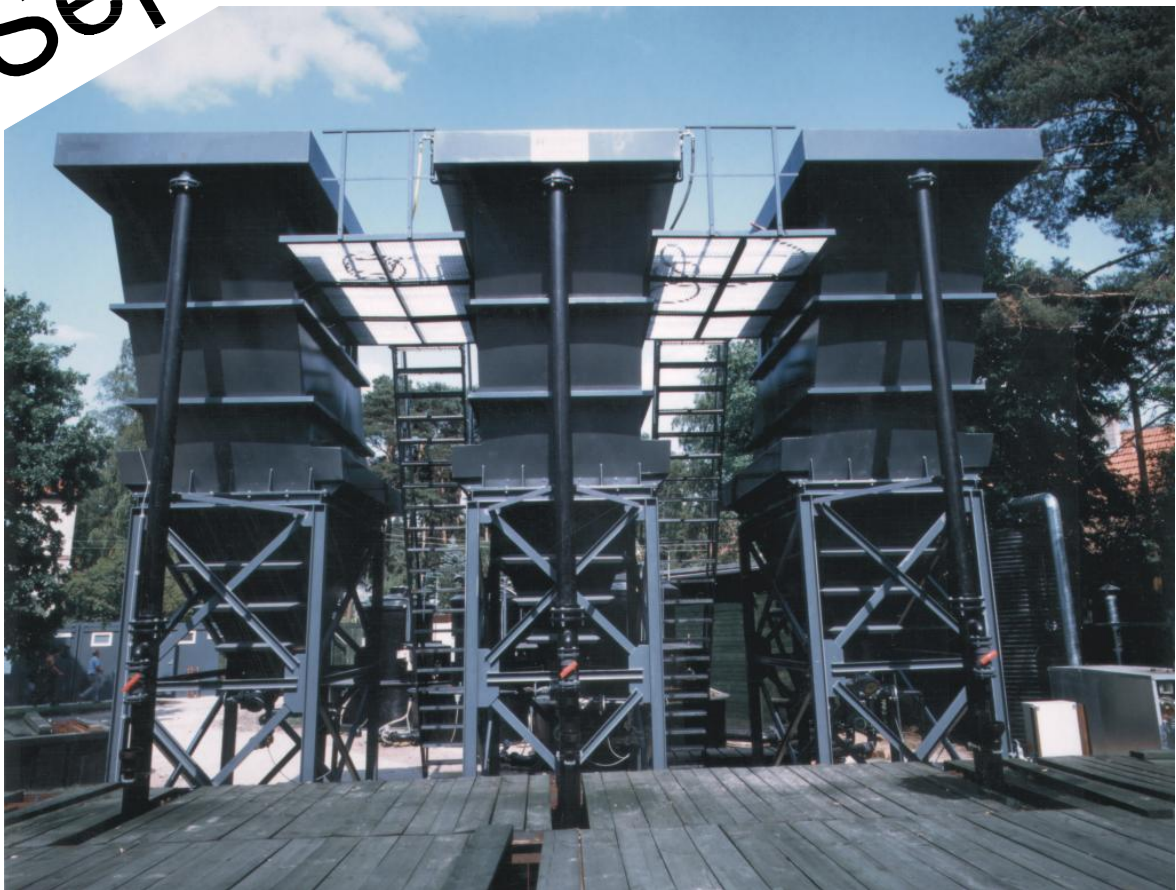


Lamella Separator



Water purification and more

The topic water purification got more and more important during the last years.

Increasing costs of fresh and waste water require economic solutions. The Leiblein GmbH offers the solution lamella separator.

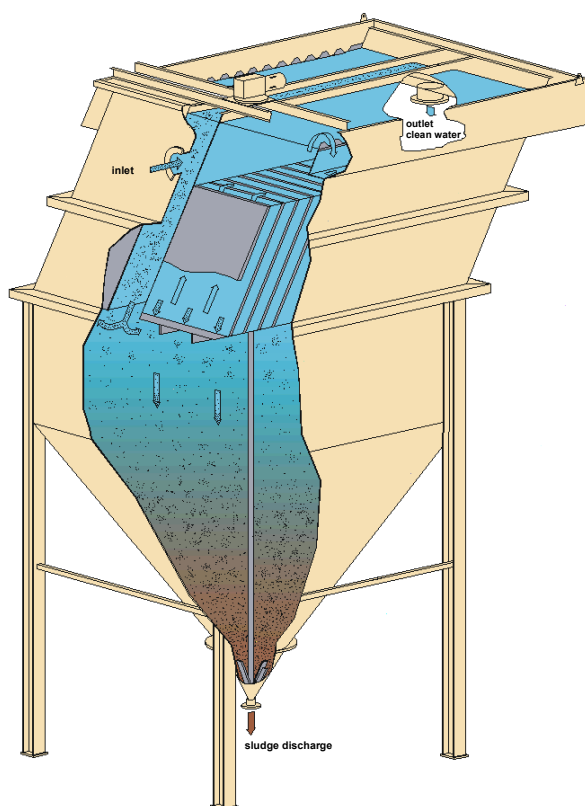
The lamella separator is used to clarify and recycle water. It saves water and costs. It separates particles and turbidity from dirty water.

