



Peak Scientific Gas Generators

# Gas Generatoren

## Wasserstoff, Stickstoff, Luft

Wir liefern die besten Gas Generatoren für Ihre Anwendungen und sorgen mit perfektem Service für den reibungslosen Betrieb in Ihrem Labor.

# Introducing Peak

All it takes is experience, passion and a dynamic environment to produce the best gas generators in the world!

We have been around long enough to see all the changes in the world of laboratory gas. Our expert knowledge and willingness to continually improve has allowed us to grow into a global company.

'Service & Support' is not just a phrase we use; it's a deep rooted belief! To us the relationship with our customer starts long before our service engineers come to visit.

Our product development is based on matching specific needs. That's why Peak works hand in hand with instrument manufacturers to ensure superb technical performance.

Smoother, quieter and more efficient than anything else on the market; our laboratory gas generators are well established and will stand the test of time.

**Peak Scientific. Go with the flow.**



## Genius Range

The NM32LA Nitrogen Gas Generator is the building block of our Genius Products.

Its ingenious design has been proven to be smoother, quieter, safer and more efficient than anything else on the market today.

Extensive testing of the generator by Mass Spec Manufacturers throughout the development process has guaranteed the best solution for your LC/MS. Through continuous cooperation with instrument manufacturers, we have been able to design a range of Genius Products suitable for your specific application.

<b>Nitrogen</b>	32 L/min @ 6.9 bar / 1.13 CFM @ 100 psi
<b>Min/ Max Operating Temperature</b>	5°C - 35°C / 41°F - 95°F
<b>Max Relative Humidity</b>	80% Non-Condensing
<b>Max Altitude</b>	2000 Metres
<b>Particles</b>	< 0.01µm
<b>Gas Outlets</b>	1x 1/4" BSP Female
<b>Phthalates</b>	None
<b>Suspended Liquids</b>	None
<b>Noise Level</b>	54 dB(A) @ 1m
<b>Electrical Requirements</b>	230v 50/60Hz 7.0A
<b>Power Consumption</b>	1610 Watts
<b>Dimensions (cm/ ins) WxDxH</b>	60 x 75 x 71.2 / 23.6 x 29.5 x 28
<b>Weight (kg/ lbs)</b>	95 / 209

“...We have nothing to declare but our Genius.”



