Contents

To order any of our products, please send an email stating the desired generator model to your account manager or simply email **orders@peakscientific.com**

"Many of our generators are a completely new design in terms of engineering and end user benefits."

Genius Series

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.

"...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

Minimum Service Requirements

Only one annual service required for the majority of users

Simple Installation

Generator designed as a plug & play system

Model	Flow Rate / Gas Type	Pressure	Application
Genius NM32LA	32 L/min N2	100 psi / 6.9 bar	Nitrogen generator suitable for most LC/MS instruments including **Agilent, Bruker, Perkin Elmer, Shimadzu, Thermo Scientific, Waters** and many more.
Genius N118LA	18 L/min N2	100 psi / 6.9 bar	Nitrogen generator developed for **Thermo / Dionex MSQ+**
Genius ABN2ZA	12L/min N2 24 L/min Dry Air 8 L/min Dry Air	80 psi / 5.5 bar 110 psi / 7.6 bar 60 psi / 4.1 bar	For use with the **AB SCIEX** 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	80 psi / 5.5 bar 110 psi / 7.6 bar 60 psi / 4.1 bar	For use with the **AB SCIEX** 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	32 L/min N2	100 psi / 6.9 bar	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	32 L/min N2	116 psi / 8.0 bar	Nitrogen generator with pressure requirements of 116psi specifically designed for the **Thermo Q Exactive** LC/MS.
Genius 1023	32 L/min N2	100 psi / 6.9 bar	Nitrogen generator switchable between standard LC/MS grade Nitrogen and the 10% Oxygen rich Nitrogen required for **Agilent Chip Cube.**
Genius 1050	32 L/min N2	100 psi / 6.9 bar	Nitrogen generator utilising CMS technology.
Genius 1051/1061	25 L/min N2	100 psi / 6.9 bar	Nitrogen generator developed to provide Nitrogen gas and Dry Air supply to the **Shimadzu LC/MS-8050.**
Genius 1052	32 L/min N2	100 psi / 6.9 bar	Nitrogen generator for **LECO** modulators.
Genius 3010	64 L/min N2	100 psi / 6.9 bar	Nitrogen generator developed for **Agilent iFunnel** Technology LC/MS 6490 & LC/MS 6550.
Genius 3013	64 L/min N2	100 psi / 6.9 bar	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 **Agilent Chip Cube.**
Genius 3020	2 x 32 L/min N2	100 psi / 6.9 bar	Nitrogen generator developed to supply two LC/MS systems, with independent control.
Genius 3022	2 x 32 L/min N2	116 psi / 8.0 bar	Nitrogen generator developed to supply two **Thermo Q Exactive** LC/MS, with independent control.
Genius 3023	2 x 32 L/min N2	100 psi / 6.9 bar	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 **Agilent Chip Cube.**
Genius 3030	2 x 12L/min N2 2 x 24 L/min Dry Air 2 x 8 L/min Dry Air	80 psi / 5.5 bar 110 psi / 7.6 bar 60 psi / 4.1 bar	Nitrogen generator developed to supply two **AB SCIEX** LC/MS instruments, with independent control.
Genius 3031	16 L/min N2 25 L/min Dry Air 24 L/min Dry Air	80 psi / 5.5 bar 110 psi / 7.6 bar 60 psi / 4.1 bar	Nitrogen generator designed to supply **AB SCIEX 6500** or other AB SCIEX LC/MS with high flow requirement.
Genius 3040	1 x 32 L/min N2 1 x 12 L/min N2 24 L/min Dry Air 2 x 8 L/min Dry Air	100 psi / 6.9 bar 80 psi / 5.5 bar 110 psi / 7.6 bar 60 psi / 4.1 bar	Designed to supply one **AB SCIEX** 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	100 psi / 6.9 bar	The Genius 3045 Nitrogen generator is specifically designed for use with the **Bruker EVOQ Triple Quad.** This generator will supply a single application and provide Nitrogen gas as well as a separate Dry Air output.

