



Food temptations

Optimized solutions for the food and beverage industry



New challenges. New pressures. New th

The food and beverage industry is in constant flow, with new challenges always emerging. As a producer, you face growing competition, stiffening regulations and consumers' increasing demands on healthiness and convenience. Alfa Laval is there at the frontline. We listen. We anticipate. Then we innovate to provide timely solutions.

We combine over a century of food and beverage expertise with the cutting edge of production technology. Whether you require individual components or complete modules and process lines, Alfa Laval is a partner that can always meet your needs.

By staying on the pulse of your industry, we make sure your production never misses a beat.

We supply components for all food and beverage applications, and for selected applications, we provide unit operations and complete processing lines.

The applications we serve include:

- Fruit and vegetables
- Proteins, high-grade oils and fats from vegetables, fish and meat
- Dairy, including whey, lactose and casein
- Wine
- Brewery
- Vegetable fats and oil refining
- Olive oil
- Other foods and beverages, such as:
 - prepared foods and confectionery
 - instant coffee and tea
 - Ingredients and flavours
 - Etc.



inking.





Brazilian orange juice producer **Citrosuco** processes 100,000 oranges every minute. Alfa Laval ensure the juice is pressed, centrifuged to remove pulp, then evaporated to produce concentrate. Little goes to waste. The process yields orange essence from peel, and solids are recycled into cattle feed.



Energy use can vary enormously between pumps, so comparing performance and energy consumption in each application can cut your energy bill considerably.



Japan's **Sato Foods** takes powdered foods and drinks to the gourmet level, delivering products of a consistent high quality that are consumed by almost everyone in the country. Alfa Laval products play a key role in getting the full flavour from ingredients, achieving precise control over temperature, solids content and product flow.

Get the most from raw materials

Do more with less

The profitability of your process, as well as the quality of your end product, is dictated to a large extent by the use you make of your raw materials. In a competitive market, doing more with what you have is an essential way to gain the edge.

Increasing the pulse

The importance of this will continue to grow. The world population is steadily expanding; there are more mouths to feed, while space for food cultivation and production is at an increasing premium. To keep pace, food producers will need to make better use of precious resources by optimizing process efficiency.

Meeting future demands

Alfa Laval devotes significant research and development resources to this issue, and the capacity to do more with less is a common characteristic of our products.

But we don't stop at manufacturing effective products. Our in-depth knowledge and expertise means we can help optimize your entire process, ensuring all parts work together in the most effective way possible.

Benefits at every stage

The connection between raw materials and profitability might well seem obvious. But a close look at production processes will frequently reveal scope for significant improvement. And with advances in technology, we are constantly discovering new ways to utilize a greater proportion of every raw material.

True progress, after all, is based on small but continuous improvements.

erials



Belgian confectioner **Astra Sweets** relies on Alfa Laval Contherm scraped-surface heat exchangers for pasteurisation of its viscous, sticky and high-fouling products. The Contherm process preserves the taste, colour and texture of the products, ensuring the best possible use of raw materials, while minimising downtime and operational costs.



Alfa Laval's Foodec decanters are a boost to Indian puree and juice producers who want to improve the quality of their mango products. Indian fruit pulp producer **Tricom** increased business due to the significant reduction of brown and black specks in its mango pulp. The decanter's reliability has also enabled the company to offer continuous production.

Reduce waste



When **Moët & Chandon** decided to improve capacity and production security by upgrading its stabilizing process, the company installed a new line using an Alfa Laval Frontline gasketed plate heat exchanger with special Gemini double wall plates. As well as halving the time needed, the system cut energy consumption for the process by 90%. It's an excellent support for Moët & Chandon's commitment to sustainability.



Our high-speed separators maximize yield from raw materials, while preserving quality and saving energy. And our new direct drive and bottom feed technologies now adds built-in controls to optimize performance.

No waste, no compromise

The more you lose, the less you make. It's a simple equation. Wiser use of basic resources can have a major impact on the profitability of a process, as well as benefitting the environment.

We are all affected by tightening environmental regulations, which will be an increasingly important factor for our industry in the future. Failing to meet these can have serious financial repercussions.

Low impact

But in any case, taking action to preserve what's precious is a positive step towards a more cost-effective future.

