



## Description

**NITROGEN** - A line of robust, reliable and modular Nitrogen generators, based on Pressure Swing Adsorption (PSA) technology using state-of-the-art Carbon Molecular Sieves adsorbents.

SYSADVANCE generators produce high purity Nitrogen from compressed air, allowing continuous availability at a very competitive cost, compared to alternative supply with cylinders or cryogenic tank.

**NITROGEN** eliminates all disadvantages associated to purchase and operation costs of high-pressure cylinder systems or cryogenic tanks, enabling a permanent source of Nitrogen, with minimum energy consumption and maintenance requirements.

**NITROGEN** is designed to be easily installed in any indoor facility, requiring only a compressed air line and a power connection.

With purities up to 99.999% of N<sub>2</sub>, **NITROGEN** can be connected to an external buffer allowing a backup or a delay of production/consumption according to the needs of each application.

The modular philosophy of SYSADVANCE **NITROGEN** generators allows the installation of multiple parallel units.

## Optionals

- » Dedicated Air Compressor
- » Pressure Booster for pressures up to 40 bar
- » Food Pack filter kit
- » Remote GSM-GPRS Monitoring
- » Oxygen Monitor

## Advantages

- » Return on investment in less than 2 years.
- » Independence from external gas suppliers and from fluctuation of the Nitrogen market price.
- » Suppression of logistic operations like handling of cylinders or liquid Nitrogen supplier management.
- » Modular, flexible and low maintenance units.
- » Don't waste more money buying Nitrogen!

## Applications

Nitrogen in gas state is used in a wide range of industries and applications. Its main use is to act as an inert agent, suppressing Oxygen and other unwanted gases in process and storage containers.

Industry	Application
Food and MAP Processes	» Packaging of juice, milk, water, coffee
	» Olive Oil
	» Wine storage and production
	» Cooking Oil
	» Milling
	» Cold storage of fresh vegetables
Electronics	» Laser cutting
	» Heat treatments
Pharmaceuticals	» Packaging
	» Process
Foundry	» Nitration
	» Blanketing
Metal Works	» Heat Treatment
	» Aluminium extrusion
	» Laser cutting
Chemical	» Reservoir blanketing
	» Solvent blanketing
	» Fuel storage
	» Polymer production
	» Solvent paint production
Automotive	» Tyre inflation
	» Leak testing
Other	» Pest control
	» Copper cable production
	» Moulding injection

## Main Technical Specifications

Nitrogen Purity	Up to 99.999%
Nitrogen Pressure	Up to 8.5 bar <sup>(1)</sup>
Minimum Air Pressure	6 bar
Maximum Particle Content	0.01 µm
Electrical Consumption <sup>(2)</sup>	120 w @ 230 VAC

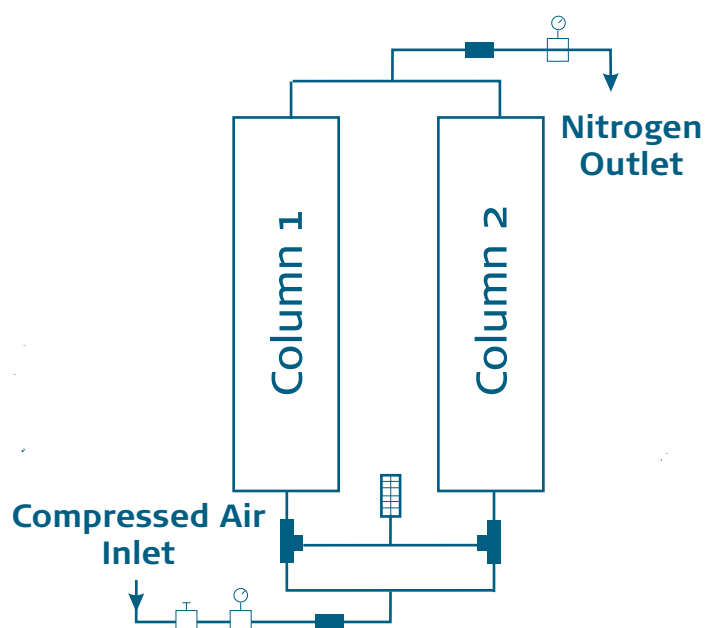
<sup>(1)</sup> For higher Nitrogen pressures solutions please contact us.

<sup>(2)</sup> Electrical Consumption for a Nitrogen 120.



## PSA Technology

Nitrogen generators incorporate sets of columns filled with Carbon Molecular Sieves. Under pressure these columns retain all compounds present in air (Oxygen, Carbon Dioxide and Water), which tie to the molecular sieve during the building of pressure, with the exception of the inert gases Nitrogen and Argon. This process is known as PSA (Pressure Swing Adsorption).

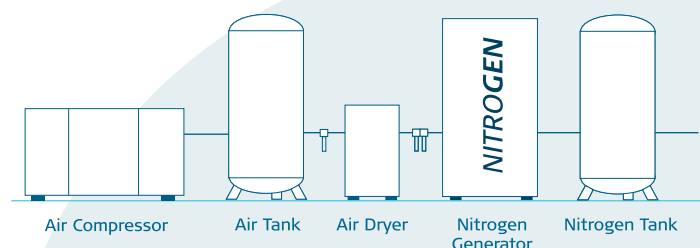


The modular philosophy of SYSADVANCE generator systems allows the installation and operation of multiple parallel units, in order to ensure a constant flow at the required purity.

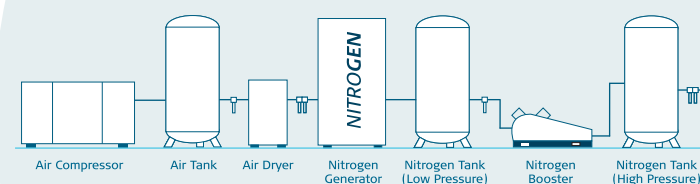
## Standard Installations

The installation is designed according to the customer needs, however the standard installations are shown below:

### Low Pressure Diagram



### High Pressure Diagram



## Performances

Model	N <sub>2</sub> Flow (Nm <sup>3</sup> /h)		
	99 %	99.9%	99.999%
NITROGEN 5	1.14	0.6	0.18
NITROGEN 10	2.4	1.29	0.4
NITROGEN 15	3.7	1.9	0.6
NITROGEN 30	8.8	4.4	1.1
NITROGEN 50	14.6	7.3	1.9
NITROGEN 90	21.1	11.1	3.4
NITROGEN 120	29.3	16.0	5.1
NITROGEN 400	112.2	56.1	12.4
NITROGEN 600	168.3	84.1	18.6
NITROGEN 800	200.2	100.0	22.1
NITROGEN 1000	259.5	129.6	28.7
NITROGEN 1200	311.4	155.5	34.4