

Gas Generators



2 Years
Warranty

 **Athena**TM
Technology
One Stop Laboratory Solution...

- Compact Size
- Best Quality & Better Performance
- Over 300+ Installation in India & Internationals



Nitrogen Generator & Zero Air Gas Generator for GC& TOC



Salient Features:

- Deliver constant pressure & flow
- Fully Automatic Programmable System
- Easy Maintenance and space saving
- Effortless and easy operation
- Improves instrument performance
- CE & ISO 9001:2008 Certified
- Fully regenerative, durability with PSA (pressure swing absorption) 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

High Capacity Nitrogen Gas Generator

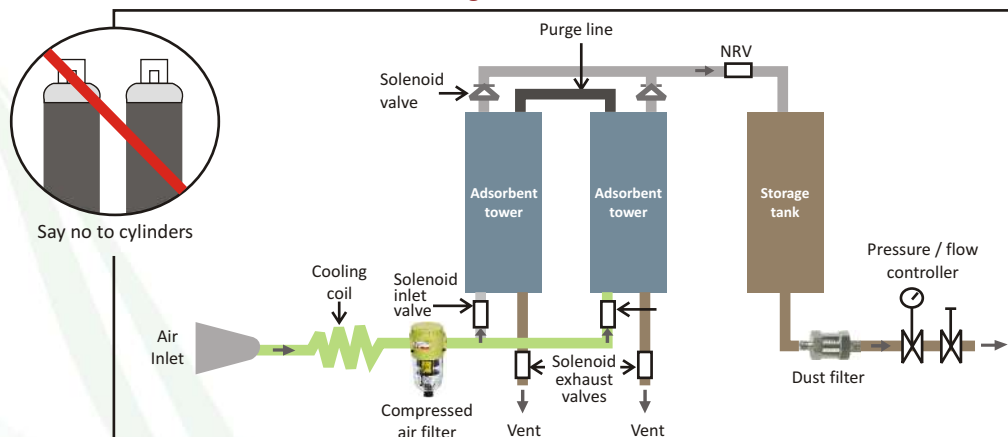
Nitrogen Gas Generator

N₂ gases for purging in pouch packing with Receiver Tank purity (99.99% - 99.9995%) which consist of

- N₂ purifier to remove O₂ and all other unwanted impurities to produces nitrogen upto 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)
- **Method of purification:** PSA (pressure swing adsorption) & depressurizations
- **Valves:** PLC based pneumatic 2 way
- **Gas outlet:** ¼" or ½" BSP male
- **Built-in reservoir:** Storage tank provided
- **Power supply:** 230 V AC, 50 Hz, 1 Ph 1.5 / 110 VAC 60 HzS
- **Micron filters:** Micron filters provided
- **Safety valve & gauges:** Safety valve, pressure gauges, electronic timer and solenoid valve provided
- **Warranty and spares:** 2 year from the date of acceptance



Schematic Diagram of Gas Generator



Technical Specification

Model	Gas Output	Flow rate	Application	
ATNA-05	Nitrogen + Air Combination Gas Generator	Flow : N2 = 500 ml/min Air = 5000ml/min Purity : 99.999% Pressure : 7 bar	for 5 GCs Gas Chromatographs	GC-FID GC-FPD GC-NPD GC-ECD
ATNA-02	Nitrogen + Air Combination Gas Generator	Flow : N2 = 200 ml/min Air = 2000ml/min Purity : 99.999% Pressure : 7 bar	For 2 GCs Gas Chromatographs	GC-TCD GC-ATD AT-AED GC-ELSD
ATN-05	Nitrogen Gas Generator	Flow : N2 = 500 ml/min Purity : 99.999% Pressure : 7 bar	For 5 GCs Gas Chromatographs	THA DSC Air TGA
ATN-02	Nitrogen Gas Generator	Flow : N2 = 200 ml/min Purity : 99.999% Pressure : 7 bar	For 2 GCs Gas Chromatographs	TOD CO2 analyzer Sample Prep
ATZ-05	Zero Air Gas Generator	Flow : N2 = 5000 ml/min Purity : 99.999% Pressure : 7 bar	For 5 GCs Gas Chromatographs	Autosamplers ELSD Detector Particle sizing by Laser Diffraction
ATZ-02	Zero Air Gas Generator	Flow : N2 = 2000 ml/min Purity : 99.999% Pressure : 7 bar	For 2 GCs Gas Chromatographs	TOC
ATZ-T	Zero Air Gas Generator	Flow : N2 = 500 ml/min Purity : 99.999% Pressure : 7 bar	For TOC Analyzer Gas Chromatographs	

ZERO AIR GENERATOR for GC, TOC & Online 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 alternating pressure increase and decrease.
- Untreated Air Flows under pressure through the reaction towers containing molecular sieve adsorber .
- Moisture, CO, CO2, 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 laboratories for Online TOC Analyzer.

