



**High performance  
oil coolers for  
flexible solutions**



**Setrab**  
*Oil Coolers*

# Setrab

## You need an aluminium cooler!

**Exactly dimensioned to suit your cooling needs and measurements!**

**Then collaboration with Setrab is the best solution for you!**

### Is the cooler to determine the system...

Background facts on aluminium coolers.

- Coolers are normally produced by large subcontractors.
- Most coolers are used in the automotive industry.
- Coolers are often produced in standard sizes.

Subcontractors are geared to volumes, which means that companies needing small or medium-sized series have difficulties in getting what they want.

### ...or is the system to determine the cooler?

Setrab has a highly developed calculation technique, and produces mainly small and medium-sized series. The best results are achieved if we are involved at an early stage.

With data on temperatures, flow rates, and pressure, we calculate the cooler requirements. We consider factors such as application area, cooling media, external dimensions, placement of connections, fastening points, mechanical loads, etc. Then we decide which one of our basic cooler models to start from.

### Setrab's coolers become one with the system

The cooler is designed to be a qualified and integrated component of the system in which it is to operate. The costs of

adjusting the machine or installation to the cooler is reduced and our collaboration makes the cooler fit and perform as an optimal part together with the other equipment.

As our coolers are cost-effective and have a high performance per surface unit, they sometimes become the decisive component, giving the competitive edge with respect to performance and design.

### Flexible manufacturing technique

Setrab has developed a very flexible manufacturing technique. We can therefore manufacture specially designed coolers even in very small series without spending large sums on tooling.

In addition we already have a number of different cooler types, of which each one can be manufactured in a large number of varieties.

By being attentive to our customers' signals regarding changing needs, and thanks to our ability to adapt our organisation and products according to these signals, we want to be one step ahead in the development of a custom-made oil cooler.

### Setrab AB

Setrab has been active on the world market since the end of the 1970s and is well established in many lines of business.

Through close collaboration with our customers, we want to create long term relationships. Setrab headoffice and production facilities are in Malmö, Sweden, and our fully owned subsidiaries are in the United Kingdom, Germany and the USA. Setrab is represented in more than 20 countries by importers and agents.



# Cooling and Setrab's Heat Exchangers

## Long experience

Setrab has worked with vehicle heat exchangers, and coolers for industrial applications, since the late 1970s.

The competence gained always comes to the benefit of the customer. Our extensive knowledge regarding calculations, dimensioning and choice of production method means that you can always turn to Setrab to discuss ideas and possibilities.

## Customer-specific solutions

Setrab works actively and close to its customers. We carefully study the environment in which the cooler shall work, and for new applications we perform follow-ups in order to document how the cooler is affected.

This working method gives us large experience on the conditions imposed in a number of different installations and is an aid in the continuous development of our coolers.

## Small and medium-sized series

Sometimes innovative thinking is required to advance with a design/engineering solution.

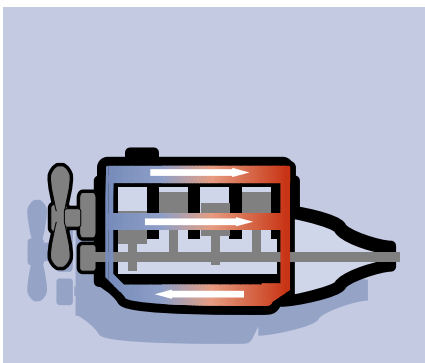
In sectors of industry with highly specific conditions, a solution with custom-made coolers can be both technically correct and cost-effective.

## Numerous application areas

By using coolers for engines, hydraulic systems, transmissions, compressors and electronics, the durability and efficiency of the system increase as all components can work at their optimal operating temperature.

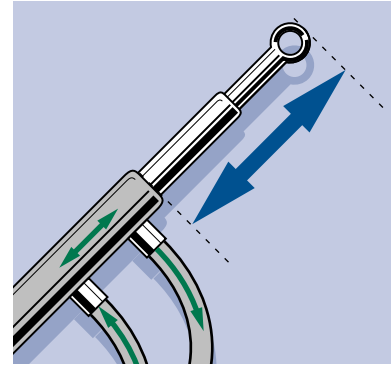
### EXAMPLE 1. ENGINES

The task of the oil is to lubricate, to seal, to cool and to protect against corrosion. If the properties of the oil deteriorate, the consequence is wear and reduced life expectancy. An engine working at excessively high oil temperatures can, if the worst comes to the worst, be subject to engine failure when the properties of the oil are completely or partially deteriorated.



### EXAMPLE 2. HYDRAULIC SYSTEMS

A hydraulic system working at elevated oil temperatures is subject to unnecessary wear. Leakage may occur leading to decreased efficiency which in turn leads to higher operating and maintenance costs and decreases the life expectancy of the system.

