PEAK INDUSTRIAL

i-Flow

Scalable, high-flow, nitrogen generation solution for industry

Features and benefits

Consistent
Constant, reliable, on-demand supply of nitrogen gas at a stable purity and quality. No application or equipment downtime as a result of running out of stored nitrogen.

Convenient
Problem free, no re-ordering or administrative costs, no health and safety issues in having to change over supplies in the case of cylinders or dewars. You control the supply.

Safe
No health and safety concerns with high pressure storage cylinders or cryogenic vessels on site. No more trucks entering and loading / unloading high pressure liquid nitrogen.

Scalable / Expandable
Future proofed solution, enabling the addition of Peak CMS banks to increase maximum flow rates whilst maintaining specified purity, after the initial installation. Peak i-Flow can also be configured in lead / lag or cascading designs to meet most applications.

Economical
Cost-effective, eliminating ongoing costs associated with re-ordering and having supplied gas delivered. Predictable, stable running costs, avoiding price volatility, and downtime costs of running out of gas.

Reduce your Carbon Footprint
By bringing your nitrogen production in-house, trucking of cylinders and liquid to site is removed, thereby reducing the carbon emissions related to your nitrogen usage.

Oxygen Analyser
All Peak i-Flow units have continuous real time monitoring of the nitrogen purity produced. The display is available in % purity or at PPM dependent upon specified requirement.

Protected
Dedicated Peak Service Engineers are on hand locally to assist or plan application specifications, system installation and on-going maintenance to ensure long-term performance and reliable operation.

The expandable on-demand Nitrogen solution

i-Flow™ is a scalable on-demand nitrogen generation system, capable of producing nitrogen gas at levels of purity and flow rates to suit a wide range of typical industrial applications. Building on nearly two decades of experience as a global leader in gas generation for the scientific field, i-Flow is a culmination of Peak's innovation and technology expertise.

i-Flow can provide either an application specific, or whole of site solution for the localized generation of nitrogen gas, delivering a continuous supply of nitrogen at the specified purity, pressure, and flow to meet the full and varying demands of your application or site.

Engineered around the latest PSA technology, and optimized for energy efficiency, the Peak i-Flow is available in over 100 pre-configured flow and purity specifications. Peak engineers can also build bespoke systems to meet the exacting demands of most applications or sites.

A single Peak i-Flow generator installation can provide nitrogen at flow rates from 40LPM – 3402LPM* with purities specified at the time of system design to meet the needs of the application (up to 99.999%*).

i-Flow's innovative expandable design allows the system to grow with your company. Additional Peak CMS column banks can be added to each i-Flow generator after installation to increase the maximum flow rate**

* Model and variant dependent. Additional higher flow rates are available using multiple i-Flow generator systems
** Each model is based on banks of paired Peak CMS columns, ranging from a single pair in 601X to 10 pairs in 610X.

Total solution

In addition to the i-Flow generator, Peak Industrial can also provide complete turnkey solutions including compressed air supply, prefiltration system, pipework, nitrogen generator, and storage. Peak can also follow this up with its worldwide team of local support technicians trained to ensure you're never off line. Crucial to this, is our ability to back this up through our global team of trained and certified field service engineers - dedicated to ensuring you're never offline.

We also offer a self-contained, small footprint, complete pre-filtration system known as PureAir™. This fully integrated solution exceeds ISO8733-1:2010 Class 1.2.1 air quality demands. Not only will the PureAir unit be correctly sized to meet the challenges of the deployment site and ensure the air quality is maintained, it also provides access to high quality air for potential use elsewhere on site*.

Our team can fully project manage a solution for your site and application, including design, installation, and commissioning ensuring maximum efficiency in nitrogen supply and energy consumption.

