



COMPRESSED GAS TECHNOLOGIES INC.  
*The Gas Generation Specialists*



# APPLICATIONS



## Food Packaging & Processing:

Modified Atmospheric Packaging is a proven method for extending shelf life without using chemical food preservatives. Almost every type of snack food can be packaged with nitrogen. These include potato chips, dried meat snacks, pre-cut fruits and vegetables, nuts, crackers, and cookies. The use of extremely dry nitrogen inside food packages eliminated moisture problems. Reduced oxygen content also diminishes the oxidation and discoloration of food.



## Food Preservation (Controlled Atmospheric Storage):

When fruits and vegetables are stored at their optimum temperature, their respiration rate is reduced. A nitrogen purge lowers the oxygen levels inside the storage facilities down to 2-5%, further reducing the fruit's respiration rate. When apples are stored at their optimal temperature, they can last for 2-3 months. But, by reducing the oxygen level inside the storage warehouses with nitrogen, these same apples can be stored for over a year. For many perishable fruits, particularly apples, bananas, pears, berries, and kiwis, the quality of freshness can be significantly prolonged by storage in refrigerated warehouses filled with a balanced atmosphere of nitrogen, oxygen, and carbon dioxide.



## Chemical Processing & Blanketing:

Production, storage, handling, and blanketing of chemicals will sometimes require the use of chemically inert nitrogen. Nitrogen is used by the chemical industry to protect against the danger of fire, moisture contamination, and discoloration or product degradation that result from atmospheric moisture and oxygen.



## Laboratory Nitrogen:

Nitrogen is used within the laboratory in a wide range of applications because of its relative inertness, chemical inactivity and non-combustibility. Nitrogen is used as a carrier or make-up gas for gas chromatographs; as an inert atmosphere within glove boxes and fume cupboards and for instrument purging of mass spectrometers and inductively coupled plasma applications.



## Tire Filling:

The aircraft industry, racing teams, and US Military have been using nitrogen to inflate their tires for years now. Nitrogen has been proven as the best choice for maintaining proper pressure in tires, therefore adding to the life of the tires, improving gas mileage, and ensuring the rims are not damaged due to corrosion. Nitrogen, being a significantly larger molecule than oxygen, will not permeate through the tire wall, thus nitrogen does not have the tendency to leak out of the tire, causing low tire pressure. Nitrogen filled tires will increase safety, improve gas mileage, and reduce operating costs, while improving the performance of the vehicle.

## PMNG ECONOMY SERIES NITROGEN GENERATOR

PMNG "E" Series nitrogen generators use patented membrane technology to produce an uninterrupted supply of gaseous nitrogen, on site. This compact system is ideally suited for low-flow applications that presently employ high-pressure gas cylinders or dewars of nitrogen. With the PMNG, the inconvenience of gas cylinders and liquid dewars is eliminated. Nitrogen is generated at your location, continuously and reliably, requiring only a supply of compressed air.

CGT INC. membrane technology works by filtering oxygen from a stream of compressed, dry air via hundreds of thousands of hollow, polymeric fibers - each about the diameter of a human hair - to produce gaseous nitrogen. The flow and purity of the nitrogen are at your control, assuring the perfect match to your nitrogen requirements. And, the automated PMNG system virtually operates itself without requiring the attention of an operator.



### Features:

- Nitrogen purity adjustable from 95 - 99.9%
- Nitrogen flows from 15 - 2000 scfh
- Small footprint - allows site flexibility
- Highly reliable
- Low Cost
- Floor or wall mount
- Simple, manual process control
- Air supply and nitrogen storage pressure gauges
- Easy to service and maintain
- Silent, unattended operation
- No electricity
- No moving parts
- Plug & play operation

# Technical Data

PMNG E-Series PERFORMANCE DATA						
PURITY	Percent Nitrogen + Inerts					
	95%	96%	97%	98%	99%	99.5%
MODEL	Nitrogen Flow in SCFH					
PMNG-20	26	22	18	14	10	7
PMNG-40	51	44	36	28	20	15
PMNG-80	168	142	116	90	60	43
PMNG-160	336	284	232	180	120	86
PMNG-240	504	426	348	270	180	129
PMNG-320	672	568	464	360	240	172
PMNG-500	1120	945	770	595	420	245

Performance is based on 77°F, 101.5PSI at the Membrane and is +/-5%.  
Data will vary with temperature and pressure.

BASE OR WALL MOUNTED UNITS				
MODEL	APPROXIMATE DIMENSIONS & WEIGHTS			
	Height	Width	Depth	Net Wt.
PMNG-20	46.75"	22.5"	10.5"	110 LBS
PMNG-40	46.75"	22.5"	10.5"	114 LBS
PMNG-80	46.75"	22.5"	10.5"	119 LBS
PMNG-160	46.75"	22.5"	10.5"	129 LBS
PMNG-240	46.75"	22.5"	10.5"	145 LBS
PMNG-320	46.75"	22.5"	10.5"	155 LBS
PMNG-500	60.75"	24.375"	20.625"	324 LBS

## PMNG Series Features:

- Quality air pre-treatment filtration system
- Supply air pressure gauge
- Nitrogen pressure gauge
- Simple, reliable flow control system with manual purity and flow adjustment

## Benefits Summary:

- Gaseous nitrogen on demand
- No cylinder storing, monitoring, handling, demurrage charges, or delivery concerns
- Low cost, reliable
- No shortfalls or overages
- Silent, unattended operation
- Minimal maintenance

## Technical Sales and Marketing Support:

To have a CGT technical representative help you determine the optimum size of the membrane system to meet your specific nitrogen requirements or answer any questions you might have about our membrane technology, please contact us by one of the methods below.



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