

*One Stop Laboratory Solution...*

# Lab Gas Generators



- High Reliability & Easy for Operation
- Compact Size
- Best Quality & Better Performance
- Over 500+ Installation in India & Internationals
- CE, ISO, FDA approved

**2** YEARS  
WARRANTY



Athena Technology, an ISO 9001: 2015 Certified Company is a reputed manufacturer, exporter and trader of high quality scientific instruments and laboratory equipments. Our unparalleled array of products includes Nitrogen Evaporator, Nitrogen Gas Generator, Zero Gas Generator and Hydrogen Gas Generator.

Under the brand name Athena, our products are known for their high efficiency, unmatched reliability, high durability, proven performance.



- Safe and convenient
- Compact structure.
- Take up very little laboratory space.
- Nitrogen generators supply ideal ultra pure nitrogen for GC (Gas Chromatography), LC/MS (Liquid Chromatograph / and Thermal Analyzer).
- Continuously generate ultra pure nitrogen through Pressure Swing Adsorption (PSA) technology.
- No longer need to use inconvenient and dangerous high pressure nitrogen cylinders in laboratory.

# Nitrogen Gas Generator GC

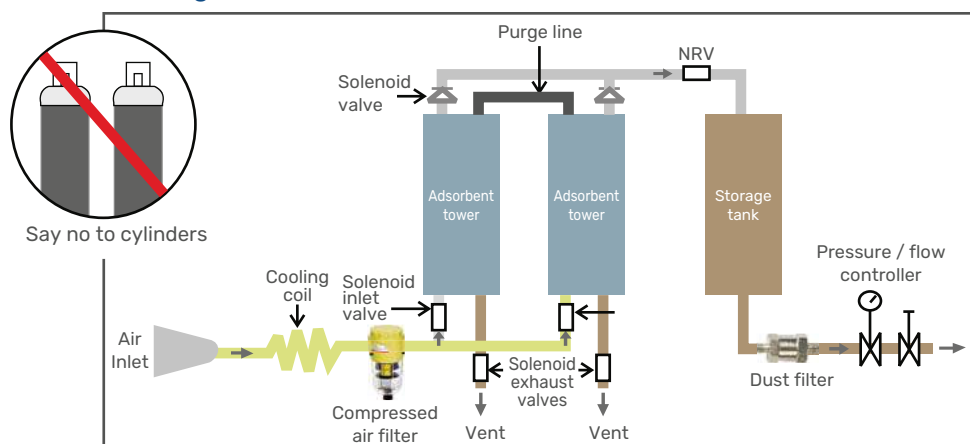


- N2 purifier to remove O2 and all other unwanted impurities to produce nitrogen up to UHP grade.
- Automatic heatless air dryer time based operation.
- Surge receiver with pressure regulator & valve inbuilt.
- Nitrogen, air gas with regulator, gauge and toggle valve (inbuilt) SS tank.
- Air filters for moisture, dust and oil, must removal (set of 2 filters).

### Silent Features:

- Deliver constant pressure & flow
- Fully Automatic Programmable System
- Easy Maintenance and space saving
- Effortless and easy operation
- Improves instrument performance
- CE & ISO 9001:2015 FDA Certified
- Fully regenerative, durability with PSA (pressure swing adsorption) technology
- CAD Detector

### Schematic Diagram of Gas Generator



### Technical Specification

Model	Gas Output	Flow rate	Application
ATN-02	Nitrogen Gas Generator	<b>Flow:</b> N2 = 200 ml/min <b>Purity:</b> 99.999% <b>Pressure:</b> 7 bar	For 2 GCs Gas Chromatographs
ATN-05	Nitrogen Gas Generator	<b>Flow:</b> N2 = 500 ml/min <b>Purity:</b> 99.999% <b>Pressure:</b> 7 bar	For 5 GCs Gas Chromatographs

# Nitrogen + Air Combination Gas Generator for GC

Nitrogen Generator uses PSA technology to separate N<sub>2</sub> from the Air, whole Athena equipment is control by the programs. The Flow output & pressure of N<sub>2</sub> are quite stable, The physical method to produce Nitrogen by PSA technology. The Nitrogen generator has advantages of no pollution, no corrosion. It could longer GC lifetime. It is very safety to use, longer life time, stable quality, and very easy to use. It could completely meet requirement for kinds of GC.