The good news is that Alfa Laval's solutions help minimize your environmental footprint, without compromising on performance. After all, performance shouldn't cost the earth.



e and emissions

Across the board

Basics such as water and energy make a major difference to the efficiency of a process. Smart ways to conserve and reuse these precious resources are essential in order to maximize profitability. We have solutions that help throughout the process, from preparation to tank cleaning.

The power to save

Saving energy is another pressing industry concern. In addition to the environmental aspects, it is also a cornerstone of profitability. There are many opportunities to save energy in everyday food industry activities. Pumps, for example, can account for 25-50% of energy consumption in some food and beverage industry facilities. Selecting the right pump for each specific task can result in dramatic savings over time.



Compagnie des Pêches produces 50 tonnes of surimi fish paste per day. Its floating factory is equipped with two Alfa Laval Surimi AlfaPlus 2500 lines, which cover the whole process from minced fish to finished surimi base, including the computerized control system. Centrifugal separation, instead of conventional rotary screens and presses, increases yield substantially and eliminates several processing stages.



Resources such as water are precious to Indian fruit processor **Jain Irrigation Systems**. The company only looks at equipment that consumes minimal power and steam while giving better output and meeting safety and environmental standards. Its Alfa Laval evaporator fits the bill, reducing steam consumption by two-thirds and ensuring a quality product.

Deliver safe a



Llandyrnog Creamery, one of the UK's largest hard cheese producers, processes 1 million litres of milk every day of the year. Since replacing static spray balls in six raw milk storage silos with Alfa Laval Toftejorg Sani-Mega rotary spray heads, the company has increased the efficiency of its raw milk tank cleaning operations by 35% while reducing water usage by 30%.



The Alfa Laval Unique Mixproof Valve allows product to flow in one housing and CIP solution in the other, without risk of co-mingling/contermination and reduces the number of single-seat valves needed while increasing automation capabilities.

Pure trust

Our industry is founded on trust. Consumers' confidence in the safety and consistent quality of food products is an absolute requirement.

Simply put, it is a question of care. Safeguarding the well-being of those who consume food or drink requires deep understanding – and the greatest attention to cleanliness and detail.

Leading heritage

When it comes to hygiene, not all products are created equal. Alfa Laval has a long and well-proven heritage in hygiene. Our solutions are designed from the ground up with superior cleanliness in mind, ensuring the highest quality product every time – without question.

Comprehensive solutions

As the premier supplier of solutions for hygienic applications, food and beverage producers worldwide turn to us with confidence for specific unit operations or complete processing solutions, the widest range of components, as well as in-depth industry and application expertise.

Safeguarding the future

Above all, our customers turn to us for innovation in meeting the challenges of hygienic production. With their superior safety, gentle efficiency and uncompromising cleanliness, our components and processing lines protect not only the businesses that work with hygienic applications, but also the people who benefit from them.

and hygienic products



Water quality is always critical to beer quality, but in India it is a particular issue. **Asia Pacific Breweries**, which manufactures brands such as Tiger and Heineken in India, uses an Alfa Laval Aldox water deaeration unit module to secure the quality of its premium product. Incoming water, inconsistent in quality, is sterilized effectively to ensure world-class beer.



Product safety and hygiene takes on even greater significance in the production of health foods. At Sweden's **Oatly**, which produces healthy dairy alternative products based on oats, Alfa Laval solutions control fluid handling and aseptic heat treatment. The result is a product that tastes good as well as doing you good.

Supply products t at a com

Our Alfa Laval AlfaNova plate heat exchanger is the world's first in 100% stainless steel. With unmatched hygiene and corrosion resistance, it's a step towards optimal process economy.



A family business became one of Morocco's best-loved brands through a focus on innovation. **Aïcha** aims to make the world's best olive and vegetable oils. Its highly automated refinery, the most sophisticated in Morocco, features 100% Alfa Laval equipment. It secures a premium product quality that safeguards the company's competitive edge, while providing scope for further expansion and resultant economies of scale.

to consumers competitive price

Boost the exchange rate

Alfa Laval's solutions, knowledge and competence all add up to one key strength: the ability to price products appropriately for the market. At the heart of the food and beverage industry is the pressing need to be competitive, which makes this an essential factor for success. However specialized or high quality a product is, price will always be an important factor.

Optimal results

Alfa Laval's technology and knowledge can make a critical difference. Through optimizing your processes we can ensure the best possible economy, and thus help you achieve the right level of pricing.

Taking the lead

Our ability to optimize processes is based on a combination of innovative products, application expertise, global presence, and a constant focus on customer relationships. Whatever you are producing, we will help to sharpen your competitive edge.

