



# State-of-the-art heating, cooling and cleaning

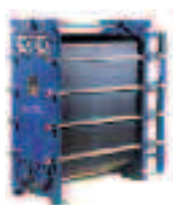


Plate Heat Exchanger, PHE



Brazed Heat Exchanger, BHE



Spiral Heat Exchanger, SHE



AlfaNova

## Heat exchangers

Alfa Laval heat exchangers come in a variety of materials, sizes and capacities, from the smallest brazed unit to the largest gasketed and welded units, or the new AlfaNova plate heat exchanger. Whatever your application, Alfa Laval has the right heat exchanger for your specific heating needs.

### Plate Heat Exchangers, PHE

In terms of capacity, Alfa Laval gasketed plate heat exchangers, PHEs, take over where the compact brazed heat exchanger ranges stop. Easy to clean and requiring very little maintenance, Alfa Laval PHEs can be supplied with corrosion-resistant titanium plates for use with aggressive media.

*Suitable for most duties*

### Brazed Heat Exchangers, BHE

Alfa Laval brazed heat exchangers are designed to handle pressures from full vacuum to 30 bar and temperatures from  $-160^{\circ}\text{C}$  to  $+400^{\circ}\text{C}$ .

*Suitable for most duties*

### Spiral Heat Exchangers, SHE

Spiral heat exchangers are highly effective in handling sludge, liquids with solids or fibres in suspension, including slurries, and a wide range of viscous fluids.

*Suitable for duties with dirty fluids*

### AlfaNova

AlfaNova is a new type of plate heat exchanger constructed of 100% stainless steel using AlfaFusion, a unique bonding technology that provides high temperature resistance (up to  $550^{\circ}\text{C}$ ) and an exceptional level of hygiene. Copper-free, AlfaNova offers unmatched corrosion resistance. Risk of corrosion caused by elevated levels of chloride and sulphate in the cooling water is eliminated.

*Suitable for applications with high demands on cleanliness, that use ammonia, or where copper or nickel contamination is unacceptable.*

## Centrifugal cleaning modules and systems

Alfa Laval centrifugal separation systems come in a wide range of sizes and capacities. Small separation systems that can be integrated into your production line, compact, trolley mounted separators that can be wheeled around your plant, large module-mounted separation systems – whatever you need, we have it.

### AlfaPure Cleaning Modules

AlfaPure is a range of advanced mobile modules for cleaning water or oil-based fluids. Each module is a complete system that includes a separator and



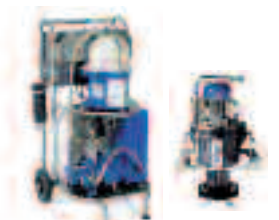
# solutions from the technology leader



AlfaPure Cleaning Modules

utility equipment. Innovative designs ensure highest separation efficiency. The equipment is easy to operate with minimum space and service requirements.

*Applications: Cleaning of coolants, wash liquid, straight/heat oil, hydraulic/quench/lubrication/compressor/test bed oil, or oily water.*



Emmie and Alfie Mobile Separation System

**Alfie 500 Mobile Separation System**  
Alfie 500 is a complete, compact mobile system, including separator, feed pump and control system. Alfie 500 separates tramp oil from the coolant as well as metal fines and solid particles down to 1 µm. Alfie 200 is designed for permanent mounting on the coolant tank.  
*Applications: Cleaning of water-based coolants.*



Decanter

**Emmie Mobile Separation System**  
A fully mobile, plug-and-play cleaning system for oils, Emmie removes nearly 99% of all particles in the 2 µm–5 µm range. The system also removes virtually all water, without removing the additives.  
*Applications: Cleaning of hydraulic oil, lubrication oil, compressor oil, test bed oil, diesel fuel.*



Basket Centrifuges

**Decanters**  
An efficient solution for dewatering sludge from, for example, painting lines. Decanters reduce waste to a minimum and the water can be re-circulated.

Decanters are also suitable for removing sludge from service fluids, prior to cleaning in centrifugal separators, and for various duties in surface treatment applications.

