

Hydrogen Generator / Hydrogen Production



Our delivery program offers three production processes for the Generation of Hydrogen:

HC: Steam Reforming

HM: Methanol Reforming

EL: Electrolyzer

All plants are supplied as completely Pre-Assembled Skid-Mounted Units, which are partially dismantled for transportation.

Havayar Hydrogen Generator Packages are designed and equipped for fully Automatic Operation.

Personnel Supervision and Maintenance needed are minimized. Start-up, Operation and Shut-Down of the plant are carried out by push button Operation by a PLC system. The Plants can be supported over large distances via MODEM.

Electrolyzer Systems are available in both Laboratory & Industrial Design with possibility to produce Oxygen & Hydrogen simultaneously.



Package Features:

Capacity of Reformer:

Up to 200.000 Nm³/hr

Capacity of Electrolyzer:

Up to 500 Nm³/hr

Purity:

Up to 99.9999 %

- Production Flexibility Regarding Flow, Purity & Pressure
- Full Automatic Operation & Remote Control
- Cost Efficiency
- Easy Installation and Maintenance
- Completely Pre-Fabricated Skids
- After Sales Services for more than 15 Years
- Availability of Spare Parts
- Low Power Consumption
- Optimal Process Cycle Design
- Minimum Delivery Time

Hydrogen Recovery and Purification Unit (HRU)

PSA Method



Hydrogen can be recovered by the pressure swing system from very different feed gases, e.g.:

- Synthesis Gas from Steam Reforming, partial Oxidation or Gasification processes
- Hydrogen-Rich Refinery Off-Gases
- Ethylene Off-Gases
- Methanol and Ammonia purge gases
- Coke Oven Gases

Due to the flexibility of the control system, the Hydrogen Purification Packages can be adapted to a certain change in Feed Gas composition or temperature.

Havayar participate with Global H₂ PSA Packagers use the most advanced absorbents on the market with patented cycles that are optimized for recovery and productivity rates. The units are made for outdoor and unmanned operation, and are designed to be both compact and fully skid-mounted.

Havayar Industrial Group is a leading supplier for plant engineering and construction in partnership with most well-known International Companies. Our services are built on our extensive partnership expertise in the planning project development and construction of turnkey industrial plants.

We focus on plants for the Purification of Hydrogen compatible with variable Feed Gas (such as Olefins, Heavy Hydrocarbons and ...)

Also Havayar have the possibility to giving advice for Designing & Revamping the new Packages/ Existing Packages.

Package Features:

Capacity:

Up to 200,000 Nm³/hr

Purity:

Up to 99.999%

Pressure:

Minimum 5 barg Up to 300 barg

- No Limitation in feed Gas & Production Pressure
- No Limitation in feed Gas & Production Composition
- Easy Maintenance
- Hydrogen Recovery up to 95%
- Full Automation & Remote Control
- Completely Pre-Fabricated Valve Skids
- Possibility to Revamp Existing Packages Recovery purity & Capacity of Hydrogen
- After Sales Services for more than 15 Years
- Availability of Spare Parts