Combined benefits

The key is a deep understanding of the application. This broad perspective enables us to see a range of opportunities for reducing costs and maximizing profits. From getting the most out of raw materials, to reducing waste and emissions, to delivering safe and hygienic products, Alfa Laval is there for you every step of the way.



For a small family producer, consistency is the key to competitiveness. **Antico Frantoio Sommariva** makes quality olive oil in a medieval village in Liguria, Italy. An AlfaOliver 500 line gives the company precise control over its production, and its products, enabling it to both serve the domestic market and successfully export as far afield as Australia.



Ukraine may not be known for beer, but Kiev's **Slavutich** brewery has doubled capacity in recent years to handle growing demand for its own brand and the licensed brands it manufactures, such as Fosters and Tuborg. Slavutich relies on Alfa Laval solutions for the quality and value that enable it to compete successfully on the domestic and export markets.



Going the extr



Douwe Egberts, now a **Sara Lee** brand, brought liquid coffee concentrate to the market in 1962, and is still the leading force today. When a new plant was needed to satisfy growing demand, Alfa Laval valves and control units were chosen to form the heart of the operation. Keeping things flowing are 20 specially manufactured Alfa Laval manifolds, incorporating some 600 Alfa Laval Unique Mixproof valves with Alfa Laval ThinkTop control units. The advanced level of automation offers total control.



Our innovative Alfa Laval Iso-Mix rotary jet mixers give you the power to cut mixing times in half, or fermentation time by a third. They handle liquid mixing and gas and powder dispersion in the same tank, and even double as tank cleaning machines. The result: superior mixing in less time.

Technology only becomes a solution when it forms an effective answer to your needs. This is why Alfa Laval does everything possible to put the right technology in your hands, both when and how you need it.

Customers around the globe turn to us for reliable solutions that are proven to deliver in the most demanding conditions.

Alfa Laval Food Technology works directly with you to create ideal package solutions. Drawing on key technologies and a solid understanding of food and beverage processes, we listen to your goals and provide custom innovation that helps you achieve them.

Equipment made easy

Alfa Laval's global network of over 1500 sales and working partners creates a local one-stop shop with world-class distribution strengths. Our partners are carefully selected and highly skilled in their own right, but they are also trained by Alfa Laval and supported by our own central and local experts. As a result, they can provide unparalleled service.

a mile



Specifically designed for ultrafiltration and microfiltration of highly viscous products and fermentation broths, the Alfa Laval M39 module is excellent for use within food and beverage applications. It is developed to meet demands for optimized flow dynamics, low energy consumption and low pressure operation.



One of Argentina's top wineries, **Trivento** is owned by the country's largest wine export brand, Concha y Toro. Its noble tradition of winemaking now makes use of the latest technology. Alfa Laval high-speed separators save filtration time and assure control over taste, colour, aroma and finish. Trivento was also the first Argentinean producer to use a decanter; an Alfa Laval Foodec 500 streamlines the process even further.

Ongo



The largest dairy cooperative in California, and the second largest in the US, **California Dairies** has members spread out from San Francisco right down to the Mexican border. Seven processing plants run 24/7 to meet their needs, and Alfa Laval has been a partner from the outset. Alfa Laval supplies a wide range of equipment, from valves to heat exchangers to refrigeration, which the plants depend on for optimal processing efficiency and trouble-free operation.

ing assurance

Regardless of how you work with us, the solution you receive is fully supported to ensure many years of profitable operation. Alfa Laval Genuine Spare Parts are a cornerstone of this support, as is our willingness to share our expertise.

Beyond thorough documentation and manuals, we supply animations, service videos and in-depth maintenance guidelines that help you maximize your uptime. Our experts can also provide seminars, training and other forms of direct assistance that help you get the most from your investment.

How we work

Our market approach focuses on process technology as well as equipment, ensuring the best possible competence for both individual components and combined processing solutions.

Backing these solutions up is a parts and service organization dedicated to keeping you operating and profitable in the long term.

We have a wide range of adaptable modules and turn-key process lines at our disposal. This means we can meet your needs in a surprisingly short period of time, whether you require individual production elements or a complete production system.

