

SEPURAN® N₂

Membrane technology
for efficient on-site nitrogen
generation



**EVONIK IS ONE OF THE
WORLD LEADERS IN SPECIALTY
CHEMICALS.**

**THE COMPANY GOES FAR
BEYOND CHEMISTRY TO CREATE
INNOVATIVE, PROFITABLE AND
SUSTAINABLE SOLUTIONS FOR
CUSTOMERS.**

**As global membrane technology
leader for the gas industry,
Evonik enables the transition
to a sustainable gas economy.**

**SEPURAN® stands for customized
polyimide hollow fibre membranes
for efficient gas separation.**

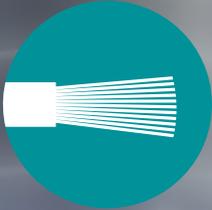
**The SEPURAN® N₂ membrane
has been especially developed for
nitrogen generation combining
low air consumption at all temper-
ature levels with high nitrogen
capacity.**

**SEPURAN® N₂
VALUE CHAIN**



**EVONIK
BUSINESS**

N₂ Polymer



Membrane



**Module/
Cartridge System**



**EVONIK
TECHNOLOGY
SUPPORT**

**OEM Partner:
N₂ Package**



APPLICATIONS

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WHY ARE WE BEST IN PERFORMANCE?

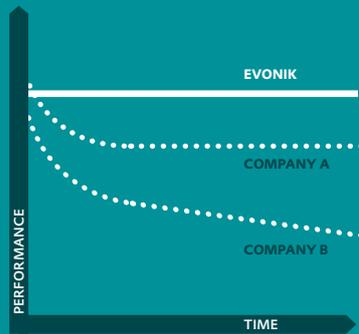
With polymer produced at Evonik, we have given our SEPURAN® N₂ products a high selectivity and permeability. This results in numerous advantages for you and your customer.

Our products	2"		4"		6"			
	2" SHORT	2" LONG	4" SHORT	4" STANDARD	6" STANDARD	6" SELECTIVE	6" LONG	
Material	PVC	Alu	PVC	Alu	SS304	SS316	SS316	SS316
Temperature rating								
≤ 40 °C	●		●					
≤ 70 °C		●		●	●	●	●	●
Pressure rating								
≤ 10 barg	●		●					
≤ 12 barg		●		●				
≤ 16 barg				●		●	●	●
≤ 20 barg					●			
Performance	[N ₂ 95% @ 7 barg, 25 °C]							
Capacity [Nm ³ /h]	0.5	0.5	1.27	1.27	11.3	22.5	50.4	72.3
AF [Air/N ₂ ratio]	2.2	2.2	2.1	2.1	2.1	2.1	2.1	1.9
Ports								
NPT	●	●	●	●	●			
NPT / BSPP						●	●	●



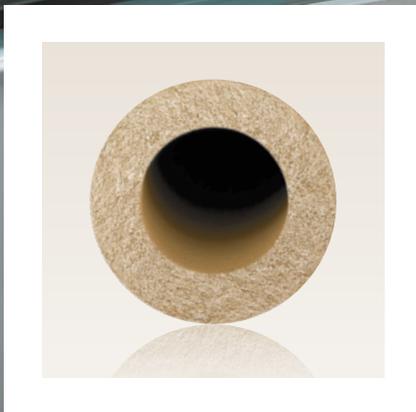
A higher pressure rating

up to 50%, can minimize your membrane space. The pressure variety of up to 16 barg to 20 barg offers you a larger freedom to choose the parameters to minimize your invest cost.



Stable performance

Unlike other gas separation membranes, with typical decreases in performance over time, SEPURAN® N₂ membranes are characterized by an extremely stable performance.



Top technical service

We offer ongoing technical support to you, before and after the project.

Worldwide.



MAKE YOUR CHOICE!



2" membrane modules
in different lengths

Take advantage of the diverse SEPURAN® N₂ product range for your individual N₂ project

Are you building nitrogen generators for inerting in the oil & gas industry, for the marine industry or just for fire protection of your customers' storage facilities? Do you construct custom made projects at higher purities or sell defined packages at fixed N₂ purity levels? Do your customers need 300 lN₂, purity 99.9% or have projects with 2000 Nm³/h N₂, purity 97%?

