CompAir

Continuous source of high purity on-site nitrogen gas

PSA Nitrogen generators

Nitrogen gas on-site - at any time

CN SERIES

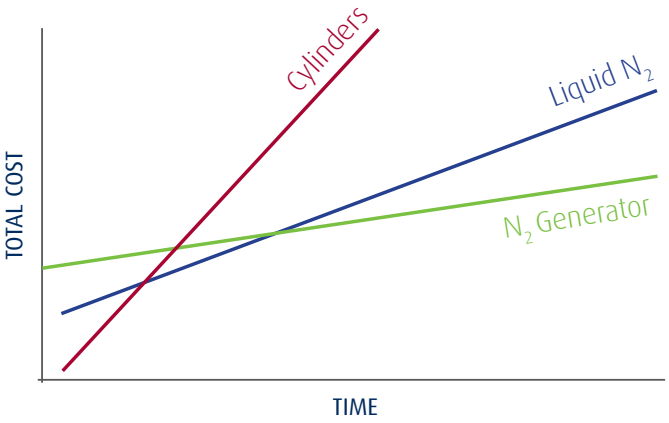
Industrial nitrogen gas - straight from the source

The cost-effective, reliable and safe solution for medium to large nitrogen requirements.

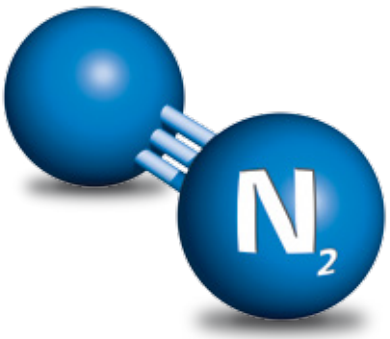
Nitrogen gas is used for a wide range of industrial applications including atmosphere packaging for perishable food products and preventing fire and explosions in chemical plants.

CompAir offers an ideal solution with a comprehensive range of cost effective nitrogen generation systems from compressed air, that enable users to produce their total demand for nitrogen gas on their premises and under their control.

Compared to traditional methods of supply, an on-site nitrogen generation system is exceptionally cost-efficient with a short payback time on investment - in many cases less than twelve months.



The payback period can be less than one year, when compared to cylinder supply and two to three years, when compared to liquid nitrogen supply.



The convenient and safe alternative

The system can be installed simply within a compressor house or production area with standard piping, without any special requirements.

Nitrogen gas is produced at low pressure, eliminating safety hazards usually associated with high pressure cylinder gas. Potential manual handling concerns are also removed.

> Taking control of a nitrogen supply in this way, rather than relying on a third party, can reduce costs considerably.

On-site nitrogen generation made easy

The CompAir product range includes everything that a customer needs to set up an on-site nitrogen generation system. Using high quality compressed air to supply the nitrogen generators, ensures long and trouble-free service and guarantees optimum performance.

CompAir air compressors and pre-treatment packages include adsorption dryers and coalescing filters to guarantee the highest quality air supply for the nitrogen generators.

The nitrogen gas can be produced from your existing compressed air system with a minimum of additional floor space.

The CompAir CN-Series of nitrogen generators use Pressure Swing Adsorption (PSA) technology to separate nitrogen molecules from other molecules of the compressed air.

