



## Alfa Laval Brew 701 eMotion™ maximizes beer recovery at minimal energy consumption

Brewery, Poland

Case story

An Alfa Laval Brew 701 eMotion™ has been clarifying beer in a European brewery since 2015. The brewery also recovers beer through yeast dosing, requiring a separator to remove large amounts of solids from the beer. The Brew 701 eMotion™ handles this challenge perfectly and clarifies the beer to 99.9%, thereby minimizing the load on the filters. Thanks to the eMotion™ technology, the power consumption is very low.

### Yeast dosing for low CAPEX

The brewery also uses yeast dosing to recover beer from fermentation tank bottoms. The yeast cells are removed from the fermenter and are collected in a separate vessel. As the beer is sent through the clarifier, the yeast from tank bottoms is dosed into the beer stream just before the clarifier.

This way, the clarifier is used for both clarifying the fermented beer and recovering good quality beer from the yeast tank bottoms. No extra equipment, such as ceramic membranes or decanters, are required to process the bottoms.

### Coping with a high solids load

The risk with this setup is that the solids load on the subsequent filters will be very high if the clarifier is not capable of removing all the yeast cells. This, in turn, leads to high running costs in the beer filters.

The flow through the Brew 701 eMotion™ is 600 hl/hour, and 2-3% of this main flow comes from yeast tank bottoms. However, this is no problem for the equipment. It has a clarification efficiency of 99.9% and effectively removes the yeast before it reaches the filters.



### Large amounts of recovered beer

The yeast, roughly 2-3% of the fermented tank volume, is settled. About 50% of this volume is beer, and 50% is yeast, meaning approximately 1.5% of the total beer production is recovered in the clarifier. For an industrial-scale brewery, this translates to large amounts of quality beer that can be sold instead of going to waste, and a good contribution to the bottom-line result.

### Change of supplier

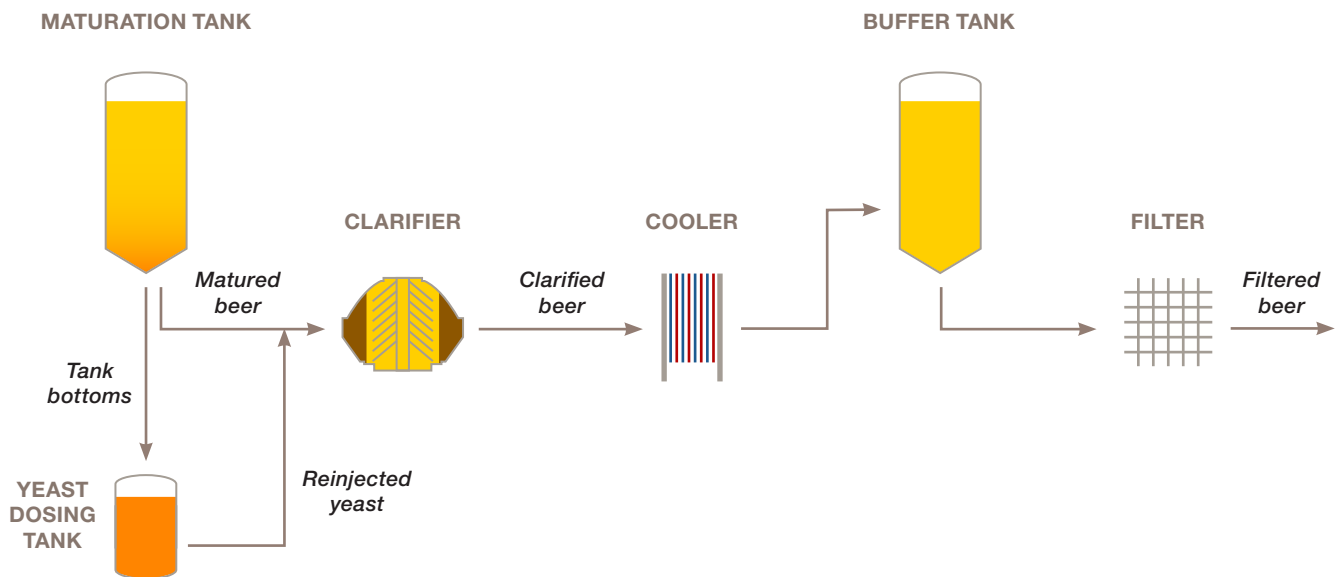
The Brew 701 eMotion™ was installed as a replacement for an older disk stack separator. The company had bought separators from another supplier for many years, but their engineers became interested in Alfa Laval's innovative solution and started a thorough investigation.

They discovered that Brew 701 eMotion™ offered a range of benefits compared to the solution offered by their existing supplier, including:

- higher clarification efficiency (99.9%) at high flow rates
- lower energy consumption
- less maintenance
- minimal temperature pickup
- minimal oxygen pickup
- better CO<sub>2</sub> retention
- lower water consumption

### In operation since 2015

The Brew 701 eMotion™ unit has been in 24/7 operation since 2015. Tests performed at start-up confirmed low power consumption, high clarification efficiency and minimal oxygen pickup. The brewery engineers are very happy with the performance of the machine.



**Fast facts**

**The plant**

The Polish brewery produces around 5 Million Hl beer per year. It is also part of a larger group that produces almost 15 Hl per year in three plants in Poland.

**The challenge**

To clarify 600 Hl beer/hour and recover beer from the fermentation tank bottoms through yeast dosing requires very high clarification efficiency to avoid high filtration costs.

**The solution**

The company installed an Alfa Laval Brew 701 eMotion™.

**The benefits**

- Very high clarification efficiency (99.9%)
- Very low load to filtration
- Exceptionally low power consumption
- Minimal maintenance requirements
- Low noise level
- Low water consumption
- Minimal temperature pickup
- Minimal oxygen pickup
- Good CO<sub>2</sub> retention
- Compact installation



The eMotion unit is installed on a separate skid and takes up minimal space.

**How to contact Alfa Laval**

Up-to-date Alfa Laval contact details for all countries are always available on our website at [www.alfalaval.com](http://www.alfalaval.com).