Infinity Series

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. 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 while reducing 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 & multiple laboratories on site

Quiet
Completely silent in operation

Mobile
Generator is supplied with caster wheels for easy mobility

Economical
More cost effective than any other gas supply method

Convenient
Gas on demand, no health hazards and 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

Model	Flow Rate / Gas Type	Pressure	Application
Infinity 1031	1 x 18 L/min N2 1 x 26 L/min Dry Air 1 x 25 L/min Dry Air	110 psi / 7.6 bar	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	110 psi / 7.6 bar	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	110 psi / 7.6 bar	3 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	110 psi / 7.6 bar	4 x AB Sciex - Full Range
Infinity 1045	1 x 32 L/min N2 1 x 50 L/min Dry AIr	80psi / 5.5bar 80 psi /5.5 bar	1 x Bruker EVOQTM Triple Quadrupole Mass Spectrometer
Infinity NM18L	18 L/min N2	100 psi / 6.9 bar	LC/MS
Infinity NM32L	32 L/min N2	100 psi / 6.9 bar	LC/MS
Infinity 5010	60 L/min N2	100 psi / 6.9 bar	LC/MS
Infinity 5020	120 L/min N2	100 psi / 6.9 bar	LC/MS
Infinity 5030	180 L/min N2	100 psi / 6.9 bar	LC/MS
Infinity 5040	240 L/min N2	100 psi / 6.9 bar	LC/MS
Infinity 5050	300 L/min N2	100 psi / 6.9 bar	LC/MS
Infinity 5060	360 L/min N2	100 psi / 6.9 bar	LC/MS
Infinity 5070	420 L/min N2	100 psi / 6.9 bar	LC/MS
Infinity 5080	480 L/min N2	100 psi / 6.9 bar	LC/MS
Infinity 9010	**140 L/min N2**	100 psi / 6.9 bar	Turbovap
Infinity 9020	**280 L/min N2**	100 psi / 6.9 bar	Turbovap
Infinity 9030	**420 L/min N2**	100 psi / 6.9 bar	Turbovap
Infinity 9040	560 L/min N2	100 psi / 6.9 bar	Turbovap
Infinity 9050	700 L/min N2	100 psi / 6.9 bar	Turbovap
Infinity 9060	840 L/min N2	100 psi / 6.9 bar	Turbovap
Infinity 9070	980 L/min N2	100 psi / 6.9 bar	Turbovap
Infinity 9080	1120 L/min N2	100 psi / 6.9 bar	Turbovap

Precision Series - Hydrogen Generators

More often than not, which generator model we recommend comes down to the 'limit of detection' you are looking for in your GC results. The lower the limit of detection, the purer the gases need to be as you will be looking for the lowest possible baseline to achieve the most precise results.

This is why Peak Scientific offers a Standard Analysis gas generator as well as a Trace Analysis gas generator solution.

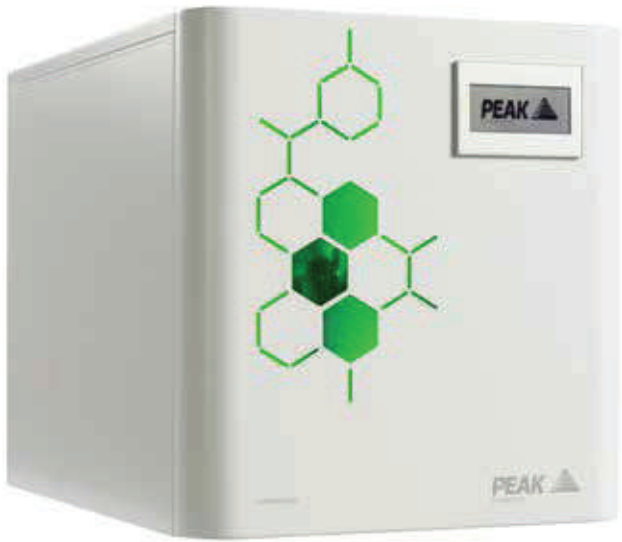
"Peak Scientific has a presence on every continent and we export to 126 countries worldwide."

