



## SOLVOX<sup>®</sup> diffusion hoses – oxygen for water. Flexible and cost-effective solution for medium to deep tanks.



### Reliable and effective aerobic treatment with Oxygen

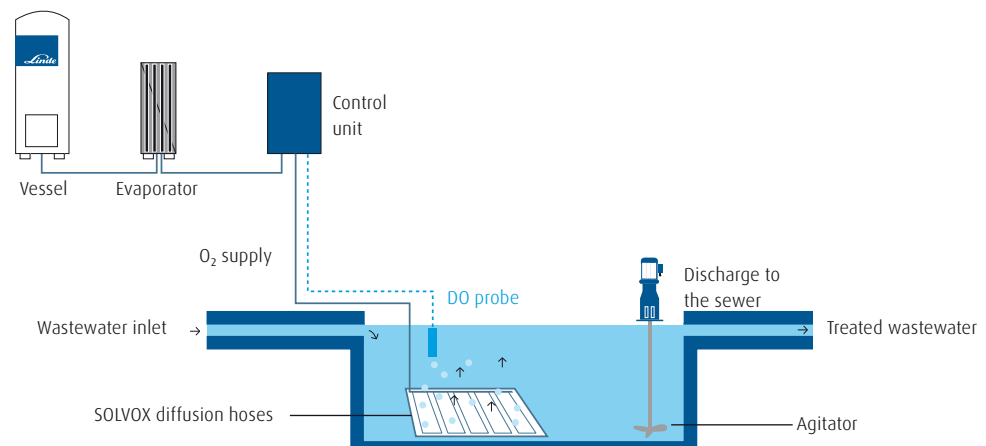
Many process problems in municipal and industrial wastewater treatment plants are usually the result of insufficient levels of dissolved oxygen (DO). The consequences are inadequate or even anaerobic decomposition processes, giving rise to highly offensive odours. With Linde's SOLVOX<sup>®</sup> portfolio, optimal DO levels are effectively and efficiently maintained, by systematically introducing pure oxygen at critical points within the wastewater cycle.

Within the Linde portfolio, SOLVOX diffusion hoses are an ideal solution for ensuring such levels of DO, in a cost-effective and reliable way, in particular for medium to deep tanks. Requiring no external power, the diffusion hoses can be easily adapted to any tank or basin shape and remain blockage free even after long idle periods. They are suitable for both oxygen and ozone.

### Installation

SOLVOX diffusion hoses are made of flexible, chemical-resistant polymer. Their mechanical stability has been enhanced by a fabric support. The fine perforations are produced by a standardised manufacturing process applying special needles. Mounted on frames, the diffuser hoses are placed on the base of the tank or on the bed of a lake or river.

When oxygen is fed from the supply vessel, the pores of the diffuser hoses open. The emerging fine gas bubbles ensure optimum oxygen utilisation. If the supply is turned off because no oxygen is required, due to a reduction in demand, the pores close – preventing ingress of water and solid particles.



SOLVOX diffusion hoses application. Oxygen transfer via tubular diffusion hoses made of a chemical resistant elastomer rubber material installed on the bottom of the tank.

## Benefits at a glance

- Low investment cost
- No external energy supply required
- High flexibility of oxygen transfer
- Fast and easy installation, even in operational tanks
- Readily adapted to any tank configuration
- High oxygen utilisation in medium to deep water
- No clogging of pores, not even after long periods of non-operation
- Maintenance-free
- Silent, environmentally friendly operation

## Applications

Biological wastewater treatment:

- Covering peak oxygen demand in overloaded aeration tanks
- Conversion of wastewater treatment plants to biological nutrient removal
- Odour control in mixing and equalisation tanks
- Preliminary purification of highly polluted industrial wastewater
- Emergency oxygen transfer
- Temporary oxygen supply during maintenance or upgrade work

Surface waters:

- Oxygenation of industrially polluted rivers, lakes and natural water bodies

## Technical characteristics

### SOLVOX diffusion hoses

Material	Ethylene-propylene elastomer (EPDM)
Dimensions	18 x 4.5 mm (0.7 x 0.2 in)
Opening pressure of pores	1.7 bar (plus water column pressure)
Maximum operating pressure	12 bar
Weight	0.35 kg/m
Colour	Black
Perforations	1,000 m <sup>-1</sup>
Quantity per roll	40 m

### SOLVOX standard diffusion mats

O <sub>2</sub> transfer capacity	4–12 m <sup>3</sup> /h (141–424 ft <sup>3</sup> )	8–24 m <sup>3</sup> /h (283–848 ft <sup>3</sup> )	12–36 m <sup>3</sup> /h (424–1271 ft <sup>3</sup> )
Length of diffuser hose	20 m (66 ft)	40 m (131 ft)	60 m (196 ft)
O <sub>2</sub> transfer capacity	6–17 kg/h (13–37 lb/h)	11–34 kg/h (24–75 lb/h)	17–51 kg/h (37–112 lb/h)
Dimensions of diffuser mat	4 x 1 m (13 x 3 ft)	5 x 2.2 m (16 x 7.2 ft)	5 x 2.2 m (16 x 7.2 ft)
Weight (excluding frame)	7 kg (15 lb)	14 kg (31 lb)	21 kg (46 lb)