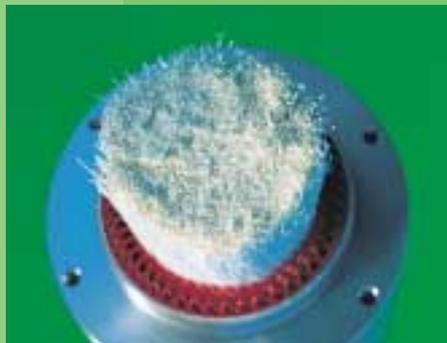




Nitrogen Generation

Catalogue K3.1.075a



Parker Filtration

Consistent Quality

Technical Innovation

Premier Customer Service

Parker's technical resources provide the correct filtration technologies that conform to your requirements. That's why thousands of manufacturers and equipment users around the world rely on Parker Filtration and people.

Worldwide Sales and Service

Parker Filtration's global reputation as a reliable supplier of superior filtration products is the result of a focused and integrated development and manufacturing system.

Parker Filtration consolidates quality filtration products into one broad based range that covers many markets and applications.

Products are backed by Parker's commitment to premier customer and technical service worldwide.



Where Required

Hydraulic, Lubrication & Coolant Filtration

High-performance filtration systems for production machinery in industrial, mobile and military/marine applications.



Finite and Balston Compressed Air & Gas Filtration

Complete line of compressed air/gas filtration and separation products; coalescing, particulate and absorption filters and gas generators in many applications in many industries.



Process & Chemical Fluid Filtration

Liquid filtration systems for food and beverage, petrochemical/ chemical processing, paint, inks and coating, electronics, oilfield and water



Racor Fuel Conditioning & Filtration

Parker air, fuel and oil filtration systems provide quality protection for engines operating in any environment, anywhere in the world.



System Contamination Monitoring

On-line dynamic particle analysis, off-line bottle sampling and fluid analysis and measurement of water content polluting the oil in the system. All important and achievable, cost-effective solutions available to equipment manufacturers and end users alike with Parker Filtration's range of system contamination monitors.





Parker Filtration and Separation, located in the Netherlands, is one of the few manufacturers in the world of hollow fibre membrane technology used for the generation of nitrogen or oxygen-enriched air from compressed air.

With a young, innovative and dynamic team, Parker Filtration and Separation leads the way in developing membrane technology and gas generator products.

The Parker Membrane is unique because it is the most permeable membrane in the world and is also one of the most robust. This results in a low cost of ownership, long membrane life and systems that are highly cost effective.

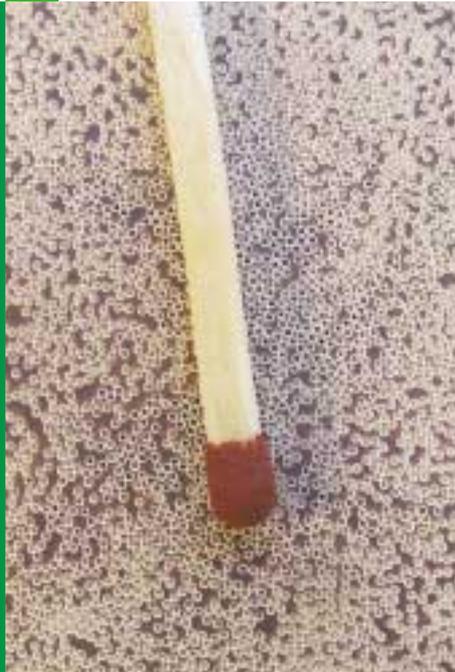
For over a decade, Parker membranes have proven their reliability, and effectiveness for nitrogen generation.

A full range of standard products has been developed which will produce nitrogen from ambient air. The units are designed for easy installation, resulting in plug and play. Operating the equipment requires no special skills, so anyone can produce nitrogen at any time.

Membrane nitrogen generators have no moving parts and require virtually no maintenance, minimising the operating costs.

Parker Filtration and Separation is your best partner for creating specific OEM solutions. Our product development team can design any solution for your specific nitrogen need. We can assist with our application knowledge and can fully integrate our membrane technology with your individual system design.

Parker Membrane Technology



Parker membrane technology is based on hollow fibres and the working principle is simple and elegant.

