PRESSCON HP-PSA NITROGEN GAS GENERATORS 95% - 99,9999% N₂

The technology to expel Oxygen with Nitrogen is our core business. We are specialists in designing, manufacturing & maintaining innovative solutions

From the existing PSA (Pressure Swing Adsorption) technology, we developed a completely new system: High Performance PSA. This eliminates the disadvantages of a traditional PSA system. The HP technology is distinguished by an optimized air flow in the system. But also by a unique pressure system for the activated carbon. These improvements make the system environmentally friendly, have a significantly longer service life and lower energy consumption.

How does the HP-PSA technique work?

Our HP-PSA Nitrogen generator uses two columns filled with carbon, which is a molecular sieve. Clean, dry compressed air serves as the generator's power supply and flows alternately through one of the two tubes. In this tube, the carbon molecular sieve absorbs Oxygen, while Nitrogen is allowed to flow freely.

At the moment of saturation, clever control technology depressurizes the tube. This causes the absorbed Oxygen molecules to remove themselves from the carbon. At the same time, the PSA is receiving compressed air, where the same process takes place. This cycle continues continuously. The produced Nitrogen enters the process directly or is stored in a pressure receiver.



N-gen

The N-gen is fully customized to your needs, with fast service and minimal downtime. If a component fails, we repair or reuse parts wherever possible in line with our commitment to mindful material managment. Our Nitrogen generator requires less than 2 m³ of compressed air to produce 1 m³ of 95% Nitrogen. Our Nitrogen generator consumes less energy than traditional generators. But on request, we can also drive on Nitrogen demand. Each generator set produces its own Nitrogen flow. Together, this provides modular and energy effienct control.

The big advantage of the HP-PSA technology, in particular, is the energy savings. When compared to a membrane Nitrogen generator, energy savings of 40% to 50% can be achieved!

Customization

• We assemble all generators in our own factory, allowing us to fully tailor them to the customer's specific requirements.

24/7 Service

• We are available 24/7 and strive to be on-site as quickly as possible.

Discover the advantages of the Presscon Nitrogen generator

Presscon's Nitrogen generator

Our N-gen can be installed in various ways, either horizontally or vertically, on frames or against walls. We list more advantages:

Purity

The N-Gen can deliver Nitrogen with purity levels ranging from 99% to 99,9999% (down to <1PPM, equivalent to purity grades 1.5 to 6.0)

High Redundancy

High redundancy is available when multiple N-Gen units or PSA sets are installed. In such setups, each generator can be controlled separately and isolated individually, allowing maintenance without disrupting the entire production process.

Special Patented Compression System

The unique filtration and compression system extends the generator's lifespan and ensures Nitrogen output.

Stable Air Consumption

When multiple Nitrogen generators are installed, they can be operated on demand and controlled independently through a modular Nitrogen flow. By initiating the generators in phases, a stable flow of compressed air is maintained, eliminating peaks and troughs in energy usage.

Easy Maintenance

In case of a malfunction or emergency, the Nitrogen generator can be replaced within 15 minutes, and manifolds can be easily swapped eliminating the need to replace the entire system, unlike traditional generators. This ensures that Nitrogen flow and production uptime remain unaffected.

Integrated Adsorption Dryer (optional)

The integrated adsorption dryer ensures dry, reliable Nitrogen with a dew point between -30 °C and -60 °C. It removes moisture from the compressed air, guaranteeing consistent quality, extending the lifespan of the CMS (carbon molecular sieve), and saving energy unlike external adsorption dryers.



Purity levels

95%	1.5
99%	2.0
99.9%	3.0
99.99%	4.0
99.999%	5.0
99.9999%	6.0



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