

# PRISM<sup>®</sup> Hydrogen Generation Systems



A global leader in gas generation and purification, Air Products' PRISM Hydrogen Generation Systems deliver reliable and cost-effective gas to help you meet your needs.

"Our proprietary technology and global design facilitates localized fabrication, allowing us to deliver superior, cost-effective hydrogen generation systems to customers around the world."

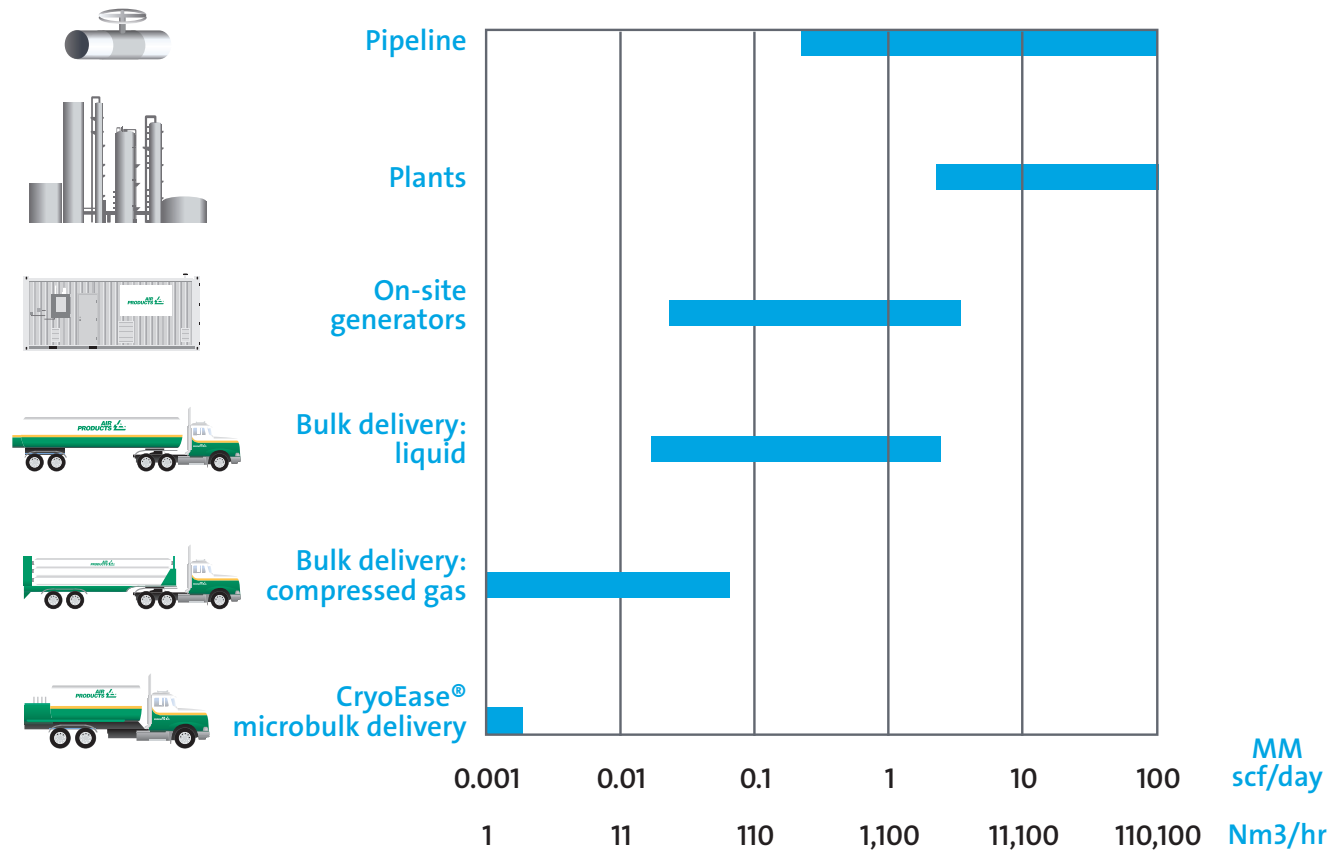
Global Product Owner  
Hydrogen Generation

## Proven solutions

As a world leader in the safe and efficient supply of hydrogen, you can count on Air Products' expertise to take the guesswork out of selecting the lowest cost and most reliable supply solution for your application. Because we offer the full spectrum of on-site hydrogen generators, delivered bulk supply options, and hydrogen purification systems, we can offer the right solution for your requirement, whatever it may be. Our hydrogen gas generation options include hydrocarbon reforming, off-gas cleanup, and electrolysis systems.

Whether you buy hydrogen or generate it on-site, Air Products has ways to help you improve efficiency and lower your overall costs. No one knows hydrogen like Air Products. We're the world's leading hydrogen supplier and operator of the world's largest hydrogen pipeline network. You can count on us to provide the most cost-effective supply option to meet your needs. Plus, we have the technologies and experienced technical support to help improve process efficiency, optimize gas usage, and improve safety.

## Supply options to meet your needs



Our engineers will recommend the most efficient and cost-effective supply mode based on your volume, pressure, purity level, flow rate, and operating pattern.



## Superior design delivers performance

Based on advanced proprietary technology, Air Products' PRISM hydrogen generators and purification equipment use a highly efficient, robust process to meet a broad range of requirements. Packaged PRISM hydrogen generators are designed to meet requirements up to 5,000 normal cubic meters per hour (4.56 million standard cubic feet per day). And the hydrogen purity from our generators will be more than 99.999%. Multiple systems can be configured for some applications to meet backup requirement and provide flexibility in operations.

Our proprietary process makes very efficient use of natural gas to minimize operating costs. The generators feature a compact modular design for easy installation. High onstream time is enabled by the reliability designed in the PRISM hydrogen generator and easy maintenance. Fully integrated backup systems can also be provided to help maintain uninterrupted supply.



## Applications

Air Products' PRISM Hydrogen Generation Systems currently provide the most economical hydrogen supply solution to a wide variety of applications in locations around the world. Industries that can use the PRISM hydrogen generator include chemicals, electronics, metals processing, steel, glass, food, power generation, and hydrogen fueling.

## Features and benefits of PRISM Hydrogen Generator Systems

### Cost-effective hydrogen supply

- Economical unit gas cost (efficient utility consumption and equipment design)
- Fully skidded, modular design for low cost installation
- Low life cycle cost for reformer catalyst (materials and maintenance)

### High reliability

- Real-time monitoring through global operating service centers
- Reduced maintenance – minimal moving parts

### Flexibility

- More options for plant installation at the site due to very compact and modular design
- Contract options include sale of gas and sale of equipment
- Reduced operating cost when running in turndown mode

### Dependable

- High onstream time with process and proven components
- Fast initial and hot start-up

### Experience

- Training and ongoing operations support based on leading experience with hydrogen generation
- Applications knowledge and usage survey to reduce hydrogen costs
- Consider all supply options to select the best for your unique requirements



## Utilities required for PRISM Hydrogen Generation System:

**Natural gas, process water, cooling water, instrument air, nitrogen purge**

**Electric power** 480 VAC, 3 pH, 60 Hz or 380 VAC, 3 pH, 50 Hz

**Siting requirements** Class 1 Division 2 Group B (main skid)

**Controls** Intrinsically safe or Class 1 Division 2 Group B (24 VDC)



### For more information

To learn more about how Air Products' PRISM Hydrogen Generation Systems deliver reliable and cost-effective hydrogen supply to your operation, contact us.

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