

# Agitate, Circulate and Aerate

Optimisation of  
pond treatment plants

a mixing  
mission is  
possible!



# Main issues and solutions:

## Main issues of pond treatment plants:

- settleable solids / sedimentated sludge
- worsen effluent values in season changes
- too less nitrification and denitrification
- too less COD-reduction
- freezing of the ponds

## Pond treatment plants will be optimised by an process mix !

### Our favourite process mix:

- **OLOID** in combination with
- **floating wet lands** as biofilm growth carrier
- possibly supplemented by **surface aerators**



no freezing:  
Magdalenenhofteich  
(Vienna) at -20°C

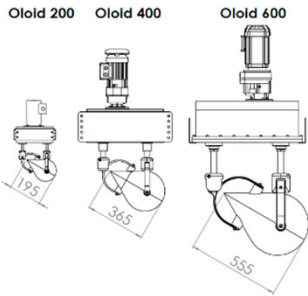
### Possible further actions, which will lead to an integrated solution:

- use of overgrown vertical partition / sheet pile walls
- installation of a primary treatment
- desludging of the pond
- use of simple partitions for directional water flow (prevention of short-circuit currents)
- water level control and regulation
- controlled separation of rainwater (bypasses or rainwater catchment basin)
- integration of planted reed zones in the polishing pond



# Machines and methods that can be combined:

## A1. OLOID



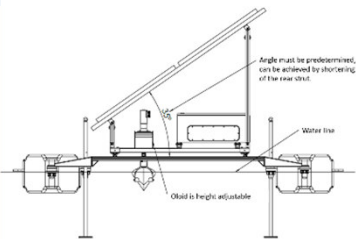
### Characteristics:

worldwide unique selling point  
to recirculate and aerate flat, elongated  
ponds, combinable with surface aerators  
and floating wet lands  
about 20 German references!

Pond treatment plant  
Battenberg



## A2. SOLAR-OLOID



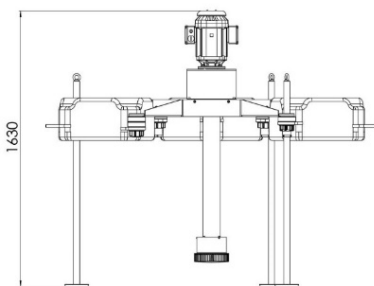
### Characteristics:

Power supply for remote ponds  
Inclination angle 0-45° adjustable  
Oloid stirrer 360° rotatable  
Average 12h / day running time  
Overload and discharge protection  
Programmable running times

Lake renaturation  
Lüneburg



## B. SURFACE AERATOR



### Ventilation capacity:

(measured at 1420 rpm)  
air volume flow: 58.5 m<sup>3</sup> / h  
oxygen input: 5.0 kg O<sub>2</sub> / h  
oxygen yield: 2.2 kg O<sub>2</sub> / kWh  
perfect in combination with OLOID

Pond treatment plant  
Ruwertal



## C. FLOATING WET LANDS

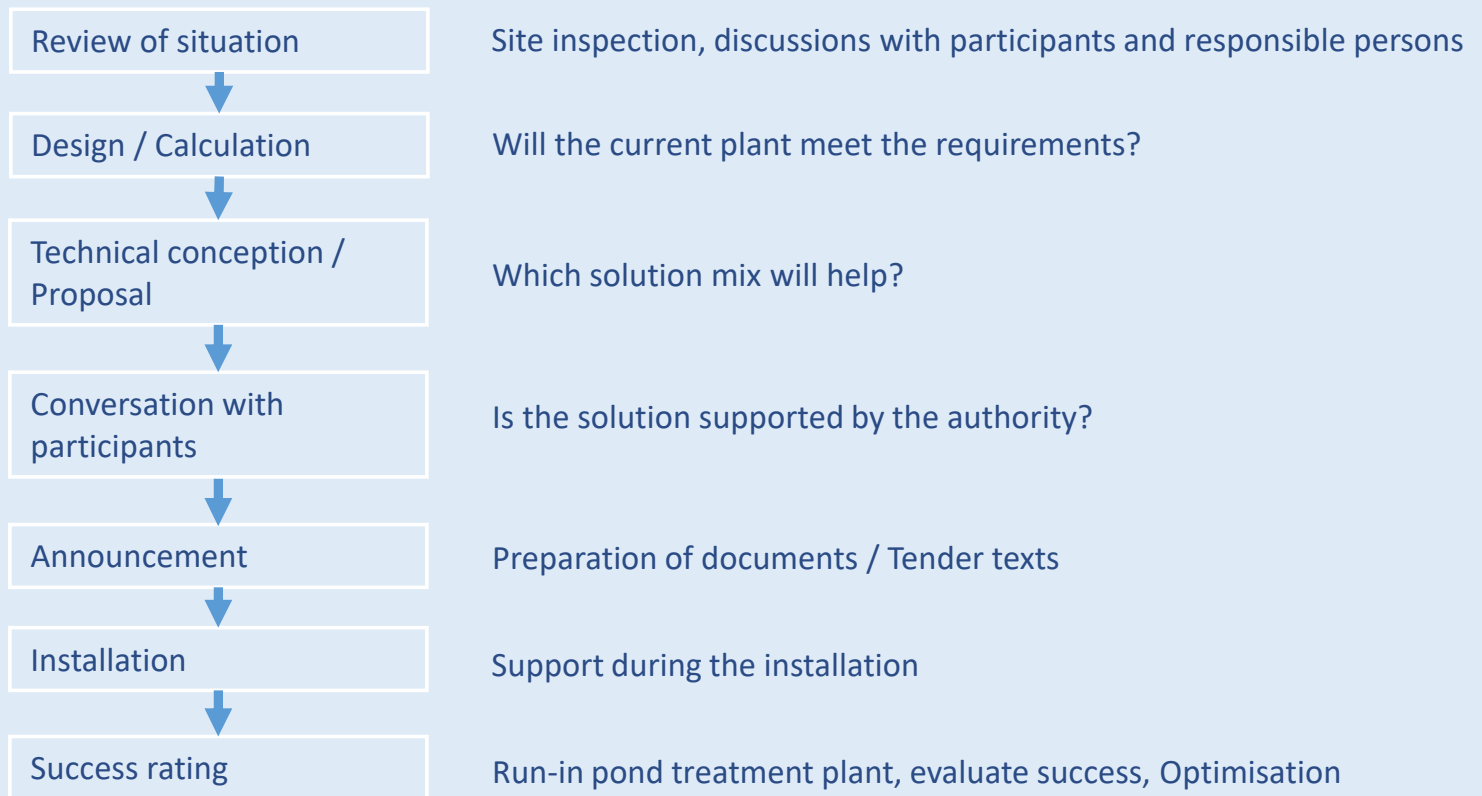
### Characteristics:

easy to install  
little care necessary  
approx. 1 m<sup>2</sup> nursery area / m<sup>2</sup> pond mat  
no removal in winter  
Lifetime > 10 years

Pond treatment plant  
Zeigerheim



# What do we offer:



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- mission completed -  
circulation & aeration  
is really possible