# SOLVOX® emox
## Emergency Oxygen System

### Introduction

SOLVOX® emox is a complete emergency oxygen system, based on SOLVOX® dropin complemented by Linde accessories. It is delivered fully preset and automated to self-release, submerge and start operation in a fish tank during emergency situations.

### Benefits

- No installation works inside the tank required
- High capacity
- High oxygen dissolving efficiency
- Low energy demand
- Low maintenance

### Description

SOLVOX emox is a standalone emergency system, developed with safety, flexibility, reliability and fish welfare in mind. The system consists of the following solutions and components: SOLVOX dropin, SOLVOX dosing cabinet, SOLVOX incontrol and SOLVOX release.

Under normal conditions, the system is in standby mode, suspended over the tank. If an anomaly like “low oxygen” or “power loss” occurs, the SOLVOX dropin system is immediately deployed. It is lowered down to the operational position in the tank by means of gravity and the release brake system. The system then starts and doses oxygen ($O_2$) based on the measured $O_2$ saturation level in the fish tank and the $O_2$ setpoint chosen in the SOLVOX incontrol HMI. In the event of a power failure, the system starts as soon as the power has been restored – but with a valuable head-start as the SOLVOX dropin system has already been dropped to its operational position.

The operator may override emergency mode and use the system when emptying the fish tank. The microbubbles produced by SOLVOX emox will act as a buffer throughout the transport piping and create conducive conditions during this critical operation.

This emergency system is suited for land-based seawater tanks where $O_2$ consumption is typically high and/or where tanks are more than 5 meters deep.

## Installation

As a standalone system, SOLVOX emox can be easily installed/retrofitted without having to be integrated with other systems. It only requires a connection to the control power source, the main power supply and the $O_2$ supply line. An interface to a top system is recommended as this can ease daily operational tasks.

The system is delivered with its own oxygen probe, which may be interfaced with any top system.

Individual system parts are CE marked as required, and the comprehensive documentation is sufficient to CE-mark the system after completing the specific risk assessment for the installation site.

## System integration

For an optimal SOLVOX emox installation, we recommend interfacing the system with the on-site top system using Modbus TCP. This gives operators access to a full range of registers for control and monitoring.

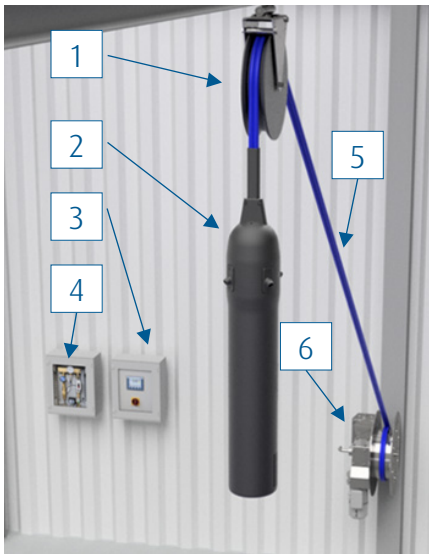
We offer system integration support and assistance with the final risk assessment.

SOLVOX dropin offers up to 100% efficiency. We therefore recommend using $O_2$ with purity levels in excess of 99.5%. The use of $O_2$ with lower purities can reduce the dissolving efficiency and potentially result in total gas pressure (TGP) supersaturation in the process water.

### Technical Data

| | |
|---|---|
| Power SOLVOX dropin | 2.2 kW |
| Power winch | 0.5 kW |
| Design water flow | 50 – 60 $m^3/h$ |
| Oxygen capacity | 50 kg/h |
| Oxygen gas pressure | 7-8 bar |
| Material | POM-C, EPDM, stainless steel |

- → Pos 1 Pulley
- → Pos 2 SOLVOX® dropin
- → Pos 3 SOLVOX® incontrol
- → Pos 4 SOLVOX® dosing cabinet
- → Pos 5 multicable
- → Pos 6 SOLVOX® release

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