*additional air requirements to be specified upon design

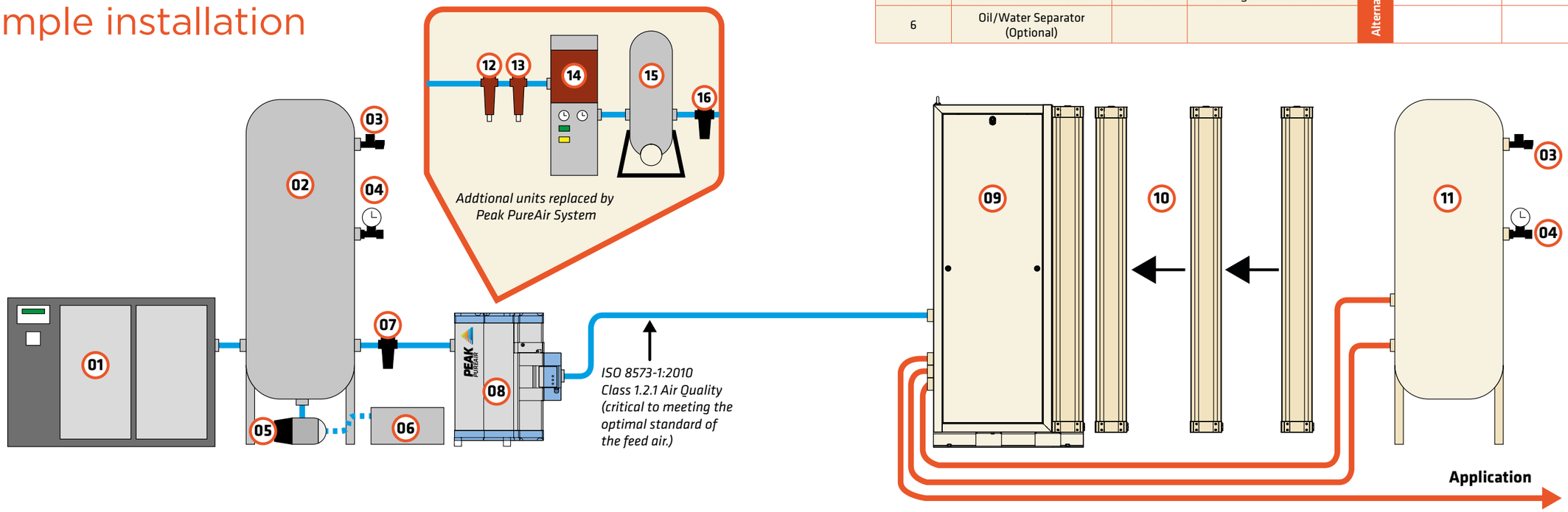
Expand to meet demand

Peak i-Flow systems benefit from an innovative, expandable design that gives you the flexibility to continually increase nitrogen production capacity at a later date (after initial purchase and installation*), allowing for system expansion as your site or application demands grow. This makes Peak i-Flow a versatile and future-proof solution for sites looking for a sustainable alternative to bulk delivered gas, or bottles, but concerned about being constrained by a fixed capacity solution. Peak i-Flow delivers the best of both worlds, flexibility and versatility on one hand, sustainability and cost stability on the other.

*Potential flow expansion to be discussed at initial scoping to allow provisional prefiltration sizing.

Ref	Description	Ref	Description		Ref	Description
1	Compressor	7	Bulk Water Separator (Optional)	Alternative to Peak Pure Air System	12	1 µm Coalescing Filter
2	Wet Air Receiver	8	Peak PureAir System		13	0.01 µm Coalescing Filter
3	Pressure Release Valve	9	Peak i-Flow Nitrogen Generator		14	Desiccant Dryer (-40° Cpdp)
4	Pressure Gauge	10	Peak i-Flow Expandable Capacity		15	Carbon Bed
5	Auto Condensate Drain	11	Nitrogen Process Tank		16	Post Filter
6	Oil/Water Separator (Optional)					

Example installation



Convenience and safety

The streamlined compact footprint of the i-Flow nitrogen generators and PureAir compressed air prefiltration systems allow for more efficient use of available space in comparison to bulk tanks, multiple dewars or racks of pressurised cylinders. Additionally they eradicate the onerous administrative processing, ongoing variable costs, surcharges, and opportunity cost of non-delivery associated with external gas supplies. Dependent upon application, the Peak i-Flow system negates any potential health and safety concerns as the full nitrogen supply solution is bought in-house.

