

# Oxygen Production Systems

## Wastewater, Sewage, and Ozone



**A Stand-alone  
Solution**



**NOVAIR**



# PRODUCE OXYGEN ONSITE TO DRAMATICALLY INCREASES BACTERIOLOGICAL SURVIVAL AND REGENERATION

As a pioneer in the design and manufacture of oxygen generators, NOVAIR offers complete oxygen production solutions for the specific needs of aeration. An on-site PSA oxygen generator from NOVAIR ensures there is always enough oxygen to keep up with bacteria and ozone demand.

Using pure oxygen for aeration and ozone generation is a simple and cost-effective process with proven effectiveness to:

**1**  
**INCREASE  
BACTERIA REGENERATION**  
Evenly distributed oxygen  
encourages bacterial survival

**2**  
**GENERATE  
SUFFICIENT O<sub>2</sub> QUANTITY**  
Keep up with demand without  
relying on delivered O<sub>2</sub>

**3**  
**ENSURE  
RELIABLE SUPPLY OF OZONE**  
Consistently generate high-purity  
oxygen gas on-site

## WHY PRODUCE OXYGEN ONSITE?

Oxygen is traditionally supplied to industrial or agricultural sites by trucks and stored in high-pressure cylinders or cryogenic tanks. This method of supply is costly, polluting and causes logistical constraints as well as risks for users. Onsite oxygen production by generator is a safe, efficient alternative with many advantages:



### AUTONOMY

On-site oxygen produced from ambient air means no more deliveries of liquid or bottled Oxygen



### NO LOGISTICS CONSTRAINTS

Eliminate recurring logistics constraints



### CONTINUOUS PRODUCTION

Oxygen available 24/7 with no risk of supply interruption



### PROVEN SAVINGS

30-60% savings



### ECO-FRIENDLY SOLUTION

Zero delivery = zero pollutant emissions

## Did you know



Injecting oxygen into a sewage treatment basin dramatically increases bacteriological survival and regeneration. The process of de-compounding sewage wastewater using O<sub>2</sub> uses the bacteria naturally found in water to eat it away. Using a measured amount of supplemental oxygen in the wastewater maintains sufficient levels of oxygen. When oxygen levels drop, wastewater levels rise as the water is discharged from land runoff, sewers, and industrial plants.

# NOVAIR SOLUTION FOR WASTE WATER TREATMENT DE-COMPOUNDS SEWAGE WASTEWATER USING O2

NOVAIR designs and manufactures all the components of the on-site oxygen production solution for waste water treatment. NOVAIR keenly assesses each individual site situation and plant operations to design a solution that meets the unique needs of a specific plant. This will take into account oxygen demand, as well as criteria such as the water depth and existing aeration equipment.

NOVAIR offers a complete range of generators that meet all requirements in terms of flow rate, pressure and purity for injection into the sewage treatment basin.



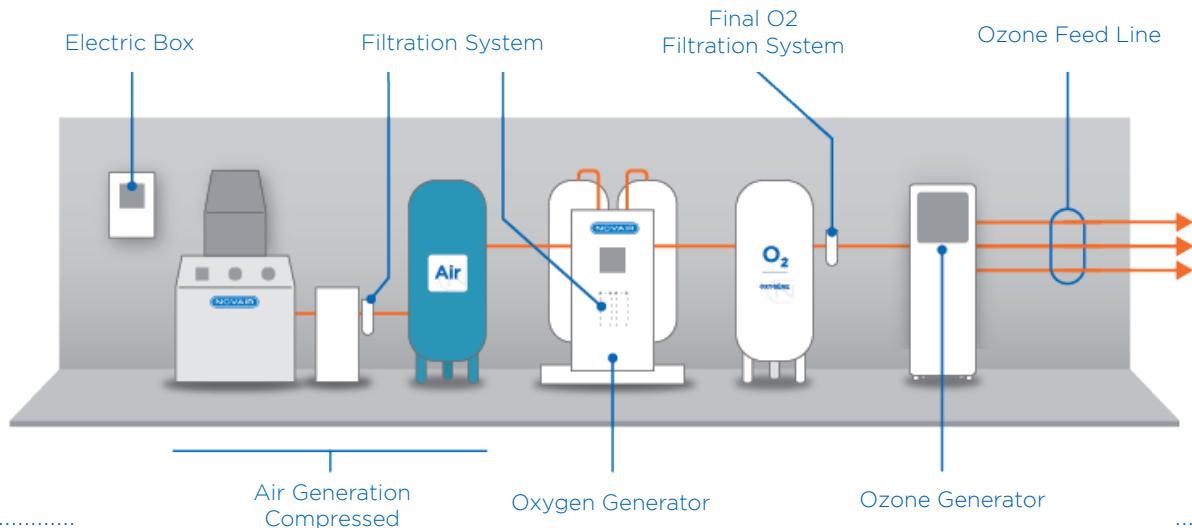
**“TWICE THE OUTPUT OF AIR-FED SYSTEMS...  
...HALF THE TROUBLE OF OXYGEN SYSTEMS”**

## INTEGRATION SOLUTIONS

NOVAIR solutions are available for installation to be integrated into an in-house technical room or to a wastewater facility as needed.

