



# COMBINE AIR / NITROGEN GAS GENERATOR

## SERIE ANG / ZANG

The combine N<sub>2</sub>/Air generator eliminates the need for costly, inconvenient high pressure cylinders in the laboratory. Including an integral oil free air compressor in option, the combine nitrogen/air generators deliver a continuous stream of pure nitrogen gas > 99,9995% and grade purified air with HCs content <0,1ppm, ideal for applications, such as, GC carrier gas, make up and GC-FID.

Nitrogen is produced by pressure swing adsorption (PSA) to remove oxygen, carbon dioxide and water from compressed air and purified air is produced by using an activated alumina column.



Application :

- GC-FID , carrier gas, make up

### 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 and Pure air gas produced as standard

#### ■ Improved safety

Nitrogen and Pure Air 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

- \* **Various flow rate**
- \* **Options:**
  - Integral oil free air compressor
  - Oxygen analyser
  - Catalyst module for hydrocarbon level<0.05ppm
- \* **Auto start**
- \* **Alarm display with help menu**
- \* **Audible alarm sounder**
- \* **Outlet flow indicator**
- \* **Trend graphs for QA reporting**
- \* **Energy saving Mode**
- \* **Compressor over temperature alarm**
- \* **Remote access to screen using internet or GSM**

#### ENERGY SAVING MODE:

The generator has a real-time calendar and clock which can be easily updated no matter where you are in the World. By using the Auto-Run function you can select when the generator runs giving you complete control of your gas supply and saving energy.

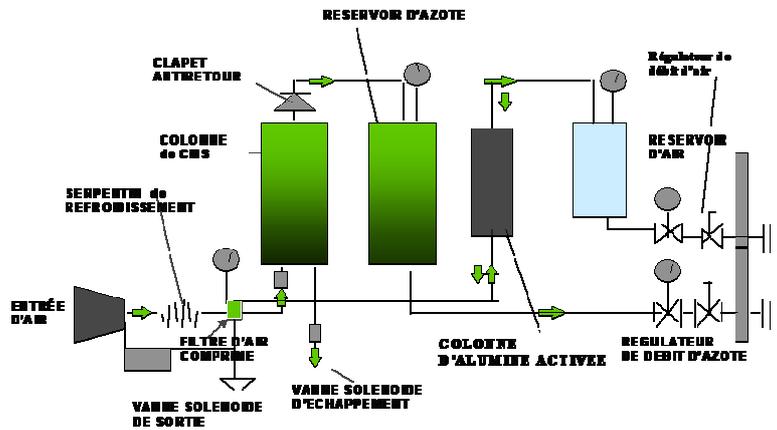
Example: If your laboratory working hours is 8am to 6pm, set the generator to start at 5am to ensure you have high quality gas at 8am and have it switch off at 7pm, reducing running time and energy by some 55%.

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The combine nitrogen/air generator use pressure swing adsorption technology (PSA) to produce pure nitrogen gas and an additional bed of activated alumina for air purification.

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 8 barg 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. Whilst 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.



### TECHNICAL SPECIFICATIONS

Specifications	ANG1/1	ANG1/0	ANG3/1	ANG3/0
Max. N2 flow rate > 99,9995%	1L/min		3L/min	
Purified Air flow rate (HCs < 0,01 ppm and water dewpoint < - 55°C)	1.5L/min		3L/min	
Outlet pressure	5,5 bars			
Integrated air compressor <55 dB	yes	no	yes	no
Electrical supply	230 V			
Connexion	1/4" BSP			

\* option ZERO NITROGEN/AIR ( ZANG ) : include a catalyst : HC< 0.05 ppm for N2 gas

### Dimensions and Weights

Enclosure Size	Height mm (ins)	Width mm (ins)	Depth mm (ins)	Weight Kg (*)
Without compressor	650 (25)	320 (12.5)	650 (25.5)	45
With compressor	725 (28.5)	450 (17.7)	665 (26.1)	80

### Technical Data

Ambient Temp range	5-35°C (41-95°F)
Maximum air Inlet Pressure	8 barg (116 psig)
Nitrogen Outlet Pressure	See above table
Air Inlet Requirement (units without compressor)	Dewpoint: -40°C (-40°F)
	Particulate: <1 micron
	Oil: <0.01 mg/m <sup>3</sup>
Electrical Supply	220v a.c. / 1ph / 50Hz or
	110v a.c. / 1ph / 50-60Hz
Inlet / Outlet connections	G 1/4" (BSP) Female

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