limbermach

COMPRESSED AIR & INDUSTRIAL GAS SYSTEMS

Membrane Nitrogen Generators

Mmp, Mg, Mg-s Type Nitrogen Generators

Working Principle

Hollow-fibre membranes are used to separate air into nitrogen and oxygen. Depending on different permation speed of gases, nitrogen permeates slowly through the membrane while oxygen and water vapour faster. Membrane modules are fed by compressed air to produce nitrogen at high pressure side and oxygen is vented.

Nitrogen purity ranges from 95% to 99.9 %. As purity level increases, more air consumption and membrane modules are required so higher investment appears. That is why precise gas specifications are important in order to obtain maximum economic solution.

Features

- Optimized size of active carbon adsorber for oil vapour and ozone removal.
- Prolonged lifetime of active carbon towers (1 year compared to hours) compared to carbon filters.
- Capacities from 1 - 5000 Nm3/h.
- Purities up to 99.9 %.
- Pressure drop across dust filter is continuously monitored for longer membrane life time and system reliability.
- Feed air is not heated to ensure long membrane life time.
- Nitrogen purity controlled by PLC can be set up to any value by operator for various applications.
- Telemetry system.
- Bureau Veritas type approval.
- Multi lingual operator panel.
- After sales technical support.
- Shortest delivery time.
- Own stock of spare parts.

Pgn, Pgn-h Nitrogen Generators

Working Principle

Gaseous Nitrogen is separated from ambient air depending on the separative properties of the Carbon Molecular Sieves (CMS). A double bed adsorber system is filled with CMS and alternately fed with compressed air. While one of the adsorber is producing Nitrogen, the CMS in other adsorber bed is being desorbed by depressurization to atmospheric pressure. Then the cycle is switched to other adsorber to produce Nitrogen. This method of separation is known as Pressure Swing Adsorption (PSA).

Limbermach can offer an extensive range of standardized and custom-engineered PSA Nitrogen Systems including blanketing, purging, high purity and other purposes onshore and offshore.

Features

- Varied capacities from 1 to 5000 Nm3/h.
- Purities range from 95% to 99.9999 %
- Highest quality of Carbon Molecular Sieves (CMS).
- Easy installation.
- Highest technical and industrial standards.
- Telemetry system.
- Custom-engineered features based on specific customer applications.
- Equipment requires minimum maintenance.
- Technical support and after sales service.

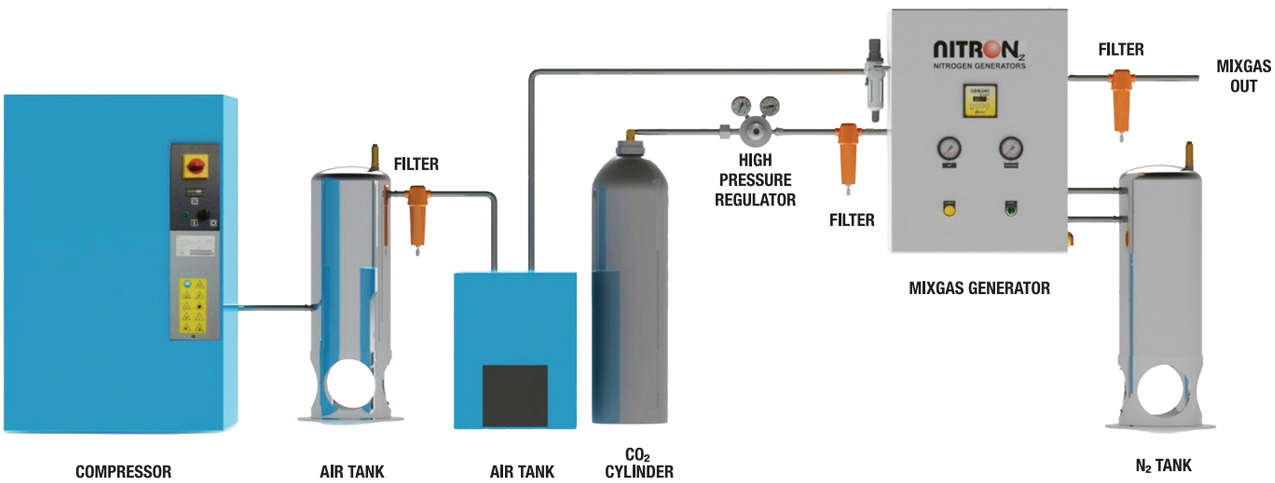
Mixgas Generators

Working Principle

MXG MODEL NITROGEN GENERATORS, are designed for specificaly food applications. Nitrogen is produced by either membrane or PSA technology and mixed with carbondioxide in specified ratios.

Features

- Economic supply of food grade mixed gases.
- Simple and reliable quality control.
- Highest technical and industrial standards.
- Easy installation.
- Telemetry system.
- Custom - engineered features based on specific customer applications.
- Equipment requires minimum maintenance.
- Technical support and after sales service.



Hydrogen Generators

Hydrogen plants based on water electrolysis technology with atmospheric pressure from NITRON$_2$ Hydrogen are simply considered being world class.

NITRON$_2$ is a compact, high pressure electrolyser that provides a technological breakthrough in terms of operational flexibility. NITRON$_2$ has an exceptional dynamic operating range between 10% and 100% of the installed capacity while maintaining high gas purity. The hydrogen production rate responds immediaetly to rapid changes in power input. Additionally the electrolyser can be put in stand by mode for long periods, allowing instant resumption of hydrogen production when required.

Fields of Application

Maritime | Oil And Gas | Food | Deoxidization | Plastic Injection Molding | Laser Cutting | Soldering | Nitrogen Tire Inflation

ISO 9001:2015 | ISO 13485 | IQR ISO 45001:2018 | CE | BUREAU VERITAS | RINA | TÜRKAK | INTERNATIONAL ACCREDITATION SERVICE

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