

- Highest efficient membrane technology
- Top quality membranes with the highest permeability feature
- Nitrogen purity range between %95 and % 99.5
- Few moving parts
- Compact and ergonomic design
- Integrated skid mounted design with air treatment package
- Activated carbon tower instead of carbon filter
- Automatic stand-by function
- Technical support from local distributor
- Spare parts from own stock

MEMBRANE NITROGEN GENERATORS FOR LABORATORIES

MG MINI SERIES

NITRON nitrogen generators have an edge with its high performance membrane modules featured with low investment and running costs.

Megatek, as a manufacturer of nitrogen generators applying both membrane and PSA technologies, provides solutions to laboratories with Nitron MG MINI series nitrogen generators. Customized engineering studies performed with high technology and efficiency principles created the unique Nitron brand which offer lasting on-site economic and reliable nitrogen production solutions

Stand-alone units or completely turn-key basis integrated systems are designed pursuant to customer's needs.

Pressing "START" button is enough to start Nitron MG series nitrogen generators. Sole requirement of nitrogen production is adequate amount of compressed air. When nitrogen demand cease, system goes to "STAND BY" and air consumption stops. System restarts re-production when nitrogen consumption commences.

Nitron MG series nitrogen generators are designed and manufactured with experienced engineers. This solution is by far reliable when compared to alternative nitrogen supply methods owing to low pressure operation and few moving parts. Periodical maintenance can be easily performed by user and service support is given on demand.



With Nitron MG series nitrogen generators, you can produce nitrogen gas on your site. Our on-site solutions enable you to make uncomparable savings when compared to alternative supply methods (compressed gas cylinder and bulk liquid supply).

PROCESS DESCRIPTION

Standard membrane nitrogen production system consists of four main parts. Air compressor, air treatment, air separation and nitrogen control system.

Air compressor

Air is the raw material of the nitrogen generator. Air compressor pressurizes the air sucked from the atmosphere to the ideal pressure and supplies it to the nitrogen generator. Oil injected screw compressors or oil free compressors are convenient type of air compressors.

Air treatment

Quality of compressed air is essential in preserving the performance of membrane nitrogen generators. Water, oil, dust particles and steam of water and oil must be kept away from air treatment system. Nitron nitrogen generators include basic air treatment within the skid.

Air separation system

Compressed air which passed through air treatment system reaches to air separation system and at this stage nitrogen and air are separated from each other. In membrane-type nitrogen generators, air separation process works in such a

principle where oxygen molecules skip from the membrane surface and nitrogen molecules stay in the membrane inner surface.

Membrane is a polymer material produced in the form of hollow fiber and in parallel modules.

Nitrogen control system

Purity of the nitrogen produced in the air separation system can be adjusted according to the application field.

Oxygen in the product nitrogen is continuously measured. If oxygen concentration in product gas is higher than preset value, product valve is automatically closed and off-spec valve open till product purity is reached to preset value. In critical applications, off-spec / product valve system is very important for quality assurance.

Adjustable product purity option can be added if different product purity is required. In that case operators will be able to set maximum oxygen concentration in product line. In those plants higher product purity can be achieved by lower product flowrate which is the general rule of nitrogen generators.

SAFETY AND STANDARDS

Pressure Vessels:

Pressure vessels are designed in reference to EN-13445:3 code standard. A special quality steel is used in the manufacturing process of pressure vessels pursuant to EN standards.

Piping and pressure vessels: DIN

Electrical works: IEC

Adherence to safety, environment, health management standards and regulations is the basic principle of Megatek. Besides, our strength is built upon 15-years of extensive experience on industrial plant design.

FEATURES

- Efficient membrane technology
- Product purity range between % 95- % 99.5
- Top quality membranes with the highest permeability feature.
- Few moving parts
- Compact and ergonomic design
- Integrated skid mounted air treatment system
- Activated Carbon Tower, instead of Carbon Filter
- Aging of membrane modules at factory during production
- Improved control system
- Stand-by function
- Service supply from manufacturer or local distributor company
- Spare parts from own stock
- Continuous oxygen monitoring and off-spec vent system

ADVANTAGES

- Lower cost of nitrogen production on-site
- Product purity required for application. Lower nitrogen cost if low purity is enough.
- Highest production efficiency even at lower air feed pressure and without electric heater.
- Lower maintenance costs
- Minimum space requirement
- Easy installation on site.
- Keeping membrane performance tens of years
- Newer lost of membrane efficiency due to aging
- User friendly fully automatic control system
- No air (energy) consumption incase of no nitrogen demand
- Lower cost of maintenance and quick service
- Faster supply of spare parts
- Continuous quality assurance

NITRON MG MINI SERIES MEMBRANE NITROGEN GENERATORS PRODUCTION CAPACITIES, Nm³/hr

MODEL	Feed air pressure	% 95	% 96	% 97	% 98	% 99	% 99.5	Height (mm)	Width (mm)	Depth (mm)
MG 2	7 barg	2.10	1.90	1.49	1.16	0.71	0.44	1000	675	310
	10 barg	3.40	2.80	2.29	1.78	1.11	0.67			
MG 4	7 barg	4.20	3.80	2.98	2.32	1.42	0.88	1000	675	310
	10 barg	6.80	5.60	4.58	3.56	2.22	1.34			
MG 6	7 barg	6.30	5.70	4.47	3.48	2.13	1.32	1000	675	310
	10 barg	10.2	8.40	6.87	5.34	3.33	2.01			
MG 8	7 barg	8.4	7.60	5.96	4.64	2.84	1.76	1000	675	310
	10 barg	13.6	11.2	9.16	7.12	4.44	2.68			