

PRISM® Hydrogen Generation Systems

A GLOBAL LEADER IN GAS GENERATION AND PURIFICATION, AIR PRODUCTS' PRISM HYDROGEN GENERATION SYSTEMS CAN DELIVER RELIABLE AND COST-EFFECTIVE GAS TO HELP YOU MEET YOUR NEEDS.



proven solutions

As a world leader in the safe and efficient supply of merchant hydrogen, you can count on Air Products' expertise to take the guesswork out of your selection of which method of hydrogen generation and supply is the lowest-cost and most reliable 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.

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 can be sized up to 10,000 standard cubic feet per hour (250 normal cubic meters per hour), achieving hydrogen purity levels in excess of 99.999%.

PRISM hydrogen generation systems feature a compact modular design that facilitates easy installation and maintenance and delivers high reliability. Fully integrated backup systems can also be added to help maintain uninterrupted supply.

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

Todd Carlson
Global Product Owner—
Hydrogen Generation



applications

Air Products' hydrogen generation systems currently provide the most economical hydrogen supply solution to a wide variety of applications in geographic locations around the world. Typical applications include use in the metals processing, steel, glass, photovoltaic, food, power generation, and hydrogen fueling industries.

BENEFITS OF PRISM HYDROGEN GENERATION SYSTEMS

| Low Capital Cost |

Fully skidded, modular design facilitates low-cost site installations

Compact plant design with small footprint

Standard, pre-engineered sizes enhance delivery

| High Reliability |

Minimal moving parts

Robust design with quick start-up

Long catalyst life (7 years) improves maintenance

Simple catalyst replacement

| Flexibility |

Standard 120 psig (8.27 barg) pressure

Load following design

UTILITY REQUIREMENTS: PRISM HYDROGEN GENERATION SYSTEM		
	Standard (per 3804 Scfh)	Metric (per 100 Nm ³ /hr)
Natural Gas	1635 Scfh	43 Nm ³ /hr
Process Water	40 psig, 27 gph, >10 MegaOhm/cm	102.2 lph, >10 MegaOhm/cm
Cooling Water	30 psig, 18 gpm, 182,000 Btu/hr	2 barg, 68 lpm, 53.3 kW
Instrument Air	120 Scfh, 80 psig	3.15 Nm ³ /hr, 5.5 barg
Nitrogen Purge	80 psig, 380.4 scf/shutdown	5.5 barg, 10 Nm ³ /shutdown
Electric Power	380–480 VAC, 3 pH, 50–60 Hz, 40 FLA	380–480 VAC, 3 pH, 50–60 Hz, 20 kW
Siting Requirements	Class 1 Division 2 Group B (main skid); Unclassified (control area)	
Controls	Intrinsically safe or Class 1 Division 2 Group B inside main skid (24 VDC)	

| tell me more |

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

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