



SOLVOX® inline injector – oxygen for water. Increasing the service life of pressurized wastewater pipes.



Making the most out of your assets

Wastewater in pressurized mains or transfer pipes has no contact with the atmosphere. This means that bacterial degradation processes quickly consume the available dissolved oxygen. The consequences are corrosion damage and offensive odors in gravity channels, pumping stations and inlet heads of wastewater treatment plants. Such consequences can be prevented by the addition of pure oxygen directly into pressurized wastewater transfer pipes. The addition of oxygen, initiates the natural aerobic purification processes, similar to those carried out in the aerobic biological stage of the secondary treatment plant.

The low investment costs for SOLVOX® oxygen injection equipment, including measurement and control unit, quickly pay off through reduced need for maintenance, repair and restoration work, and odor control programs: SOLVOX efficiently improves wastewater purification.



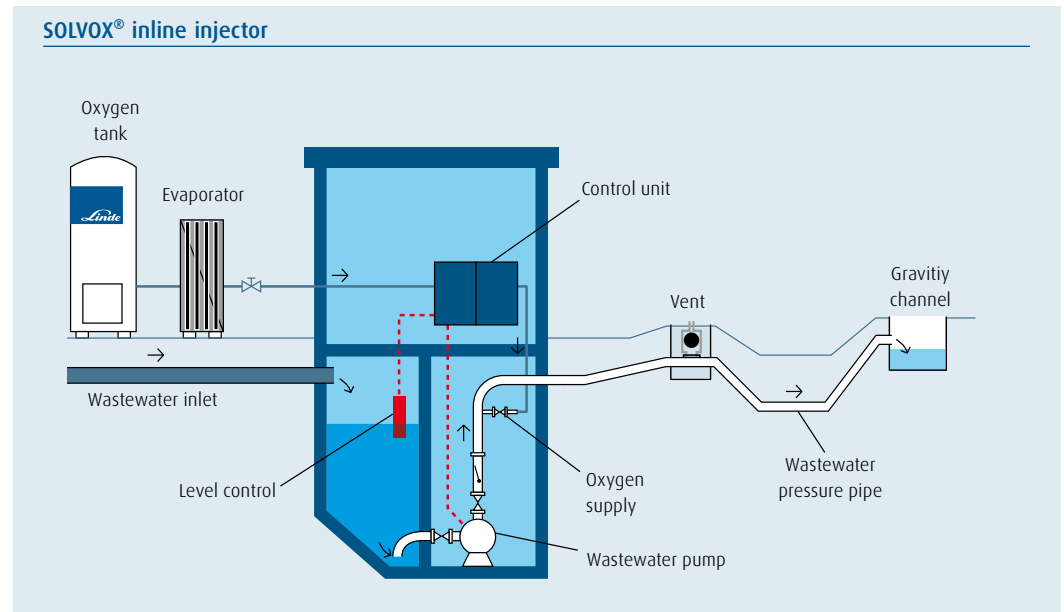
SOLVOX inline injector installation.



Pipework corrosion damage caused by bacterial degradation.

Installation

The SOLVOX inline injector system is designed for use with pressurized pipes and mains that convey wastewater and clean water. The oxygen is transferred into pressurized pipes by means of a perforated bull nose nozzle and dissolves directly into the wastewater flow. The unit is connected to the main or sidestream pipe, just downstream of the wastewater transfer pump and any non-return valves. The SOLVOX unit is attached via a pipe connection fitting that is welded to the main or sidestream pipework. Once installed, the main valve on the inline injector is opened, the bullnose injector is inserted in position and the seals on the unit prevent fluid from escaping. The oxygen is then dispensed via a flexible hose assembly. Control of the oxygen flow rate is governed by a control unit that works during pump operation either continuous (modulating) or by on/off control, only injecting oxygen when the pump is running.



SOLVOX inline injector installation. Pure oxygen is transferred to the wastewater at the inlet of the pressurized transfer pipe, just after the pump discharge.

Benefits at a glance

- Prevents pipework corrosion
- Improves settling of primary sludge during preliminary clarification
- Eliminates offensive odors from hydrogen sulfide and volatile organic sulfides
- Partially treats incoming wastewater
- No energy source needed
- Simple installation
- Low investment and operation cost
- No moving parts
- Low maintenance costs
- Non-clogging design
- Compatible with Oxygen, Carbon Dioxide, Nitrogen and Ozone

Applications

- Treatment of influent in Industrial and Municipal Wastewater Treatment plants to control odor, septicity and promote primary settlement
- Oxygenation of raw water upstream of filters in Drinking Water Treatment plants

Technical characteristics

SOLVOX inline injector dimensions

Material	Stainless steel EN 1.4301 / 304 Grade		
SOLVOX nozzle holes & diameter	13 x 1.0 (mm)		
Design pressure (water side)	10.0 (bar)		
Design pressure (oxygen)	40.0 (bar)		
Maximum operating pressure	6.0 bar (g)		
Weight	3.5 (kg)		
Approximate length of assembly	360 mm		

SOLVOX inline injector operating parameters

Delta pressure (bar)	2	4	8
Oxygen flow rate (Nm ³ /h)	18	26	32

Linde Aktiengesellschaft

Gases Division, Carl-von-Linde-Strasse 25, 85716 Unterschleissheim, Germany

Phone: +49 89 31001-0, watertreatment@linde.com, www.linde-gas.com/watertreatment