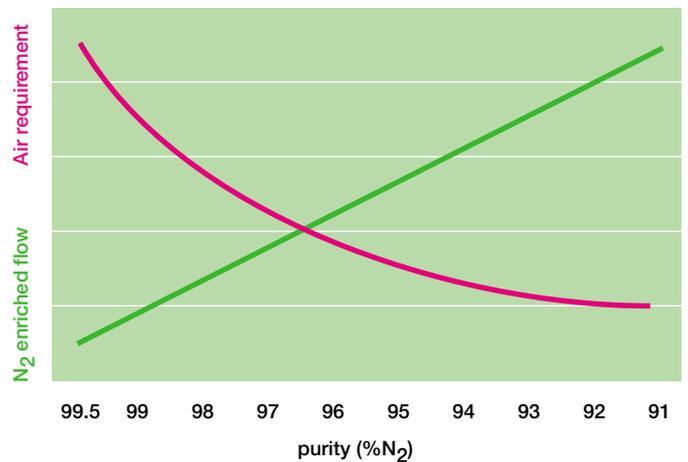
The basis of the technology is a bundle of thousands of hollow fibres. The walls of these fibres selectively diffuse oxygen. A membrane module consists of the fibre bundle fixed at both ends within a metal tube.

Nitrogen generation Quantity N₂ produced

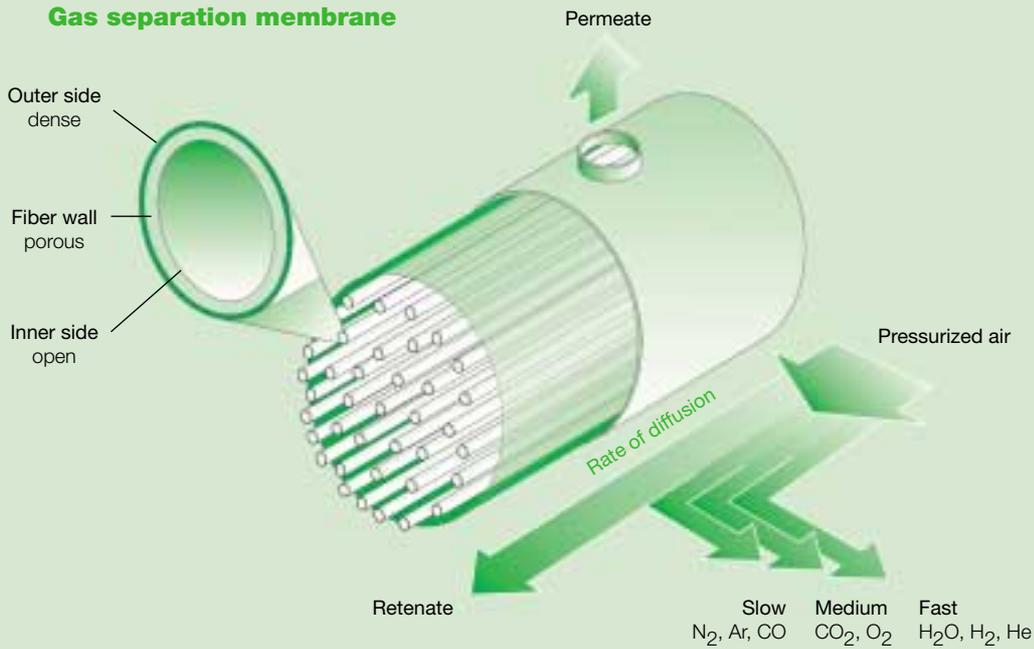
Influence of pressure



Influence of purity



Gas separation membrane



The compressed air that enters this membrane module consists mainly of oxygen and nitrogen together with other gases such as water vapour, helium and other

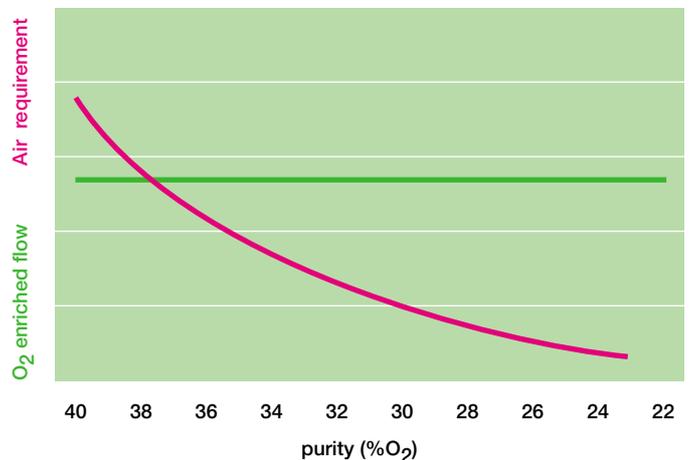
trace gases. Water vapour, helium and oxygen diffuse quickly through the membrane wall, leaving mainly nitrogen as the product.