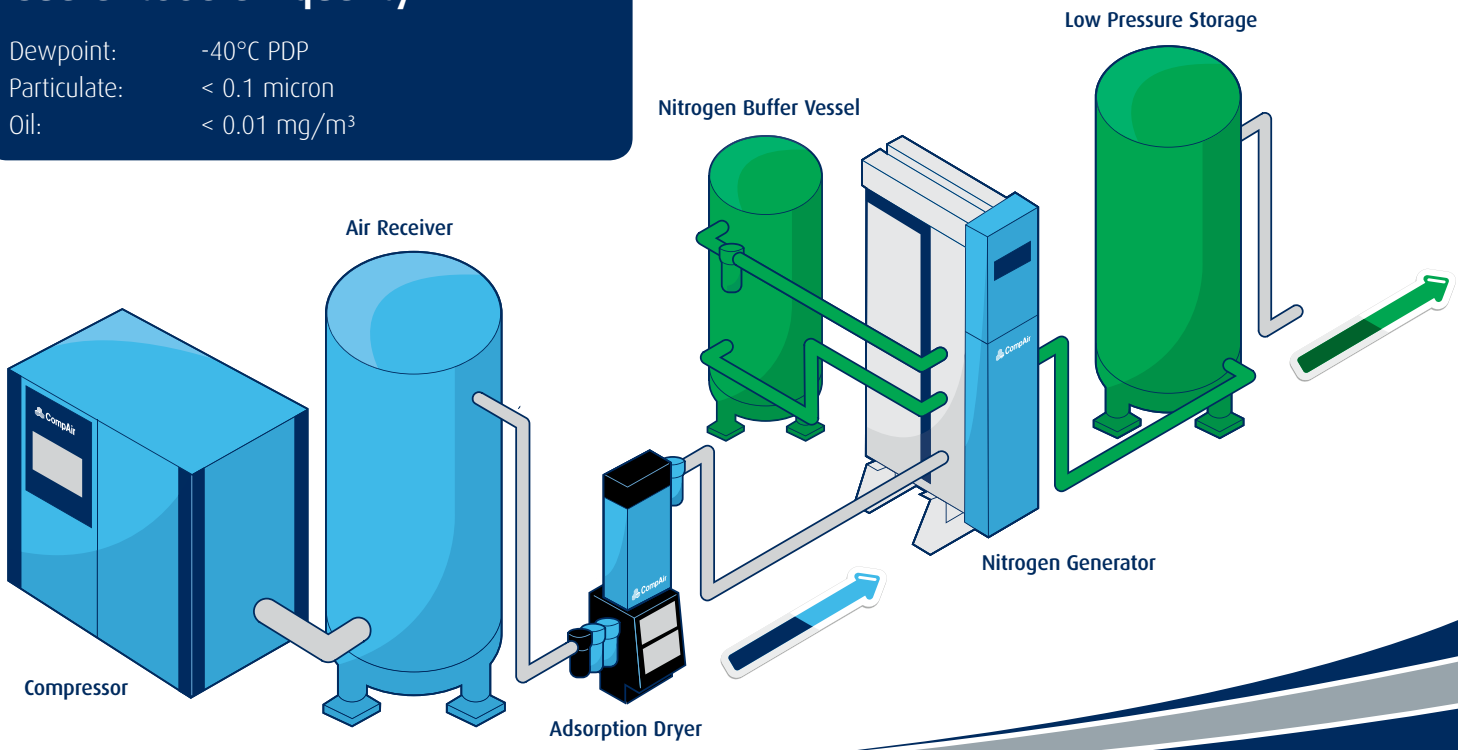
Oxygen and other trace gases are removed, while nitrogen is allowed to pass through to the application.

The design and control features employed by the CompAir nitrogen generators help maximise gas output and reduce air consumption to achieve high levels of efficiency.

The modular concept offers greater flexibility to traditional twin tower PSA generators as the CompAir CN-Series can be configured to suit installations as and when nitrogen demand increases. Additional modules can provide extra capacity on standby or service backup for peace of mind. The compact design also means the units can fit through standard doorways.

Guaranteed air quality

Dewpoint:	-40°C PDP
Particulate:	< 0.1 micron
Oil:	< 0.01 mg/m³



Nitrogen generation - in every case the best solution

CompAir nitrogen generators have many advantages over traditional supplies

Compared to outsourced supplies, on-site nitrogen generation offers a greater flexibility and has a significant impact on time and costs.

- **Enhanced safety without the need to store or handle high pressure cylinders**
- **Reduced downtime due to an on-demand supply**
- **Cost savings following payback of up to 90%**
- **High purity nitrogen at consistent flow and pressure**
- **Compact space saving design**
- **Flexible modular design**
- **Low cost of ownership**
- **Proven high reliability**

> Companies can generate as much or as little nitrogen as needed, at a fraction of the cost of having the gas delivered by external suppliers.

Typical gas supply methods include high pressure cylinders, liquid mini tanks or bulk storage vessels. A CompAir nitrogen generation system makes the workplace considerably safer for employees, eliminating the safety risks associated with traditional gas supplies.

An investment that pays off

A nitrogen generation system can reduce costs by up to 90% when compared to traditional methods of supply. If a company using liquid nitrogen was to convert to gas generation technology, the new system could be expected to pay for itself in typically less than two years. For a company using cylinders, the payback period could be even earlier - less than twelve months in many cases.

A dedicated and simple solution for multiple applications

Nitrogen is a clean, dry, inert gas, primarily used for removing oxygen from products and/or processes and is used in a wide range of industries and applications. The compact systems can easily be added to the existing compressed air station with minimum cost or disruption.