To learn more about our solutions and specialist expertise for your industry, go to www.alfalaval.com/food



Foodec decenter centrifuges combine unparalleled efficiency with exceptional hygiene, in a design that minimizes oxidation in delicate food and beverage products. They provide extremely efficient liquid extraction that leaves a particularly dry waste product. The Foodec design boosts solids handling capacity by as much as 25 % compared with other designs currently available.



Lebedyansky Company is one of Russia's foremost baby food producers. Its plant draws on Alfa Laval's extensive experience of aseptic puree and juice production, and features Alfa Laval lines that cover every stage of fruit processing, from reception to aseptic packing. The equipment is delivered in the form of preassembled and tested modules, ensuring rapid installation and a short time to production.

A taste of things to come

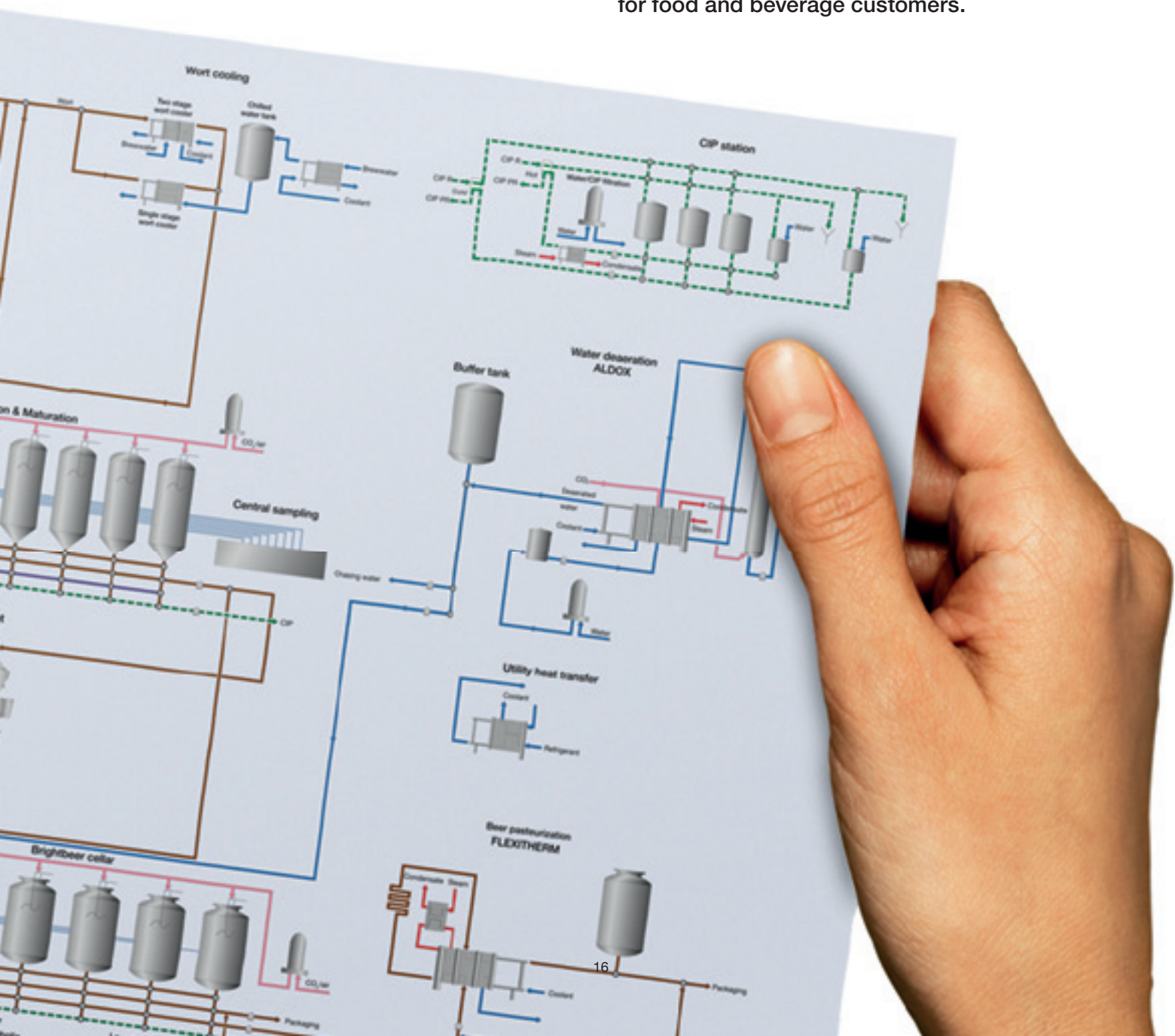
Alfa Laval's unique ability to support the food and beverage industry stems from a unique body of knowledge. Our technology is the result of decades of work with separation, heat transfer and fluid handling.

