



**NITROSWING®**  
*Nitrogen is yours*

# Nitrogen is in the air... and it is yours...

## Air separation

has always been a specialization of the IGS group.

Our nitrogen and oxygen generation systems present in every corner of the world, testify to the thirty years of experience behind our group.

With its three production facilities in the United States, Asia and Europe, and the numerous sales and after-sales centers in the world, Innovative Gas Systems sets top-quality standards everywhere.

Each system is designed, manufactured and commissioned according to the procedures of our quality system, which is regularly updated and optimized.

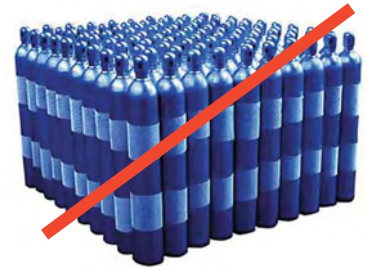


Our nitrogen generation systems provide inert gas with the correct quality for food packaging, to bottle and store wine, water, milk and edible oils, controlled atmosphere for fruit storage, for chemical and pharmaceutical processes, for laser cutting, for wave-and reflow-soldering, for Gas Assist Injection Moulding and for all other applications where nitrogen is indispensable to avoid explosions or product oxidation.



...don't buy what you already have. Now...

The solution exists to all problems tied to the supply of nitrogen. No longer you have to deal with supply difficulties, handling of high-pressure cylinders, evaporation of liquid gas, hazards of storage, unused gas still in returned cylinders, financial costs for rental and stock management.



The NITROSWING<sup>®</sup> nitrogen generators provide the most simple and economic solution for producing nitrogen according to your needs and with desired purity. Press the start button and your NITROSWING<sup>®</sup> will work for you automatically.

Discover the advantages:

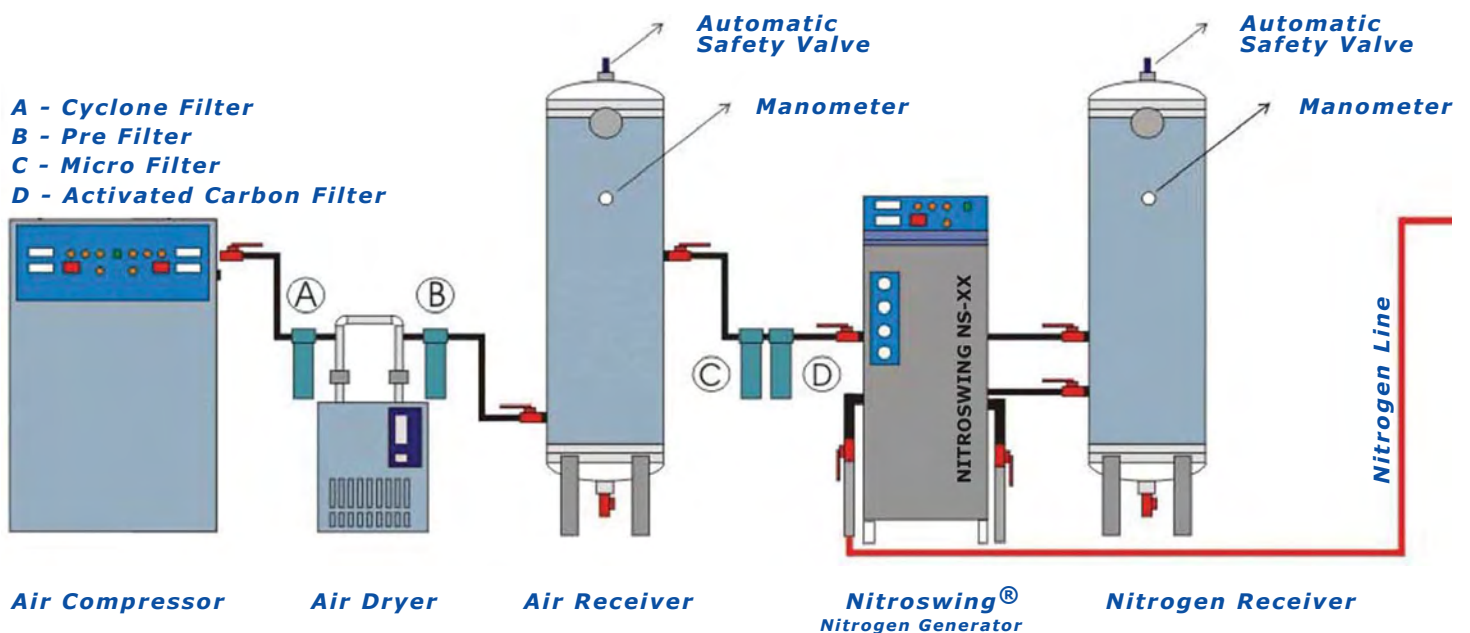
- **INEXPENSIVENESS**  
You are no longer subject to price increases from your gas supplier;
- **SAVINGS**  
No rental, filling, delivery or order management costs;
- **UNLIMITED SUPPLY**  
Nitrogen always available, without any risk of running out of stock;
- **PERSONALIZED PURITY**  
You can choose between 3% and 10 ppm of residual oxygen;
- **CONSTANT AND SAFE PURITY**  
The residual oxygen is constantly checked through a high accuracy analyser;
- **COMPACT DESIGN AND REDUCED DIMENSIONS**  
Small footprint, easy installation;
- **SAFETY**  
No more high-pressure cylinders storage, handling and changeover risks;
- **EXPANDABILITY**  
You can increase the supply of nitrogen whenever you want by simply adding modules or banks.





