

**Leiblein**  
world of liquids



# Flotation Clarifier

Technologies for solid/liquid separation

## The flotation clarifier

*Innovative and effective flotation*

In addition to non-sedimentable solids and floating materials such as oils and fats, the flotation clarifier also efficiently separates precipitated materials such as suspended solids from liquids. This makes it particularly suitable for the treatment of process or waste water, which has very high purity requirements.

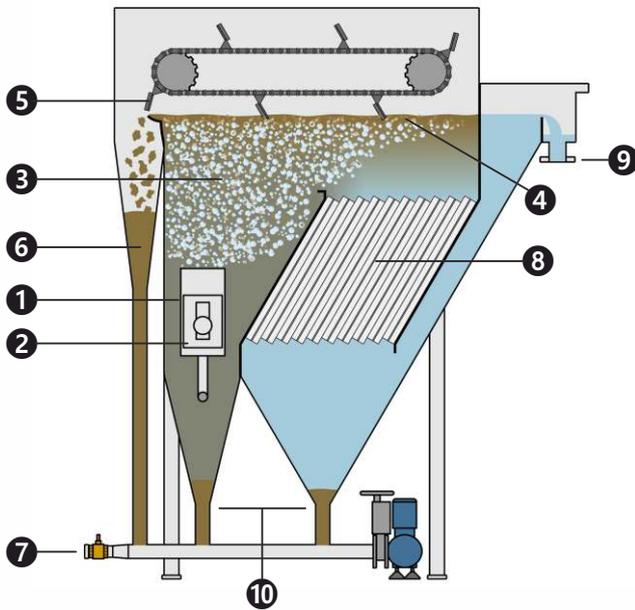
By using micro-bubbles, the contaminants float up in the flotation clarifier and are removed at the surface. The microbubbles are generated by the MicroGas™ microbubble generator. In contrast to conventional technologies, such as Dissolved Air Flotation (DAF), this is not based on the princi-

ple of gas dissolution, but on the direct induction of microbubbles. Additional lamella packages provide a significantly larger clarification area, allowing even heavier suspended solids to float efficiently.

The combination of the innovative MicroGas™ technology with effective lamella packages provides an excellent flotation result.

## Functional principle of the flotation clarifier

*Technology made by Leiblein*



### Flotation with MicroGas™ - Microbubble generation

The dirty water enters the clarifier via the inlet (1) directly to the micro bubble generator (2). There the contaminants are transported fast upwards with the micro bubbles (3) and form a sludge carpet at the water surface (4). This is removed by a surface scraper (5) and gets over a sludge funnel (6) to the sludge discharge (7).

The water flows into the second chamber through the lamella (8) downwards and from there again upwards to the clear water outlet (9). In the lamella package remaining suspended solids - if existing - float upwards and move along the upper side of the lamellas upwards to the sludge carpet.

If the dirty water contains sedimenting particles, they concentrate in the sludge funnels (10) and are discharged via the sludge outlet.

## High efficiency

*Your benefits with our flotation clarifier*

- Large clarification area due to lamellas: powerful, high throughputs and compact design
- No recycling stream required for microbubble generation
  - > Few components, therefore minimal space requirement
  - > Easy to install, operate and maintain
  - > Avoidance of downtimes due to pump or nozzle failures (e.g. due to solids from overflow)
  - > Energy efficient: Minimum energy consumption < 0.05 kWh/m<sup>3</sup>
  - > Low operating costs
  - > Independent of temperature and pH value
  - > Adjustable gas flow rate; adjustable bubble size and bubble volume
- Stronger separation efficiency through chemical pre-treatment

## Areas of application of the flotation clarifier

*Versatile application possibilities*

The flotation clarifier is particularly suitable for applications that require a high level of purity. It is mainly used for process and wastewater treatment in the **food and petrochemical industries**.

Common applications:

- Common applications:
- Separation of organic substances
- Separation of light materials such as oils, fats, fibrous materials or particles
- Pre-treatment of waste water for further treatment
- Treatment of biologically pre-treated wastewater

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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