



# ORKA SSB<sup>®</sup>

Fully biological sewage treatment plants  
for domestic and industrial wastewater  
up to 3,000 PE



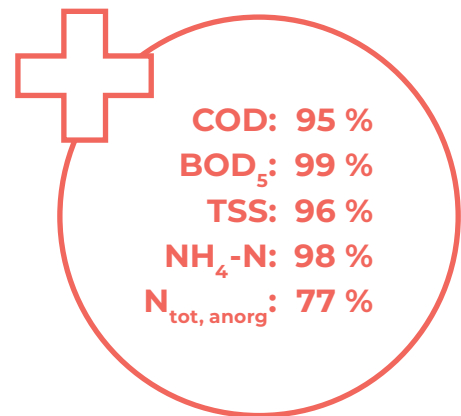
# ORKA

## Sustainable solutions for large wastewater volumes

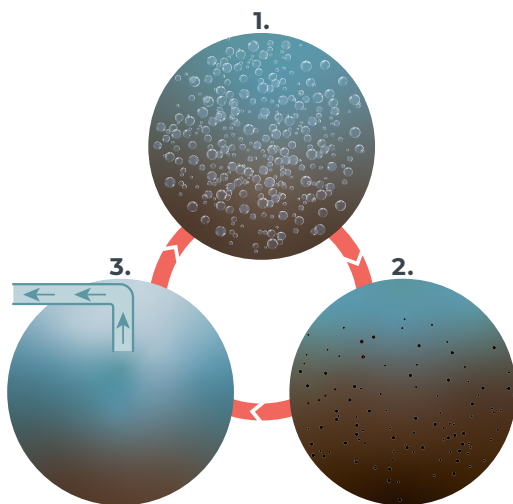
Our ORKA-SSB® system is a fully aerated wastewater treatment plant with integrated sludge stabilisation for the biological treatment of domestic and industrial wastewater. The wastewater is cleaned in multi-chamber tanks in a 3-phase cycle.

### ADVANTAGES

- + Excellent effluent values, even with both over- and underload conditions
- + Low sludge disposal
- + No odour
- + Adaptable to all tank geometries and sizes
- + No electrical components in the wastewater
- + Long life due to wear-free technology
- + Cost-effective maintenance
- + Low power consumption



### SSB®-CYCLE



#### 1. Aeration phase

The wastewater enters the first chamber. Here the biological treatment begins with aeration. Organic compounds are degraded by the micro-organisms living in the activated sludge. Meanwhile, the wastewater slowly flows through all chambers, whereby additional coarse material is retained. Optional denitrification takes place during this phase.

#### 2. Settling phase

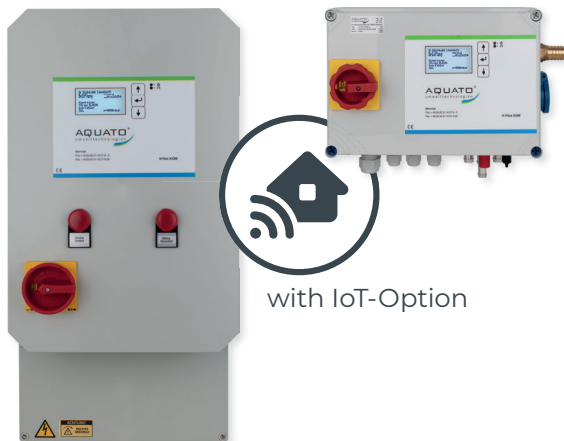
The cyclic control of the plant starts the settling phase after aeration. The activated sludge settles to the bottom of the SSB®-chambers. In the upper area clear water is formed.

#### 3. Discharge phase

The treated clear water is pumped into the outlet. At the end of this phase, the excess sludge is returned to the first chamber and the SSB®-cycle begins again.