...you can make it by yourself...

**PSA (Pressure Swing Adsorption)** technology permits the production of nitrogen by pressurization with compressed air of two adsorption towers filled with molecular sieve in cyclic alternation.



While one of the towers is in the adsorption phase, the other will be regenerated by reducing the pressure. The NITROSWING® nitrogen generators combine cycling times and molecular sieve characteristics in the best possible way, achieving maximum productivity and efficiency. The result is nitrogen at the desired purity level, in total safety, without any waste, with low energy consumption and minimum environmental impact.

You can use either your own air compressor for the necessary feed air supply or a dedicated air compressor will be supplied together with your NITROSWING® PSA nitrogen generator.



...with all the advantages...

The features of the NITROSWING® range provide you the maximum advantages in terms of convenience and simplicity.

- Expandable without making any substantial changes to the system;
- Pipes, valves and air treatment already sized for the maximum extension.
- FlatFlow® gas distribution system for unmatched performance and efficiency;
- Components from primary suppliers available throughout the world;
- No need for any feed air adsorption dryer upstream the nitrogen generator, which significantly reduces your energy consumption;
- Minimum maintenance requirements;
- Oxygen analyser with zirconium oxide sensor for maximum measurement stability and no need for yearly calibration;
- Electronic flow meter fitted inside the metal cabinet;
- Telemetry for remote monitoring and control of your NITROSWING® PSA nitrogen generator;
- Touch panel or semi-graphical HMI.



## Simple, fast and safe extension

NITROSWING® allows you to add modules without complete disassembly of the unit, avoiding the risk of contamination of the molecular sieve inside the towers.

Would you like to double or even triple the flow rate of your NITROSWING® system?

Choose the DUAL BANK option, just one control system for a double or triple machine.



...and as much as you want...

The NITROSWING<sup>®</sup> product range covers all possible nitrogen requirements. Thanks to the modular design and the DUAL BANK system option there are virtually no supply limits.

Performance table

Flow Nm <sup>3</sup> /h with air inlet pressure at 7,5 bar(g)								
Purity % O <sub>2</sub>	NS-5	NS-10	NS-20	NS-25	NS-30	NS-35	NS-40	NS-45
0,001	1,3	2,5	3,9	5,2	6,4	7,6	9,2	10,5
0,005	2,0	4,0	5,8	7,6	9,3	10,9	12,4	13,9
0,01	2,2	4,4	6,5	8,7	10,9	13,1	15,2	17,4
0,1	3,7	7,4	11,1	14,8	18,5	22,2	25,9	29,6
0,5	6,9	13,8	20,6	27,5	34,4	41,3	48,1	55,0
1	8,0	16,0	24,0	32,0	40,0	48,0	56,0	64,0
2	9,8	19,6	29,4	39,2	49,1	58,9	68,7	78,5
3	11,1	22,1	33,2	44,3	55,4	66,4	77,5	88,6

The use of the Dual Bank System will double or triple the above mentioned flow rates

Maximum compactness, minimum space

MODEL	DIMENSIONS mm	WEIGHT Kg
NS-5	520 x 700 x 1340	210
NS-10	520 x 930 x 1340	315
NS-20	520 x 1160 x 1340	420
NS-25	520 x 1390 x 1340	525
NS-30	520 x 1620 x 1340	630
NS-35	520 x 1850 x 1340	735
NS-40	520 x 2080 x 1340	840
NS-45	520 x 2310 x 1340	945

#### Technical specifications

N <sub>2</sub> outlet pressure:	max. 8,3 bar(g)
Air inlet pressure:	max. 10 bar(g)
N <sub>2</sub> dew point:	-50°C @ 1 bar(a)
Power supply:	230V/1ph/50Hz - 60Hz
Energy consumption:	0,3 kW
Ambient temperature range:	5° - 45°C

#### Main applications

- Food & Beverage
- Electronics
- Metallurgy
- Plastics
- Oil & Gas
- UV Curing
- Tire Inflation



SAFETY · HIGH RELIABILITY · LOWEST ENERGY CONSUMPTION · LOW MAINTENANCE

...because nitrogen is yours.

**You can personalize** your system supplied on a single skid or mounted inside ISO container. All components of your packaged system will be selected according to the ambient conditions of the installation site. Before shipment, each NITROSWING® system undergoes stringent testing, which also can be performed with your presence for major transparency.



**After-sales service** is an integral part of our philosophy. Our technicians reach customers all over the world to check correct installation, system commissioning and customer personnel training.

We can also provide you programmed maintenance for your NITROSWING® PSA nitrogen generator, including the assistance of a qualified technician and the application of genuine spare parts.



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