



NITROSWING

MODULAR PSA NITROGEN GENERATOR

Up to 99,999% nitrogen



- Patented PSA process
- High efficiency
- Compact & flexible



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

NITROSWING® modular PSA generators implement a unique Pressure Swing Adsorption technology. Unlike twin-tower standard systems, NITROSWING® 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 without any skilled personnel
- **Compact dimensions** for installations even in small spaces of your production facility
- Application of **non-corrosive materials** such as aluminum and stainless steel, for all process components
- **Easy fleet management:** all NITROSWING® models feature the same components, allowing a limited spare part management and easy maintenance

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

MODULAR PSA NITROGEN GENERATOR NITROSWING

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

- Unprecedented energetic efficiency
- Increased purity stability
- Instant optimal working conditions
- Easy instruments upgrade

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

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

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

Ergonomic design, for a minimum footprint

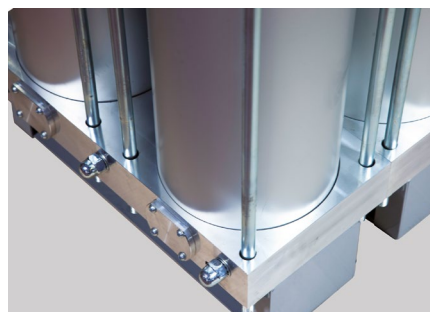
Each NITROSWING® Modular PSA nitrogen generator can easily be upgraded at any time by simply adding modules to the generator.

A "Dual Bank" can also be added, consisting in a second PSA nitrogen generator, without any PLC and power supply. The Dual Bank gets its power and control signals from the NITROSWING® PSA nitrogen generator through a single cable connection (master/slave principle).



Dual Bank Units

One NITROSWING® PSA nitrogen generator can control up to three Dual Banks in parallel.



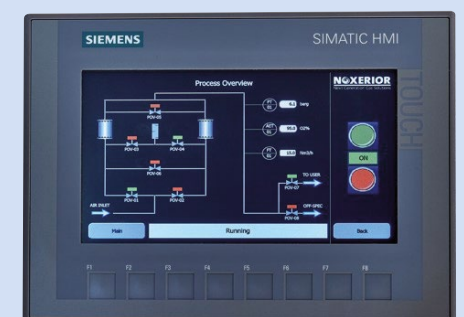
Detail of modular PSA aluminum banks, based on single modules concept.



Designed with
NOXERIOR
Next Generation Gas Solutions
A company of **NOVAIR**



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 touchscreen series with colour touch screen



First class components

Your NITROSWING® generator should work, always. That is why we are using first class components like stainless steel process piping, 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 nitrogen.

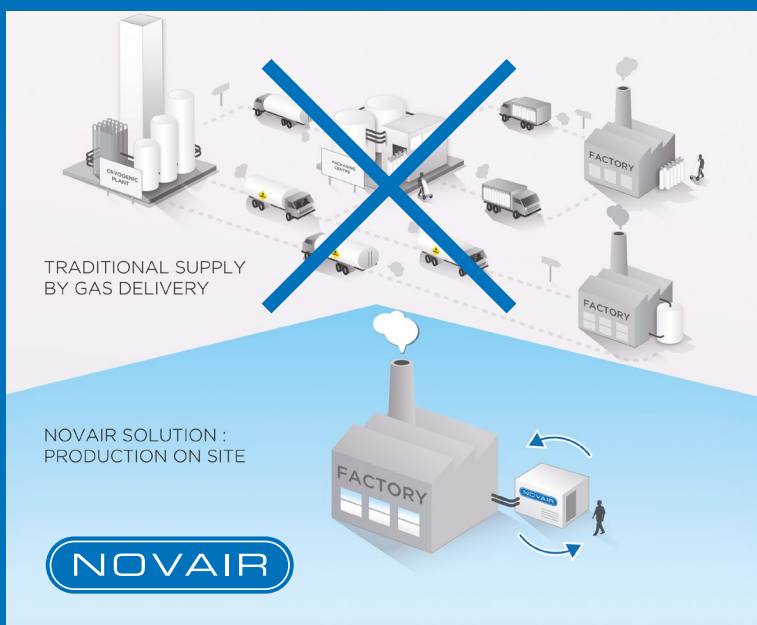
Certified quality

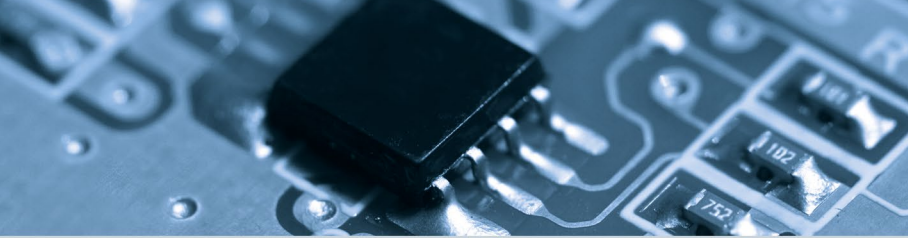
A reliable, safe and stable nitrogen production are essential features of NITROSWING® generators. They comply with the European Pressure Equipment Directive 2014/68 EU. For food applications, we can provide food grade certificates upon request.

