

Your local *gas generation* partner



i-Flow

Nitrogen **gas generation solutions** for manufacturing & processing industries

Discover more at www.peakgas.com

Key Features

- **Economical & sustainable** - A cost effective solution that eliminates the need for bulk nitrogen gas purchase forever.
- **Expandable on-demand** - i-Flow's space saving, future-proof design allows columns & modules to be added as your business grows
- **Energy saving efficiency** - An innovative 'Eco-mode' ensures the lowest running costs by automatically managing production based on your daily demands.
- **Verified industry compliance** - Exceeding standards of EIGA, EC Food Grade, European Pharmacopoeia & JEFCA, as well as US Food & Drug Administration (CFR Title 21) with Peak IQ/OQ certification.
- **Safe on-site supply** - No more health & safety concerns over hazardous truck deliveries or storage of gases in highly pressurized cylinders or tanks.
- **High quality engineering** - Peak is an ISO 9001 certified manufacturer and i-Flow's highly efficient technology requires minimal maintenance & supervision.
- **Expert consultation** - Peak's professional consultants will expertly design an end-to-end, turnkey solution to meet your company's needs.

Your **sustainable** and **expandable** nitrogen generation **solution**

i-Flow is a modular & scalable on-site nitrogen generation system, capable of producing a continuous supply of nitrogen gas to meet the demands of industrial manufacturing and processing applications. Harnessing the latest in gas purification technologies, i-Flow is the most cost effective, efficient and economical nitrogen generation system available on the market. It delivers a wide range of customizable purity and flow rates on a large scale and is suitable for use in numerous industries, including food & beverages, pharmaceuticals & biotechnology, chemicals, electronics, metals, plastics, rubbers and many more.

i-Flow is the culmination of Peak Gas Generation's innovations and technological expertise. It builds upon over two decades of experience as industry leading gas generation specialists. Designed & engineered in the UK by an ISO 9001 accredited manufacturer, i-Flow utilizes the latest Pressure Swing Adsorption (PSA) technologies, optimized for maximum energy efficiency, with over 100 preconfigured flow rate (1.3 - 255 m³/hr) and purity (up to 99.9995%) specifications.

Our expert consultants design systems around business needs, ensuring supply meets company demands effectively and allows for expansion through the addition of Peak CMS banks or generator modules, in order to meet future business growth.



i-Flow offers the **total solution**, eliminating the need for bulk nitrogen gas purchase, providing **sustainable on-site nitrogen generation** that allows companies to **control costs, reduce their carbon footprint** and enjoy massive benefits in the long run.

Bulk Supply vs On-site Generation

Beyond the highly variable costs of industrial gas, supply methods such as cylinders, dewars and bulk liquid storage also create numerous challenges for businesses, as well as many additional and hidden costs, which ultimately impact on the bottom line.

Added costs

- Cylinder or dewar rental & supply delivery charges;
- Bulk liquid storage planning permission, installation, rental & upkeep;
- Multi-year purchase contract commitments, with long notice periods.

Logistics & safety

- Frequent hazardous truck deliveries to facility
- High pressure storage, with risk of explosive decompression or leaks
- Cylinders & dewars require heavy manual handling

Product losses & wastage

- Unpredictable supply timescales
- Bulk supply needs frequent switching & monitoring
- 10% gas returned to supplier & 20% lost to 'off-gassing'
- Downtime = lost revenue.

Why buy bulk nitrogen gas when you can make your own?



Guaranteed supply

Increased efficiencies, maximum productivity and minimum downtime



Increased safety

No need for pressurized gas storage so safer than bulk delivery options



Less wastage

Consistent and reliable supply means fewer product defects or rejections



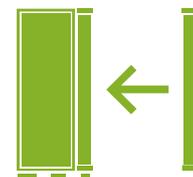
Eliminate on-going costs

No more equipment rental, long contracts or re-supply ordering



More sustainable

Reduced carbon footprint by eliminating trucking of cylinders to your site



Future proof

Expandable on-demand N2 generation that meets future needs

Why Peak Gas?