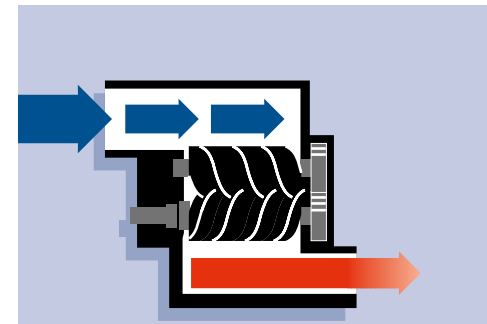


### EXAMPLE 3. COMPRESSORS, AIR COOLING

The aim of compressing air is to increase the ability of the air to perform work.

This ambition is counteracted by the temperature increase of the air during the compression phase. This is true whether it is an industrial compressor or a compressor for a car.

When the air is cooled, its density increases and hence its ability to perform work. The efficiency of the system is increased and thus better operating economy is achieved.



## Brazing process and surface treatment for demanding environments

Setrab has long experience of the brazing process according to the Nocolok® method and our coolers are brazed as complete units in computerised furnaces.

This brazing technique is particularly suitable when a cooler has to be provided with a permanent vibration- and pulse-resistant brazing joint in order to endure in demanding applications. The brazing technique is a further reason why we can produce small and medium-sized series of cost-effective coolers.

To achieve high flexibility in our production we work with several furnaces. An advantage is that we can adjust the environment in the furnace to each cooler size.

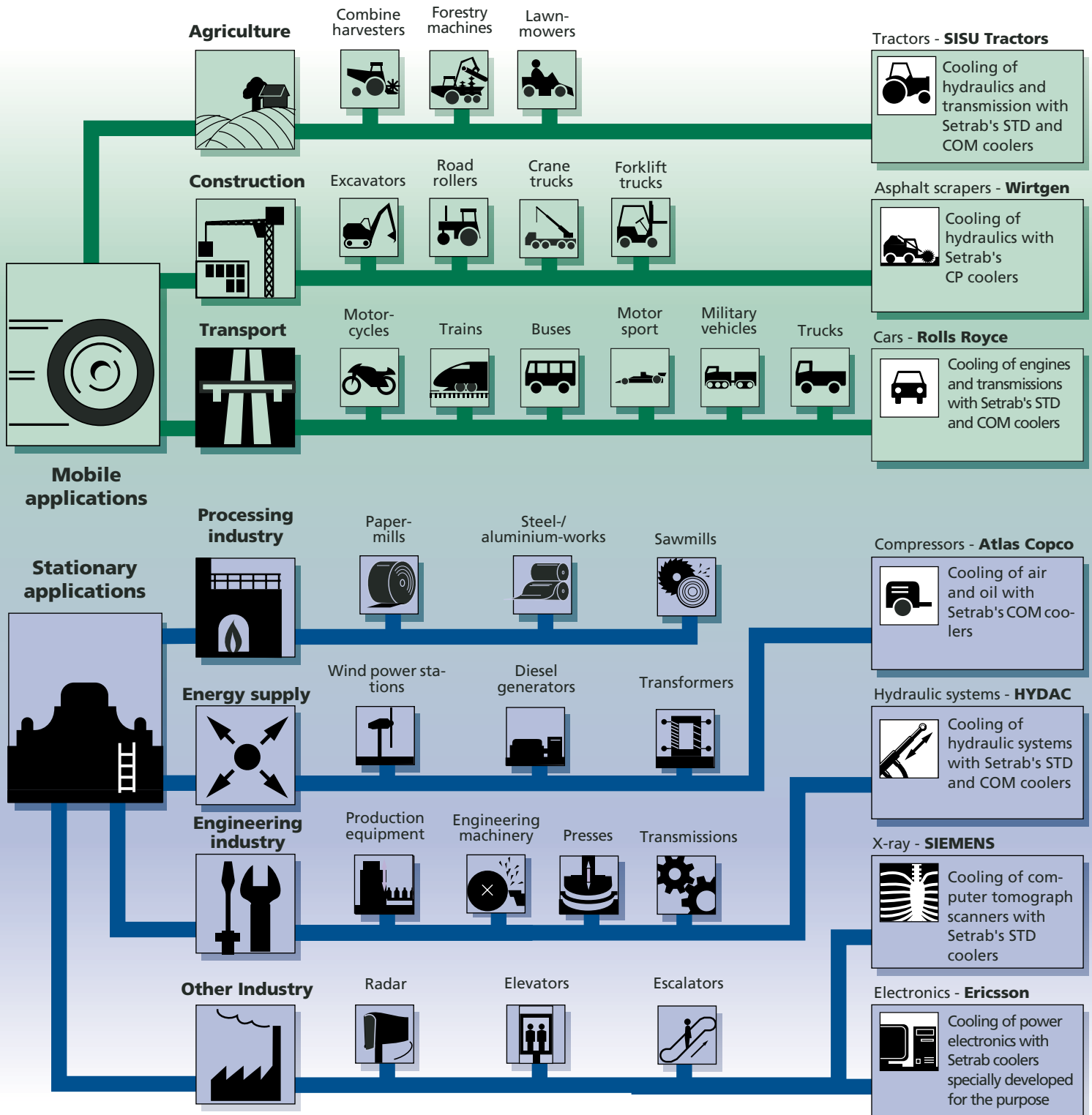
In addition to the brazing process, which by itself provides a very good internal and external surface treatment, our coolers receive an epoxy coating to further enhance the outer corrosion resistance and to give the coolers a high surface finish.