*Applications: Dewatering of paint waste; removal of sludge from liquids in surface treatment and waste coolants/oils.*

### Basket centrifuges

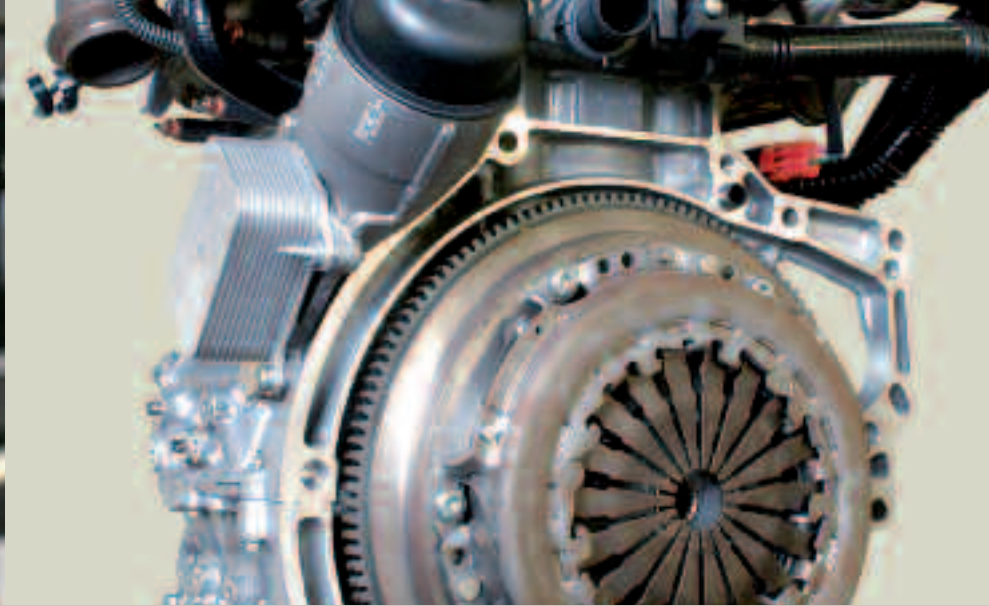
The TSK Basket Centrifuge has been specially developed for the clarification of different types of fluids; cutting or grinding coolants and oils, wire drawing fluids, paint waste water, and waste oils in small and medium-sized operations.

*Applications: Dewatering of paint waste; cleaning of oils, grinding coolant and phosphatising liquids.*

### Alfa Laval Parts & Service

- More than 70 service centres worldwide
- Regional spare parts distribution network
- Global inventory management and fast delivery of standard parts
- Wide network of distributors and service partners





# heating, cooling and cleaning of service fluids

## Cleaning of service fluids

How do you clean your service fluids? Skimmers, filters, lamella separators, coalescers? Perhaps you use ultra filtration - all these methods have their disadvantages. They are either inefficient or they generate high operating costs. Cleaning by high-speed centrifugal separation, using separators or decanters, is not only highly efficient, it will reduce your operating costs as well!

### Less tool wear, improved end-product quality

Since cleaning by centrifugal separation is highly efficient, removing water, abrasive metal fines and other particles as small as 2  $\mu\text{m}$ , your machine tools give much longer service before wearing out. This means considerably lower tool replacement costs. Reduced tool wear also results in more precise machining and, fewer rejects.

### Increased uptime in your plant

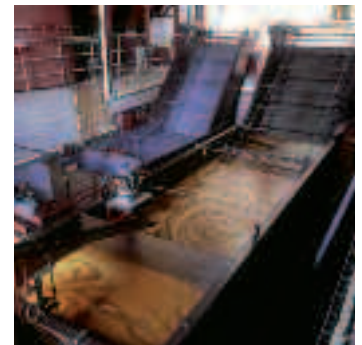
Clean service fluids mean longer production runs without tool changes. Also, fewer breakdowns due to solid particles clogging pumps and other equipment. Since Alfa Laval separators are normally installed in a bypass system, other benefits include more efficient utilisation of machine tools and fewer stops for tank cleaning.

### It benefits your workforce and the environment

Efficient cleaning and recycling of coolants, wash liquids and oils with an Alfa Laval cleaning system inhibits growth of micro-organisms in the service fluids. This ensures cleaner, healthier working conditions in your plant. It also reduces the impact of plant operation on the external environment.

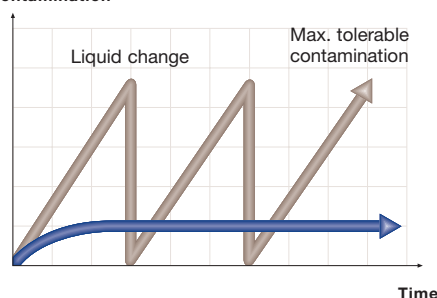
### Fast payback

In a nutshell, having clean service fluids all the time means lower purchasing and disposal costs for fluids, more production uptime, and reduced wear and corrosion on the equipment served. The payback time for an Alfa Laval separation system is therefore surprisingly short, often less than one year.



Tramp oil floating on the surface of coolant.

Contamination



■ Without cleaning  
■ Continuous separator cleaning