Function specification:

The dirty water gets into the inlet channel and runs downwards. In the middle of the separator the flow is reversed and streams up through the lamellas, passes a weir and gets out of the separator. During the passage the particles settle down onto the inclined lamellas (sedimentation) and slide into the sludge funnel.

For separating finest particles (turbidity) from the water, it could be necessary to use flocculants. Also the clarification surface and the dimensions of the lamella separator could be reduced.





Leiblein lamella separator

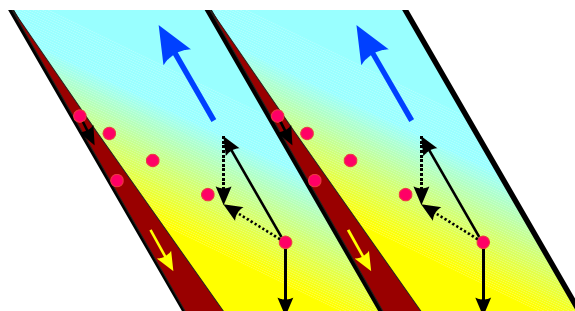


Leiblein lamella separators have a high efficiency. They are designed and produced according to the customer's requirements.

Leiblein lamella separators are robust constructions and easy in maintenance. The materials and the coatings are chosen according to the medium.

Functional scheme

-  direction of flow of dirty water/clean water
-  way of flow of a solid particle
-  vectors speed of flow and settling speed
-  direction of flow of the sludge



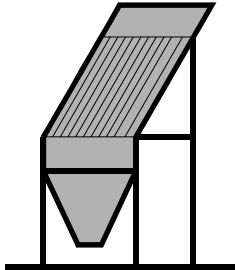
The dirty water flows upwards through the inclined lamellas. On their way up the speed of the particles is lower than the water's speed. And so the particles settle down onto the lamellas. The clear water flows up and the particles (sludge) slide down. The picture shows exemplary the way of one particle. The vectors represent the speed and the direction of the water and the particle. The resultant of both is the sedimentation rate.

Distinct advantages:

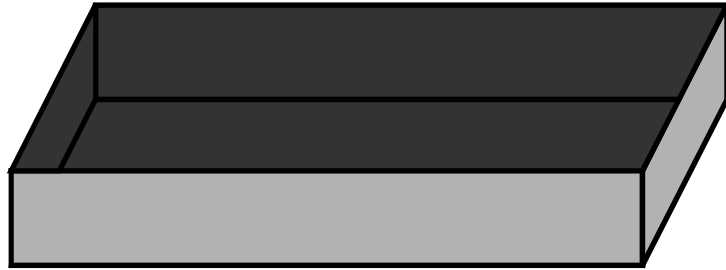
- **compact design:**

more than 85 % less space than conventional sedimentation basins:

simple sludge discharge



lamella separator,
3 m² space



sedimentation basin, 30m² space

- **economical:**

low costs because of compact design
low costs for assembling and installation
low operating costs because of only mechanical process
low electrical costs of sludge and dosing pumps

- **all-purpose application:**

ceramics and glass-industries

e.g. purification of washing water, removal of mass rests, separation of particles from cooling and grinding water, recycling and multiple use are possible

gravel and concrete works

e.g. recovery of fine sand, remove sludge off rinsing lakes, recycling is possible

fruit and vegetable processing

e.g. removal of floating substances off the waste water and reduction of COD-value, recycling is possible

environmental decontamination

e.g. decontamination of soil and waterbodies (digesting sludge), treatment of landfill leakage water

cooling water

e.g. fresh water treatment, carry out cooling water cycles of steelworks and power plants

and many others

Lamella separators are available from lab scale up to large scale plants. The required clarification surface follows of the flow rate and the surface load (purification capacity).

The Leiblein company has comprehensive experience in the respective areas, but with special applications tests are beneficial.

The casings of lamella separators are made of coated steel or stainless steel, the lamellas are made of polypropylen or stainless steel. Special designs and materials for special applications are available.

If necessary flocculation tanks may be integrated into the lamella separator or installed before.

The dimensions can be adjusted to the local building conditions.



Leiblein sewage purification - everything's clear !