



**ENGINEERED-
TO-ORDER (ETO)
MEMBRANE SYSTEMS**

**For a Safer, Cleaner,
More Productive World**



**Membrane
Solutions**



ENGINEERED-TO-ORDER (ETO) MEMBRANE SYSTEMS

Air Products Membrane Solutions is a pioneer in the development of hollow fiber membrane separators and systems for on site gas generation.

We were the world's first company to commercialize hollow fiber membrane technology for gas separation, introducing process gas membrane systems in 1977 and nitrogen membrane systems in 1986. We continue to introduce new product innovations, new fibers, and new system configurations as we help customers around the world protect lives and goods, create sustainable energy sources, and enhance productivity.

Designed for high-flow industrial applications, our Engineered-to-Order (ETO) membrane systems are ideal for the energy industry, ammonia plants, chemical manufacturing, biofuel production, and refineries. The result of collaborating with end-users, licensors, and EPC firms, these are fully customized, sustainability-focused solutions. Our ETO systems deliver highly reliable performance; efficient, economical operation; and reduction in costly downtime.



Precision from Start to Finish

With ETO membrane systems, Air Products Membrane Solutions ensures precision design and performance from fabrication, commissioning, and startup to long-term service and support.

Proven Performance Record

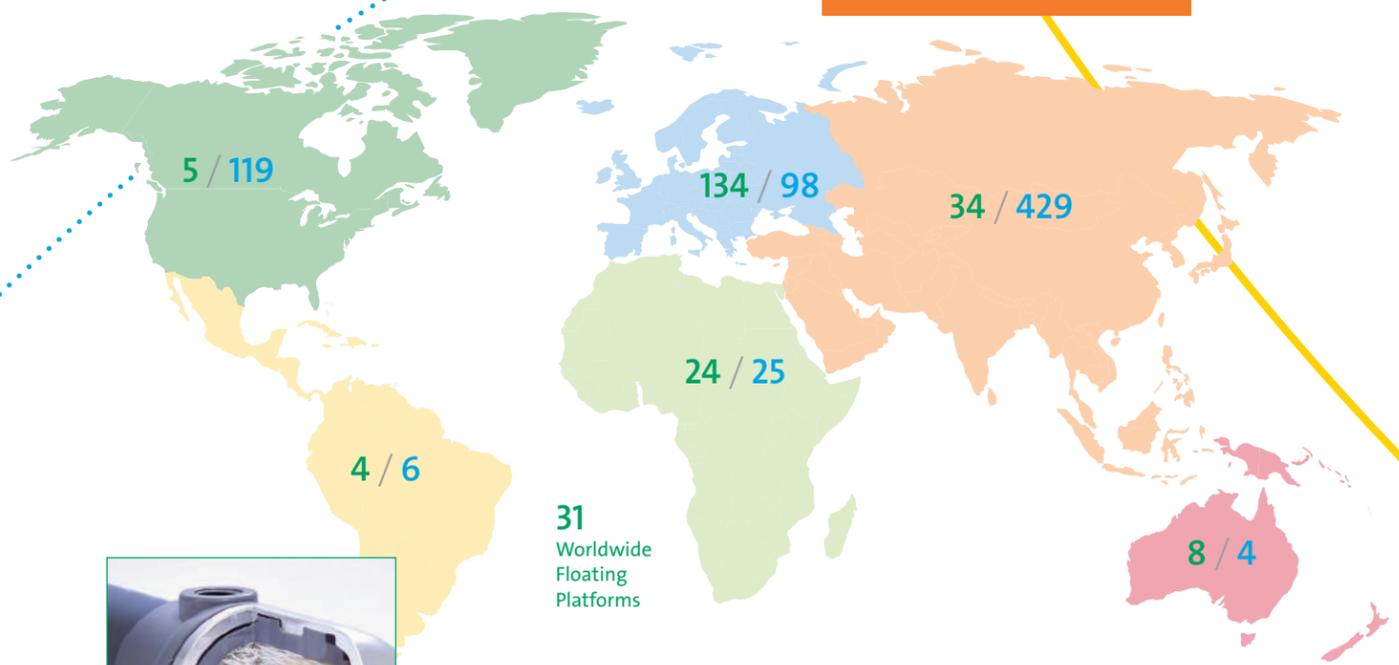
Air Products Membrane Solutions offers a performance guarantee period on our ETO systems. Some installations have been operating for more than 20 years.

Worldwide Installations

Air Products Membrane Solutions has delivered more than 240 ETO nitrogen systems and more than 650 ETO process gas systems around the world. Of these systems, many represent repeat customers.

Engineered for Lasting Stability

Air Products Membrane Solutions is part of a family of brands with a global footprint based on stability, ongoing innovation, and worldwide support. Our ETO solutions are backed by a long list of quality certifications including ISO certification. We are a preapproved quality supplier for many leading companies across the world.



ETO MEMBRANE SYSTEM INSTALLATIONS
 ■ Nitrogen Systems ■ Process Gas Systems

ETO Nitrogen Systems

Nitrogen generation applications include inerting, blanketing, and makeup for LNG heat exchangers; lift gas for oil wells; drive gas for oxygen dehydration; LIN system replacement; and compressor seal gas.

PRISM® InertPro Membrane System

- Pre-engineered nitrogen system primarily utilized for offshore energy applications
- 2000 normal cubic meters per hour with additional flexibility for higher flows
- Various system setups available including combined N₂ and membrane air dryer configurations

PRISM® Nitrogen Membrane System

- Tailor-made to customer specifications based on existing field-proven systems
- Often utilized in onshore and offshore energy applications, FPSOs, and FLNGs
- Customizable nitrogen purity range, up to 99.95%
- Capability to offer multiple N₂ flow rates and purities in one system



Global Service & Support

Air Products Membrane Solutions' dedicated team of service and support specialists is committed to making sure that your ETO nitrogen membrane system operates at peak performance and without interruption—today and tomorrow.



ON SITE SERVICES

Fast, reliable on site system services provided by specially trained Service Engineers.

SPARES & CONSUMABLES

We ensure correct feed-air quality through the use of genuine spare parts and consumables. This secures predictable and safe onboard operation of your safety-critical N₂ system.

N₂ SYSTEM HEALTH CHECK

Our Service Engineers perform an on site inspection and tune-up. Recommendations for operation and maintenance are then delivered in a comprehensive system report.

ETO Process Gas Systems

Air Products Membrane Solutions was the world's first process gas membrane system provider, with many long-term customers since 1977. Used in biofuel applications, petrochemical applications, refineries, ammonia plants, and methanol plants, ETO process gas systems allow hydrogen recycling, syngas ratio adjustment, the recovery of ammonia from purge gas streams, byproduct rejection, and off gas upgrading.

PRISM® Process Gas Systems

- Favorable investment compared to other gas equipment
- Designed and manufactured to customized specifications
- Operates with low maintenance due to no moving parts
- Fast startup/shutdown
- Flexible design and easy turndown
- Dedicated service and support throughout the system's life



Global Service & Support

All ETO process gas systems are backed by an expert Global Service & Support team dedicated to making sure that your system continues to operate at peak performance and without interruption.



REPLACEMENTS & SPARE PARTS

PRISM® membrane separators and genuine spare parts.

CONSULTING

Engineering services and feasibility studies for upgrades and expansions.

ON SITE SERVICE

Fast, reliable service for the installation of replacement membranes.

PERFORMANCE EVALUATION

Analysis of system operation data achieves optimized performance.



Contact Us

Our global presence includes offices in the U.S., China, Norway, and India and worldwide service and support.



Membrane Solutions

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