



# Competence in water purification

like for drinking water, food industry and process water

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# Water Treatment Technology

## Water purification



### Philosophy of Abwa-tec

Abwa-tec GmbH pays special attention on customer support service from problem identification to installation of solutions.

Every unit is put into operation by Abwa-tec GmbH technicians and is handed over to the customer.

According to customer's requirements the operators of the unit are trained extensively in the use and maintenance of the unit.

Furthermore, optional service-contracts are offered for units provided by Abwa-tec GmbH.

# Water Treatment Technology

## Water purification



Award for Barakat,  
in connection with  
treatment systems of  
Abwa-tec GmbH



# Water Treatment Technology

## Water purification



pure drinking water has many applications

# Water Treatment Technology

## Water purification



In filtration systems the biological treatment is an upstream treatment stage for reducing the pollution of the wastewater before it is entering the filtration system. This pretreatment is increasing the performance and the lifetime of the filtering system significantly.

The biological treatment is reducing the organic load up to 99.5% efficiency. Also nutrients and even heavy metals, color, particles and chemical substances can be bound or reduced.

There are provided different systems depending on the footprint available for the treatment, the biochemical composition of the water and the flow specification as well as the energetical situation. The systems can be installed in tanks above ground, in rooms and buildings or even below ground in green areas.

# Water Treatment Technology

## Water purification



### Types of biological systems

#### **MBBR system (moving bed biofilm reactor)**

The MBBR system has an extremely small footprint and is very resistant against overloading, chemical attack and power shortcuts. It is the most reliable system for the treatment of industrial wastewater.

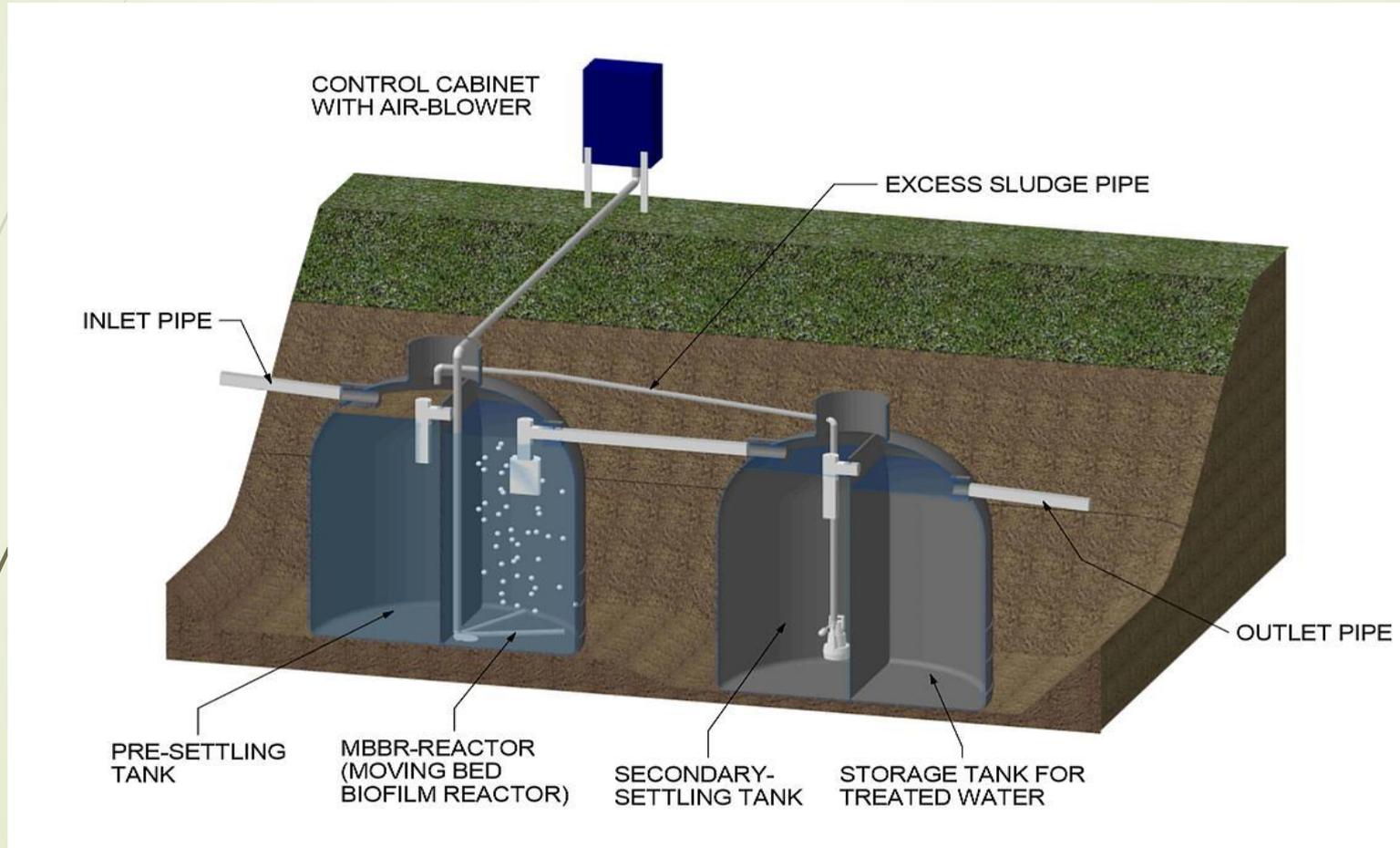
#### **Activated sludge / SBR system (sequencing batch reactor)**