- **Food & Beverage**
- **Pharmaceutical & Chemical Industry**
- **Electronics Industry**
- **Industrial Manufacturing**

> In today's global marketplace, consumers expect to receive maximum quality at minimum cost, regardless of season and location.

Modified atmosphere packaging - improving product quality and extending shelf life

Product spoilage can occur from the moment a food item has been produced. Increased consumer demand for fresh, high quality preservative-free foods has led to the development of modified atmosphere packaging (MAP). Nitrogen is primarily used to reduce the oxygen content within food packaging and to avoid product deterioration. A secondary reason for using nitrogen is as a filler gas to provide a pressurised atmosphere that prevents package collapse.

Where reliability is key

Nitrogen application in the pharmaceutical industry

On-demand nitrogen gas at consistently reliable purity levels is crucial in the Pharmaceutical Industry, whether in primary or secondary pharmaceutical product manufacture or as a centralised QA laboratory supply.

CompAir have been providing compressed air technologies for a variety of applications within the Pharmaceutical Industry. Most recently this high quality compressed air is also used in generating high purity nitrogen.

Nitrogen supplied by CompAir meets the following requirements:

- **nitrogen <10ppm oxygen content**
- **carbon dioxide <1ppm**
- **carbon monoxide <1ppm**
- **water vapour <5ppm (-66°C dewpoint)**
- **total hydrocarbons <5ppm**

OilFREE recommended

Contaninant free... risk free

CompAir offers a wide range of oil-free compressor technologies, each one built for total peace of mind. Guaranteed 100% air purity that meets stringent quality standards... always!

Scan QR code to view the oil-free literature.

Performance data

Performance data is based on 7 bar g (100 psi g) air inlet pressure and 20 - 25°C (66 - 77°F) ambient temperature. Consult CompAir for performance under other specific conditions.

CompAir Model Ref	Nitrogen flow rate vs Purity (Oxygen Content)											
	unit	10ppm	100ppm	250ppm	500ppm	0.10%	0.50%	1.00%	2.00%	3.00%	4.00%	5.00%
CN20033	m³/hr	0.55	1.2	1.5	1.9	2.4	3.4	4.3	5.8	7.2	8.4	9.4
	cfm	0.3	0.7	0.9	1.1	1.4	2	2.5	3.5	4.2	4.9	5.5
CN20072	m³/hr	1.2	2.4	3.2	3.9	4.7	6.9	8.5	11.6	14.3	16.7	18.8
	cfm	0.7	1.4	1.9	2.3	2.8	4.1	5	6.8	8.4	9.8	11.1
CN20090	m³/hr	1.5	3.2	4.2	5.3	6.5	9.5	11.5	15.2	18.7	21.7	24.5
	cfm	0.9	1.9	2.5	3.1	3.8	5.6	6.8	8.9	11	12.8	14.4
CN20120	m³/hr	2	5.5	7.1	8.6	9	14.1	17.8	22	25.8	29	32.2
	cfm	1.2	3.2	4.2	5	5.3	8.3	10.5	12.9	15.2	17.1	19
CN20180	m³/hr	3	8.3	10.7	13	13.4	21.2	26.6	32.8	38.7	43.5	48.3
	cfm	1.8	4.9	6.3	7.6	7.9	12.5	15.7	19.3	22.8	25.6	28.4
CN20240	m³/hr	4	11	14.3	17.3	18	28.3	35.5	43.8	51.6	58	64.4
	cfm	2.3	6.4	8.4	10.2	10.6	16.7	20.9	25.8	30.4	34.1	37.9
CN20300	m³/hr	5	13.8	17.8	21.6	22.4	35.3	44.4	54.7	64.5	72.5	80.4
	cfm	2.9	8.1	10.5	12.7	13.2	20.8	26.1	32.2	38	42.7	47.3
CN20360	m³/hr	6	16.5	21.4	25.9	26.8	42.4	53.3	65.7	77.4	87.1	96.5
	cfm	3.5	9.7	12.6	15.2	15.8	25	31.4	38.7	45.6	51.3	56.8
CN20474	m³/hr	7.9	20.9	27.1	32.8	34	53.7	67.5	83.2	98.1	110.3	122.3
	cfm	4.6	12.3	15.9	19.3	20	31.6	39.7	49	57.7	64.9	72
CN20588	m³/hr	9.8	25.3	32.8	39.7	41.2	65	81.7	100.7	118.7	133.5	148
	cfm	5.8	14.9	19.3	23.4	24.2	38.3	48.1	59.3	69.9	78.6	87.1

m³ reference standard = 20°C, 1013 millibar(a), 0% relative water vapour pressure.

