

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.

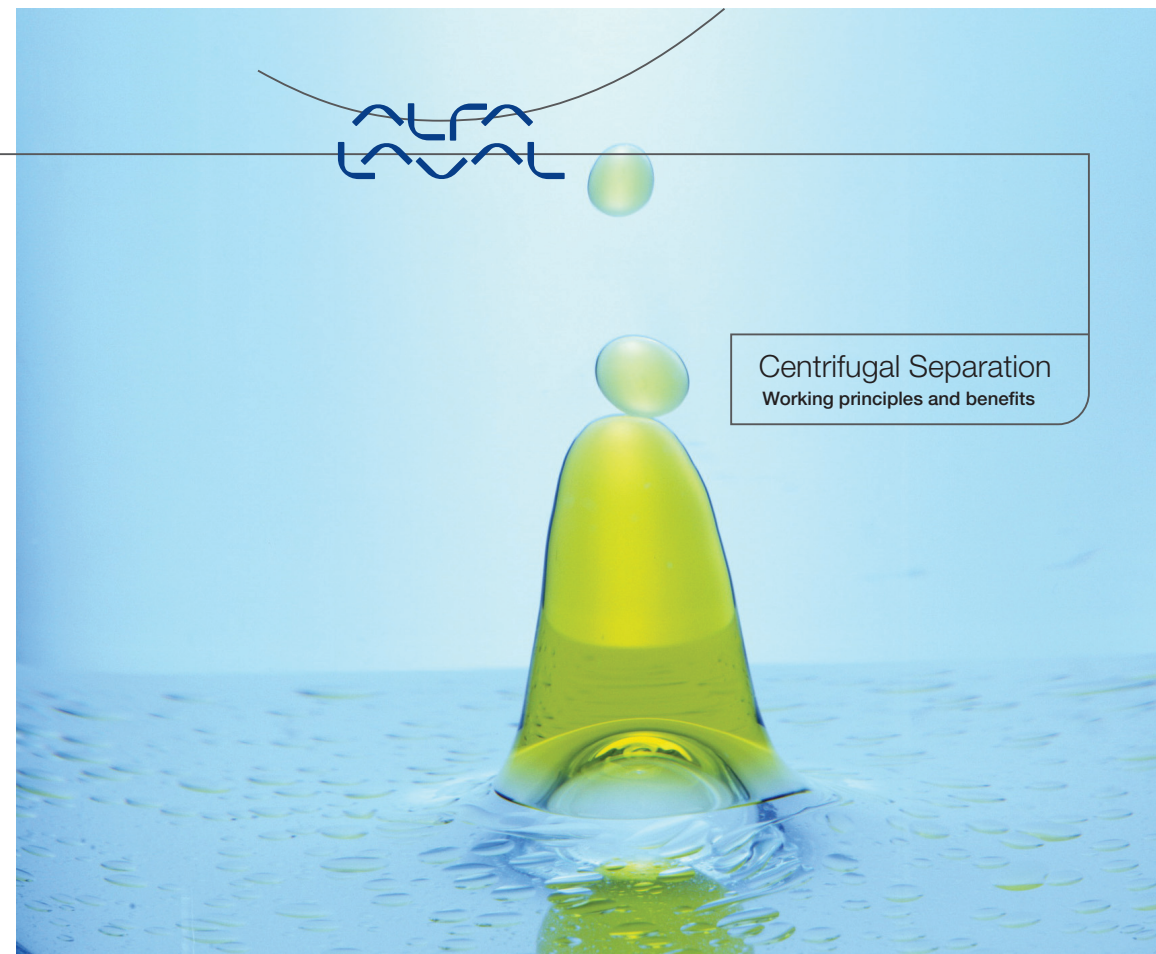
We help our customers to heat, cool, separate and transport products such as oil, water, chemicals, beverages, foodstuffs, starch and pharmaceuticals.