Global leader

Peak is the leading global manufacturer of nitrogen generators, with nearly two decades of experience creating gas generation systems.



Turnkey solutions

Our team of highly experienced consultants are experts in designing turnkey solutions that perfectly meet company demands and business needs.



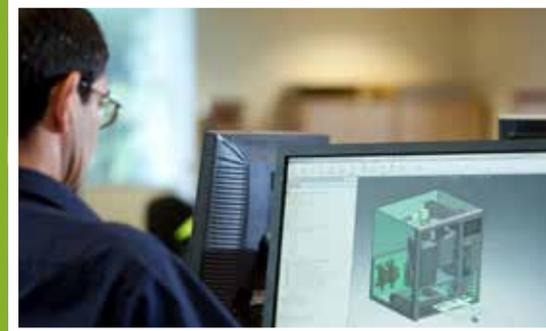
Expertise and support

Our vast industry and technological expertise, coupled with world-class aftercare support means we define the benchmark for customer service, innovation, quality and product reliability.



Project management

Our project teams manage every stage of the process, through initial consultation, system design, procurement, installation, commissioning and ensure you are kept fully informed at each step.



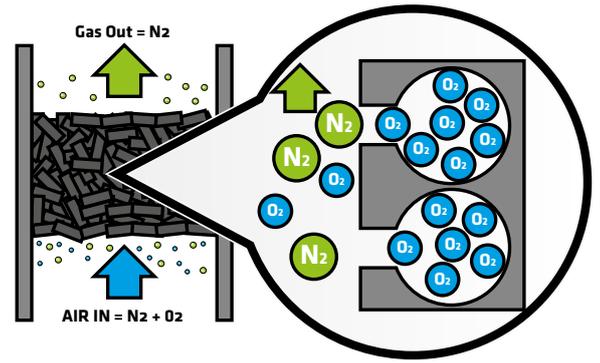
Global partnerships

Together with our industry leading partners in compression & filtration technologies, we offer the best and most diverse mix of technological solutions available on the market.



Reliable and robust technology

Based on the latest Pressure Swing Adsorption (PSA) and Carbon Molecular Sieve (CMS) technologies, i-Flow is optimized with the capacity to deliver a continuous supply of nitrogen gas to applications, whilst maximizing its energy efficiency with an innovative 'eco-mode'.