Depending on your application and your project size, you can choose among all SEPURAN® N₂ modules and cartridge systems generating nitrogen with a purity range from 95% to 99.9%, with a temperature from 0 to 70 °C. You can either pick the SEPURAN® N₂ Selective product with a very low air factor as well as the fast N₂ products with a very good capacity in different sizes.



The SEPURAN® N₂ 2" membrane modules

The SEPURAN® N₂ 2" product is available in two different lengths, 360 mm and 610 mm and with two different outer materials, PVC and Aluminum. The PVC module can operate up to 10 barg and 40°C; and the Aluminum module up to 12 barg and 70°C.

The compact size of the 2" SEPURAN® N₂ makes it an ideal product to use inside cabinets or wall-mount nitrogen generators; it is useable for all industries, be it food & drink or classic inertization.

The SEPURAN® N₂ 4" membrane modules and systems

We offer the SEPURAN® N₂ 4" as a short module version and as a larger version in a system that consists of a 4" cartridge and housing.

This 4" short product, made of stainless steel 304, is ideal for smaller standard N₂ generator packages with a capacity of 11.3 Nm³/h at a purity of 95% (7 barg, 25°C).

For medium flows, you can pick the 4" system, consisting of a cartridge and a housing. The housing is available in SS316, ideal for offshore applications.

6" membrane system consisting of a cartridge and a housing





4" membrane cartridge



4" membrane system
cartridge and housing

The SEPURAN® N₂ 6" system

You may choose the 6" product in a standard version as 6" system (50.4 Nm³/h) or the 6" long system (72 Nm³/h) consisting of cartridge and housing, for larger quantities up to several thousand Nm³/h. With the housing in SS316 quality, this product is ideal for the offshore industry.

The SEPURANR N₂ 6" product works up to 16 barg with a temperature

range between 0 to 70 °C and a purity range from 95% to 99.9%.

The SEPURAN® N₂ Selective System 6" membranes have the highest selectivity and are characterized by an extremely good air factor with excellent capacity, resulting in more nitrogen per compression energy, a smaller compressor, lower operating cost and smaller footprint overall.

The housings for the 4" or the 6" system are facilitating different industries and business models

You may be choosing a system consisting of a housing and a cartridge, replacement costs are very competitive. All housings are available with G or NPT threads, facilitating your regional project needs and they come with a material certificate facilitating the individual regional pressure regulation of your project being ASME, EN, SELO, CRN or NR13.

Detailed information

For detailed information on each SEPURAN® N₂ product, please ask for the individual technical information folder or have a look at our web-page www.membrane-separation.com where you will find the product information as a download.

NITROGEN CALCULATOR BY SEPURAN®

The best way to estimate
nitrogen purity and pressure

<https://nitrogen-calculator.membrane-separation.com/>



Calculate your N₂ product!

Use Evonik's SEPURAN® N₂ calculator to learn how much nitrogen you can make. Estimate the number and type of membranes you need by inputting the nitrogen flow, temperature, nitrogen purity and pressure of your application

Input in your preferred units

Enter your parameters here

Nitrogen quantity required Nm³/h ▾

Temperature in °C ▾

10 70
25

Nitrogen purity required in %

95 99.7
97

Pressure in barg ▾

5.3 25
9

Calculate

Get required membrane count and type for your application within seconds!

Our product range

6" long system

6" system

4" system

4" short module

6" selective system

2" short Alu

2" short PVC

2" long Alu

2" long PVC



The SEPURAN® N₂ 6" long membrane cartridge system v2.00 - 2022

The SEPURAN® N₂ 6" long membrane cartridge system

SEPURAN® N₂ 6" systems can operate up to 16 barg / 232 psig at temperatures up to 70 ° C.

The SEPURAN® N₂ 6" product is available as cartridge system in SS316. The product comes with NPT and BSPP ports and is available certified as PED, ASME, CRN & Selo.

[Product information](#)

Contact us via email

Contact us via phone

Contact us for a quotation or any technical questions!

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REFERENCES WORLDWIDE

Overview of facilities with
SEPURAN® membrane technology



10000

References
in total





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