

# MAXIGAS

## Nitrogen Gas Generators

The cost-effective, reliable and safe solution for medium to large nitrogen requirements.

MAXIGAS nitrogen gas generators from Parker produce nitrogen gas from compressed air and offer a cost-effective, reliable and safe alternative to traditional nitrogen gas supplies such as cylinder or liquid.

Nitrogen is used as a clean, dry, inert gas primarily for removing oxygen from products and/or processes.

MAXIGAS provides an on-demand, continuous source of nitrogen gas which can be used in a wide range of industries such as food, beverage, pharmaceutical, laboratory, chemical, heat treatment, electronics, transportation, oil and gas and laser cutting.



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### Features:

- Can operate from a standard factory compressed air supply
- Delivers 5% down to 10ppm oxygen content, without the need for any additional purification
- Available in 7 models offering varying flow rates and purities
- Automatic economy mode
- Built-in oxygen analyser for continuous purity monitoring
- Digital and analogue outputs for remote monitoring
- Alarm capabilities
- User friendly control interface
- Compact design
- Modular concept

### Benefits:

- **Up to 90% cost savings\***  
Typical capital pay-back is achievable within 12-24 months.
- **Energy savings**  
Low air consumption provides greater energy efficiency.
- **Convenient and safe**  
The easy to use system is simple to install, requires minimal maintenance and eliminates safety hazards associated with traditional gas supplies.
- **Space saving design**  
The compact design means the system demands less floor space.
- **Flexible multi-bank option**  
The modular concept means the generators can be multi-banked if required.
- **Reduce carbon footprint**  
The elimination of cylinder deliveries and transportation means carbon footprint can be reduced.

\* Typical cost savings achieved in comparison to cylinder or liquid supply

## Cost-effective, energy saving solution

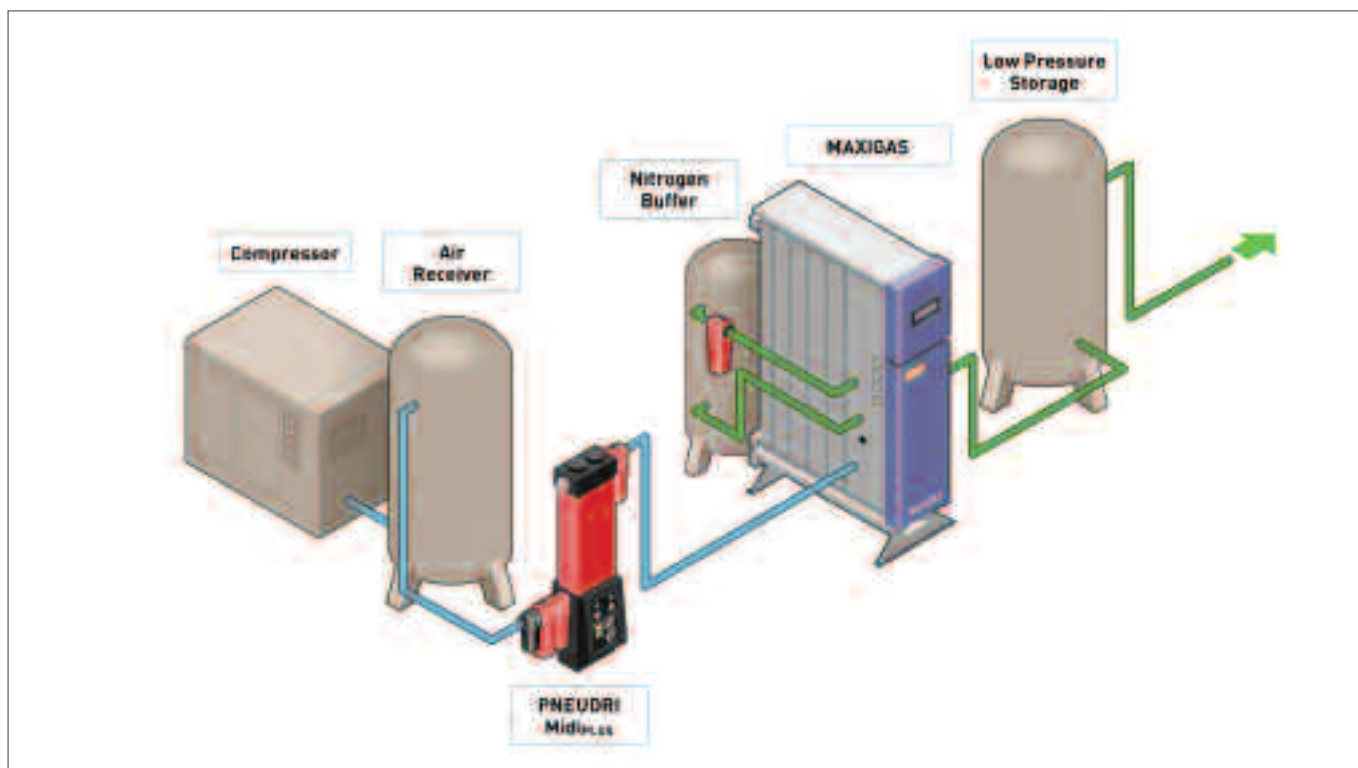
In addition to a short pay-back period, the cost-effective solution removes costs associated with traditional gas supplies including refills, order processing, tank rental and delivery charges and eliminates future gas company price increases.

