



domnick hunter



Nitrogen Gas Generators

**MAXIGAS
Pure & Simple**

www.domnickhunter.com

Why tolerate high pressure gas cylinders and dewars when there is a safe, reliable alternative?...and at a fraction of the cost!!



with domnick hunter nitrogen gas generators

Food grade nitrogen for modified atmosphere packaging, high pressure nitrogen for plastic injection moulding or laser cutting?

High purity nitrogen for heat treatment, semiconductor manufacture, laboratory applications or electronic assembly?

Whatever your need for nitrogen gas, domnick hunter has the products and experience to ensure you get the most appropriate and reliable gas supply solutions.

How important is the supply of nitrogen to your business? For many companies, a reliable supply of nitrogen gas is considered the 4th utility, after water, electricity and gas.

domnick hunter understands the key role nitrogen can play and the fundamental need for a reliable and secure supply.

For over 40 years domnick hunter has been a world leader in filtration, purification and separation technologies in a diverse range of industries, and in the last decade, gas generation technology. domnick hunter is universally known for developing high quality products, technical innovation and partnerships with customers.



domnick hunter



an alternative supply

Every time you order gas cylinders or liquid nitrogen, you not only pay for the gas itself, but also for:

- Cylinder/Tank Rental
- Delivery Costs
- Internal Order Processing
- Cylinder Handling Costs
- Safety Issues

Now these and many other problems associated with nitrogen gas supplies can be eliminated in a manner that is not only more efficient, reliable and safe, but also at lower cost.

the simple solution – generate your own supply

You can now generate your own nitrogen gas at the press of a button – as much or as little as you need, at a fraction of the cost of your existing supply and at the purity your process requires. The generators are virtually maintenance free. Simply switch on and let your domnick hunter nitrogen generator do the rest.

benefits

- **Convenient, secure supply**

With MAXIGAS, the nitrogen you need is always available on demand, 24 hours a day, eliminating the risk of lost production time due to gas running out.

- **The right purity**

MAXIGAS systems deliver the nitrogen purity your application needs - from 3% to 10ppm oxygen content, without the need for costly de-oxo systems.

- **Space saver**

The compact design of MAXIGAS means that installations take up less floor space than other systems, and will fit through a standard doorway.

- **No growing pains**

domnick hunter's unique modular design simply means that extra banks of MAXIGAS can be added as your business grows and gas requirements increase.

- **The safest supply**

No worry about safety hazards of storing, handling and changing of heavy, high pressure cylinders.

- **Cost savings**

Producing nitrogen from compressed air with MAXIGAS can cut your operating costs significantly. No on-going cylinder costs; i.e. rental, re-fill, delivery, order processing.



MAXIGAS model
N2MAX116

a better gas supply with MAXIGAS-

The award winning MAXIGAS nitrogen generator from domnick hunter offers a unique, innovative solution to nitrogen gas supply. A reliable, secure source of nitrogen can be produced from your existing compressed air supply, eliminating the need for high pressure gas cylinders or bulk cryogenic liquefied gas.



*Note: In high ambient temperature applications, it may be necessary to install an additional activated carbon stage to protect the nitrogen generator from oil vapour carryover. Please consult domnick hunter for advice.

The importance of PNEUDRI pre- treatment

domnick hunter knows that total reliability is important to you. Using high quality compressed air to supply MAXIGAS nitrogen generators ensures long and trouble free service and guarantees optimum performance.

domnick hunter pre-treatment packages are based on the proven PNEUDRI desiccant air dryers and OIL-Xplus coalescing filters to guarantee the highest quality air supply for MAXIGAS nitrogen generators.

