A SECURE SUPPLY OF NITROGEN AND OXYGEN

Whether your company is specialized in chemical manufacturing, electronics, laser cutting or food and beverage, a dependable supply of industrial gas is crucial. Compared to the on-demand delivery of gas bottles or tanks, on-site production of gas offers a wealth of advantages ranging from cost savings to continuous availability. Atlas Copco’s advanced nitrogen and oxygen generators offer you the ultimate solution: flexible on-site production of industrial gas at the lowest possible cost.

On-site vs. liquid or bottled gas

- Your own independent supply of industrial gas.
- Non-stop availability: 24 hours a day, 7 days a week.
- Significant economies of scale and lower operational costs: no rental charges, transport expenses and bulk user evaporation losses.
- No safety hazards when handling high-pressure cylinders.
- Easy integration within existing compressed air installations.

<table>
<thead>
<tr>
<th>Liquid/bottled gas</th>
<th>On-site generation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lease tank</td>
<td>Capital</td>
</tr>
<tr>
<td>N₂</td>
<td>Energy</td>
</tr>
<tr>
<td>Transport</td>
<td>Maintenance</td>
</tr>
<tr>
<td>0.1-0.8 EUR/m³(*)</td>
<td>0.02-0.15 EUR/m³(**)</td>
</tr>
<tr>
<td>N₂: 99.999%</td>
<td>N₂: 95-99.999%</td>
</tr>
</tbody>
</table>

(*) Industry average, other price settings might apply.
(**) Depending on purity and electricity cost.

High reliability

- Proven technology: simple, reliable and durable.
- The exact purity your application demands.
- Low operating costs for extra cost-efficiency.
- World-class expertise in a unique market offer from compressed air to gas.
With an air factor of 1.8 (at 95%) to 5.5 (at 99.999%) and a special cycle time modulation algorithm, the running cost of the new NGP+ can be reduced by 50%, compared to other N2 generators.

New generation membrane & PSA generators will change the market
Atlas Copco’s latest membrane and PSA generators extend the advantages of the current range. Total lifecycle cost consists of the initial investment cost of the on-site installation, the service cost, and the energy cost. The NGP/NGM range has the lowest investment cost. However, with increasing running time, you are better advised to switch to the NGP+/NGM+ range to reduce energy costs.

Wide range of applications
- Food & beverage (storage & packaging).
- Pharmaceutical applications.
- Plastic injection molding.
- Electronics.
- Laser cutting.
- Semiconductor manufacturing.
- Chemical applications.
- Metal heat treatment.
- Cable & optical fiber industries.
- Glass industries.
- Fire prevention.
- Aquaculture.
Atlas Copco NGM/NGM⁺ nitrogen generators utilize proprietary membrane separation technology. The membrane separates compressed air into two streams: one is 95-99.9% pure nitrogen, and the other is oxygen enriched with carbon dioxide and other gases.

Instant supply of nitrogen between 95% and 99.9%

The generator separates air into component gases by passing inexpensive compressed air through semi-permeable membranes consisting of bundles of individual hollow fibers. Each fiber has a perfectly circular cross-section and a uniform bore through its center. Because the fibers are so small, a large amount of fibers can be packed into a limited space, providing an extremely large membrane surface area that can produce a relatively high volume product stream.

Outstandingly dry nitrogen

Compressed air is introduced into the center of the fibers at one end of the module and contacts the membrane as it flows through the fiber bores. Oxygen, water vapor and other trace gases easily permeate the membrane fiber and are discharged through a permeate port while the nitrogen is contained within the membrane and flows through the outlet port. Since water vapor permeates through the membrane as well, the nitrogen gas stream is very dry, with dewpoints as low as -40°C (-40°F).
Based on Pressure Swing Adsorption (PSA) technology, Atlas Copco’s NGP/NGP\(^+\) nitrogen generators and OGP oxygen generators provide a continuous flow of nitrogen and oxygen at desired purity.

