

# Nitrogen Gas Generator

« Serie Mini Alize / Mini Z-Alize »

F-DGS's range of laboratory Nitrogen Gas Generators are some of best designed PSA Nitrogen Gas Generators available. Utilizing the reliable and efficient PSA technique of separating Nitrogen and Oxygen is used to produce high quality Nitrogen Gas at various flows and purities (see performance data).

The Generator is controlled using the latest in HMI touch screen technology to display the process in real time, inlet/outlet pressures and oxygen level (optional).

#### Application :

- GC-NPD • GC-FPD • GC-ECD • GC-AED • GC-MS
- TOC • Atomic absorption
- Sample evaporation
- TGA • DSC



## BENEFITS AND SAVINGS

### > Increased laboratory efficiency

A constant, uninterrupted gas supply of guaranteed purity eliminates interruptions of analyses to change cylinders and reduces the amount of instrument re-calibrations required.

### > Improved economy

Pure nitrogen gas produced as standard

### > Improved safety

Nitrogen produced at low pressure and ambient temperature removes the need for high pressure cylinders

### > Security of supply

Integral oil free air compressor as an option guarantees continuous gas supply, independent of in house compressed air supply

### > Simple installation

Gas generators can be installed in the laboratory, on or under a bench, eliminating the need for long gas lines from cylinders secured elsewhere

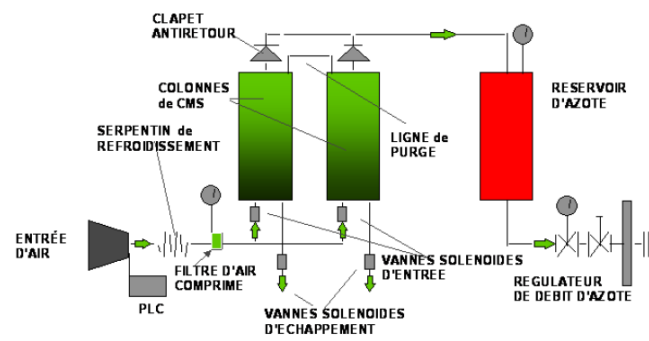
## STANDARD FEATURES

- Fully regenerative PSA technology : reduced risk of gas contamination and phthalate free
- HMI touch screen technology to display the process in real time, including process variables
- Options :
  - Integral oil free air compressor
  - Oxygen analyser
  - Catalyst module for hydrocarbons level < 0.05 ppm (for Mini Z-Alize)
- Quiet thanks to the Soundproofed compressor box and anti-vibration features
- Auto start
- Remote PC monitoring using internet via USB port
- Audible alarm display with help menu and history log
- Visual maintenance indication with history log

The Nitrogen generator use pressure swing adsorption technology (PSA) to produce pure nitrogen gas.

This technique uses a bed of carbon molecular sieve (CMS) to selectively remove oxygen and other contaminants from atmospheric air. The bed alternates between purification and regeneration modes to ensure continuous nitrogen production.

The gas generator is designed to take compressed air at 7 or 8 bar (101 or 116 psi) (depend on models) from an integral oil free air compressor which is firstly pre filtered. This filtered compressed air stream is then passed to the CMS bed currently in purification mode. Whist passing through the bed, the oxygen, carbon dioxide, moisture and some hydrocarbons are removed from the compressed air, resulting in a product stream of clean, dry, high purity nitrogen gas.



| N2 flow rate L/min via O2 content |   |                       |                       |                  |                                      |                    |
|-----------------------------------|---|-----------------------|-----------------------|------------------|--------------------------------------|--------------------|
| Models                            |   | 5 ppm<br>(> 99.9995%) | 100 ppm<br>(> 99.99%) | Outlet pressure  | Dimensions<br>(W x H x D)            | Weight<br>(kg/lbs) |
| Mini ALIZE-300                    | 0 | 0.3                   | 0.6                   | 5.5 bar (80 psi) | 36 x 40 x 54 cm<br>(14" x 15" x 21") | 29 / 64            |
|                                   | 1 |                       |                       |                  |                                      | 34 / 75            |
| Mini ALIZE-600                    | 0 | 0.6                   | 1.2                   |                  |                                      | 30 / 66            |
|                                   | 1 |                       |                       |                  |                                      | 35 / 77            |
| Mini Z-ALIZE-300                  | 0 | 0.3                   | 0.6                   |                  |                                      | 31 / 68            |
|                                   | 1 |                       |                       |                  |                                      | 36 / 79            |
| Mini Z-ALIZE-600                  | 0 | 0.6                   | 1.2                   |                  |                                      | 32 / 70            |
|                                   | 1 |                       |                       |                  |                                      | 37 / 81            |

|   |                    |
|---|--------------------|
| 0 | without compressor |
| 1 | with compressor    |

\* The letter "Z" means that there is a catalyst module integrated to have total hydrocarbons content < 0.05 ppm

|                                                     |                                      |
|-----------------------------------------------------|--------------------------------------|
| Ambient Temp range                                  | 5 - 25°C (41 - 77°F)                 |
| Maximum air Inlet Pressure                          | 8 bar (116 psi)                      |
| Air Inlet Requirement<br>(units without compressor) | Dewpoint : -40°C (-40°F)             |
|                                                     | Particulate : < 1 micron             |
| Electrical Supply<br>(+/-10 % tolerance)            | Oil : < 0.01 mg/m <sup>3</sup>       |
|                                                     | 100 - 120 V a.c. / 1 ph / 50 - 60 Hz |
| Inlet / Outlet connections                          | 200 - 240 V a.c. / 1 ph / 50 - 60 Hz |
|                                                     | G 1/4" (BSP) Female                  |

## GoldService

Satisfaction Guaranteed

The products are guaranteed 12 months. Beyond, your investment continues to be supported by our maintenance program "Gold Service". Our world class technical assistance offers Programmed preventive maintenance to ensure optimal performance of your Gas generator F-DGSi and a priority intervention in case of failure.

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