

Leiblein
world of liquids



Inclined Filter

Technologies for solid/liquid separation

The inclined filter

For the filtration of industrial fluids

The inclined filter is a hydrostatic working fleece belt filter which is used for filtering industrial liquids. With the inclined filter, both, filterable and floating solids can be separated.

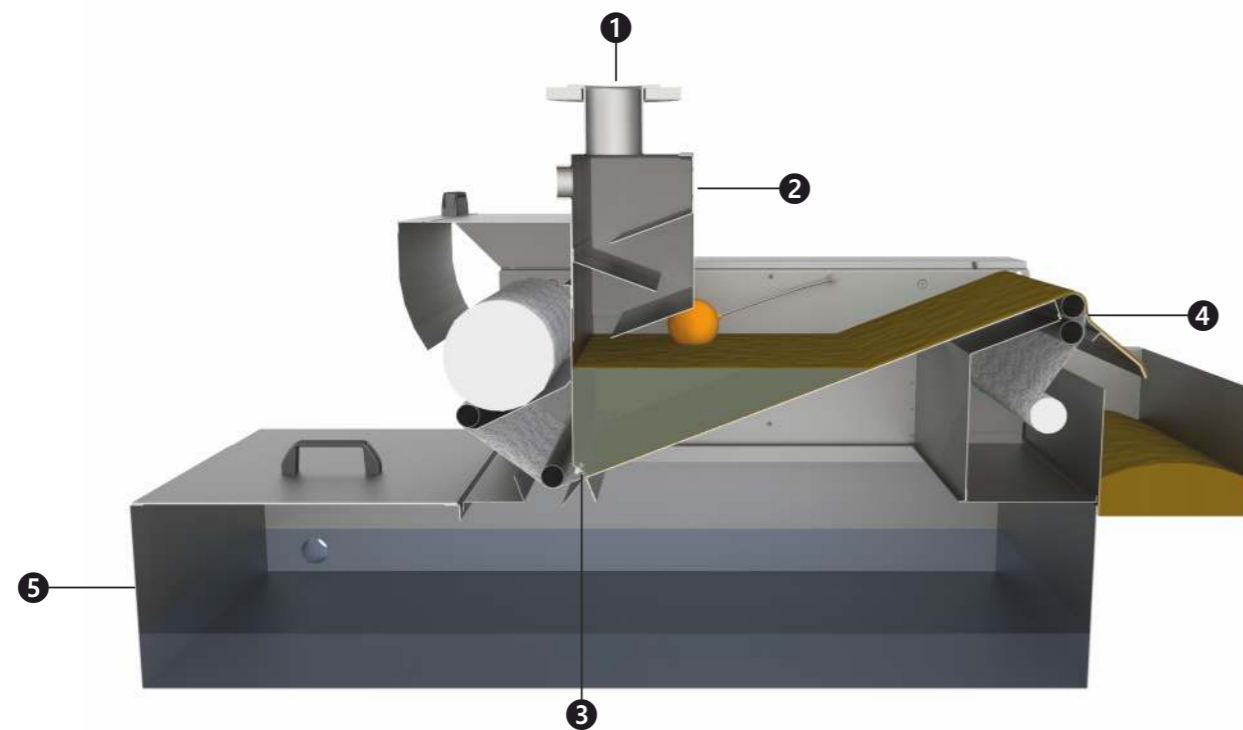
The filter fleece is selected according to the application. There are different materials and fineness of about 5-100 µm available. Depending on the solids concentration and viscosity of the fluid, throughput rates in excess of 50 m³/h per filter can be achieved.



Inclined filter in cooling lubricant treatment

Functional principle of the inclined filter

Technology made by Leiblein



Effective filtration and flotation

The contaminated liquid is fed into the filter from the top (1) and is spread evenly over the entire fleece width via a cascade box (2). The filter fleece is fed into the water chamber from the bottom (3). The filtration process takes place in the lower part of the inclined plane. Further up there is the subsequent dewatering of the resulting filter cake. Once a certain liquid level above the filter cake is reached, the fleece is pulled upwards

with a gear motor. The filter cake is stripped off via a scraper (4) and the fleece is rolled up by a roll up pulley. The simultaneously redrawn fleece at the lower end of the inclined plane has a lower flow resistance, so the liquid level decreases and the gear motor stops. The filtrate that passed the fleece, flows into the filtrate tank (5) and is available for further use.

