

GENERON[®] MEMBRANE TECHNOLOGY

Helium Recovery Systems



GENERON'S helium recovery membrane systems are ideal for the recovery of helium from natural gas deposits. Helium has the lowest boiling point making it ideal for use in cryogenics, particularly in the cooling of superconducting magnets, like MRI and NMR. Helium is also used in the process of growing crystals to make silicon wafers used in the technology industry.

GENERON[®] Helium Recovery Systems help achieve high helium recovery and purity. The customized helium recovery membrane[®] systems are manufactured in our ISO 9000 Certified facility in Houston, TX while the membrane[®] is fabricated in our Pittsburg, CA facility.

GENERON works directly with clients to provide the most efficient and cost effective solutions. Contact our professional engineering team at 713.937.5200 or www.generon.com for more information.

The GENERON[®] Advantage

- **Extensive Experience** - custom designed skids
- **State-of-the-art Membrane** - high recoveries
- **Simple Solution** - no moving parts, minimal maintenance
- **Remote Operation** - Minimal attention required, fully automated systems
- **Minimal Losses** - low HC losses
- **No Chemicals** - environmentally friendly
- **Small Footprint** - easily meet footprint

TYPICAL APPLICATIONS:

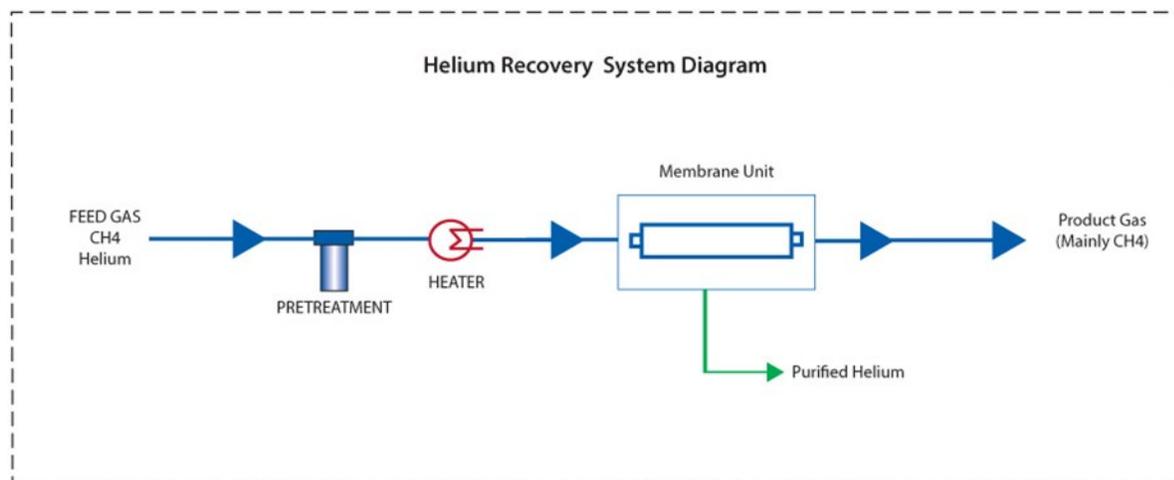
- Cryogenic
- Controlled atmospheres
- Welding and Fabrication
- Lift Gas
- Leak Detection
- Electronics
- Silicon Wafers
- Breathing mixtures (diving)



Nitrogen Membrane® Systems

Helium Recovery

In a typical **GENERON**® membrane system for helium recovery the feed gas is first filtered to remove any particles and condensate. Helium gas permeates extremely “fast” through the membrane walls. The permeated gas is the helium rich product stream with purities in the upper 90% range. The “slower” permeating gases are collected in the non-permeate (“retentate”).



SYSTEM PERFORMANCE:

- Feed gas pressures up to 1,000 psi (69 bar)
- Helium purities to 99.9%
- >98% Helium recovery
- Flow rates from 0.01 to 100 MMscfd

ADVANTAGES:

- **No moving parts.** Designed for **remote** unmanned **operation**
- **Efficient packaging minimizes space & weight**
- **Customized** process design to maximize total helium recovery
- **System flexibility** - Can operate at wide range of flow rates
- **Quick deployment & Installation** - skidded systems installed in hours



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