Oxygen enrichment Quantity enriched O₂ produced

Influence of pressure



Influence of purity



Cost of ownership

The Parker Membrane is the most permeable membrane in the world. This means that it has the highest performance per fibre, which results in:



Parker Membrane
Most permeable membrane

Less membranes required

Less weight

Lower investment for membrane modules

Smaller size system

Lower compressed air pressure required

Designed for lower pressure

Less maintenance

Less noise,
less heat production

Less energy consumption

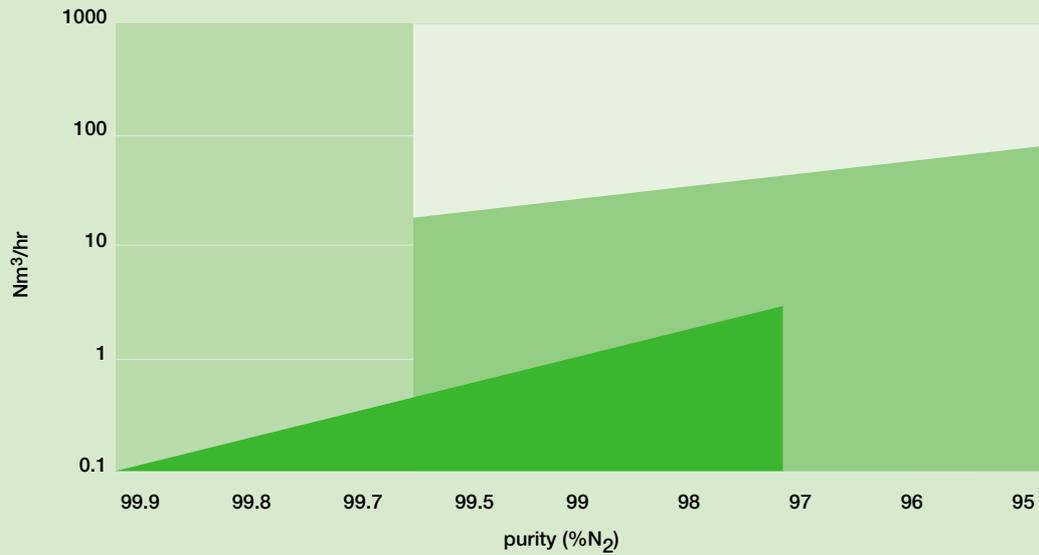
Large membrane bore

Less sensitive to particle contamination

Lower cost of ownership

Parker standard nitrogen generators

Generator flow vs. purity



Parker can offer a complete range of standard nitrogen and mixed gas generators covering a full range of flow and purity requirements.

Depending on the available compressed air pressure and required nitrogen purity, Parker nitrogen generators can offer you different flows.

The performance ranges from 0.1 Nm³/hr at 99.9% N₂ up to 1000+ at 95% N₂.

You can use above graph to select the generator you require. Simply select the purity and flow you require to see which generator will suit your requirements.

- Micro & Micromix
- NG Compact
- NitroSource®

Micro & Micromix



These only require a source of electrical power to produce nitrogen, as they have built-in compressors.



They are available either as nitrogen generators or Nitrogen-CO₂ mixed gas generators.



The unique Micro system configuration renders condensate draining and filtration redundant

Compact

Industrial design, ready to operate using an existing central compressed air system



Integrated oxygen analyser. Equipped for connection to a nitrogen storage vessel

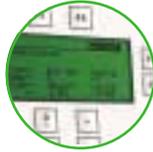


Compressed air pre-treatment section included



NitroSource®

Digital data management and control, together with data logging and remote control functions



Modular design, easy to connect and easily expandable



High quality integrated filtration, plus easy access for maintenance



(Truck)TyreSaver

TyreSaver is specially designed for filling car tyres delivering 3 Nm³/hr @ 95% purity and 10 bar(g). Inflate large vehicle tyres with the TruckTyreSaver range, existing of 10, 20, 30 or 40 Nm³/hr @ 95% purity and 10 bar(g).