## Silent Features:

- It can replace the high pressure nitrogen cylinder to make the laboratory instrumented and ensure the safety.
- Automatic control of working process, simple operation and convenient daily maintenance.
- Digital display of nitrogen production is convenient for observing instrument working state and fault judgment.
- Long service life, continuous or intermittent use, stable gas production and no attenuation.
- Program controlled intelligent self diagnosis function and service prompt function, easy to maintain.
- Highly integrated modular structure design, saving laboratory space.
- The system has built-in pressure stabilizing unit of air storage tank and safety valve design with international standards.
- Movable design with caster, easy to facilitate move.

## Machine Characters:

- Two CMS tower, with world top quality molecular sieve from Japan.
- Stainless steel gas tank inside to guarantee gas purity.
- Two levels pressure stable valves to guarantee very stable output pressure.
- Three levels gas purification system to guarantee very high output purity.
- Flow and pressure are both adjustable. Gas produced on demand.
- Continuously generate ultra-pure nitrogen through Pressure Swing Adsorption (PSA) technology.
- Compressor inside, no needing any external air source.
- Produce ultra pure nitrogen for GC (Gas Chromatography), LC/MS (Liquid Chromatograph / Mass Spectroscopy) and Thermal Analyzer.

## Technical Specification

Model	Gas Output	Flow rate	Application	
ATNA-05	Nitrogen + Air Combination Gas Generator	<b>Flow:</b> N <sub>2</sub> = 500 ml/min <b>Air</b> = 5000 ml/min <b>Purity:</b> 99.999% <b>Pressure:</b> 7 bar	For 5 GCs Gas Chromatographs	GC-FID GC-FPD GC-NPD GC-ECD GC-TCD
ATNA-02	Nitrogen + Air Combination Gas Generator	<b>Flow:</b> N <sub>2</sub> = 200 ml/min <b>Air:</b> 2000 ml/min <b>Purity:</b> 99.999% <b>Pressure:</b> 7 bar	For 2 Gcs Gas Chromatographs	GC-ATD AT-AED GC-ELSD

# Zero Air Generator For GC & TOC



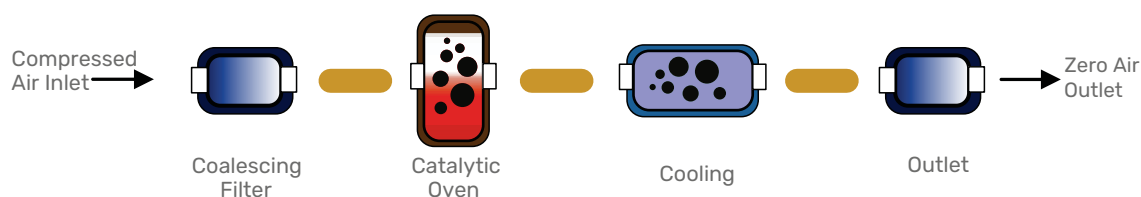
- Zero Air Generator for TOC Analyzer produces a continuous flow of high purity Zero Air at selected pressure.
- System has built in moisture separator with Air Filter & Desiccant Air Dryer
- The modular pressure swing adsorption (PSA) unit operates with the alternating pressure increase and decrease.
- Untreated Air Flows under pressure through the reaction towers containing molecular sieve adsorber
- Moisture, CO, CO<sub>2</sub>, THC and other unwanted components in the air are adsorbed, leaving Zero Air Gas of required purity.
- The Zero Air Generators are suitable for use in the laboratories for Online TOC Analyzer