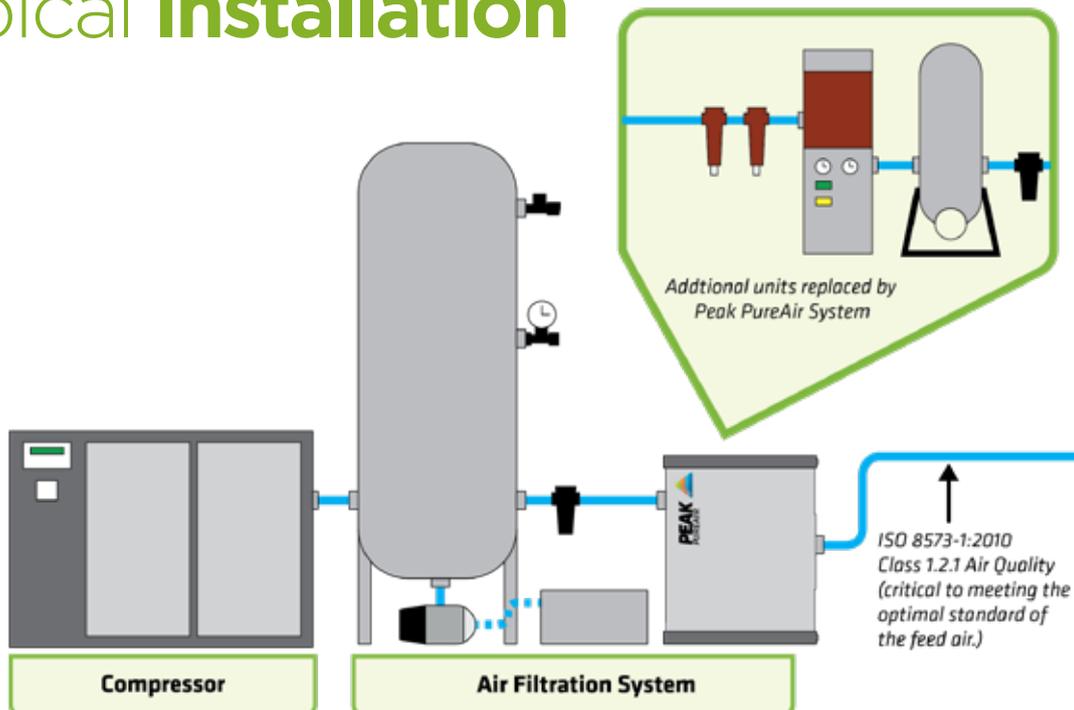


High purity nitrogen

Our CMS banks are packed using a 'snowstorm' filling technique, allowing for around 18% more carbon to be compacted into the carbon bed. This ultimately prevents gas channeling and ensures i-Flow can deliver maximum levels of nitrogen purity (up to 99.9995% or 5 ppm oxygen*). Furthermore, integrating i-Flow with our compressed air pre-filtration system, PureAir, guarantees the highest quality output by cleaning air before it enters the generator.

*Over 100 flow-rate and purities available, depending on system design requirements and commissioned specifications.