Pictured: Genius 3010 & NM32LA

## Features & Benefits:

### Convenience

Gas on demand

Easy to move

No need to wait for cylinder delivery

### Mass Spec manufacturer approved

Rigorously tested by manufacturers to ensure purity requirements are met

Complimented on outstanding reliability

### Low Noise & Vibration

Separate insulated compressor compartment

Anti vibration compressor mounts

### Space Saving Design

Maximum use of valuable laboratory floor space

### Outstanding Service Capabilities

We aim to provide an instant response by telephone or email

Engineer on-site expected between 48h-72h for contract customers

95% first time fix rate

### Minimum Service Requirements

Only one annual service required

### Simple Installation

Generator designed as a plug and play system

Model	Gas Outlet	Features
Genius NM32LA	32 L/min N2	Nitrogen generator suitable for most LC/MS instruments including <b>Agilent, Bruker, Perkin Elmer, Shimadzu, Thermo Scientific, Waters</b> and many more.
Genius N118LA	18 L/min N2	Nitrogen Generator developed for <b>Thermo / Dionex MSQ+</b>
Genius ABN2ZA	12L/min N2 24 L/min Dry Air 8 L/min Dry Air	For use with the <b>AB SCIEX</b> range of LC/MS instruments, up to and including the latest AB5600.
Genius AB3G	12L/min N2 24 L/min Dry Air 8 L/min Dry Air	For use with the <b>AB SCIEX</b> Range of LC/MS instruments, up to and including the latest AB5600. Premium model including fail safe compressor technology to ensure maximum up time.
Genius NM3G	30 L/min N2	For use with any LC/MS instrument. Premium model including fail safe compressor technology to ensure maximum up time. Recommended for clinical application where maintaining gas flow is imperative.
Genius 1022	30 L/min N2	Nitrogen generator with pressure requirements of 116psi specifically designed for the <b>Thermo Q Exactive</b> LC/MS.
Genius 1023	32 L/min N2	Nitrogen Generator switchable between standard LC/MS grade Nitrogen and the 10% Oxygen rich Nitrogen required for <b>Agilent Chip Cube</b> .
Genius 1050	32 L/min N2	Nitrogen generator utilising CMS technology.
Genius 1052	32 L/min N2	Nitrogen generator for <b>LECO</b> modulators.
Genius 3010	64 L/min N2	Nitrogen generator developed for Agilent iFunnel Technology LC/MS 6490 & LC/MS 6550.
Genius 3013	64 L/min N2	Nitrogen Generator developed for Agilent iFunnel Technology LC/MS 6490 & LC/MS 6550, switchable between standard LC/MS grade Nitrogen and the 10% Oxygenrich Nitrogen required for <b>Agilent Chip Cube</b> .
Genius 3020	2 x 32 L/min N2	Nitrogen generator developed to supply two LC/MS systems, with independent control.
Genius 3022	2 x 32 L/min N2	Nitrogen generator developed to supply two <b>Thermo Q Exactive</b> LC/MS, with independent control.
Genius 3023	2 x 32 L/min N2	Nitrogen generator developed to supply two Agilent LC/MS, with independent control, switchable between standard LC/MS grade Nitrogen and the 10% Oxygen rich Nitrogen required for <b>Agilent Chip Cube</b> .
Genius 3030	2 x 12L/min N2 2 x 24 L/min Dry Air 2 x 8 L/min Dry Air	Nitrogen generator developed to supply two <b>AB SCIEX</b> LC/MS instruments, with independent control.
Genius 3031	16 L/min N2 25 L/min Dry Air 24 L/min Dry Air	Nitrogen generator designed to supply <b>AB SCIEX 6500</b> or other AB SCIEX LC/MS with high flow requirement.
Genius 3040	1 x 12 L/min N2 1 x 32 L/min N2 24 L/min Dry Air 2 x 8 L/min Dry Air	Designed to supply one <b>AB SCIEX</b> LC/MS system, up to and including the 5600. In addition the generator includes a separate 32L/min of LC/MS grade Nitrogen available for a second LC/MS instrument.
Genius 3045	32 L/min N2 50 L/min Dry Air	The Genius 3045 Nitrogen Generator is specifically designed for use with the <b>Bruker EVOQ Triple Quad</b> . This generator will supply a single application and provide Nitrogen gas as well as a separate Dry Air output.

## Infinity Range

The Infinity series delivers performance and value far beyond expectations. Offering a pure and reliable source of gas, these perpetual flow Nitrogen generators are suitable for a variety of applications in your laboratory.

Expertly designed by Peak Scientific's knowledgeable Engineering team, the Infinity 50 series will offer a single generator solution for up to 16 LC/MS instruments whereas the Infinity 90 series offers a single generator solution for one or multiple Nitrogen evaporators.

“One Peak Infinity generator will supply multiple applications and remove the need for costly cylinders and reduce your carbon footprint enormously.”



Pictured: Infinity 1031 & Infinity 5010

## Features & Benefits:

### Durable

Few moving parts with minimum maintenance requirements

### Single Source Solution

One generator can cater for the requirements of multiple applications and multiple laboratories on site

### Quiet

Completely silent in operation

### Mobile

Flexibility to position generator where required, the generator is supplied with caster wheels for easy mobility

### Simple Installation

Commission Peak Scientific's expert installation engineers, let us do the work for you