# ...is everywhere

## Overview

The illustration shows examples of different sectors using coolers/heat exchangers from Setrab. The list does not seek to be complete. Our products are often used in highly specialised niches, and new applications are

being added all the time. Even if your activities are not described in the diagram, you are of course welcome to contact Setrab.



# Setrab's Heat Exchangers

## Flexibility/Performance

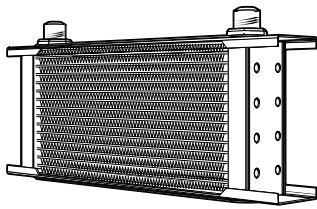
Setrab's cooler program is designed for flexibility and performance.

This means that our product range achieves superior applicability for our customers, and we can devise the best possible solution to suit the conditions dictated by the customers application. We can therefore offer our customers the right product for every occasion.

## Quality

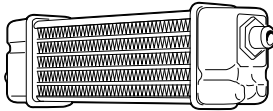
Quality has top priority for Setrab. For us it is natural that quality is the guiding star when it comes to service and design, as well as production and distribution, to achieve the result the customer expects.

We are working towards the highest quality on all levels within the organisation and the continuous development of our quality assurance system is a process that engages all of our employees.



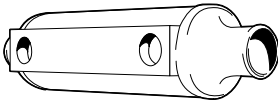
### **STD, Air-cooled oil cooler**

STD is the most flexible high performance oil cooler on the market. There are 9 different widths with 3-80 tubes and about 60 different types of connections. The cooler is suitable for working pressures up to 10 bar.



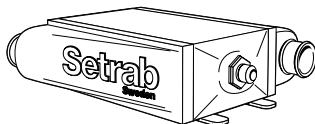
### **SLM, Air-cooled oil cooler**

SLM is a compact cooler with high performance. It is manufactured in 3 different standard lengths with 6 or 14 tubes and about 30 different types of connections. The cooler is suitable for working pressures up to 8 bar.



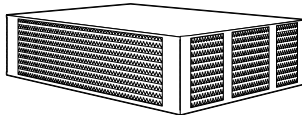
### **TOC, Water-cooled oil cooler**

The TOC cooler is entirely made of aluminium for the lowest weight. The cooler is supplied in 3 different standard lengths and with about 60 different types of connections. The cooler is suitable for working pressures up to 10 bar.



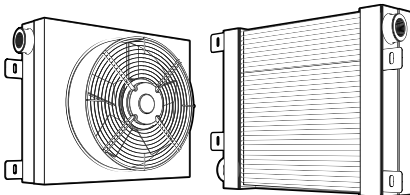
### **LOC, Water-cooled oil cooler**

The LOC cooler is very efficient and a further development of the traditional plate heat exchange principle. The side tanks are designed for optimal distribution and performance. The cooler is suitable for working pressures up to 20 bar.



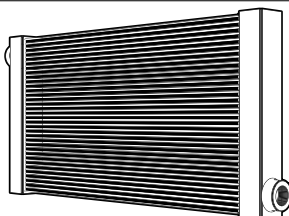
### **LIC, Water-cooled charge-air cooler**

The LIC cooler is a high-performance liquid-cooled charge-air cooler in which the side tanks are adjusted to the customers application. The cooler can also be supplied without side tanks for installation by the customer.



### **CP, Air-cooled oil cooler with built-in fan**

The CP coolers are very compact and easy to install. CP is a series of cooling packages based on STD and COM coolers, where coolers, fan and covers are optimised for best performance. Cooling packages are available for 12 V, 24 V, 230 V single-phase and 230-400 V three-phase.



### **COM, Air-cooled oil cooler**

The COM cooler is definitely one of the market's most adaptable coolers, giving full flexibility in terms of size and style! The cooler is suitable for working pressures up to 25 bar.



# Setrab

## *Oil Coolers*

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