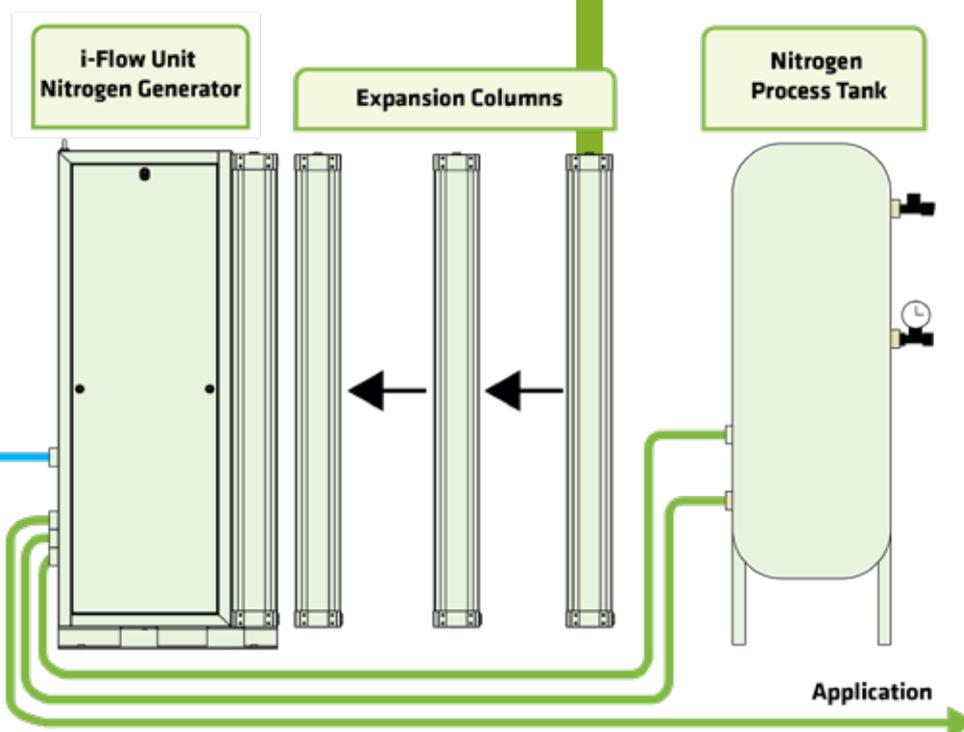
Typical installation



High flow-rates

i-Flow's highly robust PSA system generates nitrogen gas using simple principle methods. Compressed air is fed into the dual pressure CMS vessels and undergoes a cycle of compression & decompression, where oxygen is adsorbed and nitrogen is passed downstream. This not only delivers continuous nitrogen gas flow-rates on a large scale (1.3 - 255 m³/hr*), it also guards against abrasive breakdown, preventing gas supply contamination and ensures a CMS lifespan of around 20 years.

*Over 100 flow-rate and purities available, depending on system design requirements and commissioned specifications.



Adaptable, future-proof design

Peak Gas Generation's nitrogen generation systems are designed to be a future-proof, space-saving and sustainable solution. To accommodate inevitable future growth and your expanding business needs, i-Flow can be scaled out retrospectively, with additional Peak CMS banks or modular units. This offers companies the flexibility to incorporate a solution that can continually adapt infrastructure in line with growth, rather than being constrained by an increasingly expensive or fixed capacity nitrogen gas solution.



Modular

Multiple units can be synchronized to meet demands based on application flow-rates and purity requirements (more units = greater flow-rates at specified purity).

95 - 99.9995% purity 1.3 - 255 m³/hr



Scalable

Up to ten CMS column banks can be added to each single i-Flow unit in less than a shift, increasing nitrogen production capacity with minimal downtime.

Consultative **design &** project **management**

Alongside technological innovation and expertise, Peak also provide an industry-leading, wrap around consultative system design and project management service. Peak Gas Generation's highly trained and dedicated specialists are experts at designing turnkey solutions that perfectly meet current and future business needs.

Our project teams professionally manage each step of the process, including:

- ▶ Consultation
- ▶ System design
- ▶ Procurement
- ▶ Installation & commission

Coupled with Peak's world-class aftercare service and an ongoing commitment to a global & local technical support, ensures customers experience minimum downtime in the unlikely event of breakdown, with engineers capable of being on-site in under 72 hours.

Where a company prefers to utilize its own engineering and maintenance personnel, Peak offers in-depth systems training to ensure staff are fully equipped to manage day to day maintenance and servicing.



Industry applications

Nitrogen gas is naturally clean, dry, inert and non-conductive. It is the most commonly used and cost effective solution to a whole host of industrial manufacturing and processing challenges. Below are just some examples of industry applications where Peak Gas Generation's nitrogen generation solutions can help a company maximize its efficiencies and product quality, as well as increase profitability.



Food packaging & storage

Oxidation of perishable foods impacts on product quality and suitability for consumption. Nitrogen gas is used for modified atmosphere packaging (MAP), form filling and inert food storage. These help extend shelf-life, minimize the need for chemical preservatives, prevent packaging collapse and increase reach of product distribution.



Wine making & production

Oxygen contamination during processing and storage of wine can lead to spoiling and often manifests as a rancid, vinegary taste, ultimately impacting on consumer experience, as well as the producer's reputation. Nitrogen gas is used at numerous stages throughout, such as sparging, blanketing and purging, helping to maintain product quality.



Pharmaceuticals & biotechnology

Exposure to oxygen & moisture causes contamination, which can alter product composition, potentially rendering them useless or even make consumption harmful. Nitrogen gas is used throughout the manufacturing process for blanketing, inerting processing chambers (e.g. during milling or spray drying) and even to sterilize packaging prior to product filling.



Laser cutting & welding

Material exposure to moisture or oxygen can impact on the quality and structural integrity of end products. Nitrogen gas is used as an assist, purge and shielding gas, ultimately helping to ensure better quality cuts or welds and prevent against product discoloration due to oxide formation.



