

Gas Dehydration

GENERON[®] Membrane Technology



Typical Applications

- Natural gas dehydration
- Cracked gas drying
- Polymer plant feedstock drying
- Olefin plant feedstock drying

Natural gas usually contains significant quantities of water vapor. Small changes in pressure and/or temperature can cause condensation of this vapor. This can lead to corrosion and hydrate formation. Therefore the water vapor needs to be removed before it can be compressed or sent to the application. from many sources. The GENERON[®] Membrane System is of simple process technology and utilizes patented GENERON[®] Membrane Technology.

Membrane Technology is competing against molecular sieve desiccant type PSA (pressure swing adsorption) systems and liquid glycol absorption systems which are used frequently but are complex and have high capital, operating, and installation costs, a relatively high fuel cost and potential environmental issues. Advantages of the Membrane Systems over both competitive types are:

The GENERON[®] Advantage

- Skid mounted process units are easy to connect and commission
- Built to your specifications and for your convenience
- Engineering support from concept to completion
- Remote control operation
- Operation flexibility with automated part-load



Gas Dehydration

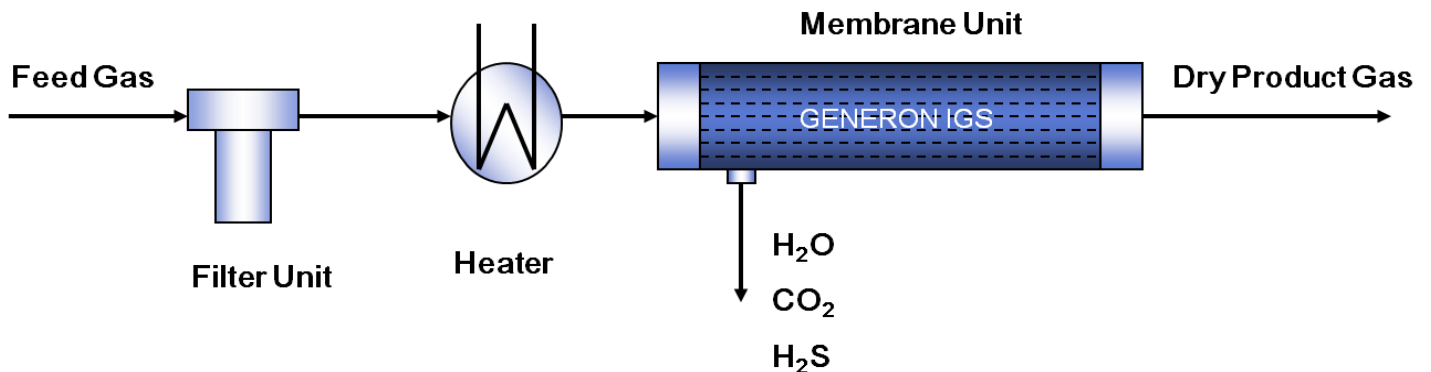
GENERON[®] Membrane Technology

In a typical GENERON[®] membrane dehydration system the feed gas is filtered to remove particles and liquid condensate. The feed gas is then ready to enter the GENERON[®] membrane modules. H₂O vapor permeates preferred through the membrane walls. The non-permeated valuable gas remains at pressure and is the dry product. The “faster” permeating gases, e.g. CO₂, H₂O, H₂S, are collected in the permeate.



Advantages of MEMBRANE Systems:

- no moving parts, and designed for remote unmanned operation
- Efficient packaging minimizes space and weight — ideal for offshore applications
- Optimized process design to maximize total hydrocarbon recovery
- Easy installation: skidded system can be installed in hours



The System Performance:

- Feed gas pressures up to 350 psi (24 bar)
- Dew points to -40 °F
- > 95% hydro carbon recovery
- Flow rates of 10 to 350,000 SCFM