

Your local *gas generation* partner



## **Genius XE**

Standalone high performance nitrogen generators for analytical applications

Discover more at [www.peakscientific.com/genius](http://www.peakscientific.com/genius)

# When **only** **exceptional** will do

Built upon decades of innovation in gas generation for the lab, Genius XE sets a new benchmark in performance and confidence. With increasingly sensitive applications and demands on productivity, you can't afford to compromise on instrument gas.

Featuring Multi-Stage Purification™ and innovative ECO technology, Genius XE delivers exceptional quality and reliability...

**When only exceptional will do.**

## **Only Genius XE gives you all this:**

- › **Multi-Stage Purification™** producing analytical grade N2
- › Variable flow rate up to 70 L/min and pressure up to 116 psi
- › **ECO (Electronic Compressor Optimization™)** technology for low energy consumption and enhanced compressor performance
- › **PEAKOS™** touch screen interface for ease of operation
- › Ultra-fast start-up. Just 30 minutes to operating purity
- › Smaller & quieter than previous generation
- › On-board service scheduling and system diagnostics
- › 2 year comprehensive manufacturer's warranty\*

# Inspired by Genius

Our original Genius series can be found in thousands of labs worldwide, having defined a benchmark in high quality nitrogen generation for analytical applications since launch in 2010. Approved and supplied by the leading mass-spec manufacturers around the world, Genius has become synonymous with nitrogen on-demand for LC-MS.

But time doesn't stand still and today's lab demands more. With increasing instrument sensitivity, lower detection limits and pressures to maximize uptime and streamline workflow, it became clear that some customers needed more...Something exceptional. So we set out to take all that we have learned with Genius and evolve and innovate, to design our most advanced, high performance nitrogen generator yet. **Genius XE was born.**

## The **most advanced** nitrogen generator on the market today

Genius XE is designed from the ground up to deliver maximum performance, for labs that can't afford to compromise. The perfect combination of innovative technology and expertise, to meet the needs of even the most demanding laboratories.

- **Productivity**

Built to exacting standards in our high-tech UK manufacturing facility, Genius XE gives you 24/7, 365 nitrogen on-demand.

- **Confidence**

Using our latest generation technology gives you confidence in analytical accuracy and the peace of mind of having a global leader in your lab.

- **Convenience**

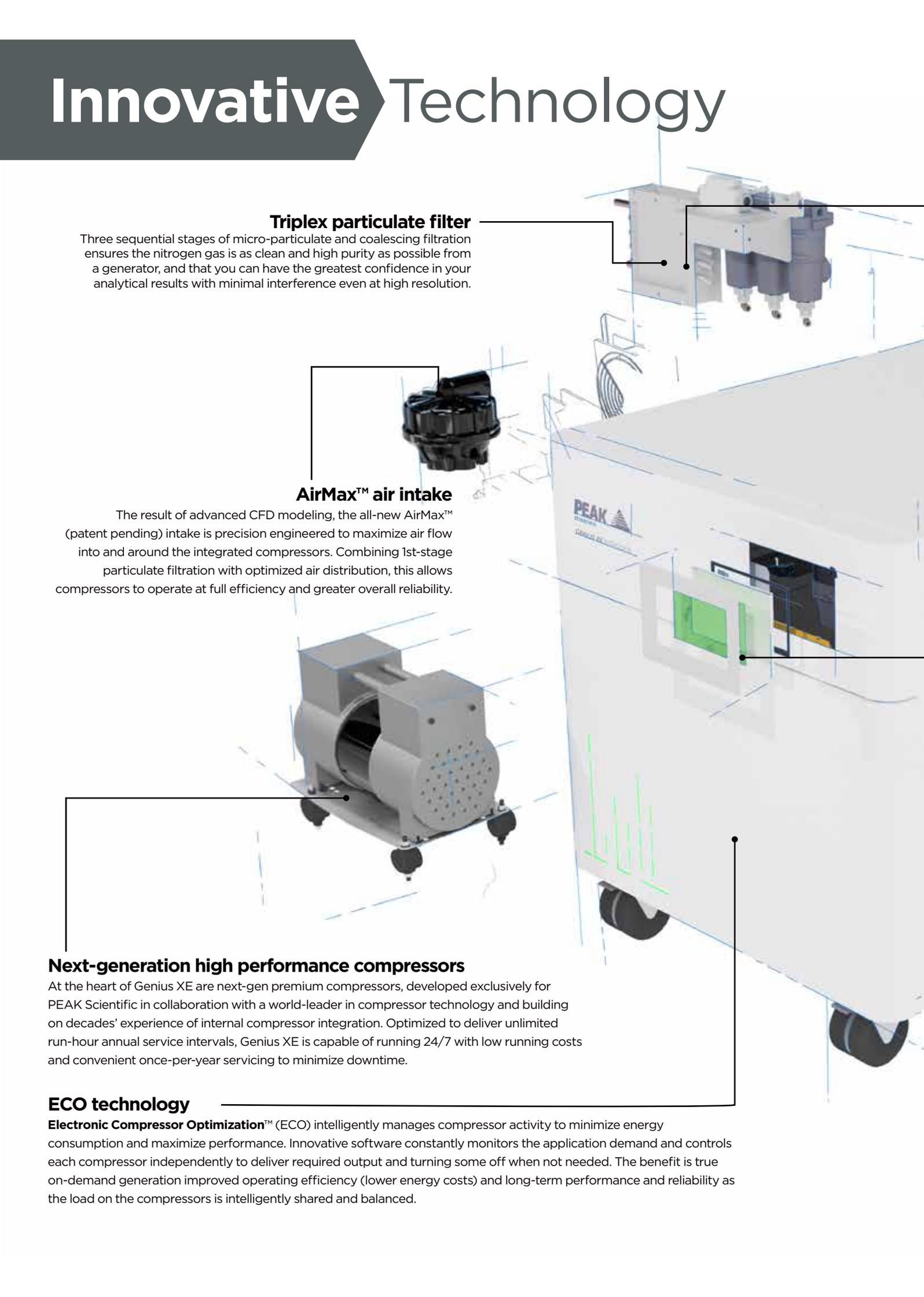
Smaller, more discrete, and easier to use than ever before thanks to PEAKOS™, Genius XE is the ultimate solution for zero-stress nitrogen gas in the lab.