Automatic switch-off when there is no nitrogen demand preventing air-loss when not in use

High quality compressed air filtration, coarse, fine and carbon filters (optional with TruckTyreSaver) protect the membranes ensuring long membrane life



Parker and OEM

Let Parker join your OEM team

Besides the standard nitrogen generator products Parker produces, Parker can provide you with your own integrated nitrogen source or even a fully customised membrane nitrogen generator. Let Parker join your OEM team and offer you:

- **Application knowledge and support**
- **Our knowledge of membrane technology**
- **Our knowledge in integrated system design**
- **Our experience in developing customised solutions**
- **The value you are looking for**

Parker can offer you a full range of solutions with different levels of integration.



Nitrogen generator filters

In order to provide the best quality filtration to ensure long membrane life, Parker offers various grades of nitrogen generator filters

Standard OEM membrane module sets

A complete range of membrane module sets offers you the possibility to integrate your own nitrogen source.

Your requirements can always be met thanks to the different sizes and membrane performance available.



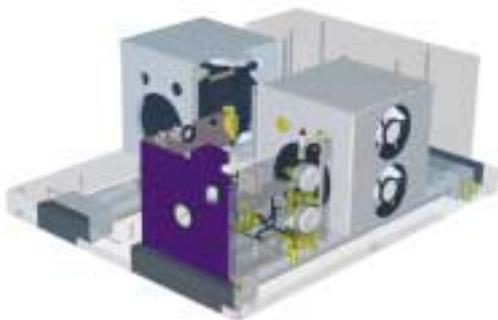


Custom designed module sets

If our standard range of OEM membrane modules will not fit your requirements, then Parker can offer a custom designed set. We make things fit!

Module sub-set assembly

Outsource your sub-assemblies and let Parker design and produce the membrane set and accessories so you can focus on your core products. We can make easy-to-fit assemblies that only require a few quick connections to integrate into your product.

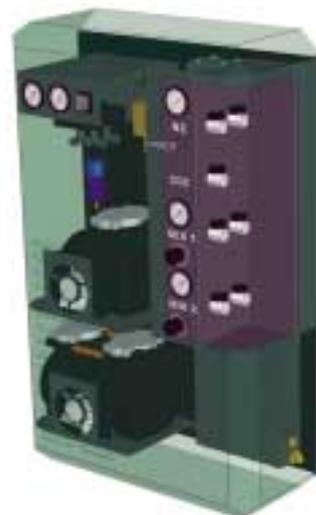


Nitrogen generator sub assembly

Let the specialists do the job for you! Parker can design a complete nitrogen generator into your system. We can customise the size, performance and features such as “plug and play”.

Complete customer-designed nitrogen generator

Finally, Parker can do the whole job, we design, produce and private brand nitrogen generators to fit exactly with your market requirements.



Applications



All living things require oxygen but oxygen also speeds-up degradation and oxidation of valuable products. Gas and dust mixtures are explosive when sufficient oxygen is present. Low oxygen environments prevent degradation and the risk of explosion that results in enhanced quality and safety. Each application requires a unique optimal oxygen concentration, or oxygen-poor environment. Reducing the oxygen concentration can be achieved by adding nitrogen or oxygen-depleted air. Because of this, nitrogen is the most widely used gas in the industry.

Blanketing

To prevent degradation of products or risk of explosion, storage facilities can be blanketed with nitrogen. Reducing the oxygen level in the headspace of the storage facility prevents oxidation. Each product requires its own optimal oxygen level. Examples include the blanketing of chemicals, water, food or petrochemical products.



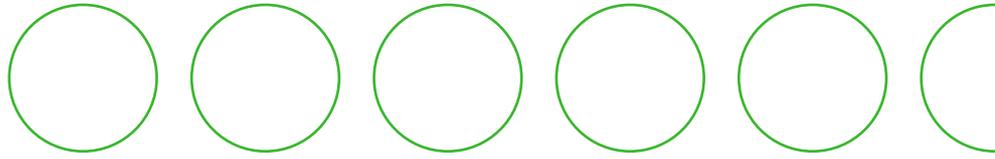
Food

Oxygen is the biggest enemy of food products. Oxygen reduced packaging, storage and transport increases the product shelf-life. This benefits both the producer and the consumer.



