

Helium Recovery

GENERON[®] Membrane Technology



Typical Applications

- Heat-transfer
- Cryogenics
- Controlled atmospheres
- Welding
- Lifting
- Leak Detection
- Mass Spectrometer
- Breathing mixtures

Helium, He, can be found in natural gas deposits or from He contamination in air. Helium is a highly valuable noble gas and can be used as a coolant of magnets, chromatography, etc. Generon membranes can allow for the recovery helium from the source gases or from waste-gases subsequent to the applications. The permeability of He is extremely high though our membranes allowing it to be separated selectively over common contaminate gases. He yields can be as high as 98% for membrane based systems that can concentrate He to over 95% purity cost effectively. While membrane system configuration will change depending on the feed composition and target He purity, Generon membranes will provide a dependable and efficient means of He recovery.

The GENERON[®] Advantage

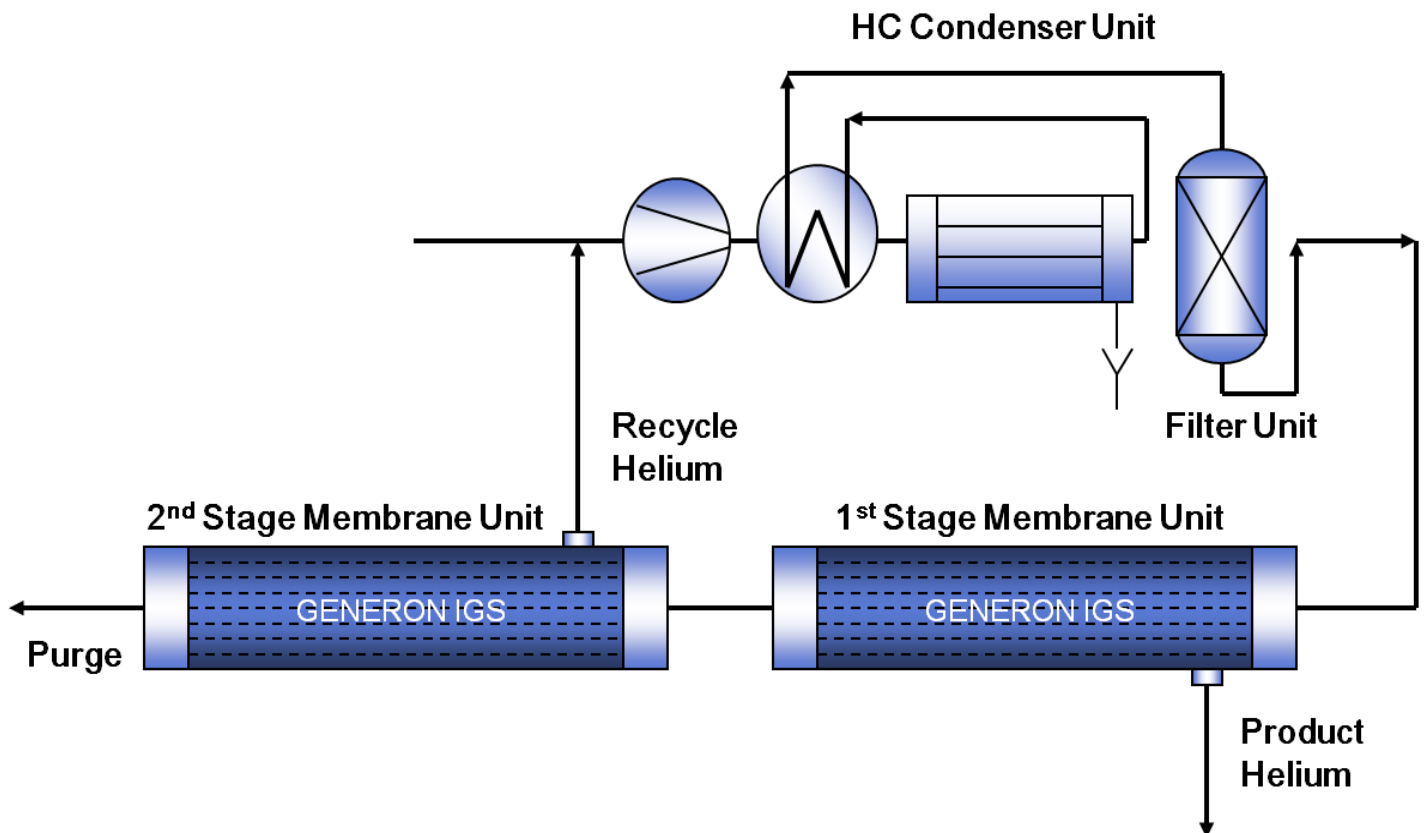
- Turn-key systems
- Cabinet units are easy to connect and commission
- Built to your specifications and for your convenience
- Engineering support from concept to completion



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In a typical GENERON[®] membrane system for helium recovery the feed gas is compressed and filtered to remove particles and condensate. A heating step provides an optimum operation temperature for the feed gas to enter the GENERON[®] membrane modules. 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”).



The System Performance:

- Feed gas pressures up to 500 psi (34.5 bar)
- Helium purities to 99.9%
- > 98% helium recovery
- Flow rates of 1 to 1,000 SCFM