## Silent Features:

- Deliver constant pressure & flow
- Fully Automatic Programmable System
- Easy Maintenance and space saving
- Effortless and easy operation
- Improves instrument performance
- CE & ISO 9001:2015 FDA Certified
- Fully regenerative, durability with PSA (pressure swing adsorption) technology

## Applications:

- GC-FID, FPD, NPD, TCD, AED
- GC-MS, LC-MS-MS, ICP / NMR
- FTIR/IR, ELSD detector
- Purging, Ampule Filling
- Analytical Grade
- Turbo Evaporator
- TOC Analyzer
- TOC Online Analyzer



## Technical Specification

Model	Gas Output	Flow rate	Application	
ATZ-05	Zero Air Gas Generator	<b>Flow:</b> Air = 5000ml/min <b>Purity:</b> 99.999% <b>Pressure:</b> 5-6 bar	For 5 GCs Gas Chromatographs	GC-FID,GC-FPD GC-NPD,GC-ECD GC-TCD,GC-ATD AT-AED,GC-ELSD
ATZ-02	Zero Air Gas Generator	<b>Flow:</b> Air = 2000ml/min <b>Purity:</b> 99.999% <b>Pressure:</b> 5-6 bar	For 2 Gcs Gas Chromatographs	THA, DSC Air, TGATOD, CO <sub>2</sub> Analyzer Sample Prep Autosamplers ELSD
ATZ-T	Zero Air Gas Generator	<b>Flow:</b> Air = 4000ml/min <b>Purity:</b> 99.999% <b>Pressure:</b> 5-6 bar	For TOC Analyzer Gas Chromatographs	Detector Particle sizing by Laser Diffraction TOC

# N2 & H2 & Air Combination Gas Generator

Athena N2 & H2 & Air generators achieve the perfect combination of nitrogen, hydrogen and Air. Compact structure and easy operation make it the ideal gas generator. This product can be applied to various gas chromatography and analysis instruments at home and abroad. N2 & H2 & Air Generator has the characteristics of three-in-one, three-in-one, compact design and simple operation. It is an ideal laboratory instrument to replace traditional cylinder gas.

## Applications:

- Petroleum
- Pesticide
- Tobacco Power Generation
- Wine Making
- Environmental Monitoring
- Universities
- Other Departments Monitoring
- Chemical
- Fertilizer
- Drug Testing
- Water Quality Testing
- Disease Control Centres
- Research Institutes
- Indoor Environmental Monitoring

## Silent Features:

- Start the switch, safe and reliable.
- Adjusted automatically
- Anti-liquid device
- LED digital display
- Anti-impact anti-aging filter
- High purity of gas
- One-time addition of alkali,
- Automatic drainage
- Stainless steel gas storage tank
- Can be used for 24 hours in a row
- Preferable in gas chromatographs at home and abroad.
- It can replace traditional high pressure cylinders.
- Easy to operate
- Pressure stability
- Low noise and strong purification ability
- System three-stage filtration (no oil)
- Long service life and easy maintenance



## Technical Parameters

Model:	AT-NAH-300
Nitrogen Outflow:	0~300 ml/min
Air Outflow:	0~2000 ml/min
Hydrogen Outflow:	0~300 ml/min
H2, N2 Air output pressure:	5 kg/cm <sup>2</sup> (0-60 psig)
Air output pressure:	0-4 kg/cm <sup>2</sup> (0-60 psig)
H2/N2/Air purity:	99.999%
Moisture:	< 2 ppm
Oxygen:	< 3ppm
Voltage:	~220V±10% 50Hz
Power:	450W
Water tank:	H2 2.5 liters
Ambient temperature:	5°~40°
Dimension (mm):	500 × 440 × 380
Weight:	40 kgs
Hydrogen technology:	SPE / PEM
N2 & Air technology:	PSA (Pressure Swing Adsorption)
Water Quality Demand:	Deionized water or Double distilled water

