Cryogenic air separation plants have proven themselves and been worth their value throughout the world for many years now. These systems are particularly suitable for the production of liquid and/or gaseous oxygen, nitrogen and argon. The precious products are gained from atmospheric air, based on a low-temperature rectification process. Thereby the substances are of high purity and find wide fields of application in medicine and industry.
Air Separation Plants
Standard and tailor-made

GASEOUS OXYGEN (GOX), NITROGEN (GN), ARGON (GAR)
Standard and tailor-made plants of models ONG and OANG
Standard models: ONG 1,000 / 2,000 / 5,000 / 10,000
OANG 1,000 / 2,000 / 5,000 / 10,000

<table>
<thead>
<tr>
<th>Product</th>
<th>Product Output*</th>
<th>Product Purity</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOX</td>
<td>150 - 10,000 Nm³/h</td>
<td>99.5 - 99.7 % by vol.</td>
</tr>
<tr>
<td>GN</td>
<td>300 - 20,000 Nm³/h</td>
<td>up to 1 ppm (v) O₂</td>
</tr>
<tr>
<td>GAR</td>
<td>12 - 240 Nm³/h **</td>
<td>up to 5 ppm (v) O₂</td>
</tr>
</tbody>
</table>

**Argon production is possible from 500 Nm³/h Oxygen / Nitrogen production

During the production of gaseous Oxygen, Nitrogen and Argon, certain amounts of liquid products (LOX, LIN, LAR) can be produced simultaneously.

LIQUID OXYGEN (LOX), NITROGEN (LIN), ARGON (LAR)
Standard and tailor-made plants of models ONL and OANL
Standard models: ONL 100 / 200 / 500 / 1,000 / 2,000 / 5,000
OANL 500 / 1,000

<table>
<thead>
<tr>
<th>Product</th>
<th>Product Output*</th>
<th>Product Purity</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOX</td>
<td>100 - 5,000 Nm³/h</td>
<td>99.5 - 99.7 % by vol.</td>
</tr>
<tr>
<td>LIN</td>
<td>100 - 5,000 Nm³/h</td>
<td>up to 1 ppm (v) O₂</td>
</tr>
<tr>
<td>LAR</td>
<td>15 - 30 Nm³/h **</td>
<td>up to 5 ppm (v) O₂</td>
</tr>
</tbody>
</table>

**Argon production is possible from 500 Nm³/h Oxygen / Nitrogen production

During the production of liquid Oxygen, Nitrogen and Argon, certain amounts of liquid products (LIN, LAR) can be produced simultaneously.

**CHARACTERISTICS**
- Quality and functional check in CRYOTEC workshops (depending on the plant size)
- Very short erection / commissioning time due to ready piped and wired plant skids
- Application of trusted and well-proven equipment
- Efficient plant operation
- Competitive solution due to standardization
- High quality by applying a quality management system according to ISO 9001 standard

**HIGHLIGHTS OF LOX / LIN / LAR PLANTS**
- Compact design (skid mounted or containerized)
- Quality and functional check in CRYOTEC’s own workshop
- High efficiency in plant operation
- Very short erection / commissioning time due to prefabricated and tested plant units

**Additional Equipment**
- Pipeline service / compressors, for increasing the production pressure up to the specific requirements of the customer
- Liquid gas tanks for storage of liquid products
- Liquid gas pumps, vaporizers
- Cylinders filling manifolds

**Specials**
- Automatic process control by PLC guarantees highest plant availability and safety
- Air cooling at ambient temperatures up to +50°C (122°F) possible and water cooling at ambient temperature up to +60°C (140°F)
- Plants tailored to the specific needs of the customer
- Full service in all project phases: planning, design, manufacturing, delivery, supervision, commissioning and start-up of the plant
- Long-term customer service and assistance

**High Plant Safety**
- High reliability due to high plant safety and long-term experience in process design, plant engineering and construction
- Design according to latest safety standards of the oil and gas industry

**CONTACT**
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Managing Director
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Email: corinne.ziege@cryotec.de

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**HIGH PURITY NITROGEN**
Standard and tailor-made plants
Standard models: NG 300 / 500 / 1,000 / 2,000 / 3,000
5,000 / 7,000 / 10,000 / 15,000

<table>
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<tr>
<th>Product</th>
<th>Product Output*</th>
<th>Product Purity</th>
</tr>
</thead>
<tbody>
<tr>
<td>GN</td>
<td>300 - 15,000 Nm³/h</td>
<td>up to 1 ppm (v) O₂ in N₂</td>
</tr>
</tbody>
</table>

**Product Pressure**
6 - 8 bar/g

Certain amounts of liquid nitrogen (LIN) can be produced simultaneously.

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**OTHER PRODUCT CAPACITIES AND PRESSURES ON REQUEST**

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**Other product capacities and pressures on request**