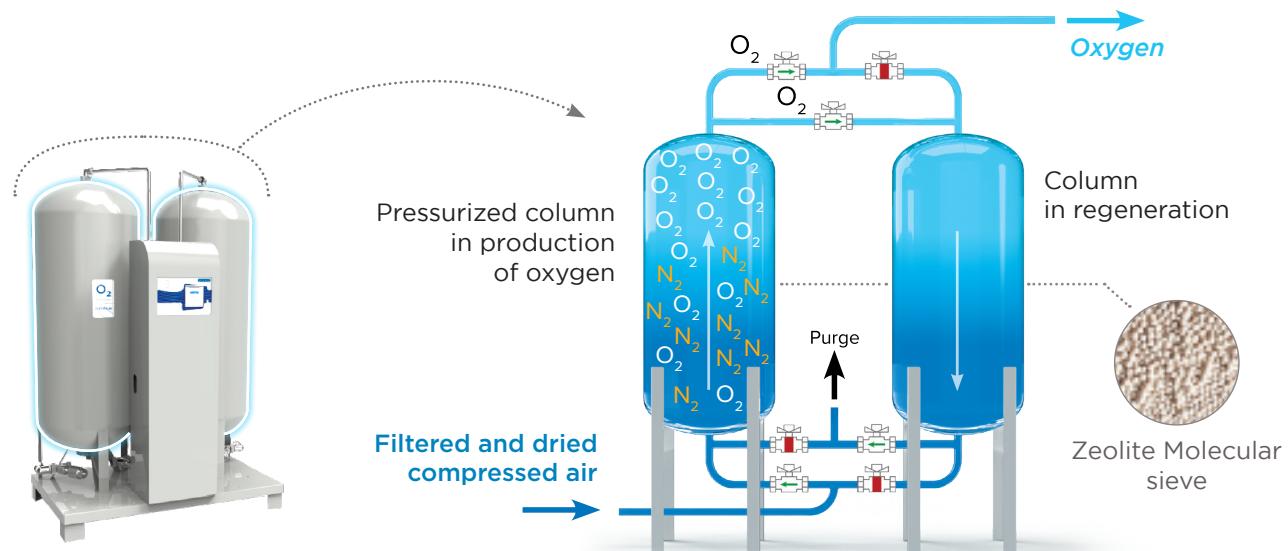


## Complete Installation



### PSA technology, mastered by NOVAIR for 30 years.

NOVAIR's Oxygen Generators use PSA (Pressure Swing Adsorption) technology allowing it to extract oxygen from ambient air.



- 1 The air is compressed, filtered and dried to be injected into a column with zeolite molecular sieve with selective adsorption properties.
- 2 Under the effect of the pressure regulated by a programmable logic controller PLC, the molecular sieve allows oxygen to filter out and traps water vapor and nitrogen, which are present in the air.
- 3 To ensure a continuous flow, two columns are alternately used. When one column supplies oxygen, the other column is regenerated by releasing the adsorbed nitrogen into the atmosphere.
- 4 The oxygen produced is analyzed in real time and supplied to the production site.

# EXPERTISE RECOGNIZED WORLDWIDE



## NOVAIR, expert in on-site gas production

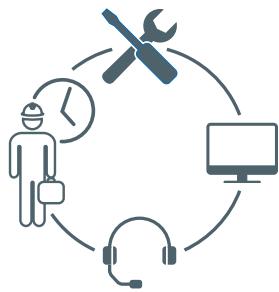
NOVAIR USA, a member of the NOVAIR Groupe, is based near Buffalo, New York. Founded in 1977, NOVAIR is recognized worldwide for its nitrogen and oxygen generating systems as well as medical air and vac solutions.

### Custom-engineered solutions

Backed by 45 years' experience and ongoing investment in R&D, NOVAIR designs on-site gas production solutions tailored to the needs of each industrial application. In addition to the oxygen or nitrogen generator, NOVAIR integrates all the peripheral equipment required to ensure optimum response to the demands of each process.

NOVAIR exports turnkey systems for the healthcare and industrial sectors to over 150 countries worldwide through a vast network of certified distributors, and has thousands of oxygen and nitrogen generators installed worldwide. Let us know and we would be happy to put you in touch with one of our satisfied customers.

## MANUFACTURER'S SERVICE GUARANTEED MAINTENANCE



NOVAIR provides you with a range of services from qualified technicians who will ensure your systems operate optimally at all times by providing you with rapid assistance over the phone, or right on-site.

# A RANGE OF SOLUTIONS AND SERVICES INDUSTRIAL GASES IN COMPLETE CONFIDENCE

## Synergy

NOVAIR offers a complete range of solutions tailored to the needs of each healthcare and industrial application due to the synergy created from years of field experience in all sectors as the global expert in gases.



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