N2 & H2 & Air Combination Gas Generator



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:	0~4 kg/cm ² (0-60 psig)
• H2/N2 purity:	99.999%
• 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°
• Water Quality Demand:	Deionized water or Double distilled water
• Dimension:	500 × 440 × 380 (mm)
• Weight:	40 kgs
• N2 & Air technology:	PSA (Pressure Swing Adsorption)
• Hydrogen technology:	SPE / PEM



Nitrogen Generator for LC-MS / LC-MS-MS& Turbo Vap Evaporator

- Nitrogen Generator produces a continuous flow of high purity Nitrogen at selected pressure.
- The modular pressure swing adsorption (PSA) unit operates with alternating pressure increase and decrease.
- Untreated air flows under pressure through the reaction towers containing carbon molecular sieves adsorber. Moisture, CO, CO₂, THC, O₂ and other unwanted components in the air are adsorbed, leaving Nitrogen Gas of required purity.
- During the desorption cycle, the trapped substances adsorbed are released again at low pressure and the adsorber is ready for next cycle.
- Flow range available from 10 LPM to 30 LPM and above.

For LCMS

Model	Gas Output	Flow rate	Application	
ATN-LCMS1	Nitrogen Gas Generator	N ₂ : 6 LPM - 40 LPM Purity :MS grade Pressure : 7 bar	Nitrogen generator compatible with most LC-MS instruments	Suitable for most LC-MS instruments
ATN-LSMS2	Nitrogen Gas Generator	Nitrogen : 65 LPM Purity : MS grade Pressure : 7 bar	Nitrogen generator developed for LC-MS instruments requiring higher flow rates	N ₂ supply for range of laboratory applications including LC-MS

For LCMS-MS

Model	Gas Output	Flow rate	Application	
ATN-LCMSMS-1	Nitrogen Zero Air Curtain Dry Air Gas	Nitrogen : 4 LPM Zero Air : 12 LPM Dry Air : 8 LPM Purity : MS grade Pressure : 7 bar	Suitable for selected Sciex LC-MS instruments LCMS	API/LCMS APCI, Electrospray LCMC/MS, TOF
ATN-LCMSMS-2	Nitrogen Zero Air Curtain Gas	Nitrogen : 12 LPM Zero Air : 24 LPM Dry Air : 14 LPM Purity : MS grade Pressure : 7 bar	Suitable for all Sciex LC-MS instruments	Air for nebulizer gas Nitrogen for curtain and sheath shield gas
ATN-LCMSMS-3	Nitrogen Zero Air Curtain Gas	Nitrogen : 24 LPM Zero Air : 48 LPM Dry Air : 32 LPM Purity : MS grade Pressure : 7 bar	Suitable for selected LC-MS MS instruments with higher flow requirements	
ATN-LCMSMS-4	Nitrogen Zero Air Curtain Gas	Nitrogen : 36 LPM Dry Air : 26 LPM Purity : MS grade Pressure : 7 bar	Nitrogen generator developed for Agilent MP-AES instruments	

Warranty:

- 24 months (2 years) warranty for Athena Nitrogen Air Gas generator
- If any technical problem during warranty time, replacement parts will be sent free of charge.
- Technical support is also available in whole time.

Our Advantage

- Reply your enquiry in 24 working hours.
- Experienced staffs answer all your questions in fluent English.
- OEM is available if the quantity is large.
- We offer very competitive for all our products.

After-sales

- Our machines undergo an extensive and strict testing and quality control procedure, ensuring every item purchased meet global quality standards .It's safe and reliable quality for Gas Generators .
- Eliminates dangerous and costly gas cylinders & dewars
- Improves instrument accuracy, sensitivity, and performance
- Safer by operating at low pressure
- Pays for itself, typically, in less than one year
- Compact design frees up valuable laboratory floor space



ATHENA TECHNOLOGY

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