- **Versatility**

With flexible flow rates and purity up to 99.5%, Genius XE is a versatile solution for various instrument gas needs including LC-MS, ELSD or sample evaporators.



# Innovative Technology



## Triplex particulate filter

Three sequential stages of micro-particulate and coalescing filtration ensures the nitrogen gas is as clean and high purity as possible from a generator, and that you can have the greatest confidence in your analytical results with minimal interference even at high resolution.

## AirMax™ air intake

The result of advanced CFD modeling, the all-new AirMax™ (patent pending) intake is precision engineered to maximize air flow into and around the integrated compressors. Combining 1st-stage particulate filtration with optimized air distribution, this allows compressors to operate at full efficiency and greater overall reliability.

## Next-generation high performance compressors

At the heart of Genius XE are next-gen premium compressors, developed exclusively for PEAK Scientific in collaboration with a world-leader in compressor technology and building on decades' experience of internal compressor integration. Optimized to deliver unlimited run-hour annual service intervals, Genius XE is capable of running 24/7 with low running costs and convenient once-per-year servicing to minimize downtime.

## ECO technology

**Electronic Compressor Optimization™** (ECO) intelligently manages compressor activity to minimize energy consumption and maximize performance. Innovative software constantly monitors the application demand and controls each compressor independently to deliver required output and turning some off when not needed. The benefit is true on-demand generation improved operating efficiency (lower energy costs) and long-term performance and reliability as the load on the compressors is intelligently shared and balanced.

## Two-stage moisture removal

Unique reheat technology and proprietary lock-and-drain moisture removal with redundancy ensures the application is extra protected against any risk of moisture in the gas stream, delivering ultra-dry N<sub>2</sub> into your instrument.

## Advanced polymer hollow fiber nitrogen membrane technology

Developed in collaboration with a world leading nitrogen membrane manufacturer for the most efficient and robust nitrogen membranes, ensuring a consistently high purity of nitrogen from Genius XE, even at high flow rates.

## PEAKOS™ control

Full color, high resolution touch screen interface with integrated system control, performance monitoring, start-up status check and on-board service scheduling and system diagnostics to aid in speedy troubleshooting and service maintenance. Makes Genius XE the most intelligent and easiest to use nitrogen generator we've ever designed.

## NMHC capture

Proprietary non-methane hydrocarbon (NMHC) filtration stage designed to remove ambient long-chain hydrocarbons (down to <1ppm), which can cause spectral interference in some analytical results, depending on the method. The innovative design has been optimized for efficiency, performance and service life (annual\*).

\* subject to environmental conditions, replacement may be required more frequently at customer expense

# Performance

## Raising the bar with what's under the bench

Everything about Genius XE has been designed with either superior performance or user experience in mind. With the latest advances in mass-spectrometry and increasing performance and higher sensitivities, the quality of nitrogen is more important than ever. Our approach to incorporate more stages of filtration technology than ever before and following years of research into new filtration, adsorption and drying technology, has led to Genius XE defining new benchmarks in gas quality and usability.

## Tested and verified performance

Each generator is rigorously tested as part of our exacting Quality Assurance Testing at our ISO 9001 compliant factory before shipping to our customers, with gas quality certified and recorded for each and every unit. The National Physical Laboratory (UK) has independently verified the nitrogen output of Genius XE to be free of plasticizers and volatile organic compounds including phthalates, BHT, SO<sub>x</sub>, NO<sub>x</sub> and NO. With Genius XE you can be supremely confident in product performance.

## Two models to choose from

There are two models to suit your flow requirement, Genius XE 35 (up to a total of 35 L/min) and Genius XE 70 (up to a total of 70 L/min), both sharing many of the unique benefits with the main differences being size, number of internal compressors (2 and 4, respectively) and of course total output flow. The XE 70 is ideally suited to serving multiple instruments, eg. 2 or even 3 mass-spectrometers from one compact footprint solution.



