



HPC Nitrogen Gas Skid

For The Food & Beverage Industry

Reliable. Efficient. Pure.

After 45 years of compressed air excellence, HPC Compressed Air Systems is expanding its line of leading solutions for on-site Nitrogen generation, backed by unmatched expertise, innovation & reliability.

Why Choose The HPC N₂ Gas Skid?

- **Generate N₂ On-site:** Reduce the need for costly & logistically challenging liquid or gas cylinder deliveries.
- **Cost Savings:** Save up to 90% by generating your own N₂, compared to the costs of cylinders / dewars (giving you complete control of your N₂ generation costs).
- **Reduce Your Carbon Footprint:** Minimise gas-related deliveries, install energy efficient systems, reduce packaging waste and optimise production processes.
- **Ultra-Low O₂ Content:** Delivers N₂ with 0.5% O₂ content, ensuring your food & beverage products maintain their quality & freshness.
- **Consistent Supply:** Continuous, reliable N₂ production tailored to your operational needs, preventing production downtime.
- **N₂ On Demand:** No cylinder change-over, no running out, or worries over deliveries
- **Rental Options:** Flexible rental plans allow you to access the benefits of on-site N₂ generation without the upfront capital investment.

Key Features:

- **Advanced Filtration System:** Ensures gas purity by removing impurities & delivering N₂ at the desired O₂ content.
- **User-Friendly Interface:** Easy-to-use controls with real-time monitoring of gas output & purity.
- **Compact Design:** Space-saving design ideal for food & beverage production facilities of any size.
- **Scalable:** Modular system allows for easy scaling as your production needs grow.
- **Energy Efficient:** Designed with cutting-edge technology to minimise energy consumption while maximising output.
- **Fully certified:** N₂ quality is third party validated and certified to European EIGA statute 231/2012 for gas used as a food additive, E941, as well as FDA and Pharmacopoeia compliant.

HPC | Compressed Air Systems

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Model	N ₂ Outlet Capacity*	N ₂ Purity*	Compressed Air Requirement
HPC N ₂ Gas Skid 20+ R	21.2 m ³ /hr	0.5% O ₂ - (99.5% N ₂)	53.1 m ³ /hr @ 7.50 barg
HPC N ₂ Gas Skid 20+ D	21.2 m ³ /hr	0.5% O ₂ - (99.5% N ₂)	67.1 m ³ /hr @ 7.50 barg
HPC N ₂ Gas Skid 40+ R	42.4 m ³ /hr	0.5% O ₂ - (99.5% N ₂)	106.2 m ³ /hr @ 7.50 barg
HPC N ₂ Gas Skid 40+ D	42.4 m ³ /hr	0.5% O ₂ - (99.5% N ₂)	136.2 m ³ /hr @ 7.50 barg
HPC N ₂ Gas Skid 60+ R	62.3 m ³ /hr	0.5% O ₂ - (99.5% N ₂)	156.1 m ³ /hr @ 7.50 barg
HPC N ₂ Gas Skid 60+ D	62.3 m ³ /hr	0.5% O ₂ - (99.5% N ₂)	193.1 m ³ /hr @ 7.50 barg
HPC N ₂ Gas Skid 80+ R	83.1 m ³ /hr	0.5% O ₂ - (99.5% N ₂)	208.1 m ³ /hr @ 7.50 barg
HPC N ₂ Gas Skid 80+ D	83.1 m ³ /hr	0.5% O ₂ - (99.5% N ₂)	268.1 m ³ /hr @ 7.50 barg

Technical Specifications

- **Operating Pressure:** c. 5.3 barg
- **Power Requirements:** 5.5 – 25 kW
- **Compressed Air Feed Quality:** ISO 8573-1 (2010):
Class 2.4.1 (Particles.Water.Oil)
Class 2.2.1 (Particles.Water.Oil)
- **Typical ROI:** 12 - 36 Months

* Packages are configurable based on user-specific needs e.g. flow rates & purity.

° HPC N₂ Gas Skid 80+ models are provided as separate components & not skid-mounted.

Typical Examples: Food Packaging

- A vertical form fill & seal machine for potato snacks, grated cheese and coffee. Typical N₂ requirement 5 - 10 m³/h per/mc.
- A horizontal form fill & seal machine can pack a similar range of products with greater variety & product size. Typical N₂ requirement 10 - 30 m³/h per/mc.

Typical Examples: Brewing / Beverage

- Head of your beer / keg pressurisation; purging beer or wine production lines (purging O₂); purging O₂ from coffee bags (filling) / N₂ infusion coffee.

Package Content:

- Skid Mounting°
- Interconnecting Piping
- Pre-Filtration Package
- Compressed Air Dryer
- Oil Vapour Reduction Filter
- Oil/Water Separator
- N₂ Generator
- Process Vessel
- Sterile Process Filter



Applications

- **Packaging:** Extend the shelf life of perishable food products.
- **Beverage Preservation:** Prevent oxidation in beverages such as wine, beer & juices.
- **Food Processing:** Ideal for processes requiring inert atmospheres like modified atmosphere packaging (MAP).
- **Storage:** Protect sensitive ingredients from spoilage during storage.

Additional N₂ Gas Quality Specifications:

- **Oil-Free:** Ensures that the N₂ is free from oil contamination by utilising an oil-vapour reduction unit, making it safe for F&B applications.
- **Particle-Free:** The N₂ skid includes advanced filtration systems that remove particulate matter, ensuring the highest purity of N₂.
- **Moisture Control:** The N₂ skid is equipped with compressed air drying technology to deliver dry N₂ gas, preventing any moisture-related issues to enter into your production process.

