


# SEPURAN® N<sub>2</sub>

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.**

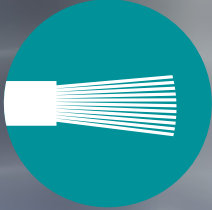
**The SEPURAN® N<sub>2</sub> membrane  
has been especially developed for  
nitrogen generation combining  
low air consumption at all temper-  
ature levels with high nitrogen  
capacity.**

**SEPURAN® N<sub>2</sub>  
VALUE CHAIN**



**EVONIK  
BUSINESS**

**N<sub>2</sub> Polymer**



**Membrane**



**Module/  
Cartridge System**



**EVONIK  
TECHNOLOGY  
SUPPORT**

**OEM Partner:  
N<sub>2</sub> Package**



**APPLICATIONS**

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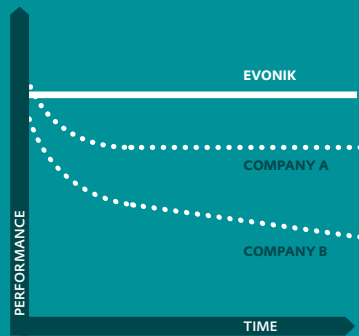
# WHY ARE WE BEST IN PERFORMANCE?

With polymer produced at Evonik, we have given our SEPURAN® N<sub>2</sub> 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		
<b>Material</b>	PVC	Alu	PVC	Alu	SS304	SS316	SS316	SS316	SS316
<b>Temperature rating</b>									
≤ 40 °C	●		●						
≤ 70 °C		●		●	●	●	●	●	●
<b>Pressure rating</b>									
≤ 10 bara	●		●						
≤ 12 bara		●		●					
≤ 16 bara				●		●	●	●	●
≤ 20 bara					●				
<b>Performance</b>	[N <sub>2</sub> 95% @ 7 barg, 25°C]								
Capacity [Nm <sup>3</sup> /h]	0.5	0.5	1.27	1.27	11.3	22.5	50.4	12.1	72.3
AF [Air/N <sub>2</sub> ratio]	2.2	2.2	2.1	2.1	2.1	2.1	2.1	1.9	2.1
<b>Ports</b>									
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® N<sub>2</sub> 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® N<sub>2</sub> product range for your individual N<sub>2</sub> 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 N<sub>2</sub> purity levels? Do your customers need 300 lN<sub>2</sub>, purity 99.9% or have projects with 2000 Nm<sup>3</sup>/h N<sub>2</sub>, purity 97%?

Depending on your application and your project size, you can choose among all SEPURAN® N<sub>2</sub> 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® N<sub>2</sub> Selective product with a very low air factor as well as the fast N<sub>2</sub> products with a very good capacity in different sizes.



### **The SEPURAN® N<sub>2</sub> 2" membrane modules**

The SEPURAN® N<sub>2</sub> 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® N<sub>2</sub> 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® N<sub>2</sub> 4" membrane modules and systems**

We offer the SEPURAN® N<sub>2</sub> 4" as a short module version and as a larger version in a system that consists of a 4" cartridge and housing.

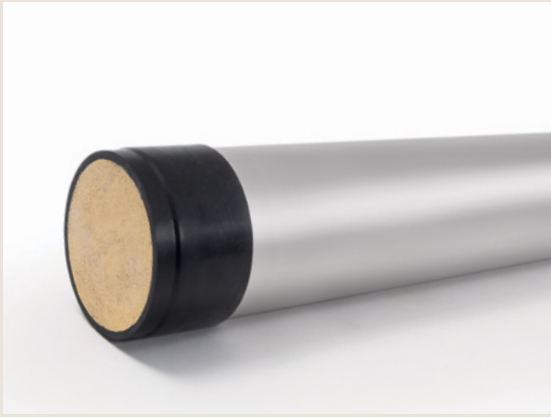
This 4" short product, made of stainless steel 304, is ideal for smaller standard N<sub>2</sub> generator packages with a capacity of 11.3 Nm<sup>3</sup>/h at a purity of 95% (7 barg, 25°C).

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® N<sub>2</sub> 6" system

You may choose the 6" product in a standard version as 6" system (50.4 Nm<sup>3</sup>/h) or the 6" long system (72 Nm<sup>3</sup>/h) consisting of cartridge and housing, for larger quantities up to several thousand Nm<sup>3</sup>/h. With the housing in SS316 quality, this product is ideal for the offshore industry.

The SEPURANR N<sub>2</sub> 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® N<sub>2</sub> 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® N<sub>2</sub> product, please ask for the individual technical information folder or have a look at our web-page [www.membrane-separation.com](http://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 N<sub>2</sub> product!

Use Evonik's SEPURAN® N<sub>2</sub> 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 Nm<sup>3</sup>/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® N<sub>2</sub> 6" long membrane cartridge system v2.00 - 2022

The SEPURAN® N<sub>2</sub> 6" long membrane cartridge system

SEPURAN® N<sub>2</sub> 6" systems can operate up to 16 barg / 232 psig at temperatures up to 70 ° C.

The SEPURAN® N<sub>2</sub> 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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