



The building blocks of profitability

Step up your game

Alfa Laval is one of the world's leading suppliers of equipment and complete production lines for clarification, extraction, dewatering and fat recovery in fish, meat, vegetable protein and dairy processing. Companies across the globe rely on our products and solutions to recover high-quality proteins, oils and fats in a cost-efficient way.

The protein business is highly competitive, and to be profitable you need to maximize quality and yield while keeping operating

costs low. At Alfa Laval we have more than 30 years' experience from designing rendering, fat melting and protein recovery systems. We know how you can reduce your environmental impact and get the extra percent of product out of your raw material that make all the difference to your bottom line.

Please contact us at protein@alfalaval.com or visit www.alfalaval.com to learn more.



Innovating processing technology since 1883

Ever since Gustav de Laval founded Alfa Laval in 1883 and started manufacturing separators, we have been at the forefront of the development of processing technology. Over the years the company has grown and we have expanded our scope of applications, but one thing remains unchanged – our focus on performance, reliability and customer satisfaction.

Providing state-of-the-art solutions

Alfa Laval is active in many different industries and you can find our equipment in all sorts of processes – from breweries to power plants.

We are the world's leading supplier of complete process lines for recovery of edible protein from fish, meat and vegetable sources. We supply components, complete skid-mounted modules and process lines for clarification, extraction, dewatering and fat recovery.

Optimizing our customers processes. Time and time again.

We help customers around the world optimize their operations and continuously improve their processes. Our long experience, deep process knowledge and wide product range means we can help you get the most out of your raw material.

Core technologies

All our solutions are based on Alfa Laval's three core technologies:

Heat transfer – We offer a wide range of highly efficient heat exchangers that help you cut energy costs and improve production in all types of heat transfer duties, including heating, cooling, evaporation, condensation and even steam generator systems.

Separation – Alfa Laval high-speed disc stack separators and decanter centrifuges are perfect for separating two liquids from each other, or solids from one or two liquids.

Separators are mainly used for purifying liquids, and decanter centrifuges are commonly used for defatting and/or dewatering solids. Alfa Laval decanter centrifuges are available in two or three phase designs. In the separation category we also offer membrane filtration systems and strainers.

Fluid handling – Our range of valves, pumps, pipes, fittings, tank cleaning equipment and agitators have been specifically developed for industries with stringent hygiene requirements.

Decanter centrifuge system for protein processing

Alfa Laval in brief

Alfa Laval is a leading global provider of specialized products and engineering 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 Alfa Laval's global protein specialists at protein@alfalaval.com. We are happy to discuss the possibilities in your plant and explain how we can help you improve your profitability.

If you wish to get in contact with your local Alfa Laval office, you can find up-to-date contact details for all countries on our web-site at www.alfalaval.com.



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Maximize reliability and yield with Alfa Laval protein, fat and oil recovery systems





A global partner to the industry



Supporting you all the way
Partnering with Alfa Laval gives you access to all the resources you need to succeed in the protein recovery industry.

We can help you in all development phases, from design to testing. Our global team of process experts helps you get the right equipment to match your specific needs and operating conditions.

Once you have decided which equipment to use we can supply you with individual components, skid-mounted modules or complete process lines. We are also happy to assist with start-up and commissioning, training and service.

Global centre and regional hubs
Being close to our customers is important for us and this is reflected in the way we are organized. Our central and regional process experts support your local sales representatives. This decentralised way of working ensures you get the best possible local support and have access to world-class process knowhow.

Extending performance
Alfa Laval Service provides all the services you need to ensure top performance over the whole lifecycle of your equipment and maximize your return on investment.

With Alfa Laval as your service partner you get the peace of mind that comes from knowing your machinery is in the hands of dedicated professionals. We make sure your equipment and processes are optimized so that you keep your competitive edge and benefit from maximum uptime.

Our Performance Agreements are tailor-made service solutions that can include any combination of our services. A Performance Agreement gives you true security and advance knowledge of your service costs.

With service centres, field service engineers and service partners in nearly 100 countries, Alfa Laval is in easy reach of your operations. Dedicated specialists are ready to assist you when ever you need help.