Hydrogen Generator Precision Hydrogen

Technical Specifications	100cc	200cc	300cc	450cc
Flow Rate	100 cc/min	200 cc/min	300 cc/min	450 cc/min
Purity	99.9995%	99.9995%	99.9995%	99.9995%
Pressure	0-100 psi / 0-6.9 bar	0-100 psi / 0-6.9 bar	0-100 psi / 0-6.9 bar	0-100 psi / 0-6.9 bar

Hydrogen Generator Precision Hydrogen Trace

Technical Specifications	500cc
Flow Rate	500 cc/min
Purity	99.9999%
Moisture	<1ppm
Pressure	0-100 psi / 0-6.9 bar



Pictured: Precision Hydrogen Series

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

Safe

Proven PEM Technology to generate Hydrogen safely & reliably

Pure

Regenerative PSA Dryers to ensure highest level of purity

Low Maintenance

Maintenance limited to replacing de-ionizer cartridge

Other Features

Automatic loading pump as standard

Short & easy start-up & shutdown procedures

Creates Hydrogen on demand, minimal storage of Hydrogen in the system

Internal leak detection with automatic shutdown features

Series option to combine multiple units for higher flow requirements

Remote shutdown

GC In Oven Hydrogen Leak Detector available as an optional extra

About Helium and Hydrogen...

Helium is considered by many working with GC to be the carrier gas of choice. It is inert, relatively safe and does its chromatographic job very well. However, as a finite resource, Helium is rapidly increasing in price and its long-term availability is not guaranteed to GC users.

As a result, many GC labs and instrument manufacturers are now making a switch from Helium to Hydrogen. By switching to Hydrogen, users will discover a number of advantages in terms of performance, cost and availability, as well as Hydrogen being a renewable resource.

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

- Increased speed: increasing the linear velocity of your carrier gas allows for shorter run times, thereby increasing the throughput of your laboratory samples. Hydrogen out-performs Helium at higher velocities (see van Deemter curve, below right) meaning quicker run times without compromising sensitivity.
- Use of shorter, narrower bore columns with Hydrogen carrier gas can improve detection of samples in less time without the need to work at high inlet pressures.
- Lower temperature separations: with lower elution temperatures of analytes, it may be possible to reduce the maximum GC oven temperature needed for your analysis.
- Availability: Hydrogen is readily available through the electrolysis of water and with a Peak gas generator can be generated on demand.
- Environmentally friendly: Hydrogen is widely regarded as a green gas because it disperses rapidly into the atmosphere and is non-polluting.

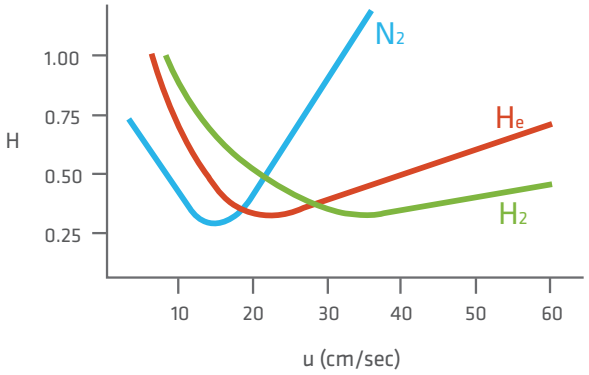
What about safety?

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 is 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:

- Minimal 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 has further developed a Hydrogen Detector, which can be connected to your GC, measuring the Hydrogen content within the GC oven and alerting you before there is a critical build up.



