



For a world with clean water.

## **ATB Equipment**

For waste water treatment plants – new construction | retrofit | rent



Based on more than 20 years of experience, ATB WATER develops and manufactures core components for biological wastewater treatment in-house at various locations in Germany and Romania.

## High-quality components for biological wastewater treatment

The complete range of ATB equipment such as our aerators, mixers and decanters and our advanced processes for mechanical pre-treatment, sludge treatment and hygienisation is available in various tailor-made executions. Together, these components cover a considerable part of the common process variants in biological wastewater treatment. From SBR applications to classic activated sludge processes, MBBR technologies to membrane processes, the technically and economically optimal solution is selected in dialogue with the customer from the variety of available products.

The high in-house production depth in the area of plastic and stainless steel processing enables ATB to implement individual and tailor-made solutions „Made in Germany“. Our manufacturing subsidiary in Romania works to the highest quality standards and is ISO 9001 certified.

ATB WATER components have proven their quality and value in municipal wastewater treatment as well as in industrial applications across all sectors. Our devices are already used in numerous applications in a wide range of industries, e.g. in milk processing, breweries, slaughterhouses, rendering plants, food processing plants or even in leachate treatment or the treatment of surface water on biogas plants.

You are welcome to discover for yourself on the following pages the diverse possibilities of wastewater treatment with components from ATB WATER.



# Calibrox – Stainless steel is our passion!



That is why our components are mainly manufactured by our colleagues in Romania. Whether cutting, shaping or welding – experts are at work here! And they have been doing so for 15 years now. Each part is manufactured reliably and with highest precision in different work steps:

- Cut by Plasma, laser and water jet cutting.
- Formed in different ways (Milling, turning, rolling).
- And/or welded (WIG/TIG welding, MIG/MAG welding, welding of aluminium).

High-quality raw materials form the basic framework for our product range in biological wastewater treatment.

