MEMBRANE NITROGEN GENERATOR NM-GEN 2-50

(Membrane Nitrogen Generator)

DESCRIPTION

The NM-GEN membrane nitrogen generators extract the available nitrogen from the compressed air. Generator use hollow fiber membrane technology to separate nitrogen from other components in compressed air. The membrane uses the principle of selective permeation to produce purity nitrogen. Each gas has a characteristic permeation rate, which is a function of its ability to diffuse through a membrane. Oxygen is a fast gas and is selectively diffused through the membrane wall, while nitrogen is allowed to travel along the inside of the fiber, thus creating a nitrogen-rich product stream. The oxygen-enriched gas, or permeate, is vented from the membrane separator at atmospheric pressure. The driving force for the separation is the difference between the partial pressure of the gas on the inside of the hollow fiber and that on the outside. In the membrane separator, compressed air flows down the inside of hollow fibers. Fast gases—oxygen, carbon dioxide, and water vapor - and a small amount of slow gases, pass through the membrane wall to the outside of the fibers. They are collected at atmospheric pressure as the permeate. Most of the slow gases and a very small amount of the fast gases continue to travel through the fiber until they reach the end of the membrane separator, where the product nitrogen gas is piped to the application.

APPLICATIONS

- Blanketing of Chemicals and Pharmaceuticals
- Inerting of Flammable Liquids
- Laser Cutting
- Re-flow and Wave Soldering of PCBs
- UV-Curing of Coatings
- Food processi

TECHNICAL SPECIFICATIONS

Nitrogen pressure	5– 24 barg
Operating temperature (feed air)	35 °C to 55 °C
Dew point (at ambient pressure)	better than -50°C
Voltage, Frequency	110–230 V / 50–60 Hz
Power consumption	<35 W
Sound level	65 dB(A)
Protection class (controller)	IP 65
Compressed air quality (inlet)	Class 1.X.1 acc. to ISO 8573-1 (0,1um ; bellow saturation ; <0,01mg/m3/h)
Inlet filter	Super fine coalescing and activated carbon

MATERIALS

Membrane housing	Aluminium and (or) PA
Supporting frame	Carbon steel
Valves	Brass, aluminium
Flexible connection	Nylon
Fittings, Screws, plugs	INOX, brass, steel-zinc plated, PA
Outside protection (frame, cabinet)	Powder paint coated (Epoxy-polyester base)

Omega Air d.o.o. Ljubljana
Cesta Dolomitskega odreda 10
1000 Ljubljana, Slovenia

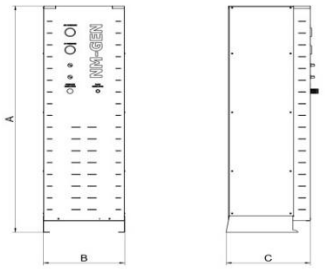
Tel: +386 (01) 200 68 00
Fax: +386 (01) 200 68 50

e-mail: info@omega-air.si
www.omega-air.si

SIZES

Model	Connection IN	Connection OUT	Purge Connection	Height A [mm]	Width B [mm]	Depth C [mm]	Mass [kg]	No. of membranes	
NM-GEN 2	½"	½"	½"	1325	428	530	51	1	/
NM-GEN 4	½"	½"	½"	1325	428	530	52	1	
NM-GEN 6	½"	½"	½"	1325	428	530	55	1	
NM-GEN 10	¾"	¾"	¾"	1925	558	630	103	1	
NM-GEN 25	¾"	¾"	¾"	1925	558	630	112	1	
NM-GEN 50	¾"	¾"	¾"	1925	558	630	130	2	

(1)Volume of 1 vessel



PERFORMANCE

Nitrogen flow capacity in Nm^3/h at compressed air temperature 55°C and 9 barg

	99,5 % Purity		99 % Purity		98 % Purtiy		97 % Purity		96 % Purity		95 % Purity		Heater power (W)
Model	Inlet	Outlet	Inlet	Outlet	Inlet	Outlet	Inlet	Outlet	Inlet	Outlet	Inlet	Outlet	
NM-GEN 2	4,7	0,8	5,1	1,1	5,7	1,7	6,2	2,2	6,8	2,7	7,4	3,2	250
NM-GEN 4	8,0	1,4	8,6	1,9	9,6	2,8	10,6	3,6	11,5	4,5	12,4	5,4	250
NM-GEN 6	14,2	2,4	15,3	3,4	17,1	5,0	18,7	6,4	20,3	7,9	22,0	9,5	250
NM-GEN 10	23,3	4,0	25,1	5,5	28,0	8,1	30,7	10,5	33,4	12,9	36,2	15,5	250
NM-GEN 25	58,8	9,9	63,6	13,9	70,6	20,3	77,4	26,3	84,1	32,4	91,2	39,0	2400
NM-GEN 50	117,6	19,8	127,2	27,8	141,2	40,6	154,8	52,6	168,2	64,8	182,4	78,0	2400

For nitrogen flow capacity at other conditions please contact manufacturer.
Performance +/- 3%.

STANDARD EQUIPMENT

- Set of External Feed Air Filters
- Electric heater
- Supporting frame or cabinet
- Pressure regulator
- Internal Piping
- Nitrogen and Air flow Regulation

OPTIONAL EQUIPMENT

- Nitrogen Sterile Filters
- Nitrogen Booster
- Nitrogen Cylinder Filling System

INFORMATION IN THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE

BUREAU VERITAS	Our quality management system is certified by BUREAU VERITAS in conformity with ISO 9001:2015 Reg. number: 200285	

Omega Air d.o.o. Ljubljana
Cesta Dolomitskega odreda 10
1000 Ljubljana, Slovenia

Tel: +386 (01) 200 68 00
Fax: +386 (01) 200 68 50

e-mail: info@omega-air.si
www.omega-air.si