## CONTROL UNIT

- + Simple adjustment of the control parameters
- + Clear menu structure
- + Controllable via WiFi direct
- + With IoT telecontrol technology
- + BMS connection possible



## VOLUMES

Inflow		Plant volume*
10.0 m <sup>3</sup> /d	67 PE	30 m <sup>3</sup>
15.0 m <sup>3</sup> /d	100 PE	44 m <sup>3</sup>
20.0 m <sup>3</sup> /d	134 PE	59 m <sup>3</sup>
30.0 m <sup>3</sup> /d	200 PE	88 m <sup>3</sup>
40.0 m <sup>3</sup> /d	267 PE	117 m <sup>3</sup>
50.0 m <sup>3</sup> /d	334 PE	136 m <sup>3</sup>
60.0 m <sup>3</sup> /d	400 PE	163 m <sup>3</sup>
70.0 m <sup>3</sup> /d	467 PE	191 m <sup>3</sup>
80.0 m <sup>3</sup> /d	534 PE	207 m <sup>3</sup>
90.0 m <sup>3</sup> /d	600 PE	233 m <sup>3</sup>
100.0 m <sup>3</sup> /d	667 PE	259 m <sup>3</sup>
150.0 m <sup>3</sup> /d	1000 PE	388 m <sup>3</sup>
200.0 m <sup>3</sup> /d	1334 PE	479 m <sup>3</sup>
250.0 m <sup>3</sup> /d	1667 PE	599 m <sup>3</sup>
300.0 m <sup>3</sup> /d	2000 PE	719 m <sup>3</sup>
350.0 m <sup>3</sup> /d	2334 PE	839 m <sup>3</sup>
400.0 m <sup>3</sup> /d	2667 PE	958 m <sup>3</sup>
450.0 m <sup>3</sup> /d	3000 PE	1078 m <sup>3</sup>

\*Design load:  
 COD=800 mg/l; BOD<sub>5</sub>=400 mg/l;  
 TSS=465 mg/l; TKN=73 mg/l

## REFERENCES

### SSB® 14 m<sup>3</sup>/d PE RETROFIT KIT

- ♦ Wastewater treatment of a business center
- ♦ Retrofit kit in new on-site constructed concrete tanks
- ♦ Year of construction 2023



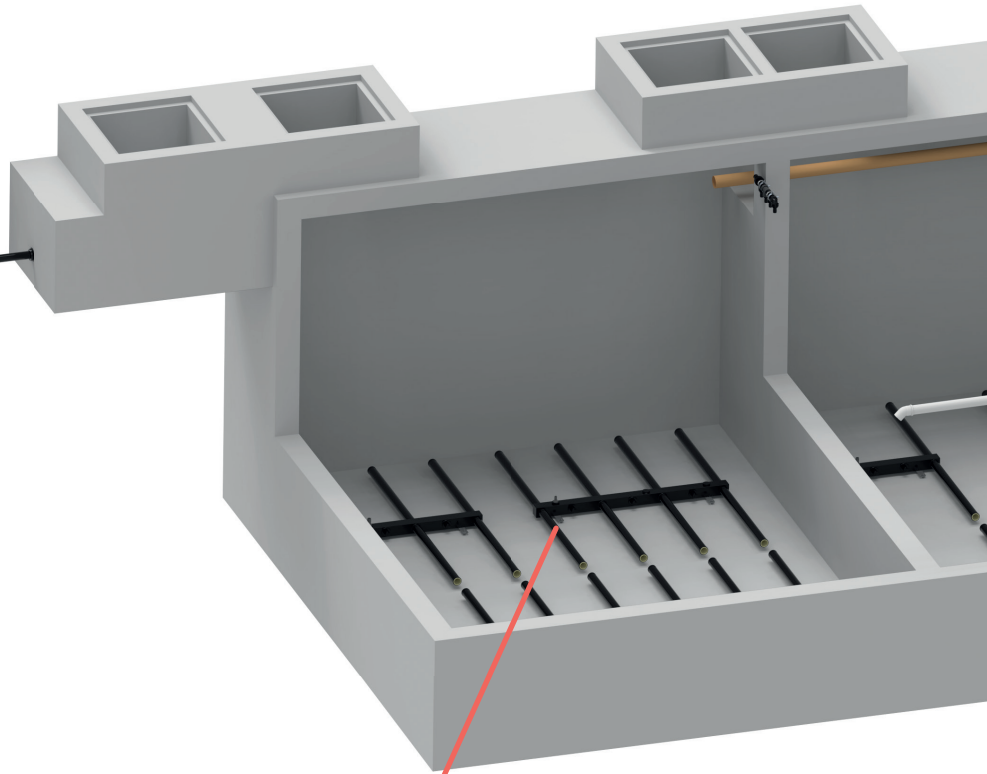
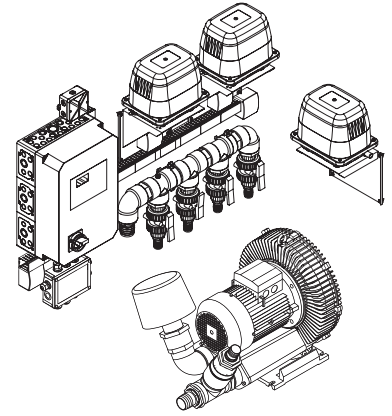
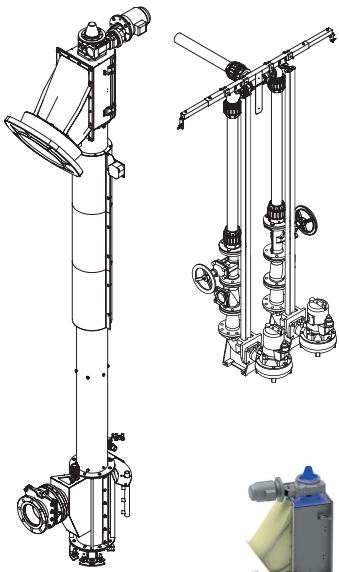
### COMPLETE SSB® 67,5 m<sup>3</sup>/d PLANT

