i-FLOW Nitrogen Solutions for

Modified Atmosphere Packaging (MAP)

PEAK INDUSTRIAL

// Modified Atmospheric Packaging for foods & pharmaceuticals // Inert storage & blanketing
// Laser cutting // Soldering // Gas assisted injection moulding
// High pressure cylinder filling // Large scale laboratory // And more...

MAP

Modified Atmosphere Packaging

Why MAP...

Product spoilage can occur from the second the food item is harvested. The chemical effects of atmospheric oxygen and the growth of aerobic micro-organisms result in changes to colour, smell, flavour and texture and will limit the shelf life of perishable foods such as meats, fruit and vegetables, dried foods, dairy and bakery products.

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.

Benefits of MAP...

Extended shelf life
Reduction in retail waste
Increased sales through high quality product
Fewer product returns through spoilage
Improved presentation of product
Little or no need for chemical preservatives
Increased distribution area and reduced transport costs due to less frequent deliveries

Why Nitrogen ....

Flushing with high purity Nitrogen Gas displaces air from food packaging and delays aerobic spoilage and oxidative deterioration.

Using Nitrogen as filler gas provides a pressurised atmosphere, preventing the package from collapsing, an important consideration for food manufactures.

MAP

Modified Atmosphere Packaging

MAP Shelf Life Extension Table

Product Type	MAP Gas Required	Normal Product Life	Extended Life Span
Liquid Food & Beverages	N_2	3-7 days	1-3 weeks
Dried Food Products	N_2	6 months	1+ years
Grated & Soft Cheese	N_2 / CO_2	2-3 weeks	2-3 months
Fresh Fruit & Vegetables	N_2	3-6 days	1-5 weeks
Chilled & Ready Meals	N_2 / CO_2	1-4 days	1-2 weeks
Cooked & Chilled Meats	N_2 / CO_2	1-2 weeks	1-2 months

Today consumers set great importance upon unadulterated taste, longer shelf life and attractive appearance of packed perishable goods.

The table indicates the increase in shelf life when Nitrogen Gas is used in the MAP process.

Why i-Flow....

Peak Industrial understands the importance of reliability and value for money. We know that downtime equates with revenue loss. That is why we have created the i-Flow range of industrial gas generators. Every generator is hand built and performance tested in our factory in Scotland to fit into new or existing working environments. i-Flow eradicates the uncertainties associated with bulk or liquid gas supplies.

i-Flow brings customer focussed, solution-based benefits to Nitrogen gas users in the food processing & packaging industries.

Service - Industry leading technical support from our worldwide distributor network

MAP
Modified Atmosphere Packaging

i-Flow 6000 Modular Nitrogen Generator...

i-Flow modular gas generators provide the flexibility to expand in line with your business needs by increasing Nitrogen production capacity as your business grows. Compact in size, i-Flow enables you to make the best use of limited production space. Highly efficient, i-Flow provides on-demand Nitrogen gas with purities from 95% to 99.999% and flow-rates between 2Nm3/hr and 115Nm3/hr as standard. Higher capacities are available on request. i-Flow is the reliable, convenient, cost effective and safe alternative to other bulk gas supplies.

Cost Saving - Innovative Eco-mode ensures the lowest possible running costs by efficiently managing compressed air production to meet Nitrogen demand.

Flexibility to Expand - Our systems are modular which means we can grow with your business needs.

Industry Experience - Peak has extensive experience in tailoring products to meet bespoke requirements. Whatever your needs we will try to assist you.

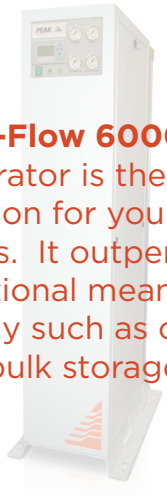
Space Saving - Much smaller than bulk LN2 tanks and does not compromise valuable workspace.