Genius **XE 70**

Genius **XE 35**

# Peace of mind

Engineered to exceptionally high specification and using proven and precision designed components, developed and refined over years of experience in manufacturing nitrogen generators for the laboratory, Genius XE is built to perform day in, day out. With a fixed annual service interval, you can be confident in maximum uptime. In the unlikely event of a fault, advanced system diagnostics will alert you to any issue via the control interface, and enable your local PEAK Scientific service engineer (or approved agent) to easily troubleshoot on-site and get you back up and running quickly.

## Extended fully comprehensive warranty

With a unique 2 year fully comprehensive warranty\* you can enjoy the peace of mind that comes with knowing that every part in your Genius XE is assured to be repaired or replaced without additional charge during that period, and what's more if you have purchased direct from PEAK Scientific or via an approved reseller, maintenance will be carried out on site in your lab by a trained, certified engineer. With an average response time of 72 hours worldwide and a 95% first-time-fix rate; excessive downtime is not something you need to worry about.

## [PEAK Protected]™

When you purchase directly from PEAK Scientific you will have access to the market-leading on-site maintenance and service support that we have become renowned for around the world. As with all gas generators, Genius XE contains many moving components, some of which are subject to wear and tear over prolonged normal use, while others may need inspection and replacement in challenging environmental conditions. To give you on-going peace of mind, our [PEAK Protected] range of products give you complete annual breakdown cover as well as many other benefits.



### 24 hour response

Rapid response service engineer network, guaranteed on-site within 72 hours globally, 48 or 24 hours available in some regions.



### Manufacturer approved parts

All components in Genius XE are precision engineered and tested to ensure optimal performance in your generator. We offer a fast response replacement parts service, shipping to you within 48 hours.



### Certified engineers

Over 100 dedicated, fully certified direct PEAK Service Engineers globally, with expert knowledge in troubleshooting and fixing any generator problem.



### 95% first time fix

Having dedicated PEAK engineers around the world means most issues are resolved on first visit – 95% of the time in fact. No other generator brand gives you this peace of mind.



### Global 24hr technical support

With regional service centres around the world, and fast-response online support, you can be sure of quick resolution to any question or problem you may have with your PEAK Scientific generator.



### Installation & set up service

Genius XE is by design simple to set up and use. But we offer a full installation and training service for customers who wish it, with a dedicated PEAK FSE visiting you to assist with getting up and running with no stress.

# Genius XE Series

Technical Specifications	Genius XE 35	Genius XE 70
Max Flow Rate	up to 35 L/min	up to 70 L/min
Max Pressure	116 psi (8 bar)	116 psi (8 bar)
Gas Outlets	1 x 1/4" BSPP	1 x 1/4" BSPP
Purity**	95-99.5%	95-99.5%
Max Relative Humidity	80% RH @ 31°C	80% RH @ 31°C
Max Altitude	3000m	3000m
Particles	< 0.01 µm	< 0.01 µm
Phthalates	Phthalate & BHT Free	Phthalate & BHT Free
Suspended Liquids	None	None
Non-Methane Hydrocarbon Content	< 1 ppm NMHC	< 1 ppm NMHC
Operating Temperature	5°C (41°F) to 35°C (95°F)	5°C (41°F) to 35°C (95°F)
Electrical Requirements	120VAC, 60Hz, 12A or 230VAC, 50/60Hz, 8A	230VAC, 50/60Hz, 11.3A
Power Consumption	960 VA (120V)/1265 VA (230V)	2530 VA
Heat Output	4118 BTU	8785 BTU
Noise Level†	56 dB	59 dB
Generator Dimensions (H x W x D)	640 x 570 x 710 mm 25.2 x 22.5 x 28"	1000 x 570 x 710 mm 39.4 x 22.5 x 28"
Generator Weight	92 kg / 202 lbs	147 kg / 325 lbs

Ordering Information		
Part Number	3300252 (230VAC) / 3300807 (120VAC)	3300253
Annual Service	<b>visit:</b> <a href="http://www.peakscientific.com/ordering">www.peakscientific.com/ordering</a>	
Complete Maintenance Plan		

\*Year 2 of warranty subject to generator being serviced at end of year 1 by a PEAK-approved agent in accordance with fixed annual maintenance schedule. For full terms and conditions visit [www.peakscientific.com/warranty-statement](http://www.peakscientific.com/warranty-statement)

\*\* Factory certified purity with respect to O2 content. Actual purity varies in relation to flow (min. 95% at maximum flow output)

† Noise level expressed as SPL (Sound Pressure Level) measured at 1m from source in a reverberant chamber

## Contact us today to discover more!

### North America

**Tel:** +1 866 647 1649

### China

**Tel:** +86 21 5079 1190

**Web:** [www.peakscientific.com/genius](http://www.peakscientific.com/genius)

### Europe

**Tel:** +44 (0)141 812 8100

### India

**Tel:** +91 40 2780 0663

**Email:** [discover@peakscientific.com](mailto:discover@peakscientific.com)