**High purity nitrogen supply up to 99.999%**

Atlas Copco’s NGP/NGP\(^+\) nitrogen generators use Pressure Swing Adsorption technology to isolate nitrogen molecules from other molecules in compressed air. Oxygen, CO\(_2\), water vapor and other gases are adsorbed. The result is virtually pure nitrogen at the outlet of the generator. The NGP/NGP\(^+\) Series is a very cost-efficient source of nitrogen used in various industries like food and beverage, metal processing, electronics, and many others.

**For all your oxygen needs**

The OGP oxygen generator works in a similar way, using Pressure Swing Adsorption technology to isolate oxygen molecules from other molecules in compressed air to leave high purity oxygen at the outlet of the generator. The OGP Series provides cost-efficient oxygen for applications such as waste water treatment, ozone production, health care, and the glass industry.
TOTAL SOLUTIONS FROM ATLAS COPCO

With a full range of nitrogen and oxygen generators to choose from, Atlas Copco brings you the right supply of nitrogen and oxygen to meet your specific needs and optimize your production process at the same time.

A unique offer

On-site nitrogen and oxygen generation requires the most reliable and efficient compressed air solution. Drawing on vast experience, Atlas Copco has been leading the industry in compressed air technology for decades. From advanced compressors and quality air solutions over a complete range of nitrogen and oxygen generators to aftermarket and financing services, Atlas Copco brings you its world-class expertise in a unique offer.

Oil-free compressors

Atlas Copco, pioneer in the development of oil-free air technology, offers a full range of premium compressors delivering 100% oil-free, clean air to protect the membrane or absorbent in nitrogen generators. There is no need for extra filtration, making sure the pressure drop is kept to a minimum.
**Oil-injected compressors**

Integrated onto the production floor, Atlas Copco’s oil-injected compressors provide a dependable flow of compressed air directly to the point of use. Built to perform in harsh environments, Atlas Copco compressors keep your production running smoothly and reliably: a very economical solution in combination with nitrogen and oxygen generators.

**Air treatment**

Atlas Copco has innovatively developed and improved air compression and drying techniques. Whatever your installation, application or quality requirements, Atlas Copco can offer the right air treatment solution, such as dryers (desiccant, refrigerant, membrane) and filters (coalescing, particle, active carbon).

Typical installation: compressor with integrated dryer, receiver, NGM+ nitrogen generator, receiver.
MEMBRANE NITROGEN GENERATORS (NGM, NGM+)

Based on innovative membrane technology, Atlas Copco’s Membrane Nitrogen Generators are flexible enough to adapt to your specific applications. And with low operating costs they offer an excellent return on investment.

Ready to use
• Requires only a supply of dry compressed air.
• No specialist installation or commissioning.
• Fitted with pre-filtration, pressure gauges and flow meter to ensure accurate system monitoring at all times.

Cost savings
• Low operating expenses.
• No additional costs such as order processing, refills and delivery charges.
• Limited maintenance costs.

Exceptional convenience
• Continuous availability (24 hours a day, 7 days a week).
• Risk of production breakdown due to gas running out is eliminated.

Desired purity
• Nitrogen supply according to your need: from 5% to 0.1% oxygen content.
• Very easy to set up the device for other purity levels.

All-in-one
• Fully integrated package.
• Filters and oxygen sensor as standard.

High flow capacity
Ideal for applications such as fire prevention, tire inflation, oil & gas, marine, packaging and many more.

Long lifetime
• No aging.
• No heater.
• Lasting performance.
PSA NITROGEN AND OXYGEN GENERATORS (NGP, NGP⁺, OGP)

Atlas Copco’s NGP, NGP⁺, and OGP nitrogen and oxygen generators are easy to install and use. They offer the required purity with a high flow capacity, making them suitable for a range of applications.

High flow capacity
The wide product range and gas flows exceeding 2,000 Nm³/h (NGP/NGP⁺) make these generators ideal for a variety of demanding applications.

Ready to use
• Only requires a supply of dry compressed air.
• Plug-and-play.
• No specialist installation or commissioning.
• Fully automated and monitored including oxygen sensor as standard.
• Service-friendly.

Desired purity
• NGP/NGP⁺: nitrogen concentrations from 95% to 99.999%.
• OGP: oxygen concentrations from 90% to 95%.