Oil & Gas

In the Oil & Gas industry, inert gas systems are used to generate oxygen depleted air which is required for many processes such as gas-seal compression, purging of tubing, blanketing storage tanks or purging flare systems. Typical residual oxygen concentrations used in the Oil & Gas industry range from 5 to 3% oxygen.



Oxygen enrichment

Parker membrane technology removes oxygen from air, but at the same time, the oxygen enriched air, normally seen as waste can be used for other applications. For some years now, oxygen enriched air has been used for nitrox diving instead of normal air.

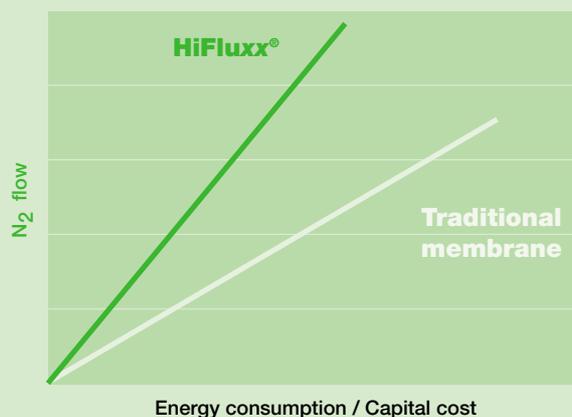
Parker believes that the future will be in the healthcare and well-being markets where people will choose to control their living environment.

Imagine your own oxygen room where you could recuperate after a hard days work, or wish to improve the quality of your life as you get older.

Managing the oxygen level

Parker membrane technology offers the possibility to manage the oxygen level in the air to match the level required. Why use pure nitrogen or oxygen if you can generate the required atmosphere on-site. Control the environment with Parker membranes.

HiFluxx® Nitrogen Membrane



The HiFluxx® is the fastest membrane in the world offering the highest performance per module.

This stainless steel membrane has been especially developed for use in custom designed systems for offshore and maritime installations.

Robust fibre

For over a decade Parker membrane technology has proven to be the least sensitive to accidental contamination. HiFluxx® membrane combines this robustness with high performance.

More capacity, reduced investment

With the fastest membrane in the world you will need fewer modules to reach the same system performance. This not only reduces the membrane but also reduces the size of the nitrogen system and associated costs.

Reduced energy consumption

Why generate nitrogen at 8 bar(g) when only 4 bar(g) is required? HiFluxx® enables you to generate nitrogen at low feed pressures. This saves energy needed to generate the compressed feed air and also saves on system design.

Temperature independence

HiFluxx® is relatively independent of the feed air temperature and does not require the feed air to be heated to increase the performance of the membranes. This avoids expensive air heating.

HiFluxx, the best solution

More capacity, reduced capital costs, less energy consumption and temperature independence. When you add this up, the only solution is Parker HiFluxx® membrane technology.

Filtration Group Technical Sales & Service Locations

Aerospace Group

A leader in the development, design, manufacture and service of control systems and components for aerospace and related high technology markets, achieving profitable growth through premier customer service.



Automation Group

A leading supplier of pneumatic and electro mechanical components and systems to automation customers worldwide.

Climate & Industrial Controls Group

Designs, manufactures and markets system control and fluid handling components and systems to refrigeration, air conditioning and industrial customers worldwide.



Filtration Group

Designs, manufactures and markets quality filtration and clarification products, providing customers with the best value, quality, technical support and global availability.

Fluid Connectors Group

Designs, manufactures and markets rigid and flexible connectors and associated products used in pneumatic and fluid systems.



Hydraulics Group

Designs, produces and markets a full spectrum of hydraulic components and systems to builders and users of industrial and mobile machinery and equipment.

Instrumentation Group

A global leader in the design, manufacture and distribution of high quality critical flow components for worldwide process instrumentation, ultra high purity, medical and analytical applications.



Seal Group

Designs, manufactures and distributes industrial and commercial sealing devices and related products by providing superior quality and total customer satisfaction.

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Where Required



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