



Expert on-site N₂ solutions for 3D printing

Additive manufacturing drives today's industrial revolution. Lighter and stronger parts and systems are created with a 3D printer joining materials, typically layer by layer. By keeping the 3D printer's build chamber inert, nitrogen prevents oxidation to give metal parts a clean finish without corrosion.



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Pure air . Pure gas

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In the meticulous process of additive manufacturing, nitrogen is indispensable. After an initial flush of the build chamber, a constant flow of nitrogen keeps it inert. This way, the printed parts will not oxidize, thereby preventing quality and safety issues such as discoloration or even combustion.

3D printing N₂-requirements

Because of the importance of nitrogen and how it is used, additive manufacturing has a specific set of N₂ requirements:

- **Reliability:** 3D print jobs can take days to complete. All this time, a reliable supply of nitrogen must be available.
- **Compact and quiet:** Additive manufacturing nitrogen generators are typically installed at the point of use. In a workshop and with people working in close proximity, a compact and quiet generator is a must.
- **Cost savings:** 3D printing requires a lot of nitrogen, which makes keeping N₂ cost in check an important consideration.

On-site nitrogen generation – the preferred solution

Many companies still purchase their nitrogen – even though generating your N₂ on-site offers more advantages.



Greater cost-efficiency
saves you money



Eliminating bottle or liquid
deliveries reduces your
environmental footprint



Take charge of your
own nitrogen supply



Less hassle by
removing supply
logistics



With the PMNG HE, on-site nitrogen production for 3D printing becomes exceptionally convenient and cost-efficient:

Pneumatech's PMNG HE gives you the nitrogen volume, purity and reliability you need at a massively reduced cost and a smaller environmental footprint:

- **Cost-efficient and sustainable:** The PMNG HE is 35% more efficient than other membrane generators. That means lower energy use, reduced operational costs, and a smaller environmental impact.
- **Superior reliability:** The PMNG HE uses membrane technology, a very simple, reliable and continuous nitrogen production method.
- **Quiet and compact:** The PMNG HE is as silent as it is compact, making it perfect for installation and operation at the point of use.
- **A complete solution:** The PMNG HE requires no additional filters, vessels or other parts. It is ready to go the minute it is connected to a compressor.
- **Ease of use:** Operation, including purity selection, is simple. The intuitive controller allows for quick purity setting and offers advanced control, monitoring and connectivity options.

More than just a superior product

Pneumatech offers you more than “just” the best nitrogen generator on the market. We can also provide oxygen generators and all your turnkey air treatment equipment. In addition, we support additive manufacturing equipment manufacturers in co-developing bespoke applications as an OEM partner.

Expert advice and support

Contact us with the details about your application and its requirements, such as your nitrogen usage or the size of generator you need. Our experts will put together the best on-site solution for you. If you don't have that information or need help, they are ready to help you through the specification process.