Exceptional reliability
• Robust design.
• Continuous availability (24 hours a day, 7 days a week).
• Potential risk of production breakdown due to gas running out is eliminated.

Cost savings
• Low operating expenses.
• No additional costs such as order processing, refills and delivery charges.
• Limited maintenance costs.
NEW GENERATION NGP+ NITROGEN GENERATORS

1. Self-protective monitoring of the feed air quality
   • Temperature.
   • Pressure.
   • Pressure dewpoint.
   • Automatic feed air blow-off in case of contamination.

2. Premium energy efficiency
   Air-to-nitrogen ratio from 1.8 (95% N₂) to 5.5 (99.999% N₂).

3. Automatic start-up
   • Minimum pressure valve with bypass nozzle for fast start-up.
   • Eliminates risk of overflow and CMS damage.

4. Highest quality CMS
   • High density.
   • Compact spring loaded.
   • Top/bottom equalization.
   • Protected by dedicated pressure sensor.
Self-regulation and stable purity
- Automatically regulates to the requested nitrogen pressure and purity.
- Extremely easy to change purity.
- Off-spec nitrogen flushing.

The most complete scope of supply
- Nitrogen flow meter as standard.
- Zirconia oxygen sensor with a long lifetime.
- Outlet pressure reducing valve.

Control and monitoring
- Remote start-stop.
- Modbus, Profibus and Ethernet.
- SMARTLINK.

Back flow pressurization
- In the pressurization phase nitrogen is used instead of air.
- No oxygen contamination of the CMS before adsorption phase starts.

The ultimate energy saver
- Stand-by mode in case no nitrogen is consumed.
- Cycle time modulation algorithm = extended cycle time at low nitrogen demand = reduced air consumption at low nitrogen demand.
ALL-IN-ONE HIGH PRESSURE NITROGEN SKID

The latest addition Atlas Copco’s specially developed equipment is the all-in-one high pressure nitrogen skid, a true alternative for liquid nitrogen or bottles. Combining a small footprint, easy installation, high reliability and supreme energy efficiency, this unique nitrogen skid truly stands out.

Ideal for a fluctuating nitrogen demand

This innovative nitrogen skid allows you to store nitrogen at 40 or 300 bar. By doing so, you can dispose of your average nitrogen consumption rather than have your maximum consumption available at all times. This saves initial investment cost and drastically reduces your operating costs.

High-pressure applications and storage of air, oxygen, nitrogen, helium and argon

Producing and storing your own gas supply is the most cost-effective solution while also ensuring your independence from vendors. Atlas Copco’s 200-bar booster delivers the high pressure you need to bottle the gas you generate. It can also be used for applications that require high-pressure air or gases, such as PET bottling or laser cutting. 100% oil-free, the booster avoids any risk of contamination in production environments that demand extreme purity.

Strong performance

• 100% oil-free.
• Cooling via internal refrigerant group for +/- 20°C outlet temperature.
• Minimal maintenance: extremely low RPM.

Flexible use

• Compressed air, oxygen, nitrogen, helium or argon up to 200 bar.
• Available in 3 to 15 kW.
• High pressure generation for direct use and bottling.

Energy efficiency

• Variable frequency drive through in- and outlet pressure.

High reliability

• Direct driven engine with gearbox eliminating belt wear.
• Closed system preventing any ventilation losses.
## TECHNICAL SPECIFICATIONS NGM SERIES