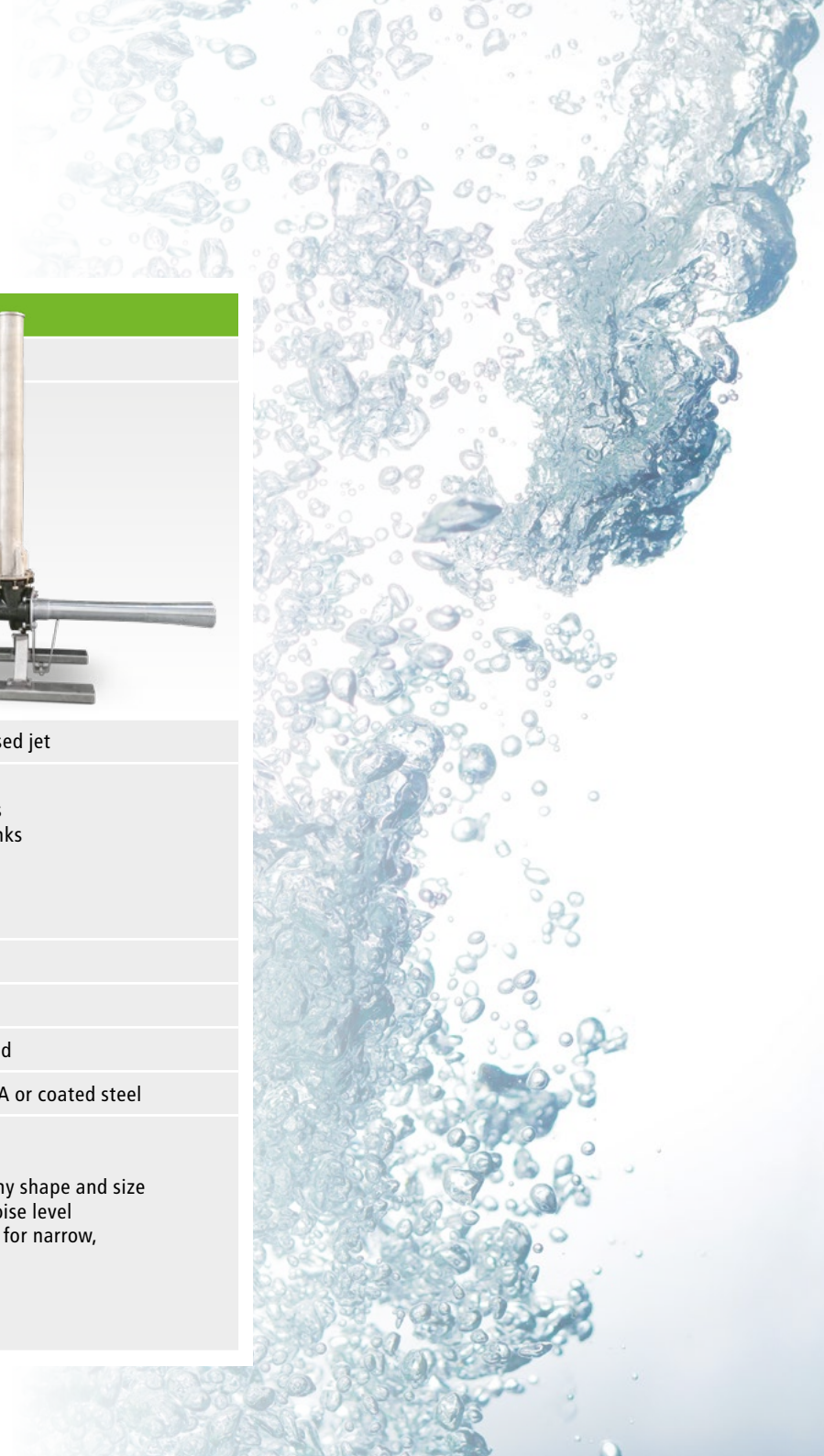



# Aerators


ATB aerators are suitable for wastewater aeration in biological wastewater treatment plants and are characterised by great economic efficiency and solid quality. Air is introduced by the following components either by direct-driven surface, submersible, centrifugal or ejector aeration. No additional blowers are required for optimum oxygen supply.

| Type                 | ATB-HSA  | ATB-AQUA 8  | ATB-HBA  |
|----------------------|--|---|--|
| Description          | Surface aerator  | Surface aerator   | Self-aspirating submersible aerator  |
| Operating direction  | Horizontally directed, 360° around the aerator   | Horizontally directed, 360° around the aerator  | Horizontally directed, 360° around the aerator   |
| Areas of application | <ul style="list-style-type: none"> <li>• SBR systems</li> <li>• Activated sludge systems</li> <li>• Pond systems</li> <li>• Mixing and balancing tanks</li> <li>• Aerated sludge storage</li> </ul>  | <ul style="list-style-type: none"> <li>• SBR systems</li> <li>• Activated sludge systems</li> <li>• Pond systems</li> <li>• Mixing and balancing tanks</li> <li>• Aerated sludge storage</li> </ul>                                 | <ul style="list-style-type: none"> <li>• SBR systems</li> <li>• Activated sludge systems</li> <li>• Pond systems</li> <li>• Mixing and balancing tanks</li> <li>• Aerated sludge storage</li> </ul>  |
| High water level     | ✓  | –   | ✓  |
| Power range          | From 0,75 kW to 110 kW   | From 0,75 kW to 1,5 kW  | From 0,75 kW to 55 kW  |
| Installation         | Floating or bridge mounted   | Floating  | Submerged, free standing on the ground   |
| Material             | Stainless steel V2A and V4A  | PE, Stainless steel V2A and V4A   | Stainless steel V2A and V4A  |
| Your advantages      | <ul style="list-style-type: none"> <li>• Extremely long service life due to air-cooled motor not in contact with media</li> <li>• Almost maintenance-free due to direct drive (no gearbox)</li> <li>• High mixing capacity, very high alpha value</li> <li>• Horizontal spray pattern: minimal aerosol generation</li> </ul> | <ul style="list-style-type: none"> <li>• Almost maintenance-free due to direct drive (no gearbox)</li> <li>• High mixing capacity, very high alpha value</li> <li>• Horizontal spray pattern: minimal aerosol generation</li> </ul> | <ul style="list-style-type: none"> <li>• self-aspirating up to 8 m: no additional blower required</li> <li>• Almost maintenance-free due to direct drive (no gearbox)</li> <li>• High mixing capacity</li> <li>• Suitable for flexible water levels: a single unit can cover water depths from 1 to up to 8 m</li> </ul> |