### Economical

More cost effective than any other gas supply method

### Convenient

Gas on demand, no health hazards, no need to worry about running out of gas

### Eco-Friendly

Onsite gas generation considerably reduces your carbon footprint

### Experience

Preferred choice supplier of many instruments manufacturers

### Outstanding Service Capabilities

We aim to provide an instant response by telephone or email

Engineer on-site expected between 48h-72h for contract customers

95% first time fix rate

Model	Gas Output	Application
Infinity 1031	1 x 18 L/min N2 1 x 26 L/min Dry Air 1 x 25 L/min Dry Air	1 x AB Sciex - Full Range
Infinity 1032	1 x 36 L/min N2 1 x 52 L/min Dry Air 1 x 50 L/min Dry Air	2 x AB Sciex - Full Range
Infinity 1033	1 x 54 L/min N2 1 x 78 L/min Dry Air 1 x 75 L/min Dry Air	4 x AB Sciex - Full Range
Infinity 1034	1 x 72 L/min N2 1 x 104 L/min Dry Air 1 x 100 L/min Dry Air	6 x AB Sciex - Full Range
Infinity NM18L	18 L/min N2	LC/MS
Infinity NM32L	32 L/min N2	LC/MS
Infinity 5010	60 L/min N2	LC/MS
Infinity 5020	120 L/min N2	LC/MS
Infinity 5030	180 L/min N2	LC/MS
Infinity 5040	240 L/min N2	LC/MS
Infinity 5050	300 L/min N2	LC/MS
Infinity 5060	360 L/min N2	LC/MS
Infinity 5070	420 L/min N2	LC/MS
Infinity 5080	480 L/min N2	LC/MS
Infinity 9010	140 L/min N2	Turbovap
Infinity 9020	280 L/min N2	Turbovap
Infinity 9030	420 L/min N2	Turbovap
Infinity 9040	560 L/min N2	Turbovap
Infinity 9050	700 L/min N2	Turbovap
Infinity 9060	840 L/min N2	Turbovap
Infinity 9070	980 L/min N2	Turbovap
Infinity 9080	1120 L/min N2	Turbovap

## Hydrogen Generators

Our Hydrogen generators have been specifically designed to cater for the requirements of any GC user. The PH Range offers a robust and reliable solution for FID.

The Precision 500 has been developed to offer ultra high purity hydrogen for your GC carrier gas requirements.

### Hydrogen Generator PH Range

Technical Specifications	PH 200	PH 300	PH 600
Hydrogen	200 cc/min	300 cc/min	600 cc/min
Purity	99.9995%	99.9995%	99.9995%

### Hydrogen Generator Precision 500

Technical Specifications	Precision 500
Hydrogen	500 cc/min
Purity	99.9999%
Moisture	<1ppm

“Peak Scientific has a presence on every continent and we export to 126 countries worldwide.”



Pictured: PH Range & Precision 500

## Features & Benefits:

### Improved Analysis Results

Hydrogen as a carrier gas allows lower detection limits

### Cost

Hydrogen is a less expensive alternative to Helium

### Efficiency

Allows up to 35% faster analysis

### Safety

No pressurised Hydrogen storage and automatic shutdown safety features

### Hydrogen Detector

Optional detector to monitor Hydrogen and ensure no gas build up inside a GC oven

### Purity

99.9995% for PH and 99.9999% for Precision 500

## About Helium and Hydrogen...

Are we running out of Helium? No, not quite. However, there is a shortage causing supply issues and a significant increase in cost.

Many leading GC Manufacturers understand the impact on your laboratory and have started to actively recommend switching your carrier gas from Helium to Hydrogen.

There are major benefits of using Hydrogen as your carrier gas:

- Increased speed: increasing the linear flow rate allows for shorter run times, thereby increasing the throughput of your laboratory
- Lower temperature separations: at the faster elution times, it may not be necessary to increase the column temperature run rate. It may even be possible to lower the maximum temperature needed for the analysis
- Longer column life: lower temperatures lead to less column bleed, which in turn can mean a longer column life. In addition, hydrogen is a reducing gas and can remove potential acidic sites off the column, further increasing column life!
- Availability: Hydrogen is readily available through the electrolysis of water and with a Peak Gas Generator can be generated on demand
- Environmental concerns: because of its availability, Hydrogen is widely regarded as a green gas