<table>
<thead>
<tr>
<th>TYPE</th>
<th>Nitrogen purity</th>
<th>Dimensions (W x D x H)</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>95%</td>
<td>96%</td>
<td>97%</td>
</tr>
<tr>
<td>NGM 1</td>
<td>FND Nm³/h</td>
<td>11.9</td>
<td>9.7</td>
</tr>
<tr>
<td></td>
<td>FND scfm</td>
<td>6.9</td>
<td>5.7</td>
</tr>
<tr>
<td></td>
<td>Air factor</td>
<td>2.6</td>
<td>3</td>
</tr>
<tr>
<td>NGM 2</td>
<td>FND Nm³/h</td>
<td>24.1</td>
<td>19.4</td>
</tr>
<tr>
<td></td>
<td>FND scfm</td>
<td>14.1</td>
<td>11.3</td>
</tr>
<tr>
<td></td>
<td>Air factor</td>
<td>2.6</td>
<td>3</td>
</tr>
<tr>
<td>NGM 3</td>
<td>FND Nm³/h</td>
<td>42.1</td>
<td>34.6</td>
</tr>
<tr>
<td></td>
<td>FND scfm</td>
<td>24.6</td>
<td>20.2</td>
</tr>
<tr>
<td></td>
<td>Air factor</td>
<td>2.6</td>
<td>3</td>
</tr>
<tr>
<td>NGM 4</td>
<td>FND Nm³/h</td>
<td>83.9</td>
<td>69.5</td>
</tr>
<tr>
<td></td>
<td>FND scfm</td>
<td>48.9</td>
<td>40.5</td>
</tr>
<tr>
<td></td>
<td>Air factor</td>
<td>2.6</td>
<td>3</td>
</tr>
<tr>
<td>NGM 5</td>
<td>FND Nm³/h</td>
<td>136.0</td>
<td>104.0</td>
</tr>
<tr>
<td></td>
<td>FND scfm</td>
<td>73.5</td>
<td>60.7</td>
</tr>
<tr>
<td></td>
<td>Air factor</td>
<td>2.6</td>
<td>3</td>
</tr>
<tr>
<td>NGM 6</td>
<td>FND Nm³/h</td>
<td>168.1</td>
<td>138.6</td>
</tr>
<tr>
<td></td>
<td>FND scfm</td>
<td>98.1</td>
<td>80.9</td>
</tr>
<tr>
<td></td>
<td>Air factor</td>
<td>2.6</td>
<td>3</td>
</tr>
<tr>
<td>NGM 7</td>
<td>FND Nm³/h</td>
<td>209.9</td>
<td>173.2</td>
</tr>
<tr>
<td></td>
<td>FND scfm</td>
<td>122.4</td>
<td>101.0</td>
</tr>
<tr>
<td></td>
<td>Air factor</td>
<td>2.6</td>
<td>3</td>
</tr>
</tbody>
</table>

## TECHNICAL SPECIFICATIONS NGM+ SERIES

<table>
<thead>
<tr>
<th>TYPE</th>
<th>Nitrogen purity</th>
<th>Dimensions (W x D x H)</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>95%</td>
<td>96%</td>
<td>97%</td>
</tr>
<tr>
<td>NGM 1+</td>
<td>FND Nm³/h</td>
<td>24.3</td>
<td>16.5</td>
</tr>
<tr>
<td></td>
<td>FND scfm</td>
<td>14.1</td>
<td>9.6</td>
</tr>
<tr>
<td></td>
<td>Air factor</td>
<td>2.2</td>
<td>2.7</td>
</tr>
<tr>
<td>NGM 2+</td>
<td>FND Nm³/h</td>
<td>48.6</td>
<td>33.9</td>
</tr>
<tr>
<td></td>
<td>FND scfm</td>
<td>28.3</td>
<td>19.2</td>
</tr>
<tr>
<td></td>
<td>Air factor</td>
<td>2.2</td>
<td>2.7</td>
</tr>
<tr>
<td>NGM 3+</td>
<td>FND Nm³/h</td>
<td>72.9</td>
<td>49.5</td>
</tr>
<tr>
<td></td>
<td>FND scfm</td>
<td>42.4</td>
<td>28.8</td>
</tr>
<tr>
<td></td>
<td>Air factor</td>
<td>2.2</td>
<td>2.7</td>
</tr>
<tr>
<td>NGM 4+</td>
<td>FND Nm³/h</td>
<td>972</td>
<td>660</td>
</tr>
<tr>
<td></td>
<td>FND scfm</td>
<td>565</td>
<td>384</td>
</tr>
<tr>
<td></td>
<td>Air factor</td>
<td>2.2</td>
<td>2.7</td>
</tr>
<tr>
<td>NGM 5+</td>
<td>FND Nm³/h</td>
<td>145.8</td>
<td>99.0</td>
</tr>
<tr>
<td></td>
<td>FND scfm</td>
<td>84.8</td>
<td>57.6</td>
</tr>
<tr>
<td></td>
<td>Air factor</td>
<td>2.2</td>
<td>2.7</td>
</tr>
<tr>
<td>NGM 6+</td>
<td>FND Nm³/h</td>
<td>194.4</td>
<td>132.0</td>
</tr>
<tr>
<td></td>
<td>FND scfm</td>
<td>113.0</td>
<td>76.7</td>
</tr>
<tr>
<td></td>
<td>Air factor</td>
<td>2.2</td>
<td>2.7</td>
</tr>
<tr>
<td>NGM 7+</td>
<td>FND Nm³/h</td>
<td>243.0</td>
<td>165.0</td>
</tr>
<tr>
<td></td>
<td>FND scfm</td>
<td>141.3</td>
<td>65.9</td>
</tr>
<tr>
<td></td>
<td>Air factor</td>
<td>2.2</td>
<td>2.7</td>
</tr>
</tbody>
</table>