These systems are standard systems with a middle sized footprint and good performance in treatment of industrial wastewater. These systems have the lowest investment costs.



# Water Treatment Technology

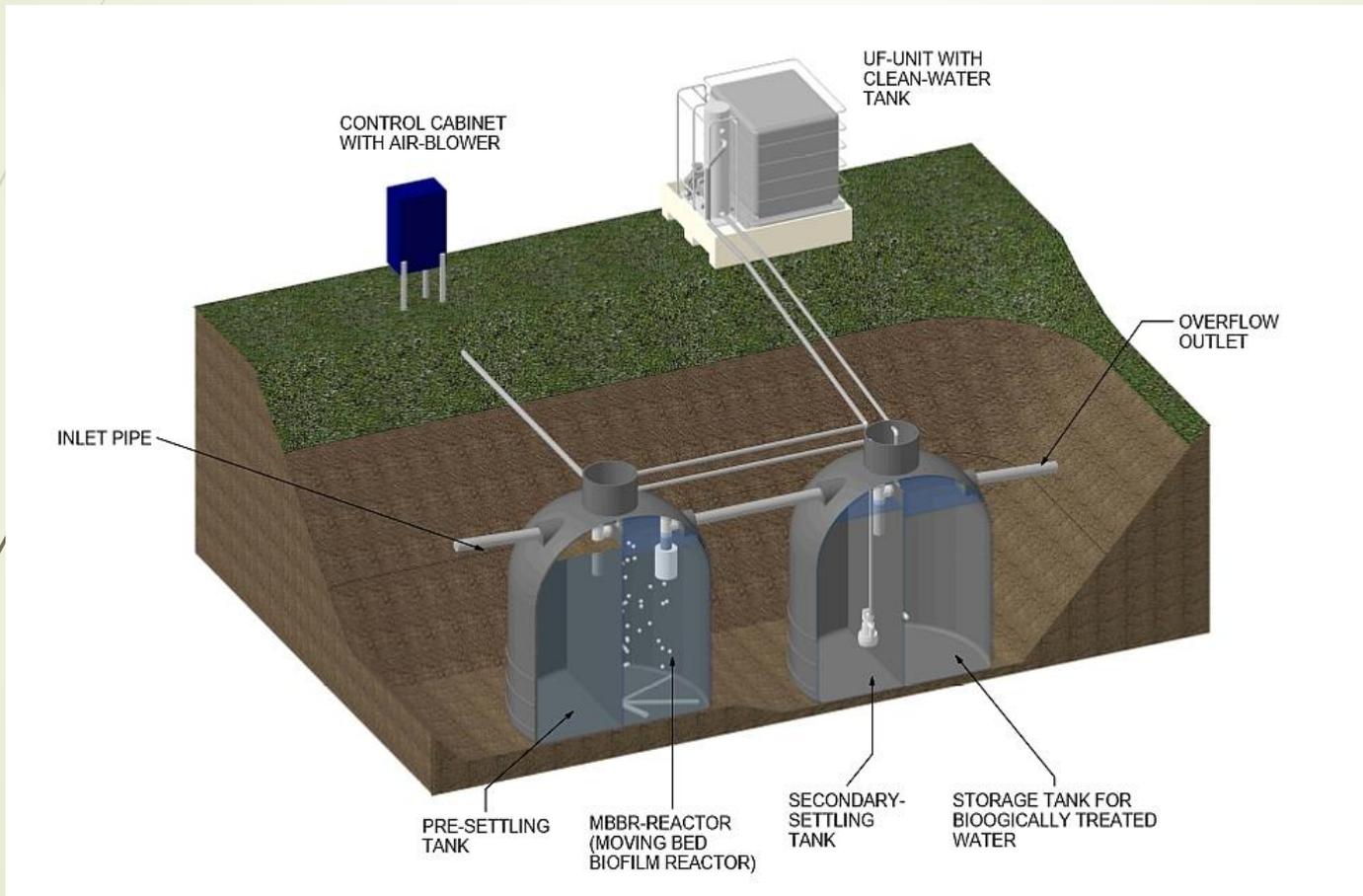
## Water purification



Biological wastewater treatment – system-Drawing MBBRclaro / 3D

# Water Treatment Technology

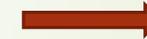
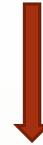
## Water purification



Biological wastewater treatment – system-Drawing MBBRclaro with UF / 3D

# Water Treatment Technology

## Water purification



### Water Treatment in 3 stages

1. stage: Biological treatment
2. stage: Ultrafiltration system
3. stage: Reverse Osmosis system

recycling up to 80% on demand

# Water Treatment Technology

## Water purification



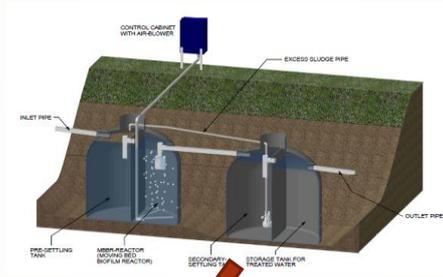
Water of the highest quality

# Water Treatment Technology

## Water purification



The way to clean drinking water - Biological Treatment - Membranfiltration



the result



# Water Treatment Technology

## Water purification



The way from sea water to clean drinking water with membrane filtration



the result

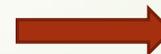


# Water Treatment Technology

## Water purification



Water Treatment for Laundry with Biology, Pre-Filter, Ultrafiltration and Reverse Osmoses



the result



# Water Treatment Technology

## Water purification



### No effluent is equal

- to treat wastewater is to examine analytically pure
- objectives to determine on request
- Environmental conditions – power supply
- Design/Engineering of plant system
- location ( Fixed or mobile )

Mobile and stationary plant Equipment  
mobile installed at plant Site in Container  
or mobile on Truck