Expert consultation

With Peak's technological innovation also comes industry leading consultation. application understanding, project specification, installation, and delivery, coupled with Peak's on-going commitment to global and local technical service and support. Peak, through its Industrial and Scientific divisions, have set the benchmark for customer service and product support around the world covering urban, rural and remote deployment sites. Our highly trained and dedicated specialists would like to guide you through the specification and project delivery of the best and most efficient i-Flow nitrogen solution to suit your application.

Applications

Wine Industry

Nitrogen is used in the wine making process to reduce the presence of oxygen and prevent spoilage. Nitrogen is used throughout the wine making and bottling process to sparge, blanket, pressure transfer and to flush and dry bottles prior to filling.

Modified Atmosphere Packaging

MAP is the process of modifying the atmosphere surrounding the product to control biochemical enzymatic and microbial actions to slow product degradation and increase shelf life expectancy.

Laser Cutting

Nitrogen is used as an 'assist' gas within the laser cutting industry, to blow molten material away from the cut area. The Nitrogen displaces Oxygen and prevents the formation of an oxide layer. Nitrogen is also used for laser beam path purging. Other metal fabrication applications include Laser welding and Selective laser sintering.

Electronic Component Assembly

High purity Nitrogen gas is inert, electrically non-conducting, and is cleaner than most filtered, dry air. It maintains atmospheric consistency and prevents oxidation or moisture penetration. These factors make Nitrogen Gas the atmosphere of choice for assembly and storage of electronic components.

Gas Assisted Injection Moulding

Nitrogen gas is used in both internal and external gas injection processes to counteract the effects of material shrinkage. Nitrogen Gas assisted injection moulding produces components with a hollow core thereby reducing machine cycle times and material costs by up to 30%.

Chemical Blanketing

Reducing the presence of oxygen in the storage vessels of chemical substances to ensure removal of a key ingredient of a potential explosive source or product degredation.

Large Scale Labs

Peak Scientific offer a wide range of gas generators for smaller laboratories however if you require a large-scale gas supply, Peak Industrial can offer tailor made solutions to meet your total Nitrogen gas requirements for your entire laboratory.

Technical specifications

	LPM *									
Oxygen Content (PPM)	**601X**	**602X**	**603X**	**604X**	**605X**	**606X**	**607X**	**608X**	**609X**	**610X**
10ppm	40	80	120	150	188	235	265	300	330	370
100ppm	69	138	207	270	335	405	462	532	591	644
500ppm	102	195	280	362	452	549	634	724	812	905
0.10%	118	212	318	406	508	620	710	812	890	989
0.50%	150	300	450	585	737	874	1015	1168	1314	1460
1%	190	370	530	708	885	1062	1238	1415	1574	1748
2%	245	490	665	858	1065	1287	1507	1720	1930	2145
3%	295	578	810	1045	1278	1574	1828	2090	2352	2612
4%	355	645	915	1136	1420	1704	1988	2272	2556	2840
5%	390	715	1070	1416	1649	2045	2478	2778	3145	3402
Voltage	100 - 230 VAC ±10%									
Frequency	50/60 Hz									
Current	2.0 Amp									
Input Connection	C20 Plug									
Electrical Requirements	110 - 230 VAC / 50 / 60Hz									
Power Cord (Supplied)	C19 Socket to local connection									
Power Consumption	250 Watts									
Operating Temperature	5°C - 50°C / 41°F - 122°F									
Heat Output	Air Output 5-10°C Above Ambient									
Pollution Degree	2									
Installation Category	II									
Dimensions										
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)

For a safer, cost effective, and reliable hassle free nitrogen system for your site and application that makes long term economic and practical sense...Peak i-Flow is your solution.

[PEAK Protected]™

Peak Industrial has highly trained, fully certified Field Service Engineers located in over 20 countries across every continent around the world. This allows us to provide an industry-leading rapid response service to our customers. With **[Peak Protected]**, your productivity becomes our top priority.

To discuss our different coverage levels and payment options speak to your local Peak Representative or for further information contact: **protected@peakindustrial.com**.

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