**FND**: Free Nitrogen Delivery

**Reference conditions**
- Compressed air effective inlet pressure: 8 bar(g)/116 psi(g). Nitrogen outlet pressure: 6.5 bar(g)/94 psi(g).
- Ambient air temperature: 20°C/68°F.
- Pressure dewpoint inlet air: 3°C/37°F.
- Pressure dewpoint nitrogen: -40°C/-40°F.
- Unit inlet air quality 1.4.1 according to ISO 8573-1:2010.
- Minimum refrigerant dryer required to precondition inlet air.

**Typical nitrogen quality 1.2.1 according to ISO 8573-1:2010.**

**Operating limits**
- Minimum ambient temperature: 5°C/41°F.
- Maximum ambient temperature: 50°C/122°F.
- Maximum compressed inlet air pressure: 13 bar(g)/189 psi(g).
## TECHNICAL SPECIFICATIONS: NGP SERIES

### NGP 10+
- **Type:** NGP 10+
- **Nitrogen purity:** FND (Free Nitrogen Delivery)
- **Dimensions:** 1400 x 840 x 2015 mm
- **Weight:** 55 kg
- **Flow Rate:** 13.1 scfm
- **Air factor:** 1.86

### NGP 15+
- **Type:** NGP 15+
- **Nitrogen purity:** FND (Free Nitrogen Delivery)
- **Dimensions:** 1400 x 840 x 2015 mm
- **Weight:** 63 kg
- **Flow Rate:** 18.6 scfm
- **Air factor:** 1.86

### NGP 20+
- **Type:** NGP 20+
- **Nitrogen purity:** FND (Free Nitrogen Delivery)
- **Dimensions:** 1400 x 840 x 2015 mm
- **Weight:** 72 kg
- **Flow Rate:** 26.3 scfm
- **Air factor:** 1.86

### NGP 250
- **Type:** NGP 250
- **Nitrogen purity:** FND (Free Nitrogen Delivery)
- **Dimensions:** 1400 x 840 x 2015 mm
- **Weight:** 90 kg
- **Flow Rate:** 341.2 scfm
- **Air factor:** 1.86

### NGP 30+
- **Type:** NGP 30+
- **Nitrogen purity:** FND (Free Nitrogen Delivery)
- **Dimensions:** 1400 x 840 x 2015 mm
- **Weight:** 87 kg
- **Flow Rate:** 41.3 scfm
- **Air factor:** 1.86

### NGP 350
- **Type:** NGP 350
- **Nitrogen purity:** FND (Free Nitrogen Delivery)
- **Dimensions:** 1400 x 840 x 2015 mm
- **Weight:** 108 kg
- **Flow Rate:** 50.7 scfm
- **Air factor:** 1.86

### NGP 400
- **Type:** NGP 400
- **Nitrogen purity:** FND (Free Nitrogen Delivery)
- **Dimensions:** 1400 x 840 x 2015 mm
- **Weight:** 126 kg
- **Flow Rate:** 68.3 scfm
- **Air factor:** 1.86

