



# NITROGEN GENERATOR NITROPLUS

On site nitrogen production  
up to 99,999% purity

Novair has designed a high efficiency nitrogen generator based on the PSA technology. This is the perfect response to industrials that need high purity nitrogen and want to gain autonomy while reducing their operating costs.

## Main features & benefits

- Turnkey solution
- Fully automatic process
- Various flow rates and purities available
- Highly competitive production cost
- Remote monitoring & alarm functions

## Designed for

- Food & beverage packing & processing
- Laser cutting
- Metal inerting
- Laboratories / chromatography
- Electronics



On site nitrogen production up to 99,999%

## Optimised PSA technology

Nitroplus nitrogen generators by Novair Industries are based on the Pressure Swing Adsorption (PSA) process. This technology is a static separation of air gases through a specific molecular sieve capable to adsorb oxygen, carbon dioxide and water vapor under pressure. Novair R&D has optimized the process to obtain a high and stable nitrogen purity – up to 99,999%, at a very competitive cost.

Designed for a simple and quick installation, they include:

- 2 PSA sieve beds
- 1 monitoring system CPU Controller with digital screen
- 1 separate nitrogen receiver equipped for nitrogen service
- 1 air inlet filter (25 µm and 0.1 µm)
- 1 submicronic nitrogen outlet filter

## High efficiency

For a long lasting performance, a low energy consumption and an easy & limited maintenance, Nitroplus generators feature :

- Ergonomic design
- High efficiency molecular sieve
- Reliable, tested and controlled components

Their open-ended concept enables to interconnect several lines.

## Additional features & available options

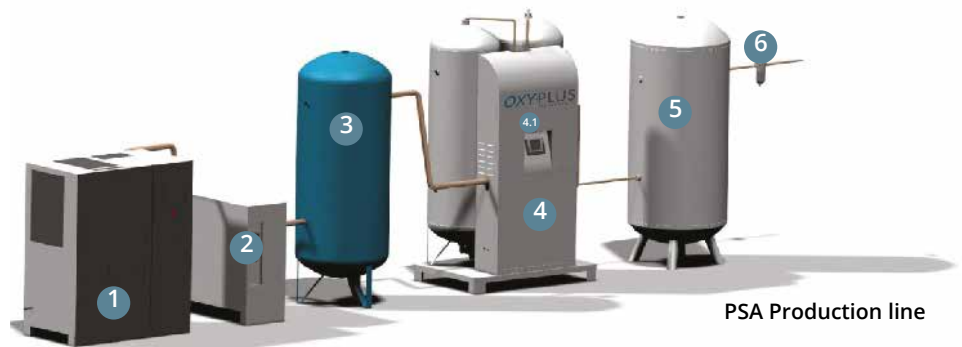
- Air compressor
- Air Dryer
- Air tank
- Containerized or skid mounted plant
- Cylinder filling system
- Gas booster
- Gas analyzers
- Flowmeter
- Remote monitoring



CPU Controller<sup>®</sup> control panel

## Automatic monitoring

Nitroplus nitrogen generators are automatically managed by the CPU controller, a device based on a PLC system comprising a logic controller, a digital screen and an ergonomic control panel. Key informations such as nitrogen concentration, hour meter or alarm reports are displayed on CPU screen. Very easy to use, the CPU Controller is available in several languages.



- 1 Lubricated screw air compressor
- 2 Air treatment line
- 3 Compressed air tank
- 4 PSA generator
- 4.1 CPU controller
- 5 Oxygen tank
- 6 Particle filter

On site nitrogen production up to 99,999%

## Inlet & environmental parameters

Compressed air	
Air pressure min / max	7,5 / 10 bar
Outlet pressure	Jusqu'à 7 bar*
Air quality	ISO 8573-1: class 1.4.1
Air inlet diameter (" G)	3/4" to 2"1/2
Oxygen outlet diameter (" G)	1/2 à 1
Dew point	+3°C

\* Possibility to increase the outlet pressure upon request

Operating conditions		
Version	Standard	With Upgrade
Ambient temperature	Up to 25°C	Up to 50°C
Altitude	< / =1000m	> 2000m
Humidity	50% @ 40°C (80% MAX ≤31°C)*	
Power supply	230-110 V / 50-60 Hz	

\* Specific humidity conditions handled upon request

Do not expose to outdoor impurities (rain, sand, heavy dust)

## Plant room

### 1/ Dedicated room:

The plant room provided should be exclusively dedicated to the nitrogen production unit. It shall contain no storage or warehousing of any product whatsoever. In particular, the presence of flammable materials is strictly prohibited.

- **Minimum dimensions:** according to the layout plan approved by Novair Industries (see example in the back).
- **Ground:** concrete slab to level.
- **Overload:** calculated for a load of 1 000 kg/m<sup>2</sup> minimum.
- **Coating:** smooth screed with floor paint or hard coating quartz type.

### 2/ Evacuation of condensate:

A connection point for the evacuation of condensed water linked with wastewater has to be provided in the room.

### 3/ Ventilation :

Provide a fresh air Intake – minimum 0.10 m<sup>2</sup> per Kw and a air extraction ventilator at the top of the room.

Warm air compressor should be wrapped and vented outside through ducts made of sheet insulating double pots.

Avoid installing the evacuation of hot air at the same side as the entry of cold air.

The room temperature must be above +5 °C and below the maximum temperature in the defined specification.

### 4/ Electrical cabinet :

Power supply cabinet must be installed on premises.

Details of requested power features will be provided by Novair Industries for each facility.

It must include a ground line in accordance with the regulations in force.

### 5/ Lighting:

The room should be well lit, especially around compressor(s) and generator(s).

### 6/ Fire safety :

Security measures must be taken and displayed at the entrance of the premises:

- Smoking ban
- Open fire ban
- Sprinklers installation



On site nitrogen production up to 99,999%

## NITROPLUS range of generators

Nitrogen flow in Nm<sup>3</sup>

Nitrogen Purity	95%	97%	98%	99%	99,5%	99,9%	99,95%	99,99%	99,995%	99,999%
Residual O <sub>2</sub>	5%	3%	2%	1%	0,5%	0,1%	500 ppm	100 ppm	50 ppm	10 ppm
Nitroplus 5	24	19	17	15	12	8	7	4	3	2
Nitroplus 10	48	39	34	29	24	16	13	8	6	5
Nitroplus 15	73	58	51	44	36	24	20	12	9	7
Nitroplus 20	97	77	68	58	48	32	27	16	12	10
Nitroplus 27	131	104	91	78	65	44	36	22	16	13
Nitroplus 30	145	116	102	87	73	49	40	24	18	15
Nitroplus 40	193	155	135	116	97	65	53	32	24	19
Nitroplus 50	242	193	169	145	121	81	67	40	30	24
Nitroplus 60	290	232	203	174	145	97	80	48	36	29
Nitroplus 72	348	279	244	209	174	117	96	57	44	35
Nitroplus 90	435	348	305	261	218	146	120	72	54	44
Nitroplus 120	580	464	406	348	290	194	160	96	73	58
Nitroplus 150	726	580	508	435	363	243	200	120	91	73
Nitroplus 200	967	774	677	580	484	324	266	160	121	97

Each generator is factory-calibrated for a given purity.  
Flow performance +/- 5%

Flexible design available for indoor and outdoor locations



Skid- mounting with power cabinet



In container equipped with power cabinet, ventilation and lighting