

**NMG-Series**  
high-purity membrane  
Nitrogen generators  
Nitrogen purity: 95% to 99.9%

**NMG**

# nano NMG-Series Nitrogen generators

## how it works

Nitrogen is a dry, inert gas which 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 produce a continuous supply of high-purity Nitrogen on site using your existing compressed air system, offering a cost effective and reliable alternative to the use of cylinder or liquid Nitrogen across a wide range of applications.

Air is 78% Nitrogen. The nano NMG Nitrogen generators use a simple and proven membrane technology to separate this Nitrogen from the air simply and cost effectively with no moving parts or electricity. Why pay a gas company to deliver Nitrogen cylinders or dewars to your facility when you can generate your own clean, endless supply of high purity Nitrogen using the compressed air you already have on site? It's a more reliable, more cost effective, safer way to get the Nitrogen you need, right where you need it.

A few of the many industries making the switch to nano N-Series Nitrogen generators include:

- Food (MAP)
- Beverage (bottling)
- Plastics (PET)
- Pharmaceutical (product transfer)
- Chemicals (blanketing)
- Laser Metal Cutting (burring reduction)
- Fire Prevention (eliminating combustion)
- Electronics (wave soldering)



*Eliminate the cost, downtime, safety concerns and hassle of buying and storing Nitrogen.*

**Reliability is built in... and backed by a 1 year warranty.**

## benefits - get more for your money

### Guaranteed Performance

- Reliable performance based on decades of experience with simple & effective membrane technology.
- No moving parts.
- Requires no electricity.

### Rapid Return on Investment

- Low initial cost and minimal maintenance.
- Significant cost savings over cylinder or liquid supply.

### Environmentally Friendly

- Low air consumption for maximum energy efficiency.
- Reduces your carbon footprint by eliminating gas delivery to your facility.

### Safe & Reliable

- Eliminates the safety hazards of transporting and storing pressurized gas cylinders or liquid Nitrogen
- No late deliveries or restrictive gas company contracts.

### Easy to Install

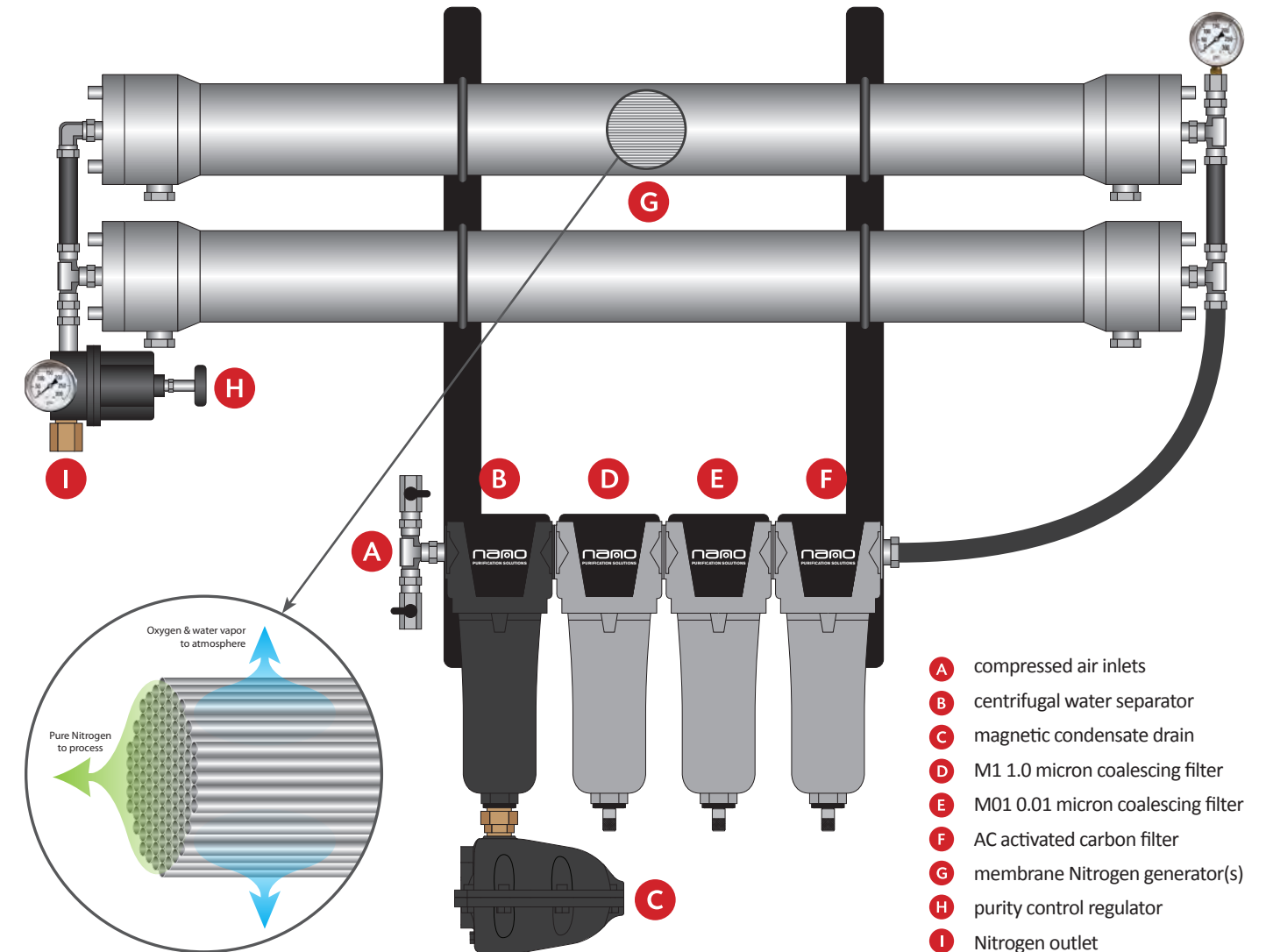
- Wall mounting brackets are included as standard.
- The compact and lightweight design allows installation in tight spaces.
- The generator can be installed horizontally or vertically depending on the space available.
- Just connect compressed air to the inlet and Nitrogen starts to flow.
- Virtually silent operation means it can be installed in noise sensitive areas.