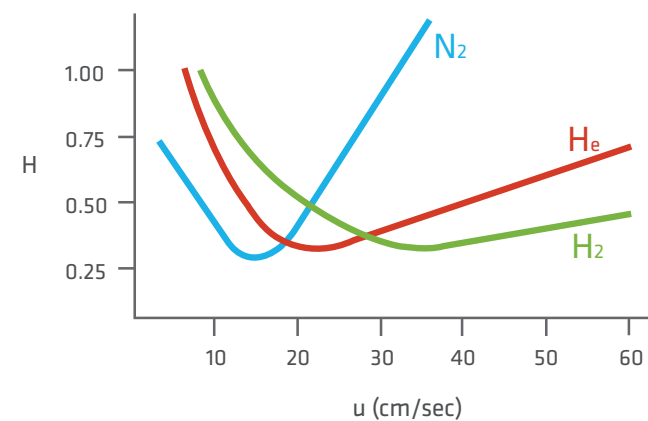
### What about safety?

Hydrogen gas is already being used commonly in the laboratory for a variety of purposes. It is the fuel used on the most commonly used detectors (FID) and therefore already present in most GC Labs.

Nevertheless we understand any concerns you may have and have therefore incorporated numerous safety features in our Hydrogen Generators' design:

- No storage of hydrogen
- Automatic shut down on leak detection
- Mechanical shut down fail safe
- Hydrogen generation on demand

For extra peace of mind, Peak Scientific have further developed a Hydrogen Detector, which can be connected to your GC, measuring the Hydrogen content within the GC oven and alerting you should there be a critical build up.





## PSA Nitrogen Generators

Pressure Swing Adsorption (PSA) has been employed for decades and is the preferred choice for generating Ultra High Purity Nitrogen at low flow rates.

The technology is self-regenerating, offering you a reliable and durable source of Ultra High Purity Nitrogen with little need for attention.

Peak Scientific also produces a range of combi-systems, which supply you with a source of dry, clean Air, as well as UHP Nitrogen.

In addition, we can make our systems available with or without an internal air compressor.

“We are proud to support advances in science with over 10,000 of our products in your laboratories.”



Pictured: PSA Nitrogen

## Features & Benefits:

They just work, and work, and work, and work ...

**Regenerative PSA Technology** makes this possible: the purity of nitrogen generators is always as stated and does not decrease over time - not to mention Peak's long record of reliability.

### Purity

Although PSA generated Nitrogen may still contain traces of argon, the output purity exceeds UHP cylinder gas specifications - and it is more cost effective as well!

### Single Source Solution

One generator can cater for the requirements of multiple applications.

### Simple but Effective

They are easy to install, easy to maintain, easy to use and easy on the eye as they are small enough to be placed anywhere in your lab.

### A Real Cost Saver

No more reordering, storing and changing of cylinder gas- saving you money all along the way.

### Support

Our world class after sales service comes as standard.

## High Purity Nitrogen Generators NG Range

	NG250(A)	NG600(A)	NG1000(A)	NG2000(A)	NG3000(A)	NG4000(A)	NG5000(A)
<b>UHP Nitrogen</b>	250 cc/min	600 cc/min	1,000 cc/min	2,000 cc/min	3,000 cc/min	4,000 cc/min	5,000 cc/min
<b>Nitrogen Purity*</b>	99.9995%	99.9995%	99.9995%	99.9995%	99.9995%	99.9995%	99.9995%
<b>Pressure**</b>	80psi / 0.5 bar	80psi / 0.5 bar	80psi / 0.5 bar	80psi / 0.5 bar	80psi / 0.5 bar	80psi / 0.5 bar	80psi / 0.5 bar

## High Purity Nitrogen Generators and Dry Air Combi-Systems ANG Range

	ANG250(A)	ANG600(A)	ANG1000(A)	ANG2000(A)
<b>UHP Nitrogen</b>	250 cc/min	600 cc/min	1,000 cc/min	3,000 cc/min
<b>Dry Air</b>	1,200 cc/min	1,500 cc/min	1,500 cc/min	3,000 cc/min
<b>Nitrogen Purity*</b>	99.9995%	99.9995%	99.9995%	99.9995%
<b>Pressure**</b>	80psi / 0.5 bar	80psi / 0.5 bar	80psi / 0.5 bar	80psi / 0.5 bar

\*Nitrogen content is devoid of Oxygen.