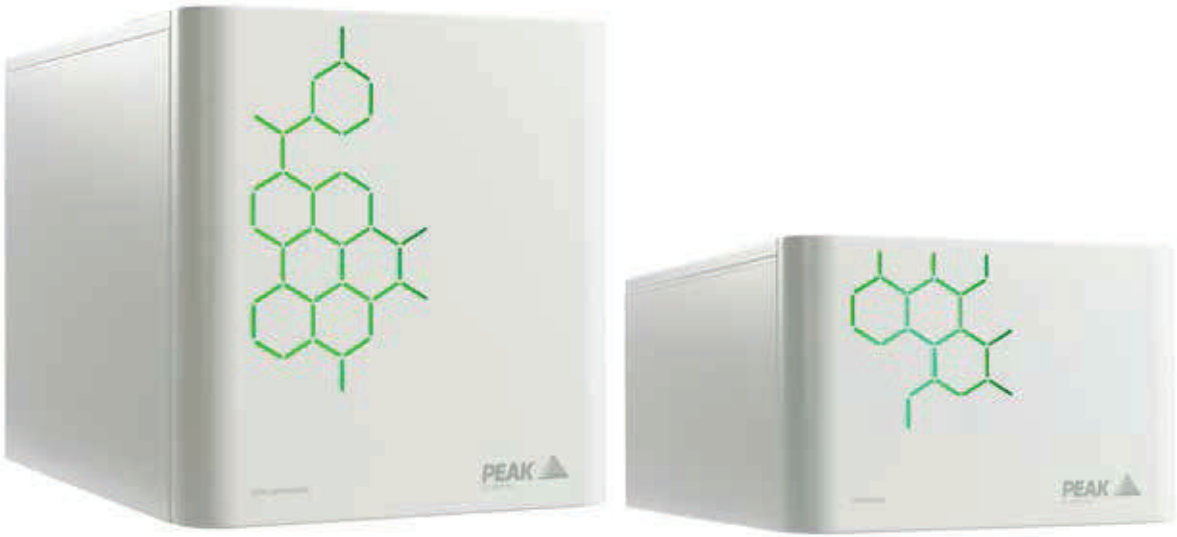
Precision Series - PSA Nitrogen Generators

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.

We have made our latest systems modular with space saving stackable design offering a GC gas supply solution specific to your lab. In addition we have incorporated an optional Air Compressor for labs without in-house air supplies.

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



Pictured: Precision Nitrogen Series

Features & Benefits:

The purity of Nitrogen generators is always as stated & does not decrease over time - not to mention Peak's long record of reliability; **Regenerative PSA Technology** makes this possible.

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.

Precision Features & Benefits:

- Suitable for carrier gas & make up gas at both trace & standard detection limits
- Regenerative CMS columns remove Oxygen & moisture
- Catalyst chamber to remove Hydrocarbons (as methane) to <0.05ppm in Trace system
- Ultra fast start-up time
- Minimum maintenance with an annual filter change
- Small & stackable

High Purity Nitrogen Generators Precision Nitrogen

	250cc	600cc	1000cc
Flow Rate	250 cc/min	600 cc/min	1,000 cc/min
Nitrogen Purity*	99.9995%	99.9995%	99.9995%
Pressure	80psi / 5.5 bar	80psi / 5.5 bar	80psi / 5.5 bar

High Purity Nitrogen Generators Precision Nitrogen Trace

	250cc	600cc
Flow Rate	250 cc/min	600 cc/min
Hydrocarbon Content (as methane)	<0.05ppm	
Nitrogen Purity*	99.9995%	99.9995%
Pressure	80psi / 5.5 bar	80psi / 5.5 bar

High Purity Nitrogen Generators NG Range

	NG2000(A)	NG3000(A)	NG4000(A)
Flow Rate	2,000 cc/min	3,000 cc/min	4,000 cc/min
Nitrogen Purity*	99.9995%	99.9995%	99.9995%
Pressure	80psi / 5.5 bar	80psi / 5.5 bar	80psi / 5.5 bar

*Nitrogen Purity measured in terms of Oxygen content.