### Easy to Maintain

- Minimal maintenance requirements.

### Fits Any Application

- Available in a wide range of flow rates and purities (Oxygen contents from 5% to less than 0.1%)
- Perfect for delivering Nitrogen right where it is used, anywhere in your process.



Air from your plant compressed air system enters the system through the inlet ports (A). It then passes through a nano NWS centrifugal water separator to remove any bulk condensate (B). Collected condensate is expelled from the system using a nano NMD magnetic zero air loss drain (C). The air then passes through three nano NF filters in series: an M1 1.0 micron coalescing filter (D), an M01 0.01 micron coalescing filter (E), and an AC activated carbon filter (F). This removes remaining liquid aerosols, solid particulate and oil vapor. The air then passes through one or more membrane Nitrogen generators (G). The generator contains hundreds of thousands of hollow fibers which separate the Nitrogen from the air through a process known as selective permeation. The walls of these fibers allow Oxygen and water vapor molecules to pass through but not Nitrogen. A simple manual valve (H) controls the flow and thereby the purity of the Nitrogen. Clean, pure, dry Nitrogen then flows out of the outlet port to your downstream process.



F1 centrifugal water separator



NMD magnetic zero air loss drain



F1 performance validated filters



adjustable purity control regulator

# sizing & specifications

Model	Inlet Air Pressure psig	Rated Outlet Flow	Nitrogen Purity at the Outlet (Maximum Oxygen Content)							Dimensions (inches)			Approx. Weight lbs
			99.9% (0.1%)	99.5% (0.5%)	99% (1%)	98% (2%)	97% (3%)	96% (4%)	95% (5%)	A	B	C	
NMG 1126	100	scfh	63	126	168	260	330	408	486	40	48	5.5	51
		m <sup>3</sup> /hr	1.8	3.6	4.8	7.4	9.3	11.6	13.8	40	48	5.5	51
	125	scfh	87	174	232	352	452	556	656	40	48	5.5	51
		m <sup>3</sup> /hr	2.5	4.9	6.6	10.0	12.8	15.7	18.6	40	48	5.5	51
	150	scfh	100	200	268	394	514	628	776	40	48	5.5	51
		m <sup>3</sup> /hr	2.8	5.7	7.6	11.2	14.6	17.8	22.0	40	48	5.5	51
200	scfh	145	290	388	586	776	918	1058	40	48	5.5	51	
	m <sup>3</sup> /hr	4.1	8.2	11.0	16.6	22.0	26.0	30.0	40	48	5.5	51	
NMG 1317	100	scfh	159	317	423	600	777	953	1130	34	53	8.0	69
		m <sup>3</sup> /hr	4.5	9.0	12.0	17.0	22.0	27.0	32.0	34	53	8.0	69
	125	scfh	212	423	565	812	1059	1306	1518	34	53	8.0	69
		m <sup>3</sup> /hr	6.0	12.0	16.0	23.0	30.0	37.0	43.0	34	53	8.0	69
	150	scfh	238	476	635	918	1200	1447	1730	34	53	8.0	69
		m <sup>3</sup> /hr	6.7	13.5	18.0	26.0	34.0	41.0	49.0	34	53	8.0	69
200	scfh	393	714	953	1341	1765	2154	2500	34	53	8.0	69	
	m <sup>3</sup> /hr	11.1	20.2	27.0	38.0	50.0	61.0	70.8	34	53	8.0	69	

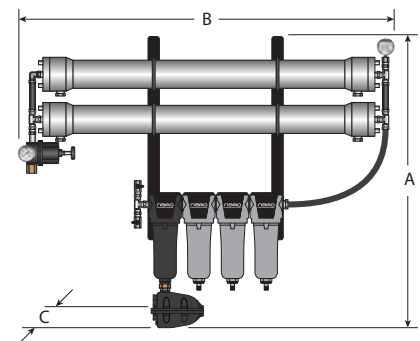
## specifications

inlet & outlet connections	1/2" NPT
design operating pressure range	100 - 200 psig
design operating temperature range	41 - 113°F
pressure drop	7 - 10 psig

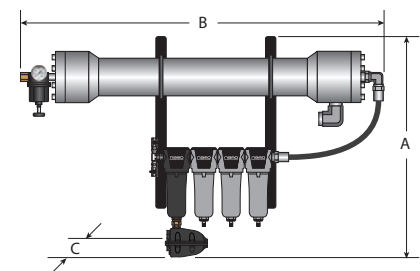
## inlet air to outlet Nitrogen ratio <sup>(1)</sup>

Nitrogen Purity	99.9%	99.5%	99%	98%	97%	96%	95%
NMG 1126	7.5	4.7	3.8	2.9	2.5	2.3	2.1
NMG 1317	4.9	4.6	3.6	2.8	2.5	2.2	2.1

(1) The amount of compressed air required at the inlet as a function of the Nitrogen flow at the outlet. Values are approximate. Contact us for detailed compressed air inlet requirements.



NMG 1126



NMG 1317

Experience. Customer. Service...n-psi

nano-purification solutions  
11330 Vanstory Drive  
Huntersville, NC 28078  
USA

Tel: (704) 897-2182  
Fax: (704) 897-2183  
Email: support@n-psi.com  
web: www.n-psi.com



Copyright nano-purification solutions  
Publication ref. n-psi-NMG-02-US