Inlet Parameters

Inlet Air Quality	ISO 8573-1: 2010 Class 2.2.2 (2.2.1 with high oil vapour content)
CN20033 - CN20090	6 - 13 bar g (87 - 188 psi g)
CN20120 - CN20588	6 - 15 bar g (87 - 217 psi g)

Electrical Parameters

Supply Voltage	100 / 240 ± 10% V ac 50/60Hz
Power	80 W
Fuse	(Anti surge (T), 250v, 5 x 20mm HBC, Breaking Capacity 1500A @ 250v, UL Listed)

Environmental Parameters

Ambient Temperature	5° - 50°C 41° - 122°F
Humidity	50% @ 40°C (80% MAX ≤ 31°C)
IP Rating	IP20 / NEMA 1
Altitude	<2000m (6562ft)
Noise	< 80 db (A)

Port Connections

Air Inlet	*G 1"
N² Outlet to Buffer	*G 1"
N² Inlet from Buffer	G 1/2"
N² Outlet	G 1/2"

*CN2033 - CN0090 Inlet and N2 outlet to buffer G 1/2"

Weights and Dimensions

Model	Height (H)		Width (W)		Depth (D)		Weight	
	mm	in	mm	in	mm	in	kg	lb
CN20033	1034	41	450	18	471	19	98	216
CN20072	1034	41	450	18	640	26	145	320
CN20090	1034	41	450	18	809	33	196	432
CN20120	1894	76	550	22	692	28	336	741
CN20180	1894	76	550	22	861	34	394	869
CN20240	1894	76	550	22	1029	41	488	1076
CN20300	1894	76	550	22	1198	48	582	1283
CN20360	1894	76	550	22	1368	55	676	1490
CN20474	1894	76	550	22	1765	71	864	1905
CN20588	1894	76	550	22	2043	82	1052	2319

Packed Weights and Dimensions

Model	Height (H)		Width (W)		Depth (D)		Weight	
	mm	in	mm	in	mm	in	kg	lb
CN20033	612	24	1490	59	950	38	174	383
CN20072	612	24	1490	59	950	38	221	487
CN20090	612	24	1490	59	950	38	272	597
CN20120	800	31	2020	80	1000	39	464	1023
CN20180	800	31	2020	80	1000	39	521	1149
CN20240	800	31	2020	80	1200	47	614	1354
CN20300	800	31	2020	80	1250	49	744	1640
CN20360	800	31	2020	80	1510	60	790	1742
CN20474	800	31	2020	80	1820	72	980	2160
CN20588	800	31	2020	80	2270	90	1360	3015

More options and purity levels available upon request. Sizing guide available in a separate booklet.

Global experience – truly local service

With over 200 years of engineering excellence, the CompAir brand offers an extensive range of highly reliable, energy efficient compressors and accessories to suit all applications.

An extensive network of dedicated CompAir sales companies and distributors across all continents provide global expertise with a truly local service, ensuring our advanced technology is backed up with the right support.

As part of the worldwide Gardner Denver operation, CompAir has consistently been at the forefront of compressed air systems development, culminating in some of the most energy efficient and low environmental impact compressors on the market today, helping customers achieve or surpass their sustainability targets.

CompAir compressed air product range

Advanced Compressor Technology

Lubricated
- Rotary Screw
  > Fixed and Regulated Speed
- Piston
- Portable

Oil-Free
- Water Injected Screw
  > Fixed and Regulated Speed
- Two Stage Screw
  > Fixed and Regulated Speed
- Piston
- High Speed Centrifugal - Quantima®

Complete Air Treatment Range
- Filter
- Refrigerant and Desiccant Dryer
- Condensate Management
- Heat of Compression Dryer
- Nitrogen Generator

Modern Control Systems
- CompAir DELCOS Controllers
- SmartAir Master Sequencer

Value Added Services
- Professional Air Audit
- Performance Reporting
- Leak Detection

Leading Customer Support
- Custom Engineered Solutions
- Local Service Centres
- Genuine CompAir Parts and Lubricants

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