### NGP 450
- **Type:** NGP 450
- **Nitrogen purity:** FND (Free Nitrogen Delivery)
- **Dimensions:** 1400 x 840 x 2015 mm
- **Weight:** 145 kg
- **Flow Rate:** 81.3 scfm
- **Air factor:** 1.86

### NGP 500
- **Type:** NGP 500
- **Nitrogen purity:** FND (Free Nitrogen Delivery)
- **Dimensions:** 1400 x 840 x 2015 mm
- **Weight:** 164 kg
- **Flow Rate:** 95.1 scfm
- **Air factor:** 1.86

### NGP 550
- **Type:** NGP 550
- **Nitrogen purity:** FND (Free Nitrogen Delivery)
- **Dimensions:** 1400 x 840 x 2015 mm
- **Weight:** 183 kg
- **Flow Rate:** 109.9 scfm
- **Air factor:** 1.86

### NGP 600
- **Type:** NGP 600
- **Nitrogen purity:** FND (Free Nitrogen Delivery)
- **Dimensions:** 1400 x 840 x 2015 mm
- **Weight:** 203 kg
- **Flow Rate:** 124.7 scfm
- **Air factor:** 1.86

### NGP 650
- **Type:** NGP 650
- **Nitrogen purity:** FND (Free Nitrogen Delivery)
- **Dimensions:** 1400 x 840 x 2015 mm
- **Weight:** 222 kg
- **Flow Rate:** 140.6 scfm
- **Air factor:** 1.86

### NGP 700
- **Type:** NGP 700
- **Nitrogen purity:** FND (Free Nitrogen Delivery)
- **Dimensions:** 1400 x 840 x 2015 mm
- **Weight:** 242 kg
- **Flow Rate:** 160.3 scfm
- **Air factor:** 1.86

### NGP 750
- **Type:** NGP 750
- **Nitrogen purity:** FND (Free Nitrogen Delivery)
- **Dimensions:** 1400 x 840 x 2015 mm
- **Weight:** 261 kg
- **Flow Rate:** 180.1 scfm
- **Air factor:** 1.86

### NGP 800
- **Type:** NGP 800
- **Nitrogen purity:** FND (Free Nitrogen Delivery)
- **Dimensions:** 1400 x 840 x 2015 mm
- **Weight:** 281 kg
- **Flow Rate:** 200 scfm
- **Air factor:** 1.86

### NGP 850
- **Type:** NGP 850
- **Nitrogen purity:** FND (Free Nitrogen Delivery)
- **Dimensions:** 1400 x 840 x 2015 mm
- **Weight:** 301 kg
- **Flow Rate:** 220 scfm
- **Air factor:** 1.86

### NGP 900
- **Type:** NGP 900
- **Nitrogen purity:** FND (Free Nitrogen Delivery)
- **Dimensions:** 1400 x 840 x 2015 mm
- **Weight:** 322 kg
- **Flow Rate:** 240 scfm
- **Air factor:** 1.86

### NGP 950
- **Type:** NGP 950
- **Nitrogen purity:** FND (Free Nitrogen Delivery)
- **Dimensions:** 1400 x 840 x 2015 mm
- **Weight:** 342 kg
- **Flow Rate:** 260 scfm
- **Air factor:** 1.86

### NGP 1000
- **Type:** NGP 1000
- **Nitrogen purity:** FND (Free Nitrogen Delivery)
- **Dimensions:** 1400 x 840 x 2015 mm
- **Weight:** 362 kg
- **Flow Rate:** 280 scfm
- **Air factor:** 1.86
## TECHNICAL SPECIFICATIONS OGP SERIES

