



OXYSWING

MODULAR PSA OXYGEN GENERATOR



- Oxygen up to 95% purity
- Patented PSA modular process
- Evolutive capacity



NOVAIR was founded in 1977 in France and is specialized in the design and manufacturing of air & gas separation, treatment and compression solutions.

Member of Groupe NOVAIR, NOXERIOR focuses on all aspects of the production of dry compressed air and its non-cryogenic separation for on-site generation of nitrogen and oxygen. With customized systems, we help our customers to reduce their operating costs and increase their autonomy.

NOVAIR headquarters are located near Paris in France and we are operating in over 100 countries through a wide network of certified local distributors. With our experience of large industrial projects, we are able to take up the most ambitious challenges, in accordance with the most demanding engineering standards.

Patented Modular PSA Technology

OXYSWING® modular PSA generators implement a unique Pressure Swing Adsorption technology. Unlike twin-tower standard systems, OXYSWING® generators feature multiple modules of molecular sieve, each implementing an optimized patented PSA process.

Modular PSA unique features:

- **Unlimited flexibility:** production capacity can be easily adjusted directly on site by simple module additions without any skilled personnel
- **Compact dimensions** for installations even in small or low ceiling spaces of your production facility
- **Easy fleet management:** all OXYSWING® models feature the same components, allowing a limited spare parts management and easy maintenance
- **Non-corrosive materials** such as aluminum and stainless steel, for all process components

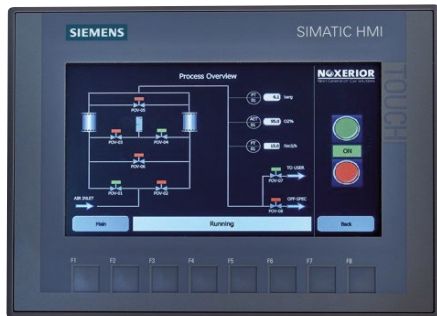
*Product protected by international patents
n° EP2047897A1, EP2047897B1, EP2052769A1,
EP2052769B1*

MODULAR PSA OXYGEN GENERATOR OXYSWING

For industrials looking for a safe and autonomous supply of oxygen, NOVAIR introduces OXYSWING, oxygen generator delivering a continuous flow of oxygen 95% produced on-site.

7" HMI for real time purity monitoring and automatic & unattended operation

Allows the monitoring / remote control of the main process parameters and displays status messages such as gas purity and flow rate, totalized gas flow, total functioning hours and maintenance alerts.

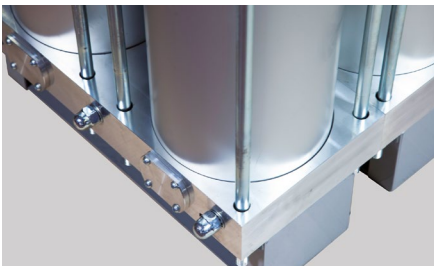


HMI Siemens® SIMATIC Series with colour touchscreen

Ergonomic design, for a minimum footprint

Molecular sieve modules allowing on-site easy capacity extension and featuring the patented FlatFlow® technology

The capacity of each OXYSWING® Modular PSA oxygen generator can easily be extended by simply adding modules to the generator



Detail of modular PSA aluminum banks, based on single modules concept.

Compact and user friendly solution, OXYSWING offers a flexible oxygen supply compliant with the most demanding standards.

Standard Components

- Feed Air Filters
- PSA Adsorber Modules in anodised Aluminium
- Exhaust Silencers
- Control panel with HMI Siemens® for fully automatic operation
- Onboard Oxygen Discharge Pressure Transmitter

Auxiliary equipment

- Feed Air Unit
- High pressure cylinder filling systems
- Containerized systems

Designed with

NOXERIOR

Next Generation Gas Solutions

A company of **NOVAIR**



Options

- Electronic Product Flow Meter with Flow Totaliser
- Air and Oxygen Dew Point Analyzer
- Feed Air Pressure and Temperature Transmitter
- Oxygen Temperature Transmitter
- Central Supervision System for OXYSWING® installations to ISO 7396-1
- Status and Process Parameters Data Logging Pen Recorder
- Paramagnetic Oxygen Analyzer
- Onboard Oxygen Analyser with Zirconium Oxide Sensor
- System for Automatic Venting of Off-Spec Oxygen
- Set of Oxygen Bacterial Filters



Certified Quality

A reliable, safe and stable oxygen production are essential features of OXYSWING® generators. They comply with the European Pressure Equipment Directive 2014/68 EU. For food applications, we can provide food grade certificates upon request.

NOVAIR is organized according to a quality management system certified ISO 9001 and ISO 13485 for the design and manufacture of medical gas systems.

First class components

Your OXYSWING® generator should work, always. That is why we are using first class components like stainless steel process piping, medical oxygen compatible valves and regulators, as well as heavy duty PLC.

