

# Tetra Alcross Bactocatch

For Dairy ESL solutions



# Longer shelf-life with Tetra



## The market for longer shelf-life is growing

All over the world there is a demand from dairies to extend the shelf-life of products.

The reasons may differ – getting more security or expanding the selling days or just getting a product that is as pure as possible for marketing and positioning reasons.

It is a known fact that there are several technologies to achieve longer shelf-life of milk products. Bactofugation of the raw milk is one method that has been used to remove bacteria from the raw milk. It's a cost effective solution but has its drawbacks. With this method there is a high risk of bacteria remaining in the milk. Normally the effect of bactofugation will give a couple of additional days of prolonged shelf-life – still with the taste of normal pasteurised milk.

With HHT (high heat treatment) the milk is efficiently heat-treated which will kill almost all bacteria in the milk. This gives a high level of security and the longest extended shelf-life possible. But the drawback is that the high temperature might give the final product a somewhat different taste that the customer might react to.

The third alternative is microfiltration, which offers the purest product quality with a long extended shelf-life.

# Alcross

## **Tetra Pak Filtration solutions will give you those extra days – still with supreme product quality**

If you are looking for a solution that gives you extra days but with no compromise on quality – Tetra Alcross Bactocatch is the one that you should chose.

The technology, based on ceramic membrane filtration, gives bacteria and spore removal from the feed at an efficiency of over 99.9%. This means that the final product is almost entirely free of bacteria and spores. The growth of bacteria is minimised and the commercial shelf-life of the product can in most cases be extended dramatically. Other factors which will influence the shelf-life are the packaging system used and the distribution temperature. All these factors together will determine the real shelf-life.

Another positive effect of filtration is the purity of the final product. Consumers today are becoming more and more cautious of what they eat and drink. Offering a product of high purity is often used to charge a higher price – and thereby achieve higher margins. If you combine that with a long shelf-life, the time for sales will increase, resulting in fewer returns and a more efficient way of producing the products.



# We only use the best to superior quality

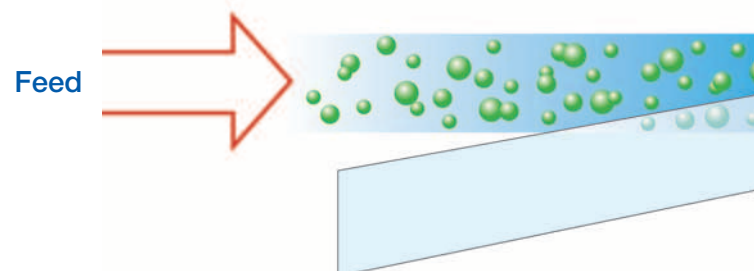


## The principle behind Bacteria and spore removal

By letting a feed (the skim milk) pass through a filter under pressure, the feed is divided into two parts – the retentate and permeate.

The retentate is the part which does not have the ability to pass through the membrane due to the particle size exceeding the pore size of the membrane.

The permeate contains water and molecules and substances such as protein, casein, lactose and salt molecules – substances which we want to preserve and use in the rest of the processes.



# preserve

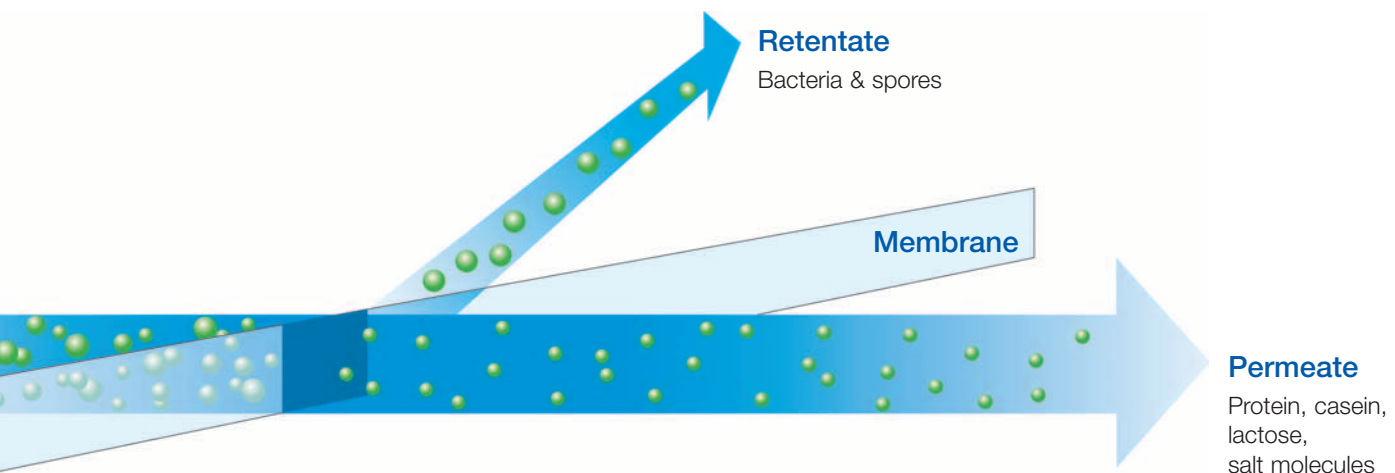


## Key to success is the filter quality

The preciseness of keeping the membrane pores at an optimised size is vital for reaching the best result. Even a small variation can have devastating effects on product quality.