<table>
<thead>
<tr>
<th>TYPE</th>
<th>Oxygen purity FOD (Free Oxygen Delivery)</th>
<th>Dimensions (W x D x H)</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>90%</td>
<td>93%</td>
<td>95%</td>
</tr>
<tr>
<td>OGP 2</td>
<td>FOD Nm³/h</td>
<td>2.1</td>
<td>1.6</td>
</tr>
<tr>
<td>OGP 3</td>
<td>FOD Nm³/h</td>
<td>3.2</td>
<td>2.5</td>
</tr>
<tr>
<td>OGP 4</td>
<td>FOD Nm³/h</td>
<td>6.7</td>
<td>5.0</td>
</tr>
<tr>
<td>OGP 5</td>
<td>FOD Nm³/h</td>
<td>9.7</td>
<td>7.5</td>
</tr>
<tr>
<td>OGP 6</td>
<td>FOD Nm³/h</td>
<td>12.5</td>
<td>10.0</td>
</tr>
<tr>
<td>OGP 7</td>
<td>FOD Nm³/h</td>
<td>16.0</td>
<td>13.5</td>
</tr>
<tr>
<td>OGP 8</td>
<td>FOD Nm³/h</td>
<td>20.8</td>
<td>18.0</td>
</tr>
<tr>
<td>OGP 9</td>
<td>FOD Nm³/h</td>
<td>26.5</td>
<td>23.0</td>
</tr>
<tr>
<td>OGP 10</td>
<td>FOD Nm³/h</td>
<td>34.8</td>
<td>30.0</td>
</tr>
<tr>
<td>OGP 11</td>
<td>FOD Nm³/h</td>
<td>46.0</td>
<td>40.0</td>
</tr>
<tr>
<td>OGP 12</td>
<td>FOD Nm³/h</td>
<td>62.0</td>
<td>55.0</td>
</tr>
<tr>
<td>OGP 13</td>
<td>FOD Nm³/h</td>
<td>83.2</td>
<td>75.0</td>
</tr>
<tr>
<td>OGP 14</td>
<td>FOD Nm³/h</td>
<td>112.0</td>
<td>100.0</td>
</tr>
<tr>
<td>OGP 15</td>
<td>FOD Nm³/h</td>
<td>152.0</td>
<td>135.0</td>
</tr>
<tr>
<td>OGP 16</td>
<td>FOD Nm³/h</td>
<td>208.0</td>
<td>185.0</td>
</tr>
</tbody>
</table>

### FND: Free Nitrogen Delivery

**Reference conditions**

- Compressed air effective inlet pressure: 7.5 bar(g)/108 psi(g) for NGP, 7 bar(g)/102 psi(g) for NGP+.
- Nitrogen outlet pressure: 6 bar(g)/87 psi(g).
- Ambient air temperature: 20°C/68°F.
- Pressure dewpoint inlet air: 3°C/37°F.
- Pressure dewpoint nitrogen: -50°C/-58°F.
- Unit inlet air quality 1.4.1 according to ISO 8573-1:2010.
- Minimum refrigerant dryer required to precondition inlet air. Typical nitrogen quality 1.2.1 according to ISO 8573-1:2010.

### Operating limits

- Minimum ambient temperature: 5°C/41°F.
- Maximum ambient temperature: 45°C/113°F for NGP, 60°C/140°F for NGP+.
- Maximum compressed inlet air pressure 10 bar(g)/145 psi(g) for NGP, 13 bar(g)/189 psi(g) for NGP+.

### FOD: Free Oxygen Delivery

**Reference conditions**

- Compressed air effective inlet pressure: 7.5 bar(g)/108 psi(g).
- Oxygen outlet pressure: 5 bar(g)/72 psi(g).
- Ambient air temperature: 20°C/68°F.
- Pressure dewpoint inlet air: 3°C/37°F.
- Pressure dewpoint oxygen: -50°C/-58°F.
- Unit inlet air quality 1.4.1 according to ISO 8573-1:2010.
- Minimum refrigerant dryer required to precondition inlet air. Typical oxygen quality 1.2.1 according to ISO 8573-1:2010.

### Operating limits

- Minimum ambient temperature: 5°C/41°F.
- Maximum ambient temperature: 45°C/113°F.
- Maximum compressed inlet air pressure 10 bar(g)/145 psi(g).
COMMITTED TO SUSTAINABLE PRODUCTIVITY

We stand by our responsibilities towards our customers, towards the environment and the people around us. We make performance stand the test of time. This is what we call – Sustainable Productivity.

www.atlascopco.com/industrialgases