- ♦ Decentralised sewage treatment plant for a holiday home estate
- ♦ Complete plant in PE large-volume tanks
- ♦ Year of construction 2021



## COARSE MATERIAL SEPARATION

- ◆ Optional mechanical pre-treatment of the wastewater
- ◆ Can be combined with a pumping station



## MODULAR PRINCIPLE

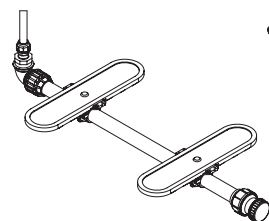
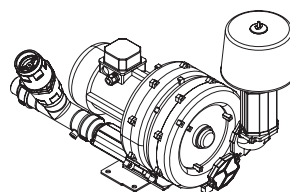
The Orka System is tailored to your needs and requirements.

Feel free to contact us for advice.

- + Various inlet and outlet conditions
- + All types of construction
- + In concrete or plastic tanks
- + With pre- and post-treatment modules combinable

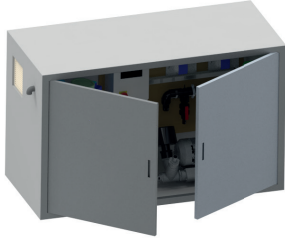
## AERATION UNIT

- ◆ Highly efficient membrane diffusers
- ◆ Customised designs possible
- ◆ Powerful side channel blowers for effective aeration of the wastewater