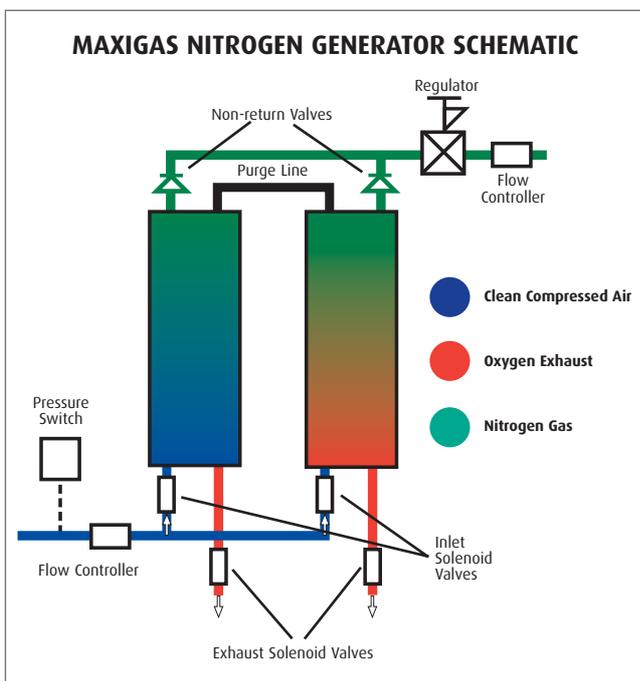
Guaranteed air quality:

Dewpoint: -40°C PDP
Particulate: <0.1 micron
Oil: <0.01 mg/m³

how it works - pulling nitrogen out of the air

domnick hunter MAXIGAS nitrogen generators operate on the Pressure Swing Adsorption (PSA) principle to produce a continuous stream of nitrogen gas from compressed air. The MAXIGAS system uses pairs of extruded aluminium columns, filled with carbon

molecular sieve (CMS). Pre-treated compressed air enters the bottom of the 'on-line' bed and flows up through the CMS. Oxygen and other trace gases are preferentially adsorbed by the CMS, allowing nitrogen to pass through.

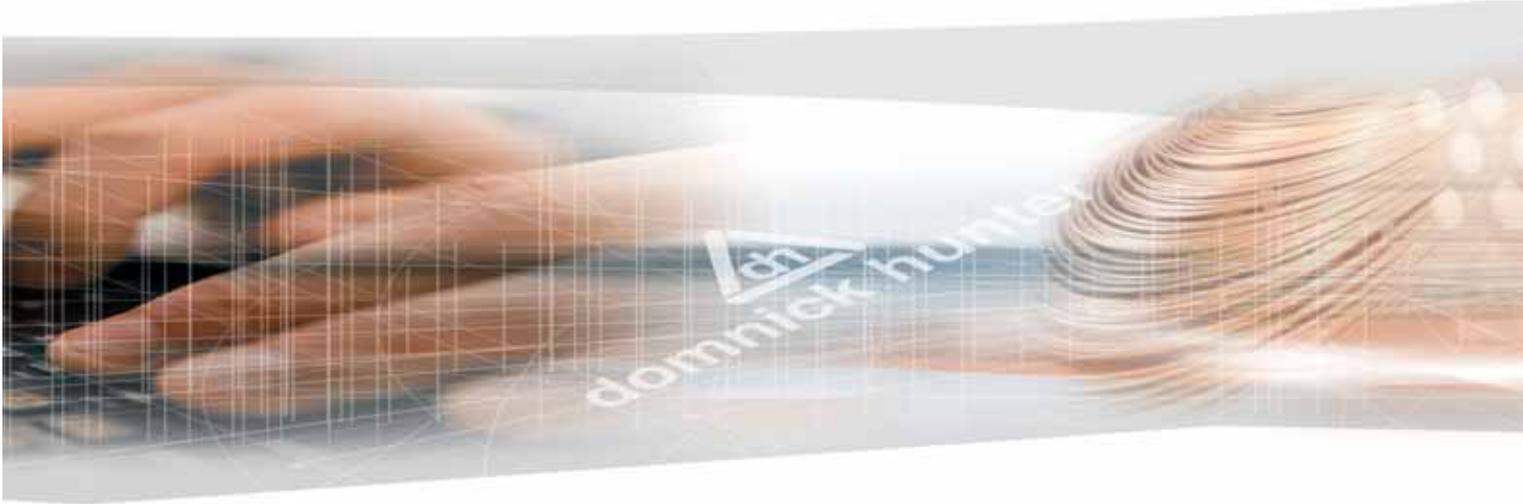


Carbon molecular sieve differs from ordinary activated carbons in that it has a much narrower range of pore openings. This allows small molecules such as oxygen to penetrate the pores and be separated from nitrogen molecules which are too large to enter the CMS. The larger molecules of nitrogen by-pass the CMS and emerge as the product gas.



