

OXYGEN PRODUCTION SYSTEMS FOR BIOGAS DESULFURIZATION



A stand-alone
solution



PRODUCE OXYGEN ON-SITE AND ELIMINATE H₂S IN BIOGAS

As a pioneer in the design and manufacture of oxygen generators, NOVAIR offers complete oxygen production solutions for the specific needs of biogas desulfurization.

Using pure oxygen to remove hydrogen sulfide is a simple and cost-effective process with proven effectiveness to:

1

INCREASE YOUR SAFETY AT WORK

No need to store large quantities of oxygen

2

PROTECT YOUR INSTALLATION

Protecting building materials from corrosion

3

MAXIMIZE YOUR INSTALLATION'S PERFORMANCE

By avoiding the formation of metal sulfide

WHY PRODUCE OXYGEN ON-SITE?

Oxygen is traditionally supplied to industrial 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

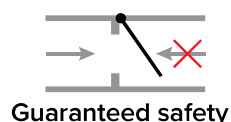


Hydrogen sulfide is both a dangerous and destructive component of biogas, with harmful effects on people, the environment, building materials and substances. For this reason, eliminating hydrogen sulfide makes a decisive contribution to the optimal operation of a biogas plant. Biological oxidation using oxygen from the air is a common method of biogas desulfurization, but the use of pure oxygen significantly increases the efficiency of the process. To achieve this, oxygen is injected into the gas stream of the digester or post-digester at the level of the activated carbon.

NOVAIR SOLUTION ENABLES BIOGAS DESULFURIZATION WITH OXYGEN IN COMPLETE SAFETY

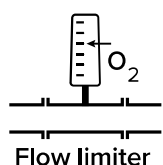
NOVAIR designs and manufactures all the components of the on-site oxygen production solution for biogas desulfuration. The solution integrates a compressed air supply, an oxygen generator, a system for regulating the flow of injected oxygen and a safety device that prevents any backflow of biogas into the oxygen tank, thus avoiding any oxygen/biogas mixing.

NOVAIR offers a complete range of generators that meet all requirements in terms of flow rate, pressure and purity for injection into the gas ceiling and/or the activated carbons.



«No-return » safety device

For the biogas application, NOVAIR has developed a device to prevent the backflow of biogas into the oxygen. A control system developed for complete safety, in accordance with risk analysis methods.



Injection control system

Installed downstream of the generator, the system controls the flow of oxygen injected according to the volume of biogas treated. This control system incorporates a flow limiter to prevent the injection of too much oxygen, thus avoiding the risk of explosion.

INTEGRATION SOLUTIONS FOR RENT OR SALE

NOVAIR solutions are available for sale or rent for integration in a technical room or «Plug and Play» container.

