PRISM® Membrane Separators
PA4030-N3/PA4050-N3

PRISM N3 Membrane Separators deliver exceptional value and benefits to OEM customers and end users. Thirty five years of manufacturing expertise combined with a newly developed fiber technology delivers the increased nitrogen productivity of PRISM N3 Membrane Separators.

Benefits

Reduced Cost
N3 fibers produce more nitrogen, so systems can be designed with fewer separators, reducing footprint and capital expenditure. High nitrogen recovery lowers operational power costs.

Design Flexibility
Design engineers have increased flexibility in fabricating nitrogen membrane systems to meet specific needs. Use less compression power to build an energy efficient system. Or, use fewer separators to build compact systems when space is limited.

Reliable Operation
PRISM Membrane Separators are field proven in the most demanding applications and environments like offshore platforms and mining operations. The high quality membrane fiber offers superior resistance to common feed stream contaminants.
Why choose PRISM Membrane Separators

Low total costs
- Lowest air consumption membrane separator on the market across the widest portfolio of product offerings.
- Broad operating range enables flexible design and optimization.
- More than 35 years of experience in designing the most cost effective systems.

Quality & reliability
- USA-based manufacturing with quality systems certified to AS9100 and ISO9001 standards.
- Trusted in critical applications like aircraft fuel tank inerting, shipboard/offshore systems, and refinery operations.
- Longest demonstrated lifespan.

Technical support
- Access to experts at membrane@airproducts.com or +1-314-995-3300.
- Specialized experience in trouble shooting and development support.
- Capabilities to customize or develop new membrane products.

PA4030-N3

<table>
<thead>
<tr>
<th>Nitrogen Flow (Nm³/hr) / Feed Air Flow (Nm³/hr)</th>
<th>Purity</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure (BARG)</td>
<td>99.5%</td>
<td>99%</td>
<td>98%</td>
<td>97%</td>
<td>96%</td>
</tr>
<tr>
<td>5</td>
<td>2.1/13.7</td>
<td>2.9/14.6</td>
<td>4.3/16.1</td>
<td>5.5/17.5</td>
<td>6.8/18.9</td>
</tr>
<tr>
<td>9</td>
<td>4.9/26.2</td>
<td>6.7/28.3</td>
<td>9.7/31.6</td>
<td>12.5/34.7</td>
<td>15.3/37.8</td>
</tr>
<tr>
<td>15</td>
<td>9.3/45.2</td>
<td>12.7/49.2</td>
<td>18.4/55.6</td>
<td>23.6/61.5</td>
<td>28.9/67.3</td>
</tr>
</tbody>
</table>

*Operating temperature 55°C.*

PA4050-N3

<table>
<thead>
<tr>
<th>Nitrogen Flow (Nm³/hr) / Feed Air Flow (Nm³/hr)</th>
<th>Purity</th>
<th></th>
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<tbody>
<tr>
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<td>99.5%</td>
<td>99%</td>
<td>98%</td>
<td>97%</td>
<td>96%</td>
</tr>
<tr>
<td>5</td>
<td>3.2/21.7</td>
<td>4.5/23.0</td>
<td>6.5/25.1</td>
<td>8.3/27.1</td>
<td>10.1/29.0</td>
</tr>
<tr>
<td>9</td>
<td>7.6/41.9</td>
<td>10.5/45.0</td>
<td>15.0/50.1</td>
<td>19.3/54.7</td>
<td>23.5/59.2</td>
</tr>
<tr>
<td>15</td>
<td>14.7/72.9</td>
<td>20.1/79.1</td>
<td>28.9/89.0</td>
<td>37.0/97.9</td>
<td>45.2/107.0</td>
</tr>
</tbody>
</table>

*Operating temperature 55°C.*

*Performance listed is typical for a single membrane separator. Contact our Technical Services department to receive detailed performance recommendations or to generate computer simulations for your specific production requirements.*
**Materials**

<table>
<thead>
<tr>
<th>Component</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shell tube</td>
<td>High-performance ABS</td>
</tr>
<tr>
<td>End caps</td>
<td>6061-T6 Aluminum</td>
</tr>
</tbody>
</table>

**Mechanical Design Limits**

<table>
<thead>
<tr>
<th>Limit</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design pressure</td>
<td>26.5 barg</td>
</tr>
<tr>
<td>Design temperature</td>
<td>65.6°C</td>
</tr>
</tbody>
</table>

**Typical Operating Range**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure</td>
<td>3 bar g to 20 barg</td>
</tr>
<tr>
<td>Temperature</td>
<td>5°C to 55°C</td>
</tr>
</tbody>
</table>

Consult our Technical Services Department for specific limits for your application.

**Dimensions**

**Feed air requirements**

Pre-treatment steps differ by application but typically include cooling, filtration, temperature control, and pressure control. Consult the Design-and-Reference manual for detailed information associated with these products.

**WARNINGS:**

Gaseous nitrogen is colorless, odorless, inert, tasteless, non-corrosive, and non-flammable. Nitrogen is non-toxic but can act as an asphyxiant by displacing the necessary amount of oxygen in the air to sustain life. Safety procedures must be established and followed before entering any enclosed or poorly ventilated area containing nitrogen generating equipment or piping. The nitrogen gas generated by the membrane cannot support life.
PRISM Membrane Separators are available through two channels

Air Products sells and distributes membrane separators through Original Equipment Manufacturing (OEM) arrangements. This global network of value-added-resellers integrates PRISM Membrane Separators into systems for a variety of applications from food preservation to scuba diving air. If you have an interest in using PRISM Membrane Separators in your gas generation systems, please contact our Business Development specialists.

Fully-assembled membrane systems are available through the Air Products Engineered Systems group. Each nitrogen system is fabricated to the highest engineering classifications, which are required for the most demanding worksites. These are the same nitrogen membrane systems that Air Products uses in its own facilities, so you can be sure that the quality and performance meets the highest standards.

We look forward to working with you.

For more information regarding Air Products’ PRISM N3 membrane separators, please contact our Technical Services department.

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The information contained in this document is believed to be true and accurate at time of publication. Air Products PRISM Membranes reserves the right to change product specifications without notification. Please consult current Product Design and Reference manual for detailed information associated with these products.

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