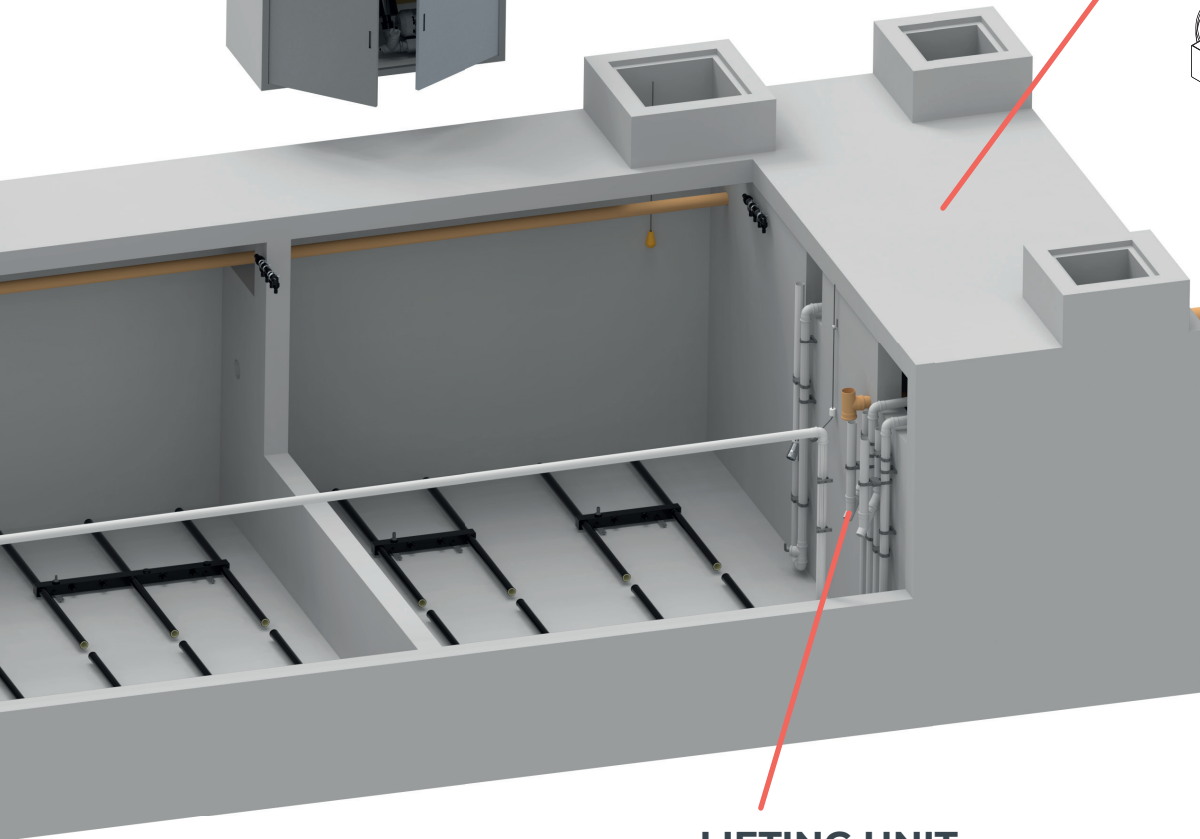
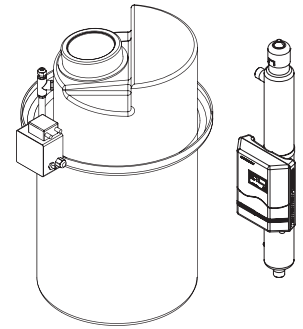
## SYSTEM CONTROL

- ♦ Individual technology package
- ♦ Completed by intuitively operable control unit
- ♦ Compatible with various cabinet types or installed in a ground pit



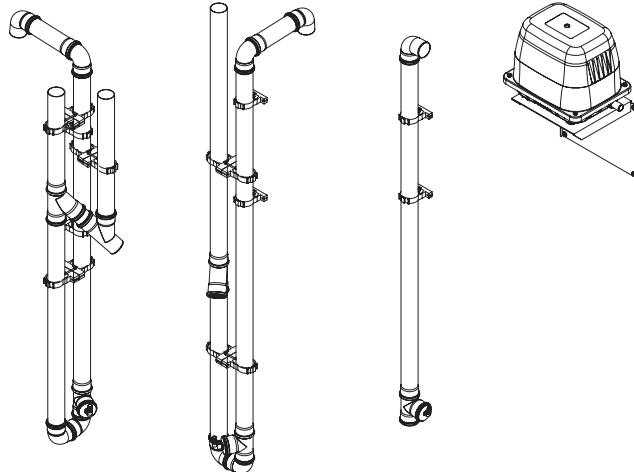
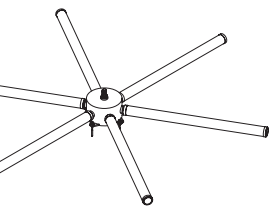
## ADDITIONAL TREATMENT STAGE

- ♦ Extended wastewater treatment through various dosing and hygienisation modules



## LIFTING UNIT

- ♦ Low-maintenance and reliable compressed air lift-systems with diaphragm compressors
- ♦ Can also be realised with submersible motor pumps on request





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