

Energy-efficient agitators deliver optimal product quality while reducing operational costs and environmental footprint



Agitators keep products homogeneous and prevent sedimentation. They play an essential role in protecting product quality and uniformity. Alfa Laval agitators feature EnSaFoil (energy saving foil) propellers, which deliver lower energy consumption and gentler product treatment.

Specially designed for tank use, EnSaFoil propellers are wider in the middle and narrower at the tips. They produce an even pumping force that requires less energy and create less heat. Their design also ensures radial flow, with efficient product exchange across the tank.

Reduce energy consumption by up to 80% and lighten your environmental footprint

EnSaFoil propellers pump liquids four times more efficiently than standard pitched-blade propellers. As a result, energy consumption is reduced by up to 80% compared to standard equivalents. With today's energy prices, the impact on operational costs can be significant, and you are ensured a short payback time on your investment.

Reducing energy consumption also lowers CO₂ emissions, helping you to lighten your environmental footprint and achieve your sustainability targets.

Ensure optimal product quality

By reducing the amount of energy that is required for stirring, the EnSaFoil propeller avoids creating too much heat in one part of the liquid. This is important because excessive heat can lead to product degradation.

The EnSaFoil propeller also allows a lower rotational speed, keeping shear stress to a minimum and ensuring gentle product treatment. This helps preserve the quality of products such as milk, since agitation that is too vigorous can break down the fat structure of the cream.

Protect microbiological food safety with easier cleaning

Alfa Laval agitators are conceived with cleanability in mind. Cleaning does not require vessel entry by operators, and the propeller is designed to avoid shadow areas, protecting microbiological food safety.

With simpler cleaning, Alfa Laval agitators also support operator safety, while saving maintenance time, water and energy.

Increase productivity by lowering processing time

The more efficient action of the EnSaFoil propeller enables producers to reduce processing times, by up to a factor of 8.

“Tank manufacturers often create tanks with the agitators built in. These agitators are typically marine-style propellers. Alfa Laval agitators are specially designed for tank dynamics, and as a result deliver energy savings with gentler product treatment.

“Alfa Laval agitators are modular and easy to install. Retrofitting an Alfa Laval agitator in one of your tanks will allow you to test the benefits and calculate the potential energy savings across your plant.”

Angelo Mennecillo,
Manager Plant Components & Processing Consumables
Centre of Expertise at Tetra Pak®

Case study

A dairy in Germany, one of the leading international producers of fine cheese specialties, installed a new 360,000-litre tank to boost production. It decided to try out an Alfa Laval ALS agitator, and discovered it needed only 4 kW of installed power, instead of the 18 kW required by a conventional tank agitator.

Samples were taken every hour to check the quality of the milk, in particular the fat content. These tests confirmed that the Alfa Laval ALS agitator met product quality expectations. After a three-month trial period the results were so convincing that the customer decided to retrofit 11 conventional propeller agitators with the new energy-efficient agitators.

© Tetra Pak International S.A. Tetra Pak Technical Service AB, 2023-01