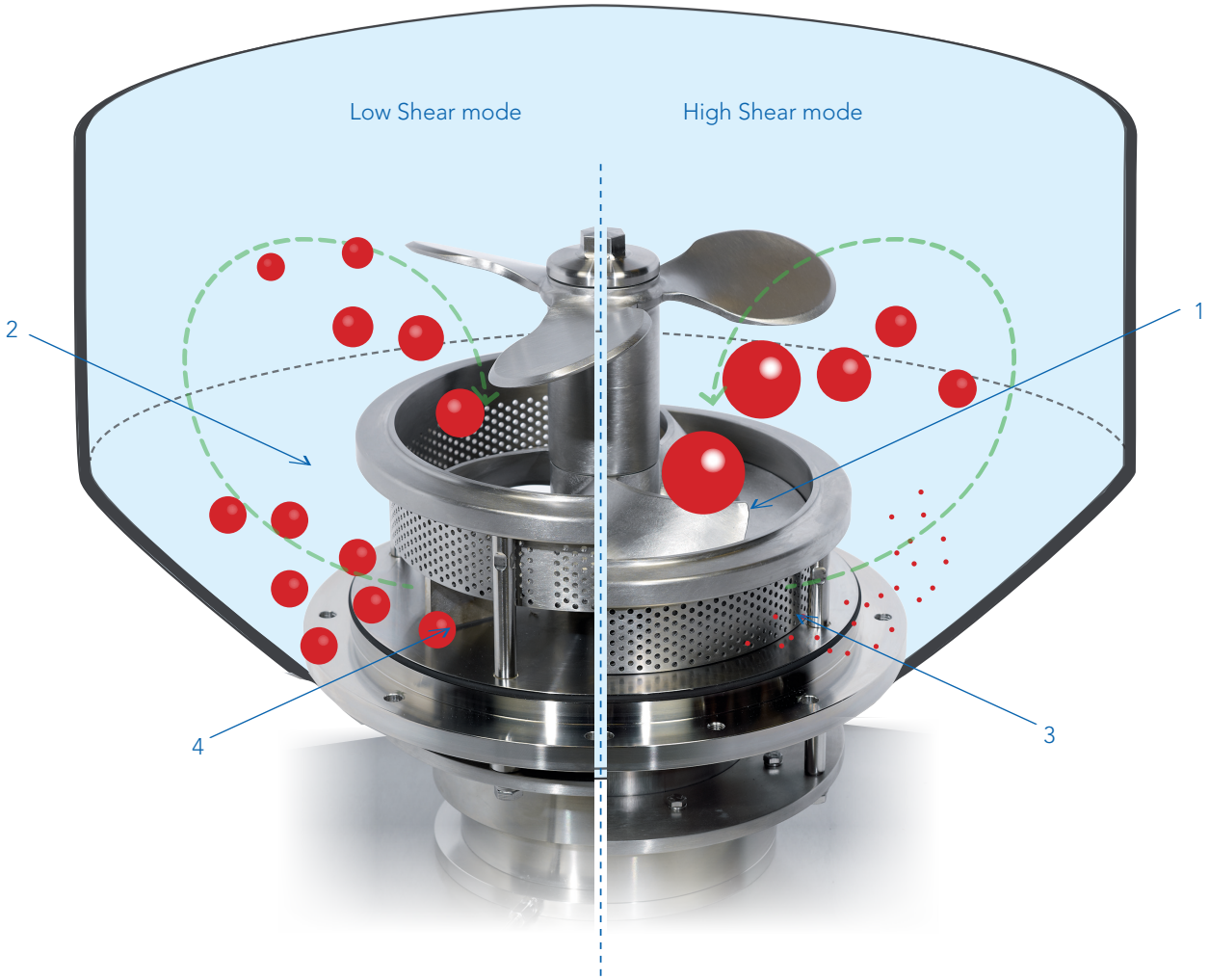
The Tetra Pak® Mixing unit is applicable within the categories: Prepared food, beverage, ice cream, dairy and cheese.

The patended Dynamic stator system allows the same machine to be used for high/low shear mixing and blending by raising/lowering the stator.

Powders and liquids can be mixed in seconds using high shear; the mixture can then be powerfully circulated using no shear. This innovation further enhances the superior all-in-one process system.

Dynamic stator

The unique dynamic stator system in the Mixing unit can be pneumatically lowered to allow high shear mixing. When raised, the stator enables blending without shear for the addition of particles. Also, easy foaming powders can be added even under vacuum with minimum raising of foam. The functions of the all-in-one process can be operated manually or managed by PLC control systems with multi-recipe functionallity and reporting. All Tetra Pak® mixing systems are designed and built to the highest sanitary standards.



Working principle

- The product is drawn into the stator by powerful centrifugal forces.
- The speed across the tank wall generated by the mixing wheel gives optimum heat transfer when using the jacket or heating, especially when the stator is lifted due to higher flow.
- High shear mode: The stator is lowered and all product flow is forced through the stator holes to break down particles and provide a homogenous mix/product. The shear level is determined by the hole size in the stator. The speed of the mixing wheel is regulated by an inverter drive.
- Low shear/blending mode: The stator is raised and the product flow is fast but gentle. This mode allows the addition of particulates/solids to be blended into the product homogenously (with little or no damage) or chopped using one of our special knife attachments.

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