After a pre-set time when the on-line bed is almost saturated with adsorbed gases, the system automatically switches the bed to regenerative mode, venting the contaminants from the CMS. The second CMS bed then comes on-line and takes over the separation process. The pair of CMS beds switch between separation and regeneration modes to ensure continuous and uninterrupted nitrogen production.

performance data



Model	With Compressor	Without Compressor	Nitrogen Outlet Flowrate - Nm ³ /hr (ATP) v Oxygen Content						
			10ppm	100ppm	0.1%	0.5%	1%	2%	3%
MAXIS MIT	N2MID350	•	0.6	1.0	1.6	2.6	3.1	4.0	N/a
	N2MID351	•							
	N2MID600	•	0.9	1.5	2.6	3.9	4.6	6.1	N/a
	N2MID601	•							
SINGLE RANK MAXIS	N2MAX104	•	1.3	2.2	4.5	7.6	9.0	11.8	13.8
	N2MAX106	•	1.9	3.2	6.7	11.4	13.5	17.7	20.7
	N2MAX108	•	2.6	4.4	9.0	15.3	18.0	23.6	27.6
	N2MAX110	•	3.2	5.3	11.3	19.1	22.6	29.5	34.5
	N2MAX112	•	5.2	8.4	18.4	30.8	36.4	41.2	47.8
	N2MAX116	•	6.9	11.2	24.5	41.1	48.5	52.9	61.4
	N2MAX212	•	10.4	16.8	36.8	61.6	72.8	82.4	95.6
DUAL RANK MAXIS	N2MAX216	•	13.8	22.4	49.0	82.0	97.0	105.8	122.8

Performance data based on 6barg (87psig) air inlet pressure, 20°-25°C (68°-77°F) ambient temperature. Consult domnick hunter for performance under other specific conditions.

technical specifications

Ambient temp. range	5°-45°C (41-113°F)
Nitrogen outlet pressure	5 barg (72.5psig)
Min. air inlet pressure	6 barg (87psig)
Max. air inlet pressure	9.5 barg (138psig)
Inlet air quality	Dewpoint: -40°C (-40°F) Particulate: <0.1 micron Oil: <0.01 mg/m ³
Electrical supply	220V/1ph/50Hz or 110V/1ph/60Hz
Inlet/outlet connections	G ¹ / ₂

standard accessories

- Oxygen analyser for continuous monitoring of nitrogen purity
- Flow verification kit
- Analogue outputs for remote monitoring
- Alarm connections



Modified Atmosphere Packaging installation.



MAXIGAS MIDI

The MAXIGAS MIDI range is designed to offer the most compact solution for smaller scale nitrogen requirements. These units are available with the option of an integral oil-free air compressor, giving a more flexible nitrogen supply with no dependence on your plant air supply.



MAXIGAS Modular Concept

For higher flow rate applications, MAXIGAS can be multibanked to offer the most cost effective solution.

The modular design of the MAXIGAS system means you can simply add extra banks as your business grows and your gas requirements increase.



Nitrogen blanketing for electronics production.

weights and dimensions

Model	Height (mm)	Width (mm)	Depth (mm)	Weight (Kg)
N2MID350	1100	590	600	145
N2MID600	1100	590	600	180
N2MAX104	1650	500	810	250
N2MAX106	1650	500	980	330
N2MAX108	1650	500	1150	410
N2MAX110	1650	500	1320	490
N2MAX112	1760	600	1717	674
N2MAX116	1760	600	2055	837
N2MAX212	1760	1700	1717	1348
N2MAX216	1760	1700	2055	1674

domnick hunter also manufactures:



Laboratory Gas Generators



Compressed Air Filters



Compressed Air Filter Elements



Compressed Air Refrigeration Dryers



Compressed Air Desiccant Dryers



Condensate Drains



Oil / Water Separators



Breathing Air Purifiers



Sterile Air Filters



Carbon Dioxide Purifiers



Mixed Gas Dispense Systems



Liquid Filters

For further information about these and many other filtration, purification and separation products please contact domnick hunter or visit our website at www.domnickhunter.com

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