\*\*Compressor based systems only.

## Fusion 1010

Peak's Fusion 1010 ingeniously provides two high purity gases from one system and has a unique 'rapid restart' control allowing it to be operational again after any power cut in a fraction of the time normally required. A huge benefit in areas where power supply is erratic, Fusion 1010 delivers reliable high performance in the laboratory. Designed specifically for use with GC- ECD and GC- FID. It may also be used with THA applications.

<b>Zero Nitrogen</b>	0.6 L/min @ 7.6 bar - 0.021 CFM @ 80 psi
<b>Zero Nitrogen Purity (O2 content)</b>	99.9995%
<b>Zero Nitrogen Hydrocarbon Content (as Methane)</b>	< 0.1ppm
<b>Zero Air</b>	1.5 L/min @ 60 psi - 0.052 CFM @ 4.14 bar
<b>Zero Air Hydrocarbon Content (as Methane)</b>	< 0.1ppm
<b>Internal Air Compressor</b>	Yes

“Peak exclusively source robust, high performance parts to ensure our generators are safe, reliable and meet your performance needs in the lab.”



Pictured: Fusion 1010

## Features & Benefits:

### Zero Nitrogen & Zero Air

Catalyst chamber ensures removal of Hydrocarbons to < 0.1ppm

### Unique Design

Only gas generator to supply Zero Nitrogen and Zero Air from two separate outlets whilst the internal air compressor ensures independence from external air sources

### Optimum Analysis

Zero Nitrogen and Zero Air for improved stability and greater reproduction of results with guaranteed purity

### Rapid Restart

Fusion 1010 has been designed to allow for almost immediate supply of Zero Nitrogen and Zero Air after power- cuts of up to 20 minutes

### Quiet in Operation

Not audible in normal working lab environment

### Mobile

Flexibility to position generator where required, even under standard lab bench, our generators are supplied with caster wheels for easy mobility

### Support

Our world class after sales service comes as standard



Ryan Scott (Peak Technician)

## Zero Air Generators

The catalyst chambers inside our Zero Air Generators make sure compressed air is stripped of all hydrocarbons before it is fed into your application.

Available in different shapes and sizes, dependent or independent from external air supplies, Peak Zero Air Generators can fulfill all of your requirements.

Of course, minimal maintenance and a long, trouble-free Generator life come as a Peak standard.

“At Peak, we work as a team to help ensure the best solution for our customers. The robust designs, simple installation and minimal maintenance mean we can offer you long-term value for money.”



Pictured: ZA015 & ZA300

## Features & Benefits:

### Complete Convenience

No more changing cylinders! Save not only the time and money, but also the need to recalibrate your instrument.

### So much more than an Air Purifier

Our zero air generators produce air with a total hydrocarbon concentration of less than 0.1 ppm.

### Plug & Play

The generator is very easy to install and does what you want it to do - with minimum maintenance requirements.

### Compact

Most of our zero air generators are very compact in size and nicely fit anywhere in your laboratory. Others are so small and light they can be attached to the lab wall, not taking any laboratory space.

### Support

Our world class after sales service comes as standard.

	ZA015	ZA035(A)	ZA070(A)	ZA180(A)	ZA300
<b>Application</b>	FID, FPD, ECD, THA	GC, TGA, TMA, TOD	GC, TGA, TMA	GC, TGA, TMA, TOD	GC, TGA, TMA, TOD
<b>Zero Air</b>	1,500 cc/min	3,500 cc/min	7,000 cc/min	18,000 cc/min	30,000 cc/min
<b>Outlet CH<sub>4</sub> Concentration</b>	< 0.1 ppm	< 0.1 ppm	< 0.1 ppm	< 0.1 ppm	< 0.1 ppm
<b>Max Inlet CH<sub>4</sub> Concentration</b>	100 ppm	100 ppm	100 ppm	100 ppm	100 ppm
<b>Particles</b>	< 0.01 µm	< 0.01 µm	< 0.01 µm	< 0.01 µm	< 0.01 µm
<b>Max Outlet Pressure</b>					
<b>- units without internal compressor</b>	125 psi / 8.6 bar	125 psi / 8.6 bar	125 psi / 8.6 bar	125 psi / 8.6 bar	125 psi / 8.6 bar
<b>- units with internal compressor</b>	80 psi / 5.5 bar	80 psi / 5.5 bar	80 psi / 5.5 bar	80 psi / 5.5 bar	80 psi / 5.5 bar