Electronics assembly & dry-box storage

Oxygen contamination can impact on product quality and the efficiency of reflow, selective & wave soldering processes, causing production defects, such as bridging or insufficient wetting. Nitrogen gas helps create inert atmospheres in assembly environments, ultimately increasing first-pass yields by minimizing reworking requirements.

Technical specifications

		Oxygen Content											
	O2 Content	5ppm	10ppm	50ppm	100ppm	500ppm	1000ppm	0.5%	1.0%	2.0%	3.0%	4.0%	5.0%
Model	N2 Purity	99.9995%	99.999%	99.995%	99.99%	99.95%	99.9%	99.5%	99%	98%	97%	96%	95%
601X	Nm3/hr	1.8	2.4	3.5	3.9	5.3	6.3	9.3	11.4	14.7	18.3	21.7	24.1
	SCFH	64	85	123	138	189	223	329	403	519	647	767	852
602X	Nm3/hr	3.7	4.8	7.0	8.1	11.4	12.3	18.3	22.8	29.4	34.7	39.1	45.0
	SCFH	132	170	246	286	403	435	647	806	1039	1225	1380	1590
603X	Nm3/hr	5.7	7.2	10.4	12.1	17.0	18.3	27.0	31.8	39.9	48.6	54.9	66.0
	SCFH	200	254	369	428	600	647	954	1124	1410	1717	1940	2332
604X	Nm3/hr	6.8	9.0	13.8	16.2	21.7	24.4	35.1	43.5	50.7	61.5	66.9	83.1
	SCFH	239	318	488	572	767	861	1240	1537	1791	2173	2364	2936
605X	Nm3/hr	8.2	10.9	17.1	20.1	27.1	30.5	43.8	53.1	63.9	76.7	85.2	98.9
	SCFH	289	386	604	710	958	1077	1548	1876	2258	2709	3010	3496
606X	Nm3/hr	10.4	13.8	20.7	24.3	32.7	36.0	52.4	63.7	76.8	94.4	102.2	122.7
	SCFH	366	488	731	859	1155	1272	1853	2251	2714	3337	3612	4335
607X	Nm3/hr	11.9	15.9	24.0	27.7	38.0	42.0	60.9	74.3	88.8	108.9	119.3	148.7
	SCFH	421	562	848	979	1344	1484	2152	2625	3138	3848	4215	5253
608X	Nm3/hr	13.5	18.0	27.3	31.9	43.4	47.7	69.6	84.9	101.1	123.9	136.3	166.7
	SCFH	477	636	965	1128	1535	1685	2459	3000	3572	4378	4817	5889
609X	Nm3/hr	14.9	19.8	30.6	35.5	48.7	53.4	78.0	94.4	113.1	139.8	153.4	182.7
	SCFH	525	700	1081	1253	1721	1887	2756	3337	3996	4940	5419	6455
610X	Nm3/hr	16.7	22.2	33.9	38.6	54.0	59.3	87.0	104.9	125.4	154.8	170.4	204.1
	SCFH	588	784	1198	1365	1908	2097	3074	3706	4431	5470	6021	7212

