



Product Profiles

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PSA TECHNOLOGY

PSA Nitrogen Generator incorporates Two sets of columns filled with Carbon Molecular Sieves CMS. Under Pressure these columns retain all compounds present in air (Oxygen, Carbon Dioxide and Water) with the exception of the inert gases (Nitrogen and Argon). This process is referred as PSA (Pressure Swing Adsorption).

Description

NITROLINE A line of robust, reliable and modular Nitrogen generators, based on Pressure Swing Adsorption (PSA) technology incorporating state-of-the-art Carbon Molecular Sieves CMS Adsorbents.

Mellcon PSA Nitrogen 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 the 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 99.9999% of **N₂**, **NITROGEN** can be connected to an external buffer allowing a reserve or a delay of production/consumption in accordance to the needs of each application.

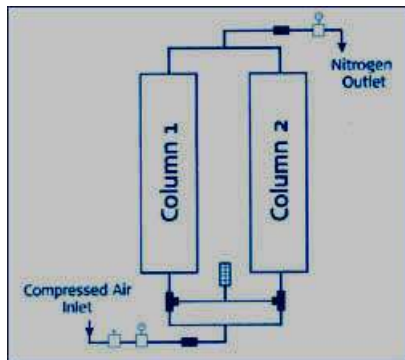
Advantages

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

Industry	Application
FOOD and MAP Processes	<ul style="list-style-type: none"> ● Packaging of juice, milk, water, coffee ● Olive Oil ● Wine Storage and Production ● Cooking Oil ● Milling ● Cold Storage of fresh vegetables.
ELECTRONICS	<ul style="list-style-type: none"> ● Laser Cutting ● Heat Treatments
PHARMACEUTICALS	<ul style="list-style-type: none"> ● Packaging ● Process
FOUNDRY	<ul style="list-style-type: none"> ● Nitration ● Blanketing
METAL WORKS	<ul style="list-style-type: none"> ● Heat Treatment ● Aluminium extrusion ● Laser Cutting
CHEMICAL	<ul style="list-style-type: none"> ● Reservoir Blanketing ● Solvent Blanketing ● Fuel Storage ● Polymer production ● Solvent paint Production
AUTOMOTIVE	<ul style="list-style-type: none"> ● Tyre inflation ● Leak testing
OTHER	<ul style="list-style-type: none"> ● Pest Control ● Copper Cable production ● Moulding Injection

Main technical Specification	
Nitrogen Purity	Up to 99.999 %
Nitrogen Pressure	Up to 83.5 bar
Minimum Air Pressure	6 Bar
Maximum Particle Content	0.01 µm
Electrical Consumption	120 W @ 230 VAC



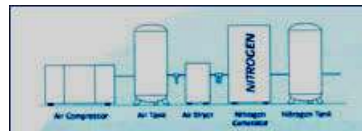


A modular PSA Nitrogen Generator system allows synchronized operation of several parallel units. in order to ensure a constant flow at the required purity.

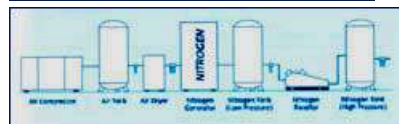
Standard Installations

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

Low Pressure Diagram



High Pressure Diagram



Model	Flow (N ₂ Nm ³ /h)			
	99%	99.5%	99.9%	99.999%
NITROLINE 5	1.00	0.8	0.50	0.20
NITROLINE 10	2.50	1.6	1.10	0.30
NITROLINE 15	3.00	2.4	1.60	0.50
NITROLINE 30	7.10	5.5	3.60	1.00
NITROLINE 50	11.80	9.2	6.00	1.70
NITROLINE 90	18.01	13.7	9.50	2.90
NITROLINE 120	26.00	20.4	13.80	4.40

The above capacities are rated at 7.0 bar Air Pressure

OUR PRODUCT RANGES			
Air / Gas Dryers			
Heatless Air Dryer		Refrigerated Air Dryer	
Custom Made Air Dryer		High Pressure Air/Gas Dryer	
Blower Heat Regenerated Air Dryer (BHR)		Internal Heater Dryer (IHR)	
Heat of Compression Air Dryer (HOC)		Split Flow-No Purge Loss Air Dryer (SFNL)	
Chillers			
Air Cooled Water Chiller upto30Tr		Water Cooled Chiller up to 150Tr	
Packaged Dry Air Plants		Liquid CO2 Storage Tanks	
Packaged Dry Air Plant		Liquid CO2 Storage Tank	
Refrigerants			
Recovery system			
Other Products			
Auto Drain Trap	Air Receiver	Liquid Dryer	Walk in Cooler
Water Cooled After Cooler	Dew Point Apparatus		Hot Air Blowing Equipment

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