|                      |  |
|----------------------|--|
| Type                 | <b>ATB-LSA</b>   |
| Description          | Surface aerator/rotary aerator   |
|                      |   |
| Operating direction  | Horizontally directed, 360° around the aerator   |
| Areas of application | <ul style="list-style-type: none"> <li>• SBR Systems</li> <li>• Activated sludge systems</li> <li>• Pond systems</li> </ul>  |
| High water level     | –  |
| Power range          | From 0,75 kW to 45 kW  |
| Installation         | Floating or fixed to a bridge  |
| Material             | Stainless steel V2A and V4A or coated steel  |
| Your advantages      | <ul style="list-style-type: none"> <li>• Extremely long service life due to air-cooled motor not in contact with media</li> <li>• High mixing capacity, very high alpha value</li> <li>• Robust, easy-to-maintain gear unit with long service life – thanks to high safety factor</li> </ul> |

|                      |  |
|----------------------|--|
| Type                 | <b>ATB-BEA</b>   |
| Description          | Ejector/Jet aerator  |
|                      |   |
| Operating direction  | horizontally directed, focused jet   |
| Areas of application | <ul style="list-style-type: none"> <li>• SBR Systems</li> <li>• Activated sludge systems</li> <li>• Mixing and balancing tanks</li> <li>• Aerated sludge storage</li> </ul>  |
| High water level     | ✓  |
| Power range          | From 2 kW to 25 kW   |
| Installation         | Free standing on the ground  |
| Material             | Stainless steel V2A and V4A or coated steel  |
| Your advantages      | <ul style="list-style-type: none"> <li>• The compact design</li> <li>• Easy installation</li> <li>• Suitable to all tanks of any shape and size</li> <li>• Submerged = reduced noise level</li> <li>• Directional flow: optimal for narrow, elongated tanks</li> </ul> |

# Mixers and combined units

ATB mixers are particularly suitable for both mixing the wastewater during denitrification or as a combined unit together with an ATB aerator for intermittent nitrification/denitrification, and for extending the oxygen supply in very deep tanks.

| Type                 | ATB-HSM   | ATB-HSA-HSM   |
|----------------------|---|---|
| Description          | Vertical mixer/Top Entry Mixer  | Combined unit of surface aerator and mixer  |
| Areas of application | <ul style="list-style-type: none"> <li>• SBR systems</li> <li>• Activated sludge systems</li> <li>• Pond systems</li> <li>• Mixing and balancing tanks</li> <li>• Aerated sludge storage</li> </ul>   | <ul style="list-style-type: none"> <li>• SBR systems</li> <li>• Activated sludge systems</li> <li>• Pond systems</li> <li>• Mixing and balancing tanks</li> <li>• Aerated sludge storage</li> </ul>   |
| High water level     | ✓   | ✓   |
| Power range          | From 0,75 kW to 18,5 kW   | From 0,75 kW to 110 kW (Aerator)/18,5 kW (Mixer)  |
| Installation         | Floating  | Floating  |
| Material             | Stainless steel V2A and V4A   | Stainless steel V2A and V4A   |
| Your advantages      | <ul style="list-style-type: none"> <li>• Extremely long service life due to air-cooled motor</li> <li>• Almost maintenance-free due to direct drive (no gearbox)</li> <li>• High mixing capacity = low specific power consumption</li> <li>• Top-entry mixers generate a vertical downward directed flow in the center of the water surface and thus provide and a cylindric mixing pattern of the basin</li> </ul> | <ul style="list-style-type: none"> <li>• Almost maintenance-free due to direct drive (no gearbox)</li> <li>• Due to the support of the vertically mounted mixer, the combined unit is also suitable for very deep basins</li> <li>• Due to its dual function, the combined unit can be used for intermittent nitrification/denitrification and in SBR plants</li> <li>• The two functional parts of the device can be used as well in stand-alone as in combined operation</li> </ul> |



# Decanters

ATB decanters are suitable for discharging the treated wastewater after the cleaning process. The decanters are designed floating and in such a way that the clear water drainage takes place below the water surface. Only the clear water layer is discharged without interference by floatables or sedimenting sludge. If discharge by gravity is not possible, the process can be supported by pumps.