# Water Treatment Technology

## Water purification



With modern processing technology

Hollow fiber filtration system

# Water Treatment Technology

## Water purification



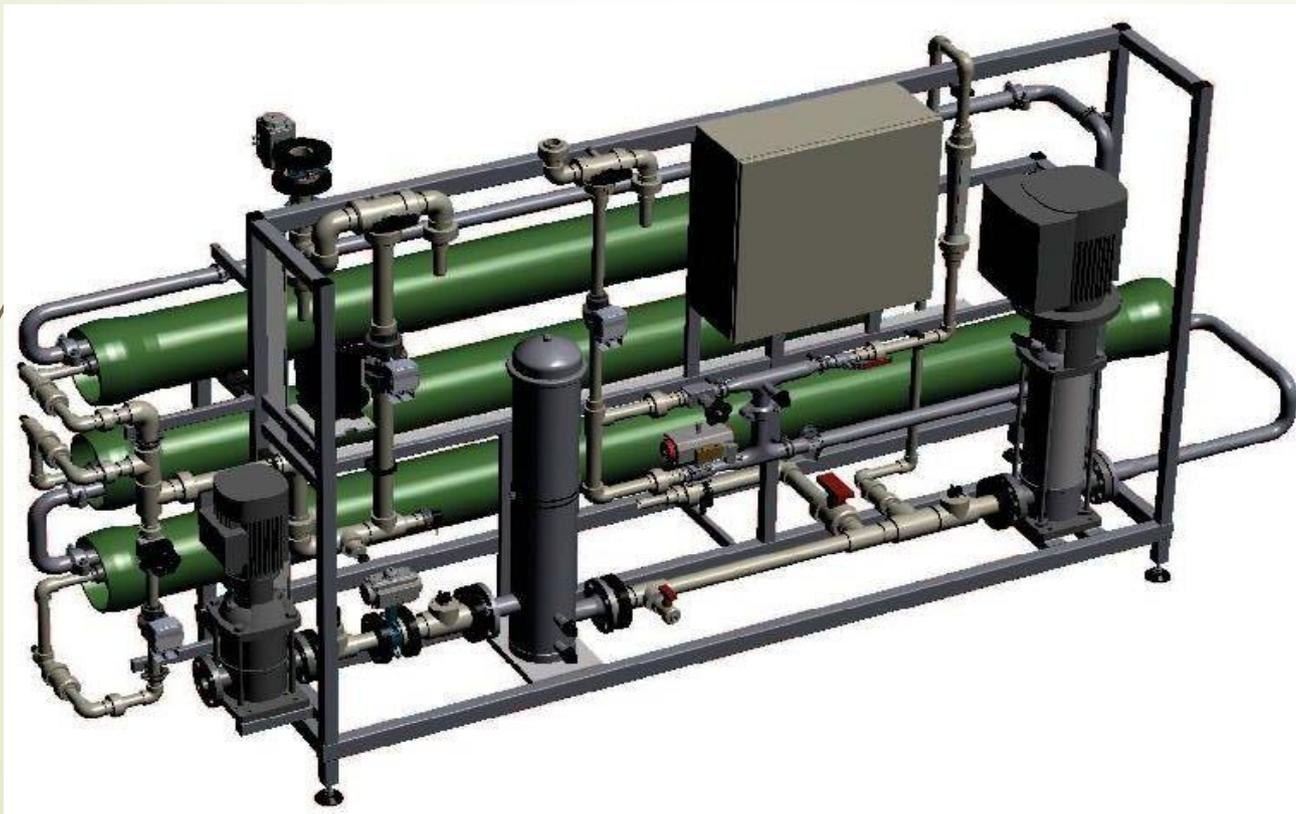
Design and manufacture of  
equipment in compliance  
with food standards

# Water Treatment Technology

## Water purification



Systems engineering



# Water Treatment Technology

## Water purification



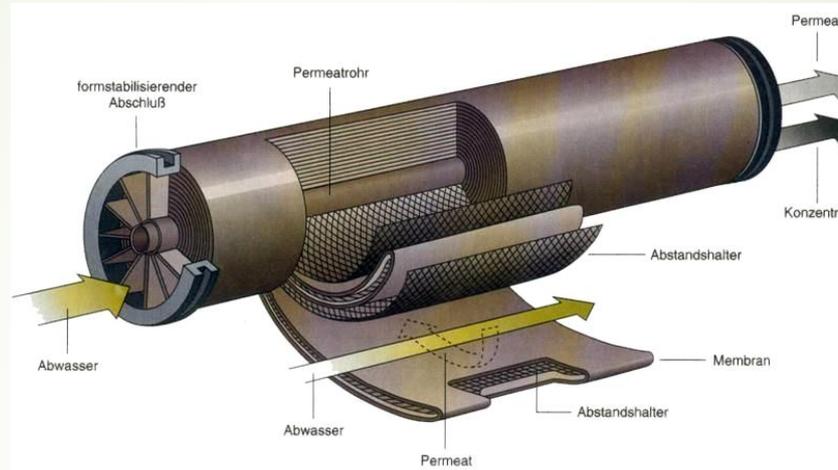
Nano-filtration system / removal of surfactants

# Water Treatment Technology

## Water purification



reverse osmosis



with dosing

# Water Treatment Technology

## Water purification



The company and production facilities