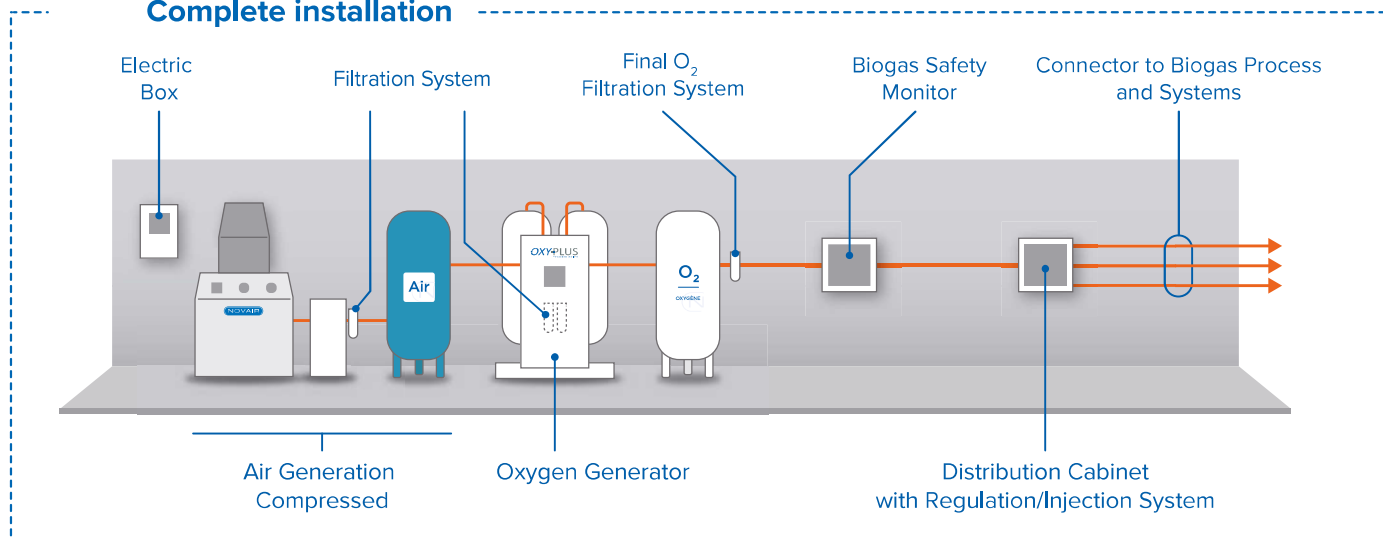


« Plug and Play » container



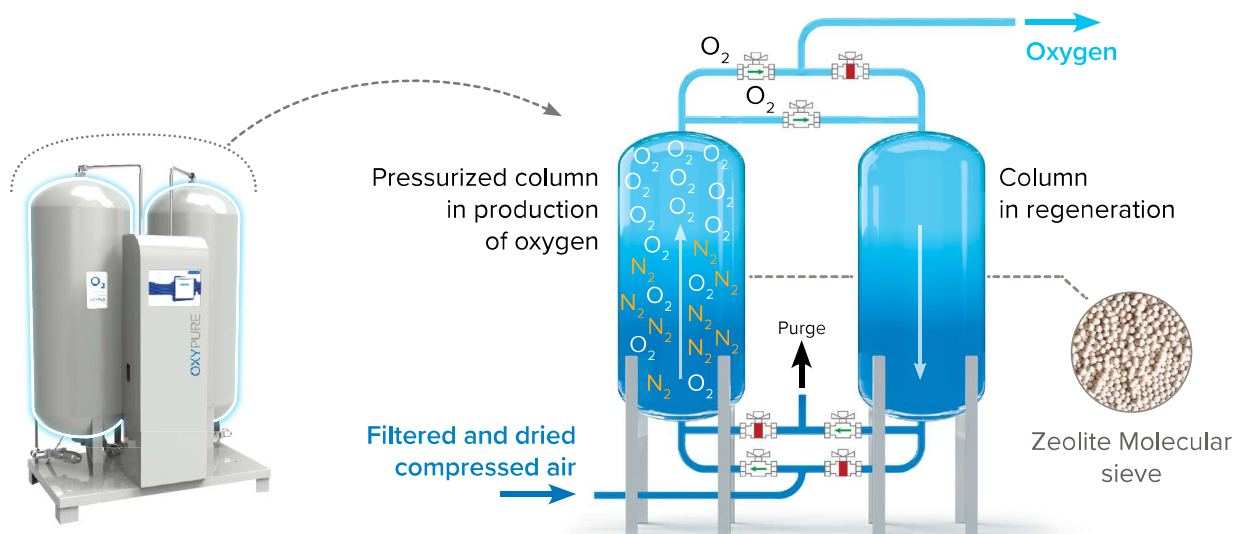
Technical room

Complete installation



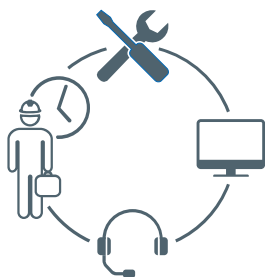
PSA technology, mastered by NOVAIR for 30 years

Oxygen Generator is based on «PSA» (Pressure Swing Adsorption) technology which allows 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.

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.

EXPERTISE RECOGNIZED WORLDWIDE



NOVAIR, French manufacturer, expert in on-site gas production

Founded in 1977, NOVAIR is a French manufacturer recognized worldwide for its nitrogen and oxygen production solutions by generators. NOVAIR is based near Paris (France) and has subsidiaries and R&D centers in Italy and the United States.



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 producing world-class oxygen and nitrogen generators, NOVAIR also integrates all peripheral equipment required for optimum response to the demands of each process. NOVAIR is structured according to ISO 9001:2015 management processes and is ISO 1485:2016 certified in the design and manufacture of gases.



Thousands of references in France and worldwide

With thousands of oxygen and nitrogen generators installed worldwide, NOVAIR exports turnkey systems to those in healthcare and industry located across 150 countries through its vast network of certified distributors.

A RANGE OF SOLUTIONS AND SERVICES

INDUSTRIAL GASES WITH COMPLETE CONFIDENCE

Synergy

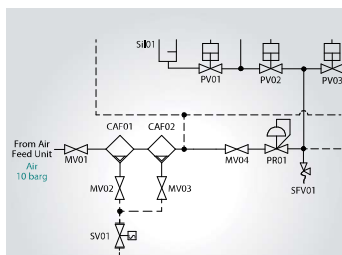
NOVAIR offers a complete range of solutions tailored to the needs of each healthcare and industrial application due to the synergy created from years of field experience in all sectors as the global expert in gases.



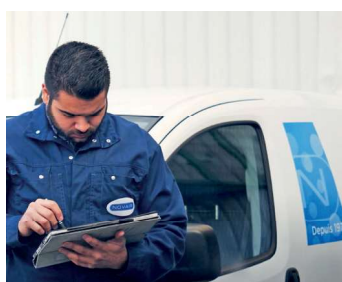
Production



On-site cylinder filling



Engineering



Technical support



Maintenance



Monitoring



Telemetry



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