| Type                       | ATB-CWE-P  | ATB-CWE  | ATB-CWE-EMC  |
|----------------------------|--|--|--|
| Description                | Pump decanter  | Decanter with open drain weir  | Decanter with closable drain weir  |
| Areas of application       | <ul style="list-style-type: none"> <li>• SBR systems</li> <li>• Removal of surface water</li> <li>• Sedimentation tanks</li> </ul>   | <ul style="list-style-type: none"> <li>• SBR systems</li> <li>• Settling tank for sewage sludge</li> <li>• Sludge pre-thickening</li> <li>• General decantation</li> </ul> | <ul style="list-style-type: none"> <li>• SBR systems</li> <li>• Settling tank for sewage sludge</li> <li>• Sludge pre-thickening</li> <li>• General decanting</li> </ul>   |
| Discharge system           | Flexible hose as pressure line to the edge of the basin  | Flexible hoses or stainless steel pipe systems as telescopic or swivel joint system, if necessary with pump  | Flexible hoses or stainless steel pipe systems as telescopic or swivel joint system  |
| Range                      | 25 or 50 m <sup>3</sup> /h   | From 50 to 1.500 m <sup>3</sup> /h   | From 50 to 1.500 m <sup>3</sup> /h   |
| Horizontal open inlet area | ✓  | ✓  | ✓  |
| Automatic closing system   | –  | –  | ✓  |
| Pump for draining          | ✓  | Optional   | Optional   |
| Installation               | Floating   | Floating   | Floating   |
| Material                   | Submersible pump and drain weir stainless steel, float PE  | Stainless steel V2A and V4A  | Stainless steel V2A and V4A  |
| Your advantages            | <ul style="list-style-type: none"> <li>• Laminar and horizontal directed intake flow – stirring up of sedimented sludge</li> <li>• Avoids the discharge of floating sludge</li> <li>• Easy installation</li> </ul> | <ul style="list-style-type: none"> <li>• No stirring up of sedimented sludge</li> <li>• Avoids the discharge of floating sludge</li> <li>• Easy installation</li> </ul>    | <ul style="list-style-type: none"> <li>• Due to the additional automatic closing system no sludge particles can enter into the decanter during mixing and aeration</li> <li>• No stirring up of sedimented sludge</li> <li>• Avoids the discharge of floating sludge</li> <li>• Easy installation</li> </ul> |

# Mechanical pre-cleaning

In mechanical wastewater treatment, solid contents are removed mechanically by various sedimentation and separation processes.

|                      |
|----------------------|
| Description          |
| Functionality        |
| Range                |
| Material             |
| Areas of application |
| Your advantages      |

## Screw screen/Rotary screen

With self-cleaning function



This is an automatic motor-driven rotary screen for removing solids from raw wastewater. For installation in the inlet shaft of the wastewater treatment plant, the screen is easy to install and maintain. In addition, it can be optionally equipped with solids compression before emptying.

Up to 1.000 m<sup>3</sup>/h

Stainless steel V2A and V4A

- Mechanical pre-treatment
- Separation of solids and liquids in municipal and industrial wastewater

- High separation performance at high inlet flow rates
- Simple installation
- Various options which can be ordered with the screen allow a detailed customizing

## Static curved screen



Curved screens offer high operational reliability in static solid-liquid separation for municipal and industrial applications, especially for separating fibrous and non-greasy solids from wastewater. Neither an electric drive nor moving parts are required for operation.

Up to 800 m<sup>3</sup>/h

Stainless steel V2A and V4A

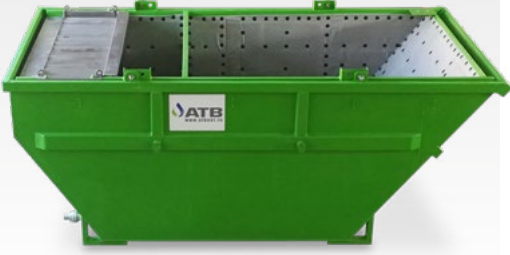

- Mechanical pre-treatment
- Separation of solids and liquids in municipal and industrial wastewater