## Our other Gas Generators

Over the years Peak Scientific has developed a wide range of air purifiers which cater for the requirements of various applications, such as FT-IR, TOC and CO2 Analyzers.

Most of these products offer gas free of organic contaminants, such as Carbon Oxides and Hydrocarbons making them ideal for environmental analysis.

We also manufacture a range of basic air dryers that can be used to prevent moisture contamination through in house air or other air sources.

“All of our generators offer superb technical performance in the lab and, of course our world class after sales service comes as standard!”



Pictured: STOCA & TOC1500

**Features & Benefits:**

**Reliability**

Sturdy design ensures maximum uptime of your application

**Purity**

Clean, dry carbon dioxide and hydrocarbon free air

**Mobile**

Flexibility to position generator where required

**Simple Installation**

Designed as plug & play system

**Economical**

More cost effective than any other gas supply method

**Convenient**

Gas on demand, no health hazards, no need to worry about running out of gas

TOC

	TOC1500	TOC1500HP	SCTOCA
TOC	1,500 cc/min	1,500 cc/min	500 cc/min
CH4 Content as methane	<2.0 ppm	<0.1 ppm	<0.1 ppm
CO2 Content	<1.0 ppm	<1.0 ppm	<1.0 ppm
CO Content	n/a	n/a	<1.0 ppm
SOX Content	n/a	n/a	<1.0 ppm
Max Outlet Pressure	Input dependant	Input dependant	80 psi / 5.5 bar

Purge Gas

	PG14L	PG28L	PG85L
Purge Gas	14 L/min	28 L/min	85 L/min
CO2 Content	< 1.0ppm	< 1.0ppm	< 1.0ppm
Max Outlet Pressure	100psi / 6.9 bar	100psi / 6.9 bar	100psi / 6.9 bar

Calibration Gas

	CG15L	CG22L
Calibration Gas	15 L/min	22 L/min
CO2	1.0ppm	1.0ppm
CO	1.0ppm	1.0ppm
THC	0.1ppm	0.1ppm

Air Dryers

	AD70L	AD140L	AD302L	AD1010L
Air Dryer	70 L/min	140 L/min	302 L/min	1010 L/min
Dewpoint	-70°c/- 94°f	-70°c/- 94°f	-70°c/- 94°f	-70°c/- 94°f



## Accessorize with Peak

Gas generators are very straight forward and need very little in the way of accessories. There are just a couple of things you may want to consider for your laboratory:

### Hydrogen Detector

Hydrogen is a combustible gas and we understand the safety concerns associated. To offer that extra peace of mind we developed a Hydrogen Detector, which can be wall mounted above your GC and can detect a potentially dangerous build-up of Hydrogen inside the GC Oven.

### Hydrogen Interconnection Cable

If you would like multiple Precision 500 Generators to work together to offer a source of hydrogen to meet your lab requirements you will require this Interconnection Cable. One cable is required for every pair of Precision 500 Generators to work in series mode.

### Boost Transformers

If your power supply does not quite offer the voltage required by our gas generators, you can use these Peak approved Boost Transformers to ensure the technical requirements are met.

### Service Kits

Our service kits are not really accessories for our generators, but a vital part in maintaining the system's performance. We recommend for every Peak Generator user, who has not opted in to one of our service plan options, to purchase these Service Kits on an annual basis. Your User Manual should highlight the appropriate service kit for your generator, but please feel free to contact our service team for advice.

“We test all Peak gas generators under strict conditions to ensure you receive the highest quality as well as value for money.”



Pictured: Precision 500 + Hydrogen Detector Centre