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

How to contact Alfa Laval

Up-to-date Alfa Laval contact details for all countries are always available on our website at www.alfalaval.com

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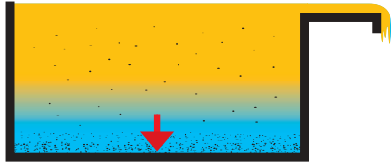




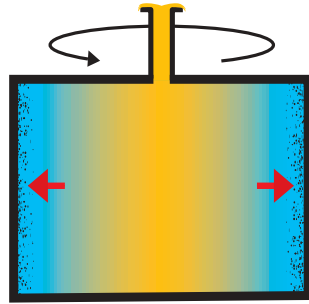
Centrifugal Separation – the best approach to cleaning fluids

On-site cleaning of industrial fluids – oils, coolants and wash liquids – is a must in most modern manufacturing operations. Efficient cleaning prolongs the lifetime of fluids, thus lowering production costs and reducing environmental impact. Furthermore, clean fluids are crucial for maintaining a consistent quality in the manufacturing process and minimising downtime for maintenance and service.

This booklet explains the working principle of centrifugal separation – the most robust and efficient cleaning method for industrial fluids in the world today.



= 1 g



> 5 000 g

Based on nature's own force – but 5 000 times stronger

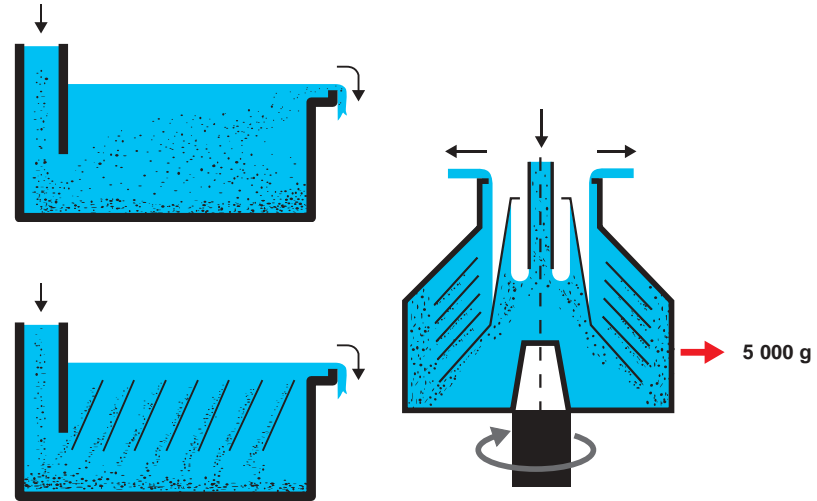
In a tank, thanks to the force of gravity, the light and the heavy phase of a polluted fluid are gradually separated, and the heavy particles sink to the bottom. As a separation method, this performs poorly, because it is slow and there is usually a large mixing phase left unseparated.

In a centrifugal separator, the force of gravity is replaced with a centrifugal force that can be more than 5 000 times stronger than the force of gravity. The separation will naturally be significantly faster.

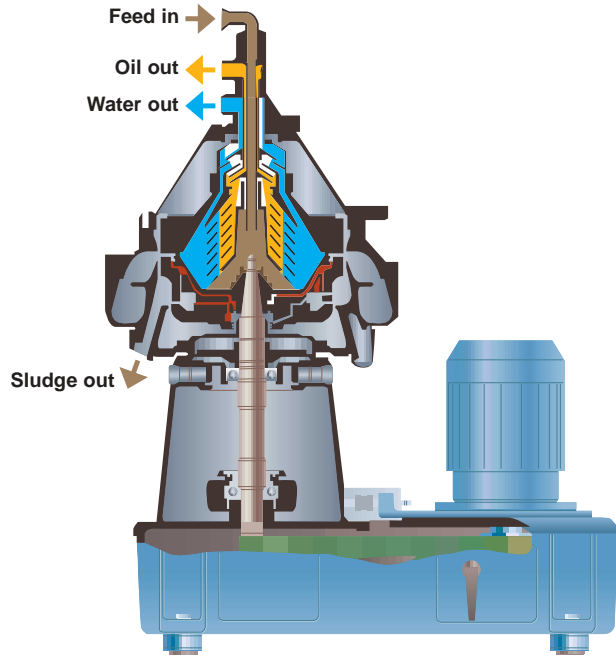
Well-known principles made more effective

If you supplement the separation tank with buffer plates, the sinking particles are stopped earlier and have a larger surface area to fasten to. The separation goes faster.