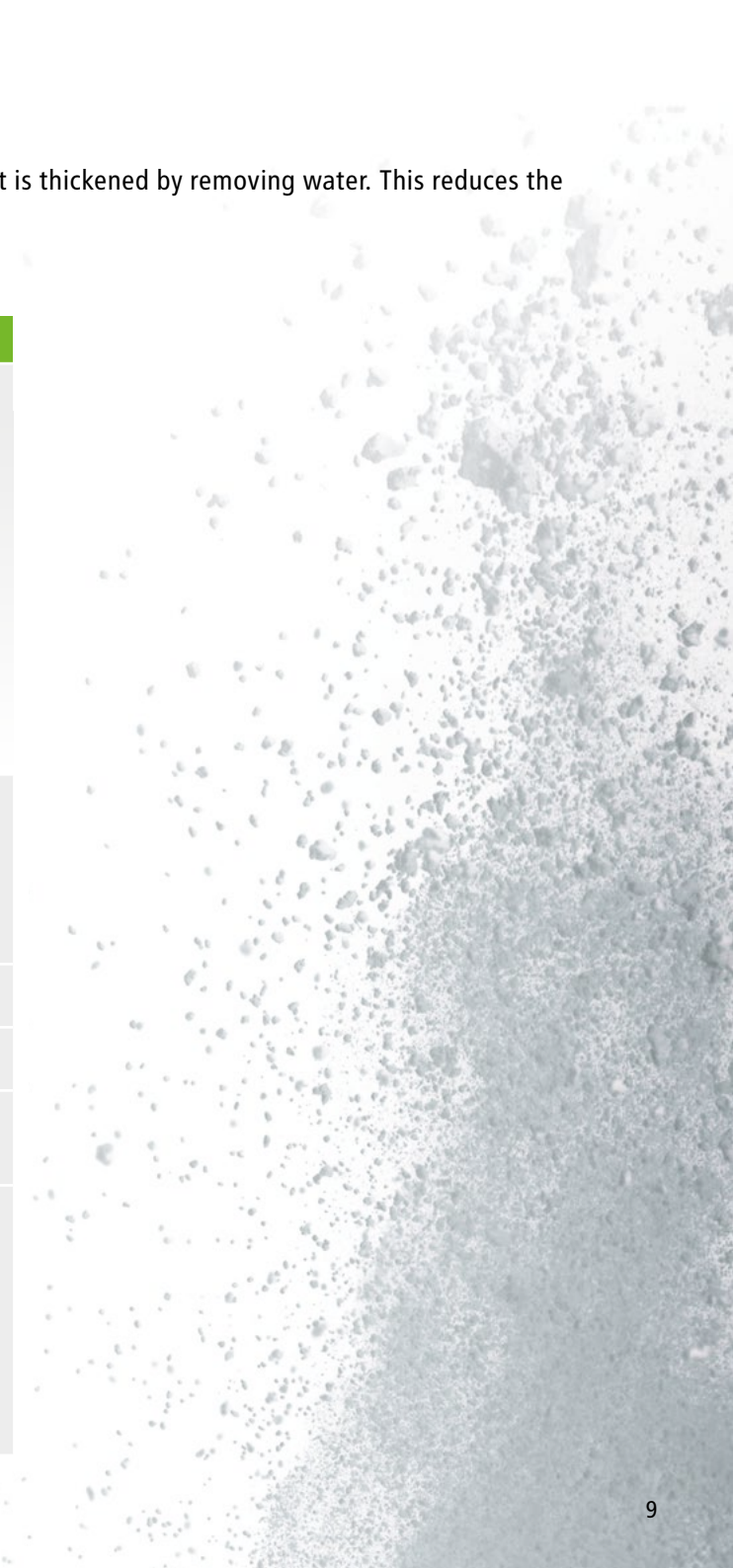
- Self-cleaning
- No clogging
- No electric motor
- Simple installation and maintenance
- Various options which can be ordered with the screen allow a detailed customizing



# ATB Sludge treatment

In sludge treatment, the primary and/or excess sludge produced during wastewater treatment is thickened by removing water. This reduces the amount of sludge, whereas the dry solids content increases.