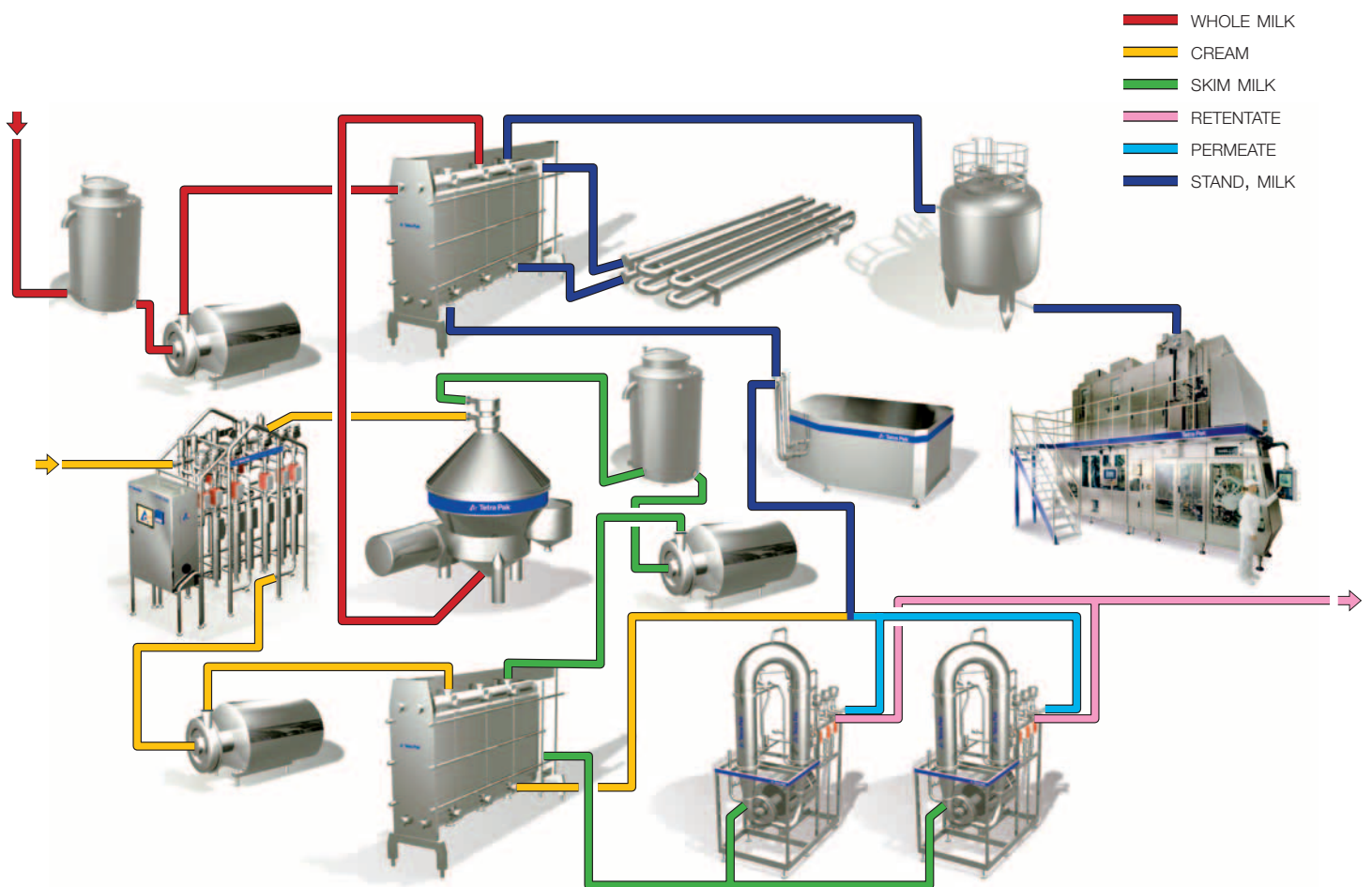
At Tetra Pak Filtration Systems, we are working closely with the leading suppliers of membranes. We also actively participate in research & development projects with scientists and institutions all over the world, in order to achieve greater accuracy for existing membranes, as well as in the development of new technological solutions.

For bacteria and spore removal we have chosen to work with ceramic filters. They have proven to give the best result and the solid structure gives a long membrane life and is chemical and temperature resistant, which makes it ideal for CIP (Cleaning-in-place).



# It takes experience

to achieve the



*The illustration above presents a typical Tetra Pak ESL-line with a Tetra Alcross Bactocatch module.*

# and know-how to configure the line

correct performance

## The configuration

Designing the perfect line depends on a number of factors – the daily volumes to be produced, the quality of the raw milk, fat content, density, equipment used in the entire process line, temperatures in the various phases of the process, total membrane area, distribution temperature, etc.

## The skilled designer

With over twenty years of experience and numerous installations in various circumstances, we at Tetra Pak Filtration have built up an extensive database from all our previous work.

The designers use this information as a reference when your filtration line is being designed, but no two plants have exactly the same prerequisites. Extensive calculations have to be made where all the parameters are taken into consideration. By doing this you will get a customised Tetra Alcross solution that is based on well proven platforms.

## The support from our service team

Microfiltration is a sensitive process that needs care and maintenance. At Tetra Pak we have specially trained and skilled service engineers to support your line and spare parts centres all over the world to give you the best performance.



# Tetra Pak Filtration

worldwide with local support



The Tetra Pak Filtration headquarters, Engineering and the R&D department are situated in Aarhus, Denmark.

Nevertheless, close cooperation with the Tetra Pak Processing marketing companies around the world means that we are all committed to assisting you with your filtration needs.

