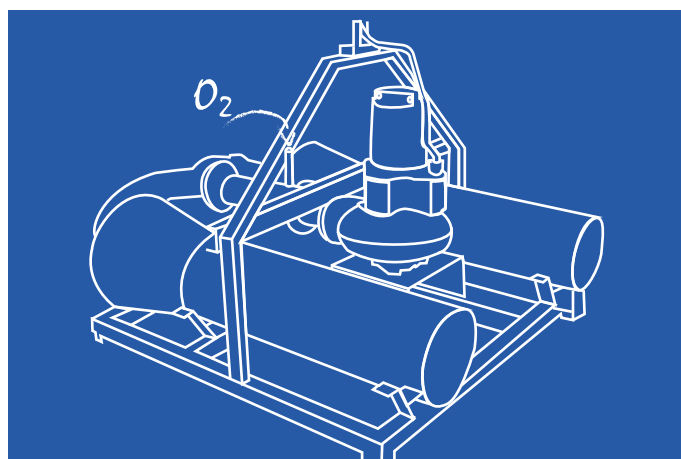


OXY INJECTOR-VENTOXAL

- High oxygen transfer rate
- Well-suited for high pollution levels
- Easy installation
- Distinctly low maintenance



The Concept

A dynamic gas-injection device designed by Air Liquide, the **OXY INJECTOR-VENTOXAL** system significantly increases the mass-transfer rate to reach high oxygen dissolution, and it integrates seamlessly with all types of wastewater basins.

The water that needs to be treated is pumped through a gas-liquid nozzle where oxygen is introduced. Emerging gas bubbles burst quickly, resulting in a highly dispersed fine-bubble stream. The oxygen-enriched fluid is then injected, thus enhancing overall oxygenation and mixing. During process steps where no oxygen is needed, the system provides the required mixing energy (e.g. for the denitrification step, the **OXY INJECTOR-VENTOXAL** is able to mix the basin without gas injection).

The system can be adapted to wastewater basins with varying water depths and levels of pollution. The combination of mixing and high oxygen transfer makes it a powerfully effective solution.

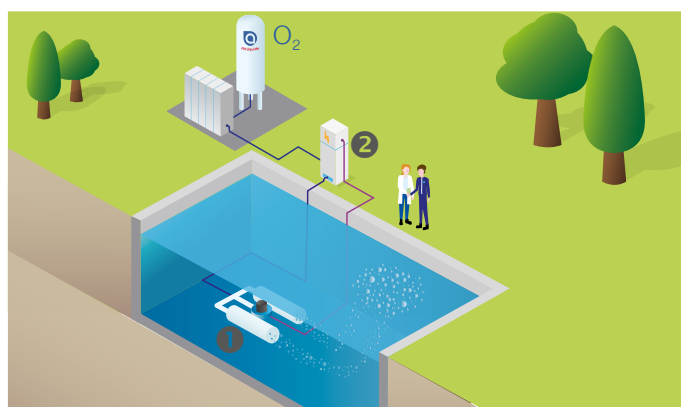
Applicable Industries

The **OXY INJECTOR-VENTOXAL** is designed for highly polluted process and wastewater streams. The cleaning step is based on a combination of biological and wet chemical reactions. When conventional equipment reaches its physical limits in terms of gas transfer, this technology is an efficient alternative to achieving higher transfer levels.

Main references can be found in:

- Chemical industry
- Petroleum Refining
- Pulp and Paper
- Food and Beverage
- Pharmaceutical
- And various others

Special Features



On top of its robust design, the **OXY INJECTOR-VENTOXAL** (1) is both compact and easy to use. The standard version consists of frame, pump, gas-liquid nozzles and mixing unit. The largest unit can inject up to 240 kg/h of oxygen. Multiple **OXY INJECTOR-VENTOXAL** systems can be easily combined to meet the need for dissolved oxygen in the basin.

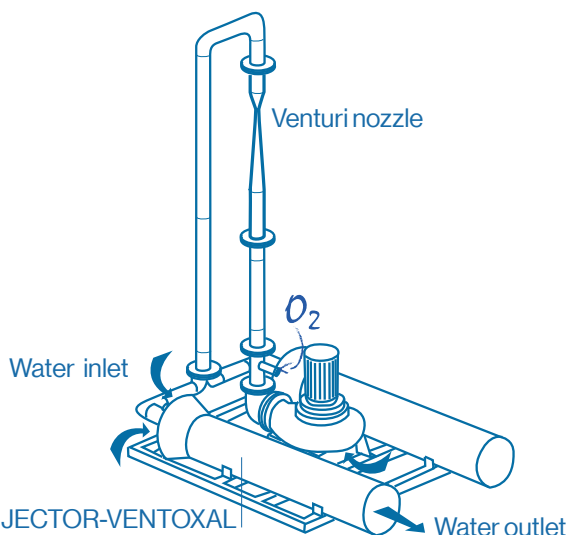
Fast and easy to install, it interacts perfectly with already existing air injection systems. It can be adapted to almost all basin dimensions and conditions of the ground.

Customized versions are also available on demand, with the pump and contactor (**CS-NOZZLE**) located outside the water treatment basin, the gas ejector being into it. The two biggest advantages are the easy surveillance and simplified pump maintenance.

A **GAS CONTROL CABINET** (2) is installed close to the basin and connected to the gas injection unit.

It carries out safety and emergency functions. The setups can be configured for stand-alone solutions or as an integrated solution in the customer process control system. All registered parameters, like power consumption or oxygen flow appear on the gas cabinet screen view on site. They can be sent via all common data transfer modes to the operator's master display.

In the event that there is a need for reusing the oxygen-rich off-gas from an **OZONATION UNIT** at atmospheric pressure, a venturi nozzle can be mounted before the inlet connection of an **OXY INJECTOR-VENTOXAL** unit to feed the system with low or atmospheric gas pressure.



Our experts supervise the dimensioning, installation and commissioning of **OXY INJECTOR-VENTOXAL** with a special focus on gas-transfer efficiency. They can support you with overall process optimization including micro-biological surveys, nutrient balances and hydraulic capacities.

Model Range

You can choose from two **OXY INJECTOR-VENTOXAL** configurations: compact unit or external-pump unit.

Each model is available in four sizes:

OXY INJECTOR-VENTOXAL 100*
OXY INJECTOR-VENTOXAL 200*
OXY INJECTOR-VENTOXAL 300*
OXY INJECTOR-VENTOXAL 600*

(*) Numbers correspond to the wastewater flowrate (in m³/h)

Technical Data

Compact version*	Dimensions L x W x H in m	Weight (kg)	Power (kW)	Water flow (m ³ /h)	Oxygen (kg/h)
OXY INJECTOR-VENTOXAL 100	1.70 x 1.50 x 1.60	400	6	100	25-40
OXY INJECTOR-VENTOXAL 200	2.25 x 1.95 x 1.60	500	12	200	50-80
OXY INJECTOR-VENTOXAL 300	2.50 x 1.95 x 1.80	600	19	300	90-140
OXY INJECTOR-VENTOXAL 600	2.50 x 4.60 x 1.80	1100	37	600	120-240

*Technical data for external-pump model available from Air Liquide's water treatment specialists

Related Offer

The **OXY INJECTOR-VENTOXAL** is part of our **Nexelia for Biological Treatment** solution, which is designed and tailored to meet your specific needs. This comprehensive offer combines the best of our gas-application technologies and expert support. As with all solutions under the **Nexelia** label, we work closely with you to pre-define a concrete set of results, and we commit to delivering them.

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