| Description          | Static sludge drainage   | Sludge drainage  |
|----------------------|--|--|
|                      | <p>Container</p>    | <p>With filter bags</p>   |
| Functionality        | <p>Drainage containers dewater all types of sludge effectively and inexpensively. The inside of the containers is lined with a permeable double layer of acid- and base-resistant fabric. Collecting, storing, dewatering and transporting – all by using one single device.</p>   | <p>Primary or excess sludge from domestic and industrial wastewater treatment plants can be collected, dewatered and easily packaged in disposable textile bags using bagging equipment. For this purpose the sludge is treated with polymers.</p>   |
| Range                | <p>Available from 5 to 10 m<sup>3</sup></p>  | <p>Sewage treatment plants up to 2.000 inhabitants</p>   |
| Material             | <p>Stainless steel V2A and V4A inner lining, filter cloth</p>  | <p>Stainless steel tube frame, disposable textile bags</p>   |
| Areas of application | <ul style="list-style-type: none"> <li>• Sludge drainage</li> <li>• General water-solid separation</li> </ul>  | <ul style="list-style-type: none"> <li>• Primary or excess sludge drainage</li> </ul>  |
| Your advantages      | <ul style="list-style-type: none"> <li>• Inner lining made of stainless steel</li> <li>• Suitable for waste truck transport according to DIN 30720</li> <li>• Extended service life</li> <li>• Completely problem-free sludge drainage</li> <li>• Stable sludge in a short time</li> <li>• Low deposition costs</li> <li>• Bottom, side walls and back wall works as filter surface</li> </ul> | <ul style="list-style-type: none"> <li>• Simple installation and maintenance</li> <li>• Easy retrofitting to existing wastewater treatment plants</li> <li>• Easy disposal of the sludge – due to filling into bags</li> <li>• Low investment and disposal costs</li> <li>• Available with 2, 3, 6 or 12 bags</li> </ul> |



# Hygienization

In wastewater treatment, disinfection, also called hygienisation, inactivates pathogens and thus additionally sterilises the treated wastewater. Against the background of increasing water pollution worldwide and at the same time growing demand for hygienically safe water resources, the disinfection of treated wastewater for water reuse is gaining in importance.

Description

## UV-disinfection



## Chlorination



Functionality

The treated and suspension-free water is passed through the UV reactor where the remaining micro-organisms or possible pathogens in the water are inactivated.

Equipped with powerful UV lamps, high-quality stainless steel reactor and effective control unit.

Chlorination is the addition of chlorine or chlorine compounds to water. For the disinfection of treated wastewater, chlorine is available for dosing in principle as chlorine gas, as liquid sodium hypochlorite or as solid calcium hypochlorite. All three forms of chlorine dosing lead to the formation of the same active substance in combination with water.

Power range

Available up to 1.300 m<sup>3</sup>/h

No specification

Material

UV reactor made of V2A and V4A

PE and corrosion-resistant plastics

Areas of application

- Treatment of drinking water
- Treatment of process water
- Waste water treatment of municipal and medium-sized industrial applications

- Treatment of drinking water
- Treatment of process water
- Treatment of wastewater

Your advantages

- Lamps with very long lifetime, radiation > 400 J/m<sup>2</sup>
- Complex electronic monitoring unit with several monitoring options
- Long lifetime of the reactor
- Simple installation and maintenance

- Simple installation and maintenance
- Easy retrofitting to existing wastewater treatment plants
- Low investment costs

# Rental equipment – The flexible option for wastewater treatment.

## References



**HSA aerator at a municipal wastewater treatment plant with 3,900 PE**

At a municipal wastewater treatment plant with 3,900 P.E. in Germany, the aeration system was to be completely replaced at the end of its service life. Within the scope of a process comparison, two floating ATB surface aerators of the type HSA with 11 kW each resulted in the lowest annual costs.

As the conversion of the system was associated with considerable costs the customer wanted to test the units in practice first and therefore opted for hire purchase. After successful trial operation over several months, the units were purchased with a pro-rata credit of the rental fee.

**Why renting equipment in the field of sewage treatment technology often makes more sense than buying it?**



### Interim solutions

When converting existing plants, in many cases existing tanks are only used during the construction phase to bridge and maintain wastewater treatment. After completion of the new plant, the corresponding rental equipment is removed from the temporarily used tanks and returned.



### Test mode

Through test operation with the help of ATB rental components, our customers can individually and cost-effectively check whether the planned technology meets their wishes and requirements.



### Seasonal high load phases

Distinct seasonal high loads (tourism, confectionery industry, high summer temperatures, etc.) can lead to a temporary need for additional aeration capacity. An alternative to cover these peak loads is to use our rental aerators instead of a cost-intensive expansion of the entire facility.



### Funding

Rental equipment from ATB is an elegant solution to relieve the investment budget and can also be an interesting alternative to purchasing components from a tax point of view.

**Please contact our sales team and receive your individual offer. If there is no suitable rental equipment available in our stock, we will of course also produce individual equipment for your requirements.**

**And the best at the end: If you decide to buy the rental unit afterwards, you will even be credited with part of the rent you have already paid!**



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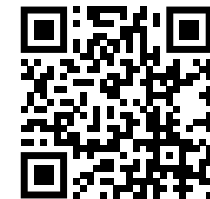
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