

# nano



## high purity nitrogen generators

nitrogen purity: 95% to 99.9%

**edgeO<sub>2</sub>**  
NITROGEN GENERATOR

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Leading edge technology and hundreds of years of **experience**...nano-purification solutions, your world-class manufacturer of state-of-the-art compressed air and gas solutions to industry.

Our commitment at nano is to work alongside our **customers** and provide unique solutions with the highest quality products to solve your specific challenges.

A wealth of experience and leading edge products are only part of the equation. nano recognise that world-class customer **service** is the most important component to any successful business.

Experience. Customer. Service... **nano**



## dry and pure

Nitrogen is a dry, inert gas which is used in a wide range of applications where oxygen may be harmful to the product or process. Nitrogen generators use regular compressed air to deliver a continuous supply of high purity nitrogen, offering a cost effective and reliable alternative to the use of cylinder or liquid nitrogen across a wide range of applications.



## design

Our experienced team of design engineers are always looking for new and unique technologies and products to bring you the highest level of performance and lowest overall operating cost.



## research & development

Our R&D team endeavour to provide solutions that go beyond developing an existing product. They are continually researching new technologies which can provide unique advantages over competitive offerings.



## manufacture

The reliable and energy saving nano ECOGEN<sub>2</sub> range of nitrogen generators are manufactured in our state of the art facility to the highest standards of build quality to ensure equipment reliability and high levels of performance.

# ECOGEN<sub>2</sub> nitrogen generators

Nitrogen is used in many commercial and industrial applications to improve the quality of a product or process or as a safety measure to prevent combustion. Liquid or bottled nitrogen delivery and storage can be expensive, unreliable and a safety concern. Nitrogen generators allow users to produce nitrogen in-house simply and inexpensively using an existing compressed air system.

Nano recognises the importance of having a safe, reliable and cost effective supply of high purity nitrogen. We have developed the ECOGEN<sub>2</sub> nitrogen generator to meet the increasing demand for high quality, complete packaged solutions which save energy and time while fulfilling the needs of their intended application.

With traditional methods of gas supply, users are liable for hidden costs such as rental, refill and delivery, order processing charges as well as an environmental levy charge.

When you switch to a nano ECOGEN<sub>2</sub> gas generator you can expect payback typically between 6 to 24 months. It's unique design and energy saving function offers a number of significant advantages over delivered gas options, as well as traditional generator designs.

The compact plug and play system can be installed easily and with minimum cost and disruption and requires only a pre-treated compressed air system to start production. The ECOGEN<sub>2</sub> is ideal for smaller usage applications such as wine production, food packaging and for atmosphere blanketing where a high quality, simple, inexpensive nitrogen supply is required.



## benefits



### guaranteed performance

- reliable performance based on decades of experience with pressure swing adsorption technology
- 100% function and performance tested at our factory
- 2 year warranty

### rapid return on investment

- significant cost savings over cylinder or liquid supply provides a typical return on investment of less than 24 months

### easy to install

- the compact design allows installation in spaces too small for twin tower generator systems

### safe & reliable

- eliminates the safety hazards of transporting and storing pressurized gas cylinders or liquid nitrogen

### environmentally friendly

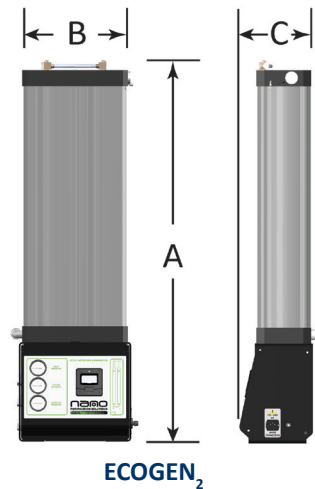
- lower air consumption and refined controls provide greater energy efficiency
- reduces carbon footprint by eliminating gas delivery to your facility

# sizing & specifications

generator model	rated outlet flow <sup>(1)</sup>	nitrogen purity at the outlet (maximum oxygen content)							dimensions (mm)			approx. weight
		99.9% (0.1%)	99.5% (0.5%)	99% (1%)	98% (2%)	97% (3%)	96% (4%)	95% (5%)	A	B	C	kg
ECOGEN <sub>2</sub> 090	Nm <sup>3</sup> /h	1.4	2.2	2.7	3.7	4.6	5.3	5.9	1016	440	297	54
ECOGEN <sub>2</sub> 110	Nm <sup>3</sup> /h	2.4	3.4	4.3	5.8	7.2	8.4	9.4	1341	440	297	78
ECOGEN <sub>2</sub> 130	Nm <sup>3</sup> /h	4.0	5.6	7.1	9.6	12.0	13.9	15.5	1941	440	297	119
Air factor		4.4	3.7	3.0	2.6	2.4	2.2	2.1				

specifications												
design operating pressure range					6 to 10 barg							
design operating temperature range					5 to 40°C							
maximum inlet particulate					0.1 micron							
maximum inlet oil content					0.01 ppm <sup>(3)</sup>							
recommended inlet dew point					-40°C PDP <sup>(2)</sup>							
supply voltage					110 - 240 VAC (50 or 60Hz) or 24VDC							

- (1) at 7 barg inlet pressure and 20 - 25°C inlet temperature. For outlet flow at all other conditions, refer to the correction factors above or contact sales@n-psi.co.uk
- (2) requires an upstream dryer. Contact n-psi for assistance selecting the optimum dryer for your application
- (3) including oil vapour
- (4) to be used as an approximate guide only. All applications should be confirmed by n-psi. Contact us for sizing assistance
- (5) connections are ½" BSPP for inlet/outlet and 1" BSPP connection to buffer vessel
- (6) option - independent external oxygen analyser



pressure correction factors <sup>(4)</sup>										
inlet air pressure (barg)	6	7	8	9	10					
correction factor	0.88	1.00	1.10	1.20	1.20					

temperature correction factors <sup>(4)</sup>										
inlet air temperature (°C)	5	10	15	20	25	30	35	40	45	50
correction factor	0.80	0.90	0.94	1.00	1.00	0.98	0.95	0.90	0.85	0.72

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