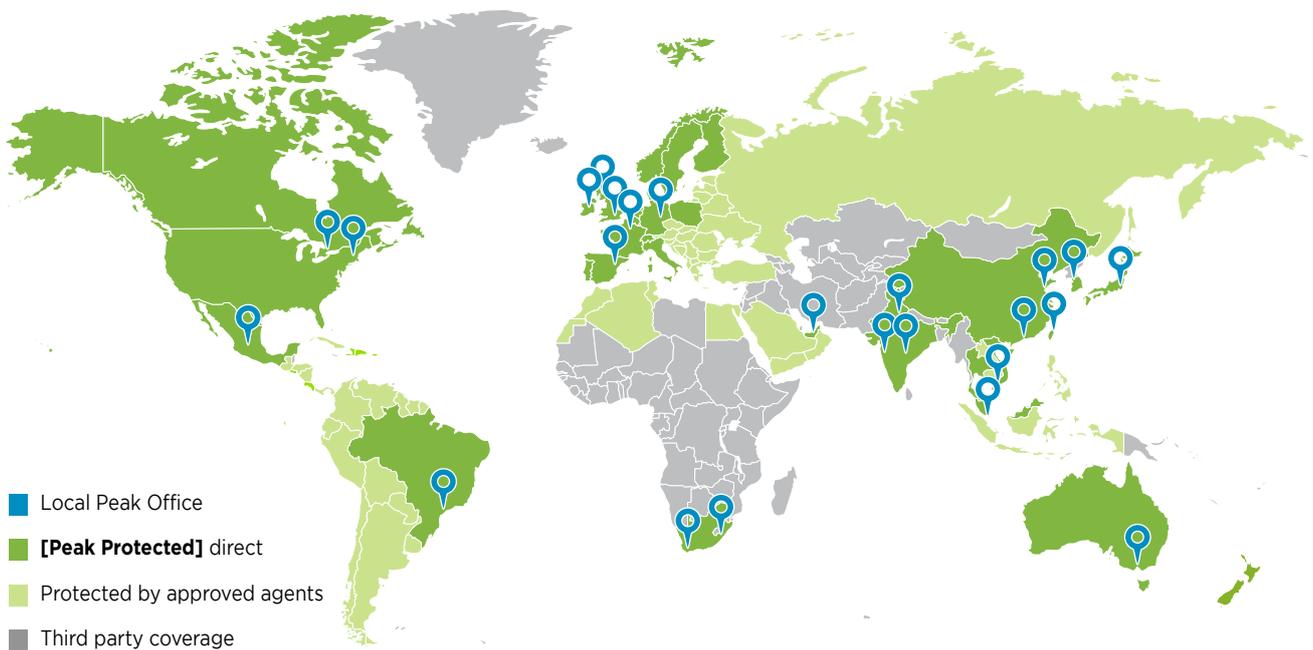
		Dimensions									
		601X	602X	603X	604X	605X	606X	607X	608X	609X	610X
Width mm (inch)		500 (19.68)									
Height mm (inch)		1738 (68.42)									
Depth mm (inch)		760 (29.92)	920 (36.22)	1080 (42.52)	1240 (42.52)	1400 (55.12)	1560 (61.42)	1720 (67.72)	1880 (74.02)	2040 (80.31)	2200 (86.61)
Weight kg (lbs)		197 (433)	282 (620)	367 (807)	452 (994)	537 (1181)	622 (1368)	707 (1555)	792 (1742)	877 (1929)	962 (2116)
Shipping weight kg (lbs)		277 (609)	364 (801)	452 (992)	538 (1184)	625 (1375)	712 (1566)	799 (1758)	886 (1949)	973 (2141)	1060 (2333)
Noise Level		59dBa @ 1m									

*Performance data is based on 7 bar (G) inlet air pressure and 20 - 25 deg C ambient temperature.
(Flow reference conditions, 20 deg C, 1013 millibar (a), 0% Relative Humidity)

Find out how Peak Gas Generation's **i-Flow nitrogen generation system** can deliver massive **cost & efficiency benefits**, protecting the company's bottom line and help meet the **future demands of your business**.

Local service on a global scale

Peak Gas Generation has experienced & fully certified Field Service Engineers, located in over 20 countries in every continent across the globe. This further highlights our commitment to providing local sales & service support to customers worldwide. Coupled with industry-leading service response times, Peak Gas Generation can demonstrate that your company's productivity is our top priority.



Contact us today to discover more!

North America

Tel: +1 866 647 1649

China

Tel: +86 21 5079 1190

Web: www.peakgas.com

Europe

Tel: +44 (0)141 812 8100

India

Tel: +91 40 2780 0663

Email: contact@peakgas.com