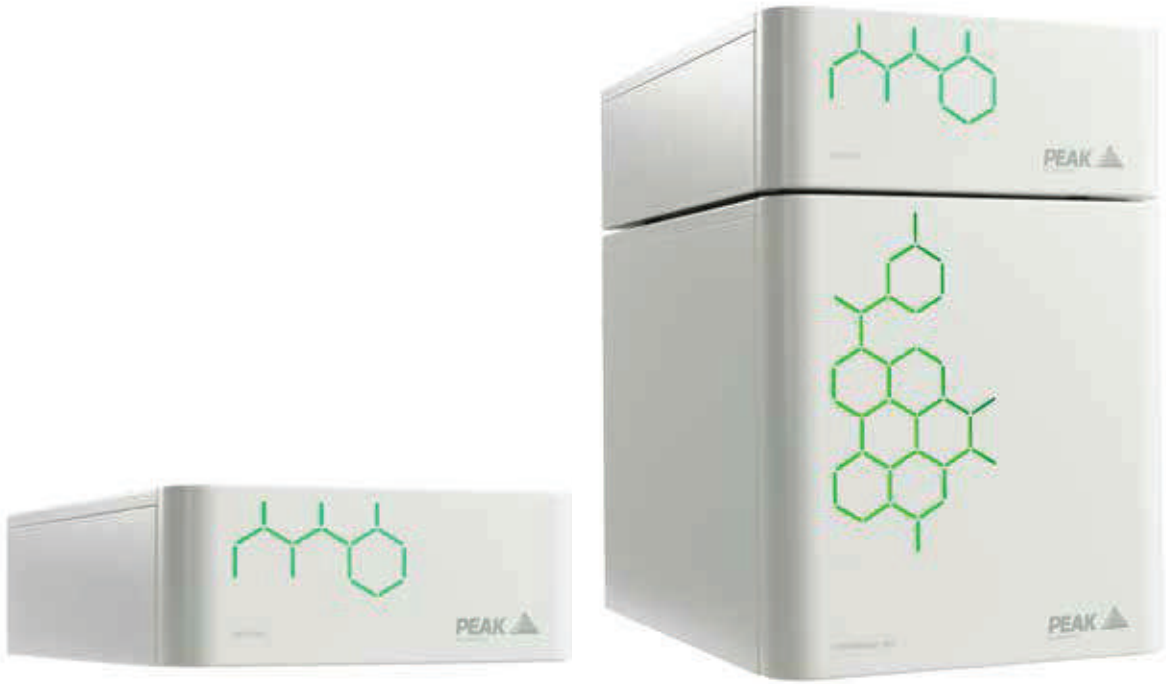
Precision Series - Zero Air Generators

The catalyst chambers inside our Zero Air generators make sure compressed air is stripped of Hydrocarbons (as methane) before it is fed into your application.

Available in a stackable format with optional Air Compressor up to 3.5 L/min as well as larger format systems that will produce up to 30 L/min dependent or independent from external air supplies, Peak Zero Air generators can fulfill all of your gas 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: Precision Zero Air & Precision Zero Air with Air Compressor

Features & Benefits:

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

- Generates Zero Air on demand from compressed air
- Catalyst chamber to remove Hydrocarbons (as methane) to <0.05ppm
- Minimum maintenance with an annual filter change
- Small & stackable

Zero Air Generators Precision Zero Air

	1.5L	3.5L
Flow Rate	1,500 cc/min	3,500 cc/min
Hydrocarbon Content (as methane)	<0.05ppm	
Pressure	80psi / 5.5 bar	

Compressed Air Generators Precision Air Compressor

- Suitable for a variety of Precision generator combinations
- Minimal noise emission due to insulated compressor compartment
- Minimal vibration through especially developed compressor anti-vibration mounts
- Compressor service indication
- Serviceable compressor

Zero Air Generators ZA Range

	ZA070(A)	ZA180(A)	ZA300
Flow Rate	7,000cc/min	18,000 cc/min	30,000 cc/min
Hydrocarbon Content (as methane)	<1.0 ppm		
Pressure	80psi / 5.5 bar		

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 and is designed specifically for use with GC- ECD and GC- FID. It may also be used with THA applications.