Areas of application of the inclined filter

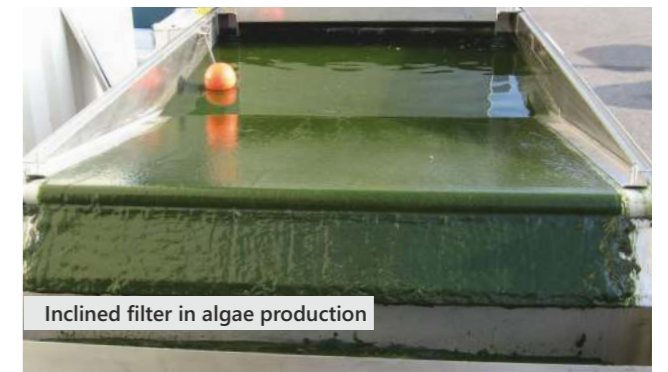
Versatile application possibilities

Leiblein inclined filters are also often used at low throughputs because of the simple handling and the low investment costs. The profitability mainly depends on the resulting fleece consumption. Exceeding a certain amount of fleece, other filter systems like our continuous belt filter are becoming interesting. Here, the investment costs are significantly higher.

- Coolant lubricant / emulsion
- Cleaning liquids / decreasing baths
- Waste water treatment
- Cooling water circuits
- Filter backwash water
- Process liquids, process water
- Washing water treatment



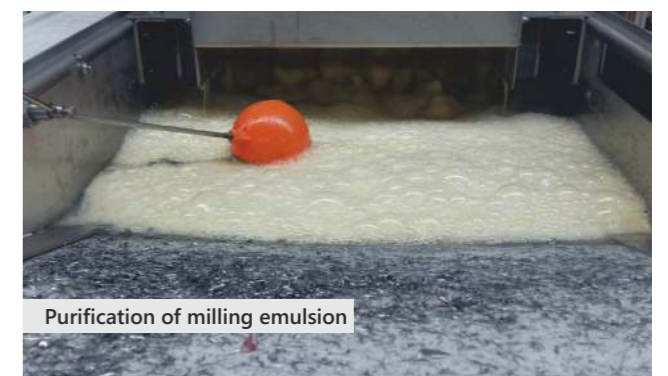
Treatment of water jet cutting water



Inclined filter in algae production



Five inclined filters in cooling lubricant treatment



Purification of milling emulsion



Treatment of landfill leachate

High efficiency

Your benefits with our inclined filter

Economical and efficient

- Optimal use of fleece: because the filter fleece is fed below the water level, the fleece is first loaded with filter cake and then with floatation tailings
- Utilization of the entire fleece width: filter fleece lies flat on the inclined filter
- Low operating costs: reusability of the filter fleece in certain cases
- Low maintenance and few wear parts

Quality and Environment

- No unfiltered medium gets into the clear tank because the inclined filter is sealed laterally
- Long lifespan: stainless steel filter
- Compliance of the cycle economy-law: separation of fleece and filter cake
- Well drained filter cake because of the inclined plane
- Resistant to load fluctuations

Design

Types and materials

Inclined filters can be used as a standalone compact unit and in combination as a central filter plant by coupling several filters.

In addition to the standard version including a filter fleece, it is possible to equip the inclined filter with an endless belt. Another alternative is the version with vacuum assistance.

Material: stainless steel AISI 304

Filter fleece: polyester, viscose, polypropylene
in fineness 5 – 100 µm

Filter belt: stainless steel, plastic

Alternative materials on request.

Every inclined filter is designed for your special application. Furthermore we provide pilot plants and rental units for all our products.



Continuous belt filter



Inclined filter before dispatch

You have questions about the treatment of your medium?
Do not hesitate and contact us!
We would be pleased to advise you.



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