Likewise, it builds on work at the frontlines of innovation. Not only do we devote considerable resources to R&D, we also possess a dedicated R&D organization with hygienic demands in focus.

The big picture

Naturally, an understanding of components is best matched with an understanding of how they fit together.

Having a complete range of components, Alfa Laval covers the full scope of production needs. But we are far more than a component supplier. As experts in the creation of modules and complete process lines, and we are skilled in developing custom solutions for food and beverage customers.

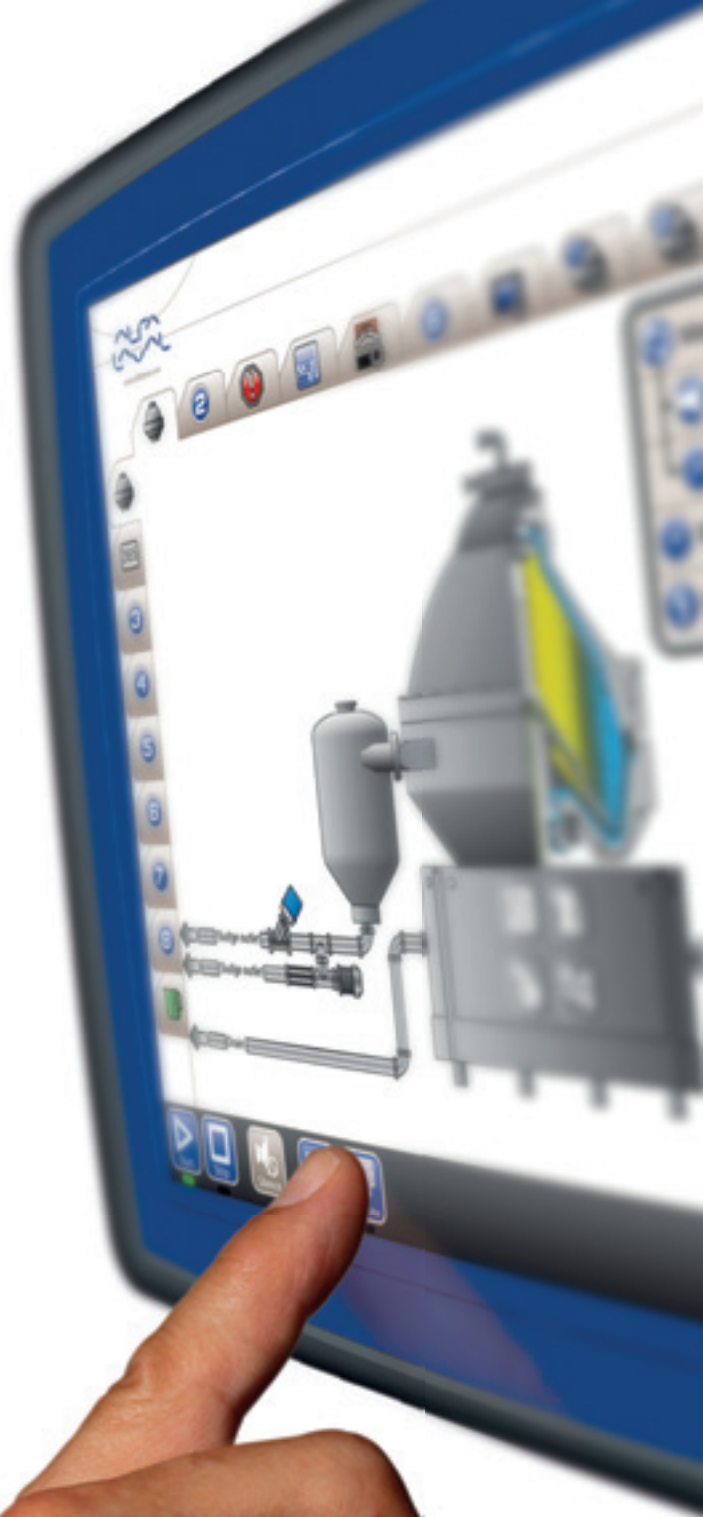




Always in the loop

The insights we gain from working with our customers are fed back into the R&D process. As we encounter changing needs in the field, we apply what we learn to create added value across the board.

