

Mobile Nitrogen Unit

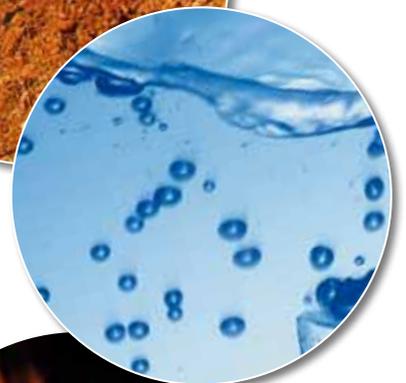
where nature and technology meet

Earth, the origin of gas. Fire, the point where

it releases its energy. Water, the source of life.

And air, the boundary of our familiar world.

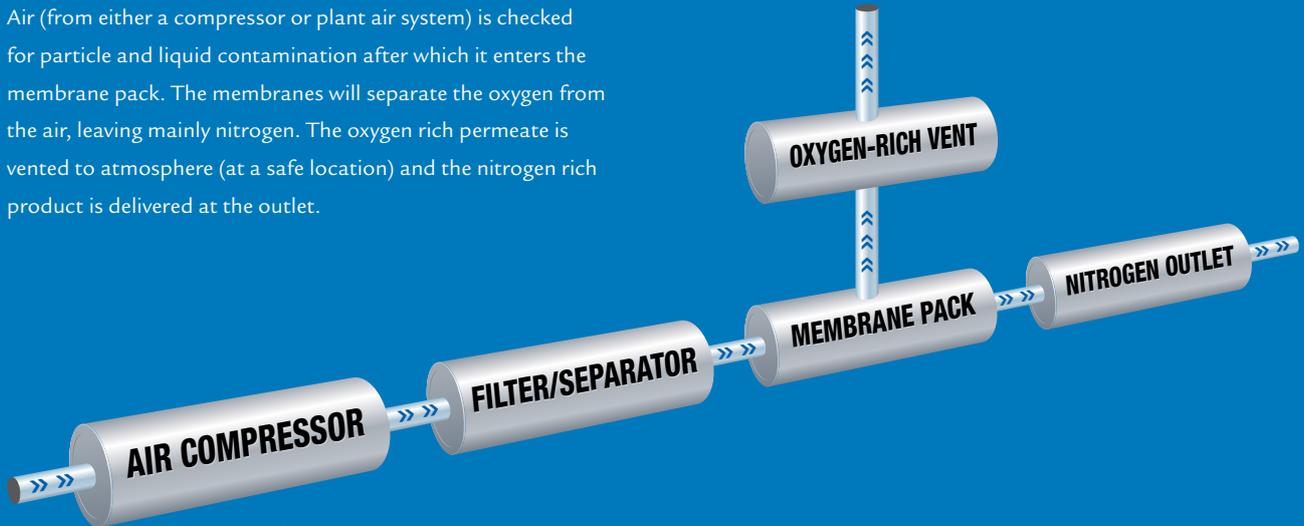
Four elements, all partners in nature.



PETROGAS
G A S S Y S T E M S

How it works

Air (from either a compressor or plant air system) is checked for particle and liquid contamination after which it enters the membrane pack. The membranes will separate the oxygen from the air, leaving mainly nitrogen. The oxygen rich permeate is vented to atmosphere (at a safe location) and the nitrogen rich product is delivered at the outlet.



Petrogas

where nature and technology meet

Nitrogen supply becomes mobile

How many bottles of nitrogen does your organization use on a yearly basis? And wouldn't it be great if you could generate nitrogen on-the-spot? During our many years experience with Natural Gas Treatment Stations we too have noticed the burden, costs and nuisance of nitrogen bottles and we have therefore developed our Mobile Nitrogen Unit. Our Mobile Nitrogen Unit offers you a safe, reliable and economic supply of nitrogen for your on-site purging, flushing and pressurizing needs.

Operational aspects

The heart of the unit are the membranes which split air into a nitrogen-rich stream and an oxygen-rich stream. Upstream of the membranes the unit is equipped with a 3-stage dust- and liquid separation system by using the principle of selective permeability. The unit is protected and controlled through various valves, instruments and control system to ensure safe and reliable operation. The unit will be designed as a packaged, easily transportable unit and is particularly suitable for quick start-up and shut-down.

The flow limiting controls, custom designed by Petrogas, ensure that the purity of the outlet stream is always within spec, even with changing inlet conditions or varying air supply compressors.

The ideal operating conditions are achieved with an air supply of 24 barg and 54°C.





Technical specifications/features:

- Nitrogen flow: 0-2000 Nm³/hr
- Outlet pressure: 0-24 barg
- Nitrogen purity: typical 95 - 99,5 vol%

Options (other specifications can met on request):

- Air compressor
- Customized HMI
- Communication with Plant Control System
- Truck or trailer mounted
- Air inlet from compressor or plant instrument air system

Inlet conditions

The inlet of the Mobile Nitrogen Unit is air which can be delivered by a compressor or service air if available on site. We have designed the Mobile Nitrogen Unit in such a way that rental air compressors (widely available worldwide) can be used. Such compressor can be rented at the location / country where the unit is operated or the air compressor can be included in Petrogas supply and be part of the complete package (separate container).

The required outlet conditions for the compressor are:

- 4 - 24 barg
- 5 - 80°C

The compressor should be equipped with an aftercooler and temperature mixing valve. Alternatively, the unit can be fed from the plant instrument air system. In this way, the use of a compressor is eliminated.

A standard unit includes:

- Inlet filter/separators
- Membrane pack
- Controls & Instrumentation
- Control panel + HMI
- Safeguards
- Packaged design
- Flow limiting controls

A standard unit is designed to be as flexible as possible and can control pressure, temperature, flow and purity.

Customization

Although we have several standard size units, the strength of Petrogas rests in the possibility of designing a unit especially for your needs and in line with your (or your customer's) specifications.

The possibilities are endless, a few examples are:

- Inclusion of the upstream air compressor
- Communication with DCS or other control system
- Mounting on a truck or trailer
- CE and PED compliance

Naturally, we can also provide a fixed unit instead of mobile.





More about Petrogas

Petrogas, located in The Netherlands, is a global player in the design and supply of natural gas treatment systems. Petrogas is a privately owned Dutch company, established in 1948 and holds offices in The Netherlands, Bahrain and China. Strengths lie in the combination of design, engineering and manufacturing of gas treatment systems. Petrogas' in-house fabrication of vessels, heat

exchangers, filter elements, piping and control panels provides a valuable independency from sub-contractors and a maximum flexibility in project execution. This combined with the freedom to select the best equipment in line with project specifications and customer preferred vendors results in optimal conditions for successful and satisfactory results.

For more information please visit www.petrogas.nl



P E T R O G A S
G A S S Y S T E M S

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