Lamella Separator
Technologies for solid/liquid separation
The clarified water flows further upwards and via a special overflow weir to the outlet (6). The solids slide down along the lamellae and accumulate in the sludge funnel (4). In order to keep the sludge flowable it is possible to add a scraper in the area of the funnel tip. Depending on the subsequent process steps the sludge is continuously or discontinuously removed (5).

Areas of application of the lamella separator

Versatile application possibilities

The lamella separator can be used for the treatment of every liquid containing sedimentable particles or flakes:

- **Gravel and sand industry**
  - e.g. treatment and recirculation of washing water; recovery of fine sand; desludging of rinsing lakes
- **Recycling industry**
  - e.g. treatment of washing water of car shedder systems; recycling of plastics; agricultural films
- **Glass, ceramic and natural stone industry**
  - e.g. treatment of washing water (white water); removal of material remains; solid separation of cooling and grinding water
- **Food processing industry**
  - Treatment of washing water for potatoes, fruits and vegetables (reduction of the COD value); treatment of washing water from dishwashers and canteen kitchens
- **Chemical industry**
  - Cooling water treatment; river water treatment, separation of precipitates
- **Paper industry**
  - River water treatment, secondary clarification; process water
- **Tunnelling / construction sites**
  - Construction site water
- **Rehabilitation of inherited waste / heavy metal precipitation**
  - Cleaning of contaminated soils; regeneration of dead zone waters (digested sludge removal)
- **Energy industry / cooling water**
- **Waste / landfill / street cleaning**
- **Heavy metal precipitation**
- **Preliminary and secondary clarification of municipal and industrial sewage plants**

Efficient sedimentation

The lamella separator is a pressure-less system. The untreated water is pumped or flows by gravity into the inlet channel of the lamella clarifier where it flows downwards (1). Below the lamellae the flow is reversed and streams up through the lamellae (2). The solids settle down countercurrently on the lamellae (3).

Cross section lamella packs

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High efficiency

Your benefits with our lamella separator

- Compact design: saves more than 85% of space compared to conventional sedimentation tanks
- As a result of the 60 degree slant of the funnel, a compact sludge is created which can be transported precisely e.g. via pumps. That is why no manual sludge handling is required.
- No moving parts. Only by the usage of a scraper there is a drive with a shaft:
  > almost no maintenance
  > low-energy system
Design

Types and materials

The lamella clarifier is offered as standard design and as special construction which can be designed, manufactured and delivered from laboratory size to industrial dimensions. Depending on the case of application they can be extended by different add-on parts.

- Scraper
- Floating sludge scraper
- Sludge level measurement
- Turbidity measurement
- Pre-treatment e.g. precipitation / flocculation
- Combination with other Leiblein products
  - Rotary screen for coarse separation
  - Vacuum belt filter for sludge dewatering
  - FlowSand-Filter for post-filtration

Materials:
- coated steel
- stainless steel AISI 304 / AISI 316L

Coatings:
- special coating to rubber coating

Lamellae:
- polypropylene, stainless steel

Alternative materials on request.

Every lamella separator is designed for your special application. Furthermore we provide pilot plants and rental units in various sizes for all our products.

You have questions about the treatment of your medium? Don’t hesitate and contact us!

We would be pleased to advise you.

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