While operating from a standard compressed air supply, the economy mode and on-demand function respectively offers control over nitrogen production, flow rates and purity levels and therefore limits costly wasted gas or liquid boil off to facilitate excellent energy savings.

The 24/7 operation also removes the risk of gas running out and thus the loss of production time.

## Typical MAXIGAS system

A typical MAXIGAS system comprises of the following configuration:



## Convenient and safe alternative

The system can be installed simply within a compressor house or production area with standard piping, eliminating the need for any special requirements.

In addition, low maintenance requirements ensure minimal production downtime.

Nitrogen is produced at low pressure, eliminating safety hazards usually associated with high pressure cylinder gas. Potential manual handling concerns are also removed.

## Pre-treatment solutions

Using high quality compressed air to supply MAXIGAS nitrogen generators will ensure long and trouble free service and optimum performance. To guarantee this, Parker offers a unique suite of pre-treatment solutions including PNEUDRI desiccant air dryers and OIL-X EVOLUTION coalescing filters which provide delivered air quality in accordance with the quality classification 3.2.2 from ISO 8573-1:2001, the international standard for compressed air quality.

## Guaranteed air quality

<b>Dewpoint:</b>	-40°F (-40°C) PDP
<b>Particulate:</b>	<0.1 micron
<b>Oil:</b>	<0.01 ppm



## The Parker Design Philosophy

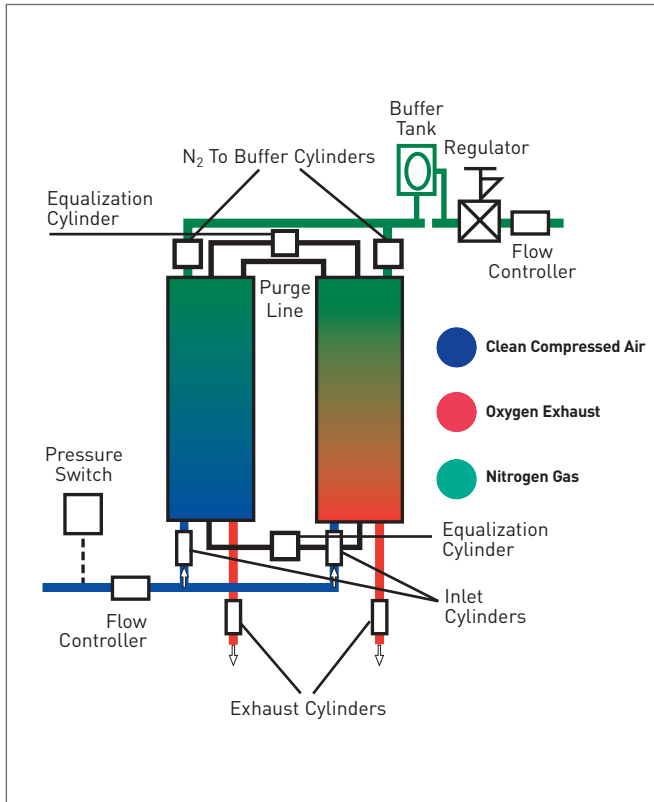
Our philosophy "Designed for Air Quality & Energy Efficiency" ensures products that not only provide the user with clean, high quality compressed air, but also with low lifetime costs and reduced CO<sub>2</sub> emissions.

## How it works

MAXIGAS operates via the pressure swing adsorption (PSA) principle to produce a continuous stream of nitrogen gas from compressed air. Pairs of extruded aluminum columns are filled with carbon molecular sieve (CMS). Pre-treated compressed air enters the bottom of the 'online' column and flows up through the CMS.

Oxygen and other trace gases are preferentially adsorbed by the CMS, allowing nitrogen to pass through. After a pre-set time the on-line column automatically switches to regenerative mode, venting contaminants from the CMS. Carbon molecular sieve differs from ordinary activated carbons as it has a much narrower range of pore openings.

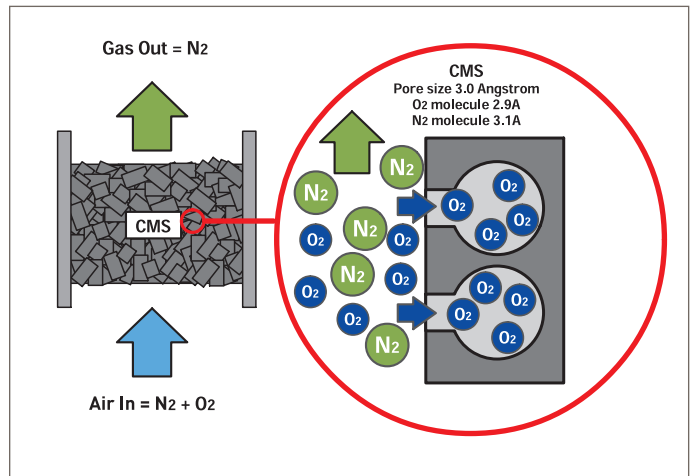
This allows small molecules such as oxygen to penetrate the pores and separate from nitrogen molecules which are too large to enter the CMS. The larger nitrogen molecules by-pass the CMS and emerge as the product gas.