In the the centrifugal separator, the effectiveness is increased by a disk stack. The principle is still the same as in the tank. Heavy particles are drawn to the separator's walls by centrifugal force. Lighter particles, which tend to follow the fluid towards the separator's centre, are hindered by the disk stack, change direction and end up with the heavy particles by the wall. The centrifugal separator can be used both to remove particles and to easily separate different fluids from one another.



Effectiveness is further enhanced by the separator's disk stack.

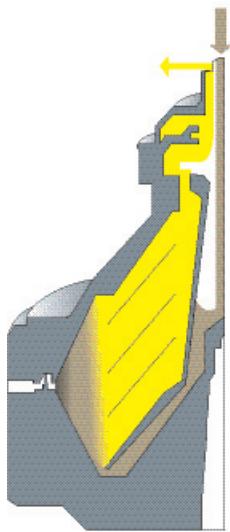


The separation of particles and different fluids is a one-step process.

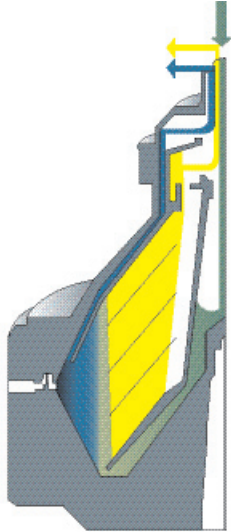
Robust design requires minimal maintenance

A centrifugal separator has few moving parts and requires very little maintenance. It is supremely easy to use and operates independently without special monitoring. In most cases, the separator is installed in a bypass system and operates continuously. This means that cleaning can be carried out around the clock, even if the system to be cleaned is not operating. There are also separators that can easily be moved between different machines.

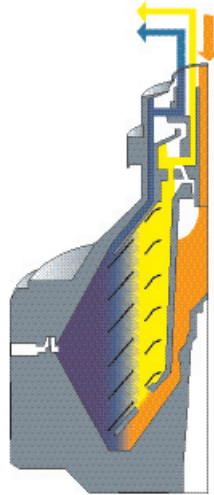
Depending on the content of sludge and particles, a separator with either automatic or manual emptying function can be chosen.



Clarifier



Purifier



Concentrator

Centrifugal separators for every application

There are different types of centrifugal separators suited for different tasks. The table below can simplify your choice.

	Clarifier	Purifier	Concentrator
Phases	2: Liquid & Solid	3: Liquid, Liquid & Solid	3: Liquid, Liquid & Solid
Main liquid	Oil or Water	Oil	Water
Typical applications	Hydraulic & Quench Oils	Lube, Fuel, Waste Oils	Wash Liquids, Coolants

Ready for plug-in

Centrifugal Separators are delivered as complete, tested modules with all the included components optimised to one another. This facilitates installation and operation and offers advantages such as

- Trouble free start-up and operation
- Convenient operation and maintenance
- Minimal floor space requirement



There are standard modules in a variety of versions and sizes.



A classic Alfa Laval separator from the early 1900s.

Everything you need – everywhere you need it!

The centrifugal separator was invented by Gustaf de Laval more than 100 years ago. His manually operated milk separator is still in action in some places throughout the world. Today's improved machines are based on the same fundamental principles that have been developed and refined through continual R&D efforts in close cooperation with industry.

In addition to centrifugal separators, Alfa Laval develops and markets heat exchangers and pumps for the manufacturing industry. We are dedicated to improving your performance time and time again.