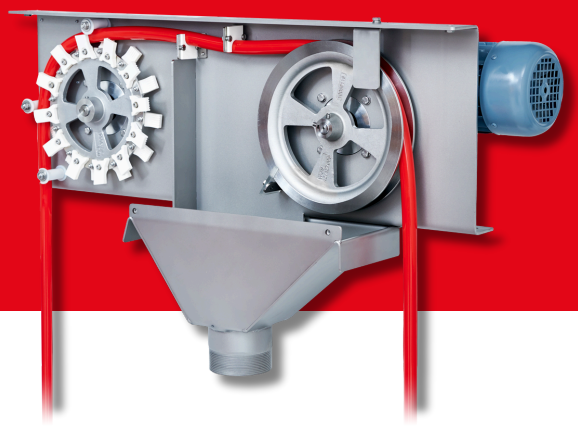
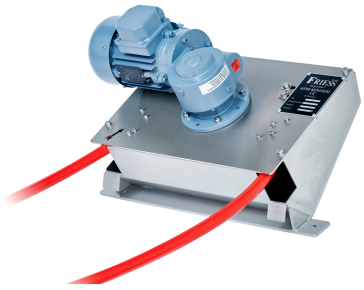
Oil Skimmers



Oil skimmers remove floating oil from process liquids. Wherever oil and grease accumulates and floats up where it does not belong, an oil skimmer can be used to remove these tramp oils and greases. There are various types of oil skimmers that are designed for different applications.

Tube Skimmer



The tube skimmer collects the oil from the liquid surface using an oil collector tube. The oil collector tube, which is connected to form an endless ring, is driven by a drive wheel.

The oil collector tube floats on the surface of the liquid and the floating oil adheres to the outside of the oil collector tube. The oil-covered oil collector tube is pulled into the oil skimmer and the oil is scraped off.

As the oil collector tube floats on the surface of the liquid, it can automatically compensate for level fluctuations. The length of the oil collector tube can be freely selected so that it is explicitly adapted to the size of the pool in order to keep the entire surface free of oil. This means that even large basins can reliably be kept oil-free, which is not possible with other types of oil skimmers.

Belt Skimmer

An electrically driven skimmer belt dips vertically into the bath surface. Floating oil adheres to the outside of the skimmer belt and is transported upwards with the skimmer belt. The oil adhering to the skimmer belt is removed by the scrapers and flows into a collection container via the scraper channel. Thanks to its compact design, the belt skimmer is particularly suitable for small and inaccessible tanks.

Angled Belt Skimmer

The angled belt skimmer is a further development of the regular belt skimmer. The lower end of the skimmer belt is redirected by approx. 80° and hits the bath surface almost horizontally.

The angled belt skimmer offers a very special advantage over a normal belt skimmer: the flat belt hitting the water surface creates a slight current. This current sets the viscous oil in motion, driving it towards the oil skimmer and is picked up by the skimmer belt. As a result, this oil skimmer is able to remove oil from larger surfaces than a conventional belt skimmer.

Advantages of Oil Skimmers:

- Reduction of bacteria content in cooling lubricant
- Improving the cleaning performance of cleaning fluids
- Efficient cost savings in fluid pre-treatment
- Fast return on investment
- Adaptable to your process and tank surface
- Minimal maintenance thanks to robust stainless steel construction
- Maintenance-free operation

Application Examples

Use of a Tube Skimmer in a Cooling Lubricant Tank

The cooling lubricant in the machine tools of a large metalworking company was heavily contaminated with graphite, anti-corrosion oil, bedway oil and hydraulic oil. This led to an increased bacterial load and a short service life of the cooling lubricant. The belt skimmers initially used were ineffective and prone to failure. As a solution, a Friess oil skimmer model 1U was installed, which works with an oil collector tube, that covers the entire surface of the bath and reliably removes the oil. Thanks to the uniform movement of the tube, even viscous and sticky oil in the corners of the tank is collected. The bacterial load has been significantly reduced, the service life of the cooling lubricant has been increased to up to one year and maintenance costs have been minimized. The return on investment for the oil skimmer was less than six months.

Use of an Oil Skimmer in the Wastewater Line of a Milk-Producing Company

During the production of milk powder, the water content of the milk is evaporated and the resulting condensate is fed into the wastewater line. However, the condensate also contains milk fat residues, which pollute the wastewater and greatly increase the costs of treatment. By using an oil skimmer model S 100, the floating layer of milk fat was effectively removed. This reduced the wastewater costs enormously. After drying, the removed milk fat could be sold profitably for use in biogas production. This reduced the return on investment of the oil skimmer to less than 3 months. The success of this application led to the implementation of the same concept at other sites of the manufacturer.

Use of an Oil Skimmer for Cooling Water Treatment in a Steel Plant

In a steel plant, the cooling water was heavily contaminated by leaking oil, grease, scale and dust, creating a viscous mass on the surface of the water. To protect the downstream gravel filters from clogging, a Friess oil skimmer model S 100 with a 24 meter long oil collector tube was installed. This tube reached the entire surface of the basin and effectively removed the oil / grease mixture. The removed mixture flows into a funnel-shaped oil collecting pan, from where the skimmed oil / grease mixture is passed through a drain pipe into a collection container. This solution led to a significant reduction in the oil content in the cooling water and enabled trouble-free operation of the gravel filters for more than three years, which greatly reduced operating costs.

Use of an Oil Skimmer in the Cleaning of Metal Parts

A large manufacturer of white goods operates a washing stage before the appliance covers are painted. Due to the manufacturing process, these are heavily contaminated with particles and various oils. A Friess tube skimmer model W20 was used to deal with the oil contamination. This significantly reduced the oil contamination in the washing liquid, despite the demanding operating conditions in the form of high temperatures and aggressive media. This led to greatly improved cleaning results and an extension of the effective service life of the washing liquid.