MAXIGAS Nitrogen Generator Schematic



Carbon Molecular Sieve



CMS Structure



Units can be multi-banked. MAXIGAS120 models

## Flexible multi-bank option

The modular concept offers greater flexibility to traditional twin tower PSA generators, as the MAXIGAS generators can be multi-banked and configured to suit higher flowrate applications, or can be added to installations as and when the nitrogen demand increases.

Additional modules can provide extra capacity on standby or service backup for peace of mind.

The compact design also means the units can fit through standard doorways.

## Product Selection

Performance data is based on 100 psi g (7 bar g) air inlet pressure and 66° - 77°F (20° - 25°C) ambient temperature. Consult Parker for performance under other specific conditions.

Oxygen Content													
Model	Unit	10ppm	50ppm	100ppm	250ppm	500ppm	0.1%	0.5%	1.0%	2.0%	3.0%	4.0%	5.0%
MAXIGAS104	scfh	71	133	193	249	284	311	496	627	769	911	1025	1135
	m <sup>3</sup> /hr	2	3.8	5.5	7.1	8.1	9	14.1	17.8	22	25.8	29	32.2
MAXIGAS106	scfh	104	200	291	375	425	469	747	938	1156	1364	1538	1702
	m <sup>3</sup> /hr	3	5.7	8.2	10.6	12.1	13.4	21.2	26.6	32.8	38.7	43.5	48.3
MAXIGAS108	scfh	136	266	385	501	567	633	998	1255	1544	1822	2045	2269
	m <sup>3</sup> /hr	3.9	7.5	10.9	14.2	16.2	18	28.3	35.5	43.8	51.6	58	64.4
MAXIGAS110	scfh	169	333	483	623	715	791	1244	1565	1931	2275	2558	2836
	m <sup>3</sup> /hr	4.9	9.4	13.7	17.6	20.2	22.4	35.3	44.4	54.7	64.5	72.5	80.4
MAXIGAS112	scfh	207	396	578	749	851	944	1495	1882	2318	2727	3071	3404
	m <sup>3</sup> /hr	5.9	11.2	16.4	21.2	24.2	26.8	42.4	53.3	65.7	77.4	87.1	96.5
MAXIGAS116	scfh	278	504	732	949	1085	1200	1893	2384	2935	3464	3895	4315
	m <sup>3</sup> /hr	7.9	14.3	20.7	26.9	30.7	34	53.7	67.5	83.2	98.1	110.3	122.3
MAXIGAS120	scfh	344	609	886	1148	1315	1456	2291	2885	3556	4189	4713	5225
	m <sup>3</sup> /hr	9.8	17.3	25.1	32.5	37.2	41.2	65	81.7	100.7	118.7	133.5	148

## Technical Data

Ambient temperature range:	41 - 122°F (5 - 50°C)
Nitrogen outlet pressure:	up to 160 psi g (11 bar g)*
Min. air inlet pressure:	87 psi g(6 bar g)
Inlet air quality:	Dewpoint: -40°F (-40°C)
	Particulate: <0.1 micron
	Oil: <0.01 ppm
Electrical supply:	110V/1ph/60Hz or 200V/1ph/50Hz
Inlet/outlet connections:	Air G1 / Nitrogen G1/2 1/2" NPT

\* higher nitrogen pressure packages available

## Weights and Dimensions

Model	Height		Width		Depth		Weight	
	ins	mm	ins	mm	ins	mm	lbs	kg
MAXIGAS104	75.76	1894	22	550	27.68	692	740.75	336
MAXIGAS106	75.76	1894	22	550	34.44	861	868.62	394
MAXIGAS108	75.76	1894	22	550	41.16	1029	1075.9	488
MAXIGAS110	75.76	1894	22	550	47.92	1198	1283.1	582
MAXIGAS112	75.76	1894	22	550	54.72	1368	1490.3	676
MAXIGAS116	75.76	1894	22	550	70.6	1765	1904.8	864
MAXIGAS120	75.76	1894	22	550	81.72	2043	2319.3	1052

## MIDIGAS

Also available MIDIGAS nitrogen generators for small to medium applications

Using the same PSA technology, the MIDIGAS range is a compact option suitable for applications requiring small to medium flow rates and is available in 3 models.



MIDIGAS2 model

For information on extended warranty and preventative maintenance contract availability, please contact us at 1 800 343 4048