A wide range of advanced process solutions

System	Grade			Raw material			End product	Components									
	Food	Feed	Technical	Fish	Poultry	Red meat		Vegetables	Grinding	Direct heating	Indirect heating	Decanter	Separator	Cooling	Membranes	Evaporation / fat/oil vacuum drying	Dryer
CentriFlow Wet rendering - commonly known as “fat melting line” or “whole fish decanting”								Oil/fat, meal or greaves			 Cantherm Cooker - Fish			 Fat/oil Greaves	 Desalination	 Evaporator and/or vacuum dryer	
Fish Liver Oil Plant Oil recovery from fish liver, usually from whitefish								Oil								 Vacuum dryer	
CentriBone Production of primarily food-grade bone chips or gel bones								Gel bones and fat or bone meal								 Evaporator and/or vacuum dryer	
CentriBlood Blood meal production from raw whole blood or haemoglobin								Blood meal								 Evaporator for reduction of BOD/COD, nitrogen or e.g. phosphor	
CentriSkim Recovery of oil and fats from industrial waste water streams. DAF followed by a 3-phase decanter								Oil/fat and meal								 Evaporator for reduction of BOD/COD, nitrogen or e.g. phosphor	
Surimi Plant Surimi production, primarily from filleted whitefish								Surimi									
Fat Reduced Meat Plant Low-temperature, mechanical meat defatting for reduction of excess fat and/or recovery of high-grade oils/fats								Texturized fat-reduced meat; high-grade virgin oil/fat								 Vacuum dryer	
AlfaBlood Plasma recovery from whole blood using a high-speed separator								Plasma and haemoglobin fraction					 Liquids Ice flakes			 Evaporator for plasma concentration	
CentriFine Final purification of recovered oil or fat using a high-speed separator								Purified fat								 Vacuum dryer	
VegPro80 Recovery of protein concentrates, fibres and carbohydrates from vegetable protein sources								Protein concentrate, fibres and carbohydrates								 Evaporator	
VegPro90 Recovery of protein isolates, fibres and carbohydrates from vegetable protein sources								Protein isolate, fibres and carbohydrates								 Evaporator	
HyPro Plant Protein concentrate recovery from soft and/or bone material or feathers through thermal/enzymatic hydrolysis with water and/or enzymes								Soup/broth or extract / protein concentrate/digest and oil/fat	 (Pre-breaker and) grinder (and refiner)		 Sterilizer - broth/soup Cooker - Feather (Pressure) hydrolyser					 Evaporator	
Silage Plant Conversion of by-products, e.g. from fish, to animal feed using acid hydrolysis								Silage and oil								 Evaporator and/or vacuum dryer	
CentriMeal Conventional dry rendering using press technology								Oil/fat and meal	 (Pre-breaker and) grinder							 Vacuum dryer	
CentriMealEco Upgrade for dry rendering plants. Production is optimized by connecting a CentriFlow upstream of the existing process.								Oil/fat and meal	 (Pre-breaker and) grinder			 Dryer/sterilizer Cooker				 Vacuum dryer Evaporator	
Alfa Laval equipment, required Alfa Laval equipment, optional Sub-supplied equipment, required Sub-supplied equipment, optional																	

Components and modules

Separation



Decanter centrifuges

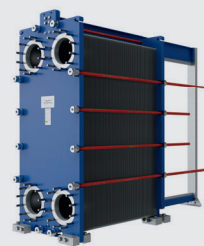


High-speed separators



Membranes

Heat transfer



Gasketed plate heat exchangers



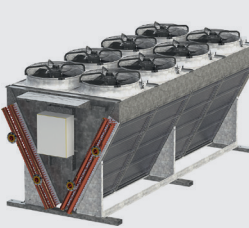
Brazed and fusion-bonded plate heat exchangers



Scraped surface heat exchangers



Tubular heat exchangers



Dry Cooler VDD

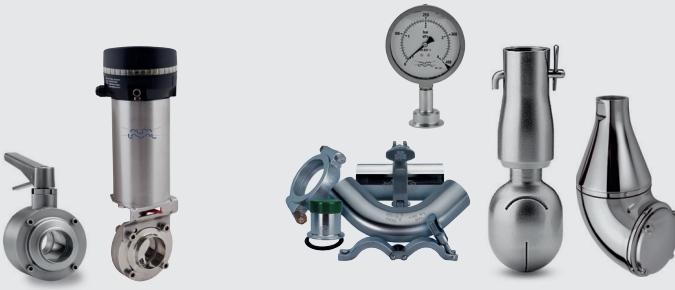
Fluid handling



Pumps



Valves and actuators



Tubes, fittings, instruments and tank cleaning equipment



Mixers and agitators

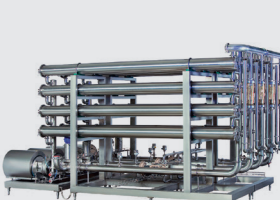
Standard and customized modules



CentriFlow - wet rendering module



SteriTherm - sterilizer module



Skid-mounted membrane filtration module



AlfaVap - evaporation module