Environmentally Friendly - No more deliveries, Energy efficient and has an economy mode.

i-FLOW

Technical Specifications

Model	Height		Width		Depth		Weight	
	mm	In	mm	In	mm	In	kg	lb
i-Flow 6010	1738	68.42	500	19.68	760	29.92	197	433
i-Flow 6020	1738	68.42	500	19.68	920	36.22	282	620
i-Flow 6030	1738	68.42	500	19.68	1080	42.52	367	807
i-Flow 6040	1738	68.42	500	19.68	1240	48.82	452	994
i-Flow 6050	1738	68.42	500	19.68	1400	55.12	537	1181
i-Flow 6060	1738	68.42	500	19.68	1560	61.42	622	1368



The **i-Flow 6000** generator is the best solution for your gas needs. It outperforms traditional means of supply such as cylinders and bulk storage.

i-FLOW

Model		99.999%	99.990%	99.950%	99.900%	99.500%	99.000%	98.000%	97.000%	96.000%	95.000%
		10ppm	100ppm	500ppm	1,000ppm	5,000ppm	10,000ppm	20,000ppm	30,000ppm	40,000ppm	50,000ppm
i-Flow 6010	Nm^3/hr	2.1	3.2	4.5	5.3	8.1	10.7	13.6	16.5	18.8	21
	scfm	1.2	1.9	2.6	3.1	4.8	6.3	8	9.7	11.1	12.4
	L/min	35	54	75	88	135	178	226	275	313	350
	Air : N2	10.8	7.2	3.4	3.3	2.7	2.6	2.3	2.2	2.1	2
i-Flow 6020	Nm^3/hr	4	6.2	8.6	10.1	15.4	20.3	25.8	31.3	35.6	39.8
	scfm	2.4	3.6	5	5.9	9	11.9	15.2	18.4	21	23.4
	L/min	67	103	143	168.4	256	338	430	522	594	664
	Air : N2	10.8	7.2	3.4	3.3	2.7	2.6	2.3	2.2	2.1	2
i-Flow 6030	Nm^3/hr	6.1	9.4	13.1	15.4	23.5	30.9	39.4	47.8	54.4	60.8
	scfm	3.6	5.5	7.7	9	13.8	18.2	23.2	28.1	32	35.8
	L/min	102	157	218	256	391	515	656	796	906	1014
	Air : N2	10.8	7.2	3.4	3.3	2.7	2.6	2.3	2.2	2.1	2
i-Flow 6040	Nm^3/hr	8.2	12.9	17.6	18.6	30.9	41.1	52.8	64.5	72	81
	scfm	4.8	7.6	10.4	10.9	18.2	24.2	31.1	38	42.4	47.7
	L/min	137	215	294	310	515	685	880	1075	1200	1350
	Air : N2	10.8	7.2	3.4	3.3	2.7	2.6	2.3	2.2	2.1	2
i-Flow 6050	Nm^3/hr	9.5	14.6	20.3	23.9	36.4	47.9	61	74.1	84.4	94.4
	scfm	5.6	8.6	11.9	14.1	21.4	28.2	35.9	43.6	49.7	55.5
	L/min	158	243	338	398	607	799	1017	1235	1406	1573
	Air : N2	10.8	7.2	3.4	3.3	2.7	2.6	2.3	2.2	2.1	2
i-Flow 6060	Nm^3/hr	11.6	17.8	24.6	29.2	44.5	58.6	74.6	90.6	103.1	115.4
	scfm	6.8	10.5	14.5	17.2	26.2	34.5	43.9	53.3	60.7	67.9
	L/min	193	297	410	486	742	977	1244	1510	1719	1923
	Air : N2	10.8	7.2	3.4	3.3	2.7	2.6	2.3	2.2	2.1	2

Other Nitrogen uses in the food and drink industry

PEAK INDUSTRIAL

Wine Making & Bottling ...

- Sparging to remove dissolved oxygen and CO2
- Tank blanketing to prevent against spoilage
- Purging the equipment to limit the growth of bacteria
- Flushing the bottles with Nitrogen purges the oxygen from the bottle prior to filling

Mayonnaise & Spreads ...

- Foaming and fluffing up of viscous products
- Extended shelf life
- Improves spread-ability

Controlled Atmosphere Storage ...

- Purging with nitrogen gas removes oxygen and CO2 which slows the products deterioration.

Packaging Strength...

- Eliminates package collapse
- Reduced materials usage
- Package weight can be reduced due to inner pressure

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Your local distributor is...

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