In addition, we keep informed of the latest developments in food and beverage regulations. By staying ahead of regulations and being active in the dialogue surrounding them, we create lasting technology that is well prepared for tomorrow's needs.



Pumping

Centrifugal pumps



LKH

Liquid ring pumps



MR

Rotary lobe pumps



SX

Flow management

Mixproof valves



Unique UltraClean mixproof valve

Single-seat valves



Unique SSV valve (standard configuration)

Butterfly valves



LKB with actuator



Unique Control

Ball valves



SBV sanitary ball valve

Heating and cooling

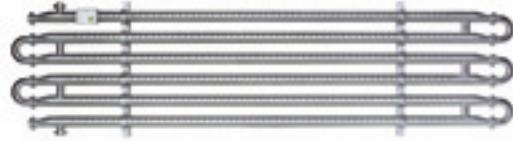
Hygienic heat exchangers for food, dairy and beverages



FrontLine Gasketed plates



BaseLine Gasketed plates



Viscoline Tubular



Contherm Scraped-surface



Pasteurizer/Aseptic sterilizer module



Bag-in-drum filling system and sterilizer module



Aseptic bag-in-box filling module



Cartoning module for bag-in-box



Multi-effect AlfaVap evaporation system for grape must, USA



Sterilizer and bag-in-drum system at mango processing plant, India



Decanter centrifuge system for protein processing



Complete system for beer recovery from tank bottoms, Romania



Scraped-surface evaporator system for viscous food, USA

Automation and monitoring

Fluid passage

Tank optimization

Regulating valves



CPM-2 valve

Special valves



Sampling valve

Flow control and indicator units



ThinkTop

Installation material



Tubes and fittings

Tank accessories



Access tank covers

Agitators and mixers

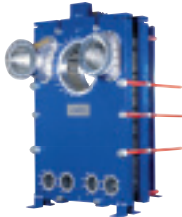


Rotary jet mixer

Industrial heat exchangers for utilities & CIP



SteriOhm
Electrical resistance



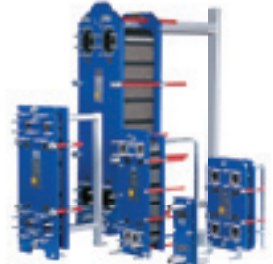
AlfaVap
Plate evaporator



AlfaNova
Fusion-bonded plates



CB Copper brazed
plates



M-Series & TS-Series
Gasketed plates



Tubular heat exchanger module



Scraped-surface heat exchanger
module for fish oil and proteins



Ohmic electrical resistance
heating module with aseptic filler



Complete process line for high
grade fish oil



Complete olive oil processing lines, Italy



Ultra-filtration membrane system for blood proteins, Scandinavia



Disk stack centrifuge systems for protein processing, Scandinavia



Complete green beer cellar, Russia



Tank cleaning equipment



Agitator ALS



Magnetic mixer UltraPure



Toftejorg SaniMidget



Toftejorg SaniJet 25



LKRRK Static spray ball

Filtration and separation



Disc-stack centrifuges



Decanter centrifuges



Spiral membrane



Plate and frame membrane (unit)



Separator module for beverages



Decanter module for juice extraction from fruit and vegetables



Membrane module for product concentration



Yeast propagation module



Tank top system



Complete flow battery at protein processing plant, Germany



Semi-continuous deodorization system for vegetable oil, Brazil



Complete mango processing plant, India



Decanter based wet rendering system for soft fatty tissues, USA



Decanter system for grape juice extraction, France

Component and module overview

The pages shows only a selected part of Alfa Laval offering for food and beverages applications. For a more complete picture of our extensive range of components and modules, visit the Alfa Laval web site. By selecting “products and solutions”, you can obtain up-to-date information via our food and beverage industry and product pages.

www.alfalaval.com/food



Alfa Laval in brief

Alfa Laval is a leading global provider of specialized products and engineered solutions.

Our equipment, systems and services are dedicated to helping customers to optimize the performance of their processes. Time and time again.

We help our customers to heat, cool, separate and transport products such as oil, water, chemicals, beverages, foodstuffs, starch and pharmaceuticals.

Our worldwide organization works closely with customers in almost 100 countries to help them stay ahead.

How to contact Alfa Laval

Contact details for all countries are continually updated on our website. Please visit www.alfalaval.com to access the information.

HILANDERS

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