Why produce nitrogen on-site?

Benefits:

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





Technical datas

NITROSWING® nitrogen production flow - Nm3/h

Inlet pressure 7 or 10 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	7bar	2.2	2.9	3.5	4.8	5.7	8.3	10.0	12.2	13.1
	10bar	2.6	3.5	4.2	5.9	7.0	10.1	11.6	14.3	15.4
NS-14	7bar	4.4	5.8	7.0	9.6	11.4	16.5	19.8	24.3	26.1
	10bar	5.2	7.0	8.3	11.8	14.0	20.1	23.0	28.4	30.7
NS-21	7bar	6.6	8.7	10.5	14.4	17.0	24.6	29.6	36.3	39.0
	10bar	7.8	10.4	12.4	17.7	20.9	30.0	34.3	42.5	45.9
NS-28	7bar	8.7	11.5	13.9	19.1	22.5	32.7	39.3	48.1	51.8
	10bar	10.4	13.8	16.5	24.6	28.2	39.8	45.6	56.4	60.9
NS-37	7bar	10.9	14.4	17.3	23.8	28.1	40.7	48.9	59.9	64.5
	10bar	12.9	17.2	21.5	30.6	35.0	49.5	56.7	70.1	75.7
NS-42	7bar	13.0	17.2	20.7	29.4	34.5	48.6	58.4	71.5	77.0
	10bar	15.4	20.6	25.6	36.6	41.9	59.1	67.8	83.8	90.5
NS-49	7bar	15.1	20.1	24.3	33.0	38.9	56.4	67.8	83.1	89.4
	10bar	17.9	23.9	29.8	42.5	48.6	68.7	78.7	97.3	105.1
NS-56	7bar	17.2	22.9	27.7	37.5	44.3	64.2	77.1	94.5	101.7
	10bar	20.3	27.2	33.9	48.3	55.3	78.1	89.5	110.7	119.5
NS-74*	7bar	21.8	28.8	34.6	47.6	56.2	81.4	97.8	119.8	129.0
	10bar	25.8	34.4	43.0	61.2	70.0	99.0	113.4	140.2	151.4
NS-84*	7bar	26.0	34.3	41.4	58.8	69.0	97.2	116.8	143.0	154.0
	10bar	30.8	41.2	51.2	73.2	83.8	118.2	135.6	167.6	181.0
NS-98*	7bar	30.2	40.2	48.6	66.0	77.8	112.8	135.6	166.2	178.8
	10bar	35.8	47.8	59.6	85.0	97.2	137.4	157.4	194.6	210.2
NS-112*	7bar	34.4	45.8	55.4	75.0	88.6	128.4	154.2	189.0	203.4
	10bar	40.6	54.4	67.8	96.6	110.6	156.2	179.0	221.4	239.0

*Dual Banks composed of one master and one slave unit

Dimensions and Weights

NITROSWING® PSA generator	Dimensions L x W x H mm / inch	Weight kg / lbs
NS-7	520 x 830 x 1422 20 x 33 x 56	256 564
NS-14	520 x 955 x 1422 20 x 38 x 56	366 807
NS-21	520 x 1183 x 1422 20 x 47 x 56	476 1049
NS-28	520 x 1411 x 1422 20 x 56 x 56	586 1292
NS-37	520 x 1639 x 1422 20 x 64 x 56	696 1534
NS-42	520 x 1867 x 1422 20 x 74 x 56	806 1777
NS-49	520 x 2095 x 1422 20 x 82 x 56	916 2019
NS-56	520 x 2323 x 1422 20 x 91 x 56	1026 2262



Nitrogen & Oxygen Generators

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



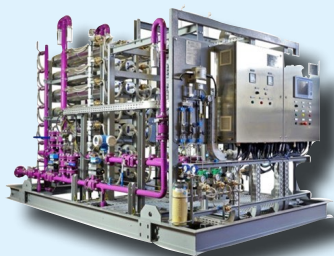
Feed Air Units



Medium & High Pressure Gas Boosters



Engineered Packages



NOXERIOR

Next Generation Gas Solutions

GRUPE

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