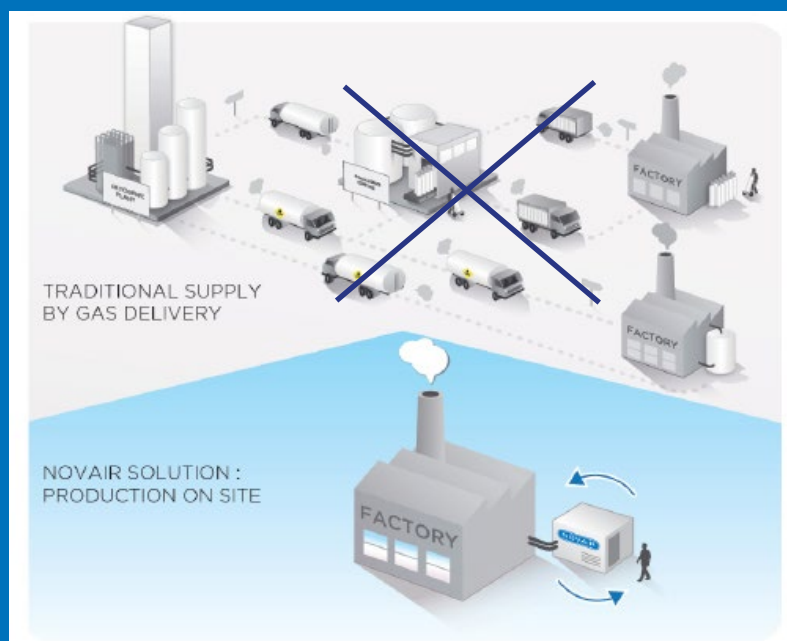
FlatFlow® technology

Allowing a uniform distribution of gas flow over the entire molecular sieve; this patented technology makes it possible to develop a compact, highly efficient and truly flexible PSA generator for the production of oxygen.

Why produce Oxygen on-site?

Benefits:

- Oxygen available 24/7: continuous production
- Proven savings
- Guaranteed purity: continuous analysis
- Full safety
- No more logistic constraints
- Instant production on-demand: no more supply chain failure
- Eco-friendly solution: zero delivery & zero emission of pollutants





OXYSWING® Oxygen production flow - 95% purity

Oxyswing®	PSA Modules	Peak Flow	
		Nm3/h	SCFH
OS-8	1	2.5	95
OS-16	2	5	190
OS-24	3	7.5	289
OS-32	4	10	380
OS-40	5	12.5	475
OS-48	6	15	562
OS-64*	4 + 4	20	760
OS-80*	5 + 5	25	950
OS-96*	6 + 6	30	1125
OS-120*	5 + 5 + 5	37.5	1425
OS-144*	6 + 6 + 6	45	1687

* Composed of one master and one or two slave units

Feed Air Pressure = 7,0 bar(g) / 100 psig

Oxygen Discharge Pressure = 6,0 bar(g) : 87 psig

Oxygen Dew Point = -60°C / -76 F at atmospheric pressure

Dual Banks

For larger capacities, OXYSWING® generators can be completed with a Dual Bank, which consists in a second PSA oxygen generator without any PLC and power supply. The Dual Bank gets its power and control signals from the OXYSWING® PSA oxygen generator through a single cable connection (master/slave principle).

One OXYSWING® PSA oxygen generator can control up to three Dual Banks in parallel.



Dual Bank configuration

OXYSWING® dimensions (mm) - Master units

Oxyswing® Mod.	L	W	H	Weight (kg)
OS-8	892	540	1750	305
OS-16	1095	540	1750	460
OS-24	1363	540	1750	615
OS-32	1631	540	1750	770
OS-40	1900	540	1750	925
OS-48	2162	540	1750	1080



Nitrogen & Oxygen Generators

- *PSA*
- *DS-PSA*
- *Membrane*



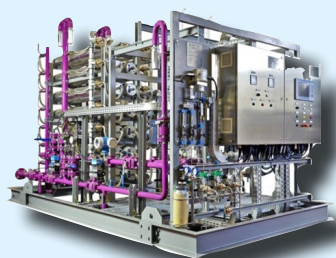
Feed Air Units



Medium & High Pressure Gas Boosters



Engineered Packages



GRUPE

NOVAIR



NOXERIOR

Next Generation Gas Solutions

A company of **NOVAIR**

Via Giordania, 48 - 58100 Grosseto - Italy

Tel : +39 (0564) 45 8041/42

Fax: +39 (0564) 45 80 43

Email : info@noxerior.com

www.noxerior.com

NOVAIR INDUSTRIES

139, rue de la Belle Etoile
95700 Roissy-en-France - France

Phone: +33 | 56 46 02 03

Fax: +33 | 49 89 29 13

Email: contact@novair.fr

www.novairindustries.com