

SOLVOX®-V. Oxygen process for activated sludge basins, especially for low water depths.



General The Linde SOLVOX®-V process for oxygen introduction into activated sludge basins is particularly suitable for the oxygen dissolution into basins with low water depths.

Basically, SOLVOX-V units consist of:

- Submersible sewage pump with very high hydraulic efficiency factor
- Distributor for the division of water with low oxygen content into separate streams
- Venturi pipes with special two-phase nozzles for the oxygen transfer in the form of very fine bubbles
- Mixing pipes for the even distribution of oxygen-enriched water

An exact distribution of the sucked-in water with low oxygen content into single streams is achieved by the constructive design of the oxygenation unit, the dimensioning and the adaptation of the individual components.

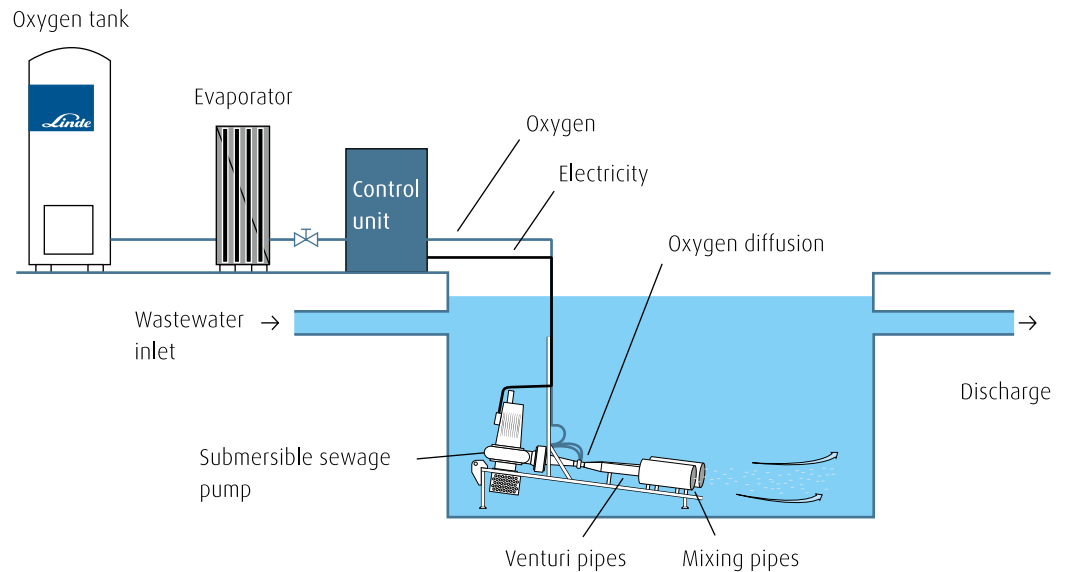
A steady transfer of oxygen in the form of very fine bubbles by means of the two-phase nozzles into the separate sewage streams and the recirculation of the oxygenated wastewater at the bottom of the basin ensure an ideal rate of oxygen utilisation and oxygenation efficiency.

The SOLVOX-V units are the result of the continuous advancement of our existing systems for oxygen transfer. Through higher oxygen utilisation and higher oxygenation efficiency rates, the cost-benefit balance of the biological wastewater treatment in municipalities and industry is further enhanced.

Performance characteristics

Advantages of the SOLVOX-V process

- Ideal oxygen utilisation and high oxygenation efficiency rates
- Intensive wastewater agitation
- More economical
- High flexibility of the oxygen dissolution
- Minimal assembly efforts – no construction work required
- Ready for operation in a short term – assembly is also possible in full tanks
- High operational reliability through its robust design and by use of high-quality system components



Areas of application

Biological wastewater treatment

- Oxygen transfer into activated sludge basins for continuous oxygenation or for covering peak oxygen demand as well as in oxidation ditches with low water depths
- Process conversion from existing carbonaceous (BOD) removal plants to nitrogen elimination (nitrification process)
- Elimination of bad odours in mixing and equalisation basins

Surface water

- Systematic oxygen introduction into organically polluted lakes and rivers

Intensive fish farming

- Oxygen enrichment in supply ditches and oxygenation basins
- Oxygen transfer into large production basins

Technical data

SOLVOX-V oxygenation unit (standard type)

- Oxygenation capacity (dissolved in water): up to 50 kg O₂/h
- Dimensions (L x W x H): 3,300 x 2,200 x 1,600 mm
- Weight of the complete unit: approx. 750 kg

Submersible sewage pump

- Water temperature: max. 40 °C
- Voltage: 400/690 V~, 50 Hz
- Rated power of the sewage pump: 14 kW
- Motor: Wet assembly

Materials

- Venturi/mixing pipe and base frame in stainless steel 1.4301 (DIN) or 304 (AISI)
- Special materials on customer request

Options

Accessories and installation

- Oxygen measurement and control unit
- Electrical switch gears for SOLVOX®-V units with motor and seal monitoring
- Different installation alternatives with separate wet or dry assembly of the wastewater pumps

Linde AG

Linde Gases Division, Seitnerstrasse 70, 82049 Pullach, Germany
 Phone +49.89.74 46-0, Fax +49.89.74 46-12 30, www.linde-gas.com