

# PRISM<sup>®</sup> VSA Oxygen Generator

## Reliable on-site gas supply

### Proven, flexible solutions

Air Products' PRISM VSA Oxygen Generators provide dependable oxygen supply to meet a broad range of flow requirements. Our robust PRISM VSA Oxygen Generators offer a highly reliable oxygen supply at an overall cost savings compared to trucked-in liquid. The systems' modular approach facilitates easy installation and maintenance, while the standard features enable the systems to meet the specific needs of glass, nonferrous metals and steel, cement, pulp and paper, water treatment, refinery, renewable energy, and other industries.

The PRISM VSA Oxygen systems generate oxygen using a proprietary molecular sieve which maximizes efficiency and significantly reduces energy requirements, often making this the low-cost oxygen source. With more than 25 years of experience, our technical experts will collaborate closely with you to select the optimal gas supply solution for your application.



### Features/benefits

#### Reduced capital expenditures

- Efficiently skidded for low installation cost
- Modular design for easy relocation
- Minimum required plot space

#### Lower operating costs

- Operating cost savings within turndown range
- Power-efficient gas supply
- No utility water required for base VSA
- Designed for unmanned operation

#### High reliability

- Fully automatic controls
- Monitoring 24/7
- Full local and remote control

#### Flexibility

- Efficient turndown to 50% of full capacity
- Advanced sound abatement
- Specific industry focus with superior integration of supply

#### Customizable options

- Oxygen booster compressor systems with closed loop cooling skid
- Stand-alone instrument air supply
- Reduced voltage start-up
- Fully enclosed building for increased sound abatement
- Tight pressure control
- Flexible layouts

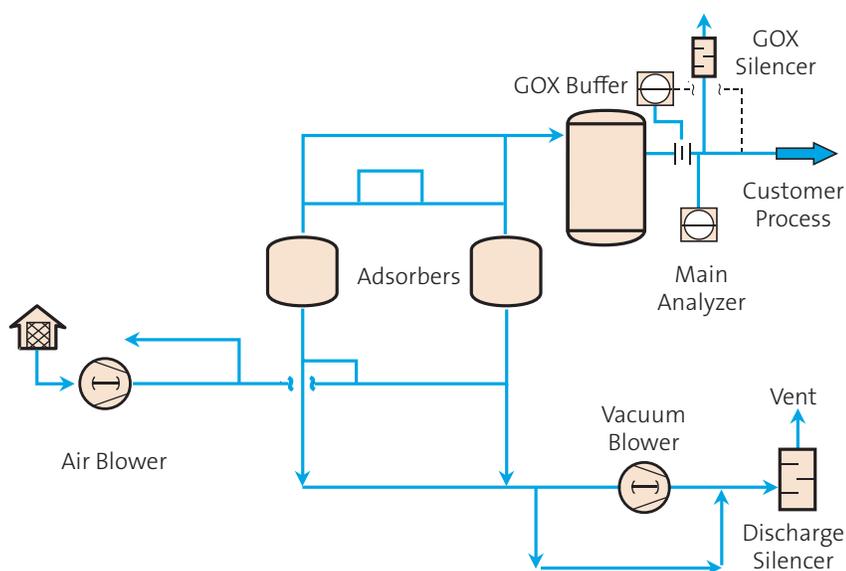
## Process description

The PRISM VSA Oxygen Generator uses adsorption technology to separate atmosphere air into its two principal components—nitrogen and oxygen. Oxygen, at your specified purity, is provided to your application at the required pressure, and the waste stream (impure nitrogen, water and carbon dioxide) is vented to the atmosphere. Utilizing a fully automated batch process, the VSA's molecular sieve adsorber vessels alternately pressurize to produce oxygen, then depressurize, regenerate and purge to be ready for the next cycle. Uninterrupted, consistent oxygen flow to your application is maintained by a product buffer tank which stores oxygen to ensure supply at all times during the operating cycle. Unlike cryogenic air separation processes, the VSA generator works at ambient temperature, significantly reducing power consumption and capital investment.

## Environmental commitment

Additionally, on-site gas generation helps sustainability-minded customers reduce their carbon footprint. It reduces the transportation of delivered products and makes the molecule directly as a gas thereby avoiding the energy needed for liquefaction. And our technology and engineering teams are constantly working to provide even higher levels of energy efficiency in our on-site gas generators.

Figure 1: Process Flow Diagram



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[airproducts.com/gasgeneration](http://airproducts.com/gasgeneration)

## Worldwide expertise at your doorstep

With local expertise around the world, Air Products can deliver reliable, cost-effective gas supply solutions by working with you to understand your needs. You can explore your gas supply options at: [www.airproducts.com/gasgeneration](http://www.airproducts.com/gasgeneration) or contact your local office to see how we can help you.

We welcome the opportunity to have a discussion with you. Please contact us at any of these locations:

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