The solids separator
For the separation of coarse solids

The solids separator is used for the separation and dewatering of quickly sedimenting solids (e.g. sand, scale, slag) from waste water or process water.

With the help of an integrated lamella pack and the resulting larger settling surface, finer particles can be separated and discharged by a screw conveyor.

**Areas of application of the solids separator**
Versatile application possibilities

The solids separator is used at high volume flows with relatively low solids loading. This distinguishes it from classical separation aggregates of the treatment technology such as bucket wheels, classifying screens or hydrocyclones.

**Examples of applications**
- Washing water and process water with sand, grit, slag or glass splinters e.g. in power plants
- Sand separation from washing water that is used for the cleaning of floor mats
- Sand separation from process water that is used in water jet cutting
- Coarse separation of mill scales at the casting and rolling from cooling water in the steel industry
- Pre-separation in the treatment technology

**Examples of industries**
- Recycling industry
- Glass / ceramic / natural stone
- Waste / landfill / street cleaning
- Steel industry

Often the solids separator is combined with a lamella clarifier or a sand filter in order to separate turbid substances.

**High efficiency**
Your benefits with our solids separator

- High throughput
- Continuous operation
- Low operating costs / low energy required
- Sturdy construction
- Direct sludge outlet into container
- Allows fluctuating solids loads
- Variable separation cut due to adaptable lamella packs

**Effective coarse separation**

The untreated water is filled in the container from above (❶).
The coarser solids sediment downwards to the screw conveyer and are discharged by it (❷). A subsequent dewatering takes place in the upper part of the screw conveyer above the water level.

The untreated water streams through the lamellae from bottom to top (❸). The solids settle down countercurrently on the lamellae and slide downwards along the lamellae to the screw conveyer (❹).

The treated water flows further upwards and via a special overflow weir to the outlet (❺).

**Functional principle of the solids separator**
Technology made by Leiblein

***Cross section lamella packs***
flow direction of untreated water/clear water
flow path of a solid particle
vectors of flow velocity and sink speed
flow direction of sludge
Design

Types and materials

The solids separator is obtainable with or without lamella packs. In addition there is the possibility to integrate a surface scraper in order to remove floating sludge.

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

Lamellae:
- polypropylene, stainless steel

Alternative materials on request.

Every solids separator is designed for your special application. According to this, it is possible to adjust the separation size and the discharge rate of the screw individually. Furthermore we provide pilot plants and rental units for all our products.

You have questions about the treatment of your medium? Do not hesitate and contact us!

We would be pleased to advise you.