



### Technical data

**NITROSWING<sup>®</sup> nitrogen production flow - cfm<sup>1,2</sup>**  
 From 7 to 13 bar. Nitrogen pressure up to 11 bar

Gas Purity	99.999%	99.995%	99.99%	99.95%	99.90%	99.50%	99.00%	98.00%	97.00%
Residual O2	10 ppm	50 ppm	100 ppm	500 ppm	0.1%	0.5%	1%	2%	3%
NS-7 1 module <sup>3</sup>	1.5	2	2.5	3	4	5.5	6.5	7.5	8
NS-14 2 modules	3	4	4.5	6.5	7	10.5	12.5	15.5	16.5
NS-21 3 modules	7	5.5	6.5	9.5	11	15.5	18.5	23	24.5
NS-28 4 modules	4	7.5	9	12.5	14.5	20.5	25	30.5	33
NS-37 5 modules	7	9	11	15	18	26	31	38	40.5
NS-42 6 modules	8	11	13	18.5	21.5	30.5	37	45.5	49
NS-49 7 modules	9.5	12.5	15.5	21	25.5	35.5	43	52.5	56.5
NS-56 8 modules	11	14.5	17.5	24.5	29	40.5	48.5	59.5	64

Other configurations available  
<sup>1</sup> Inlet pressure 7.5 bar  
<sup>2</sup> Indicative flows  
<sup>3</sup> One module is composed of 2 molecular sieve columns

### Why produce nitrogen on-site?



Proven savings



No logistic constraints



High level of safety



No more heavy bottles to handle



Continuous analysis



Nitrogen on-site on-demand 24x7x365 with continuous unattended production and no more supply failures or rising costs, using only air and electricity.

#### Nitrogen & Oxygen Generators

- PSA
- DS-PSA
- V-PSA
- Membrane



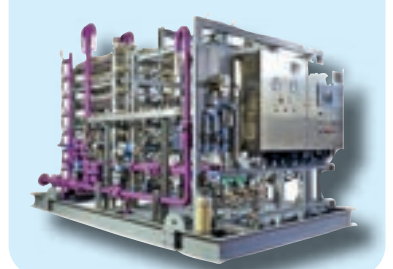
#### Feed Air Units



#### Medium & High Pressure Gas Boosters



#### Engineered Packages



# NITROSWING<sup>®</sup>

## MODULAR PSA NITROGEN GENERATOR

Up to 99.999% Nitrogen  
 From 1.5 to 64 Cubic Feet per Minute



- Patented PSA process
- High efficiency
- Compact & flexible
- Remote access capability
- Lowest-cost nitrogen



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# MODULAR PSA NITROGEN GENERATOR NITROSWING



NOVAIR is the worldwide leading manufacturer of on-site gas generating systems. Headquartered in Paris with manufacturing facilities and high-tech R & D centers in France, Italy, and the United States, NOVAIR currently operates in over 150 countries.

With more than 45 years of experience installing tens of thousands of high-quality oxygen and nitrogen generators throughout the planet for a variety of industrial applications, NOVAIR is widely recognized as the definitive leader in on-site gas production through adsorption technology.

Our deeply dedicated team manufactures superior equipment that is engineered and tested under the most rigorous standards, so that no challenge is ever too ambitious when it comes to meeting the needs of our customers.



Thousands of references worldwide

NOVAIR has headquarters in Paris, France with installations and operations in over 150 countries through a worldwide network of certified local distributors.

NOVAIR presents the new generation of NITROSWING® modular PSA generators. NITROSWING® is the result of years of research and development offering the highest standards of efficiency, flexibility and reliability:

- Unprecedented energy efficiency
- Increased purity stability
- Instant optimal working conditions
- Easy instrument upgrades

NITROSWING generators can produce nitrogen with a residual oxygen content ranging from 10ppm to 3.0 vol%.

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

Molecular sieve modules allowing easy upgrades on-site and featuring patented Flat-Flow® technology

Ergonomic design for minimum footprint



## Pipe assembly classification

NITROSWING generators are classified as pipe assembly, meaning no pressure vessel directives apply to the molecular sieve modules. This allows for:

- more competitive costs
- simpler operation

## FlatFlow® technology

FlatFlow® technology allows for a uniform distribution of gas flow over the entire molecular sieve, ensuring the highest efficiencies in the adsorption process and the lowest air ratios, **resulting in the lowest operating costs.**

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

## First-class Components



Detail of modular PSA aluminum banks based on single modules concept. Application of non-corrosive materials, such as aluminum and stainless steel, for all process components.

Allows for monitoring and remote-based control of the main process parameters, as well as status messages such as gas purity & flow rate, overall gas flow, total functioning hours, and maintenance alerts.



HMI Siemens® SIMATIC touchscreen series with color touch screen

## Patented Modular PSA Technology

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

■ **Unlimited flexibility:** Production capacity can be easily adjusted directly on site without any skilled personnel, while the zirconium analyzer requires no calibration.



■ **Compact dimensions** for installations in small spaces, easier shipping by airfreight

■ **Easy fleet management:** All NITROSWING® models feature the same components, simplifying spare parts management and maintenance, making generator upgrades a breeze

■ **Incorporates zirconium residual oxygen analyzer** requiring no calibration

## Dual Bank Concept



For large production capacities, a "Dual Bank" can be added consisting of a second PSA nitrogen generator without any PLC or power supply. The Master Dual Bank gets its power and control signals from the NITROSWING® PSA nitrogen generator through a single cable connection, with one master NITROSWING® PSA nitrogen generator controlling up to three Dual Banks simultaneously.