

# SmartFuel® hydrogen technology for the material handling market



Air Products' hydrogen fueling system provides hydrogen fuel for a customer's forklift.

Hydrogen fuel cells can help enhance material handling operations through superior performance that helps to increase productivity. Air Products provides the hydrogen supply and fueling infrastructure for fuel cell power packs, which are direct replacements for the industrial batteries used in forklifts, automated guided vehicles (AGVs) and other material handling vehicles.

## Flexible options for hydrogen supply and fueling

Air Products offers complete hydrogen supply and fueling solutions tailored to the needs of the material handling industry.

### Support for pilot programs

Air Products' SmartFuel mobile hydrogen fueling services make it easy and cost-effective to evaluate fuel cell technology at your facility. Our mobile hydrogen fueler provides everything you need—hydrogen supply as well as self-contained dispensing equipment. No utility hookups are required. The fill procedure is completely automated, and we'll train your people to use the fueler safely.

### Delivered hydrogen

When you're ready for a permanent installation, Air Products offers gaseous hydrogen supply via tube trailers for low-volume requirements as well as liquid hydrogen delivery for users who require higher volumes. Hydrogen usage and deliveries are supported by Air Products' customer service organization to provide an uninterrupted supply of fuel 24/7, 365 days per year.

## Turn to Air Products for:

- Unmatched experience in hydrogen production, handling and dispensing
- Reliable and safe gas supply
- Complete fueling infrastructure from supply to dispensing
- Comprehensive training from the recognized safety leader in the industry

## On-site hydrogen generation

If on-site generation better meets your needs, Air Products offers electrolyzer technology as well as high-efficiency natural gas or hydrocarbon reformers. Our team of supply chain professionals can analyze your particular situation and recommend the source of supply that can help you maximize reliability of supply while minimizing operational costs.

## Fueling systems

SmartFuel hydrogen fueling systems are designed for simple, cost-effective installation and automatic operation for high reliability. Each fueling system comprises three components—compression, buffer storage and dispensing. SmartFuel hydrogen dispensers offer fast-fill capabilities, are easy to use, and are designed for safe operation by your personnel. Air Products' dispensers support vehicle communications to optimize the refueling process and increase safety.

## Handle it with hydrogen. We'll show you how.

With more than 50 years of hydrogen experience, Air Products is at the forefront of hydrogen energy technology development. The company has an extensive patent portfolio with over 50 patents in hydrogen dispensing technology.

Air Products has also placed over 120 hydrogen fueling stations worldwide. Cars, trucks, vans, buses, scooters, forklifts, locomotives, planes, cell towers, material handling equipment and even submarines have been fueled with trend-setting technologies that involve Air Products' know-how, equipment and hydrogen. Use of the company's technology is increasing and is currently over 400,000 hydrogen fills per year.



For more information,  
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