Zero Nitrogen	0.6 L/min @ 7.6 bar - 0.021 CFM @ 80 psi
Zero Nitrogen Purity (02 content)	99.9995%
Zero Nitrogen Hydrocarbon Content (as Methane)	< 0.1ppm
Zero Air	1.5 L/min @ 60 psi - 0.052 CFM @ 4.14 bar
Zero Air Hydrocarbon Content (as Methane)	< 0.1ppm
Internal Air Compressor	Yes

"Peak exclusively sources 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 & Zero Air from two separate outlets while the internal Air Compressor ensures independence from external air sources

Optimum Analysis
Zero Nitrogen & 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 & 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)

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 & 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
Flow Rate	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
Pressure	90-115 psi / 6.2-7.9 bar (input dependant)	90-115 psi / 6.2-7.9 bar (input dependant)	80 psi / 5.5 bar

Purge Gas

	PG14L	PG28L	PG85L
Flow Rate	14 L/min	28 L/min	85 L/min
CO2 Content	< 1.0ppm	< 1.0ppm	< 1.0ppm
Pressure	100psi / 6.9 bar	100psi / 6.9 bar	100psi / 6.9 bar

Calibration Gas

	CG15L	CG22L
Flow Rate	15 L/min	22 L/min
CO2	1.0ppm	1.0ppm
CO	1.0ppm	1.0ppm
THC	0.1ppm	0.1ppm
Pressure	100 psi / 6.9 bar	100 psi / 6.9 bar

Air Dryers

	AD70L	AD140L	AD302L	AD1010L
Flow Rate	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
Pressure	95-115 psi / 6.5-7.9 bar (input dependant)			

Accessorize with Peak

Gas generators are very straightforward 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 connect to the Precision Hydrogen Trace in order for your GC to be able detect a potentially dangerous buildup of Hydrogen inside the GC Oven.

Hydrogen Interconnection Cable

If you would like multiple Precision Hydrogen Trace 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 Hydrogen Trace 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 into 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 Hydrogen Detector

We've repeatedly won the Queen's Award for International Trade for a reason!

12 offices

Exporting to 126 countries worldwide

Presence on every continent

Worldwide service & support structure

Network of trained & authorized distributors in over 70 countries

Genius products

Superb technical performance

Robust design

Simple installation

Minimal maintenance

Cost effective

THE QUEEN'S AWARDS
FOR ENTERPRISE:
2014

Sean Bruce (Product Manager)
Chris Pugh (Engineering Director)
Stephen Murray (Global Training Manager)

At Your Service

Peak Scientific's service department is here to help you achieve optimum performance from your gas generator throughout its life.

We have service teams around the world dedicated to providing support for you and your lab's complex needs.

All of our Field Service Engineers are extensively trained and employed by Peak. We never use third parties.

Wherever you are and whatever your needs, we are never far away. We are proud of our service ethos – we take a step beyond traditional maintenance and repair, looking after your specific gas needs every step of the way.

So take it easy, relax. It's time to let Peak Scientific take on the strain in the lab to ensure your generator maintains 'Peak' performance.

CP-ANALYTICA GmbH
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info@cp-analytica.at | **www.cp-analytica.at**

"We understand the high value of quality service and always deliver with a smile."

Standard Service Plan

- Includes all the 'essentials' required to keep your generator fully functional
- Scheduled preventative maintenance
- Maximize uptime
- Reduce unforeseen breakdowns
- All service parts included
- 10% discount on additional parts

Complete Service Plan

- Comprehensive solution
- Scheduled preventative maintenance
- Full breakdown cover
- All on-site labour & service repairs included
- Priority response time
- Complete peace of mind!