

MAKE IT. DON'T BUY IT.

On-site oxygen and nitrogen generation. Oxygen 10 to 200 Nm³/h at 93 ± 3 %. Nitrogen 1 to 90 Nm³/h at 95 to 99.999 %.

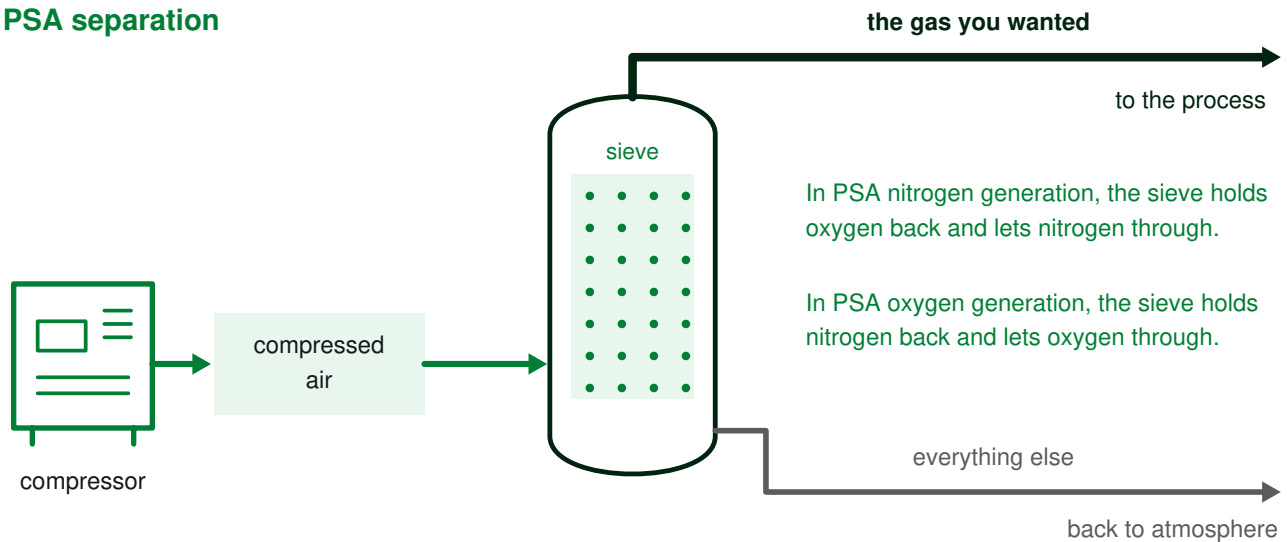
**GREEN AIR
COMPRESSOR**



THE GAS IS ALREADY IN THE ROOM

Air is roughly seventy-eight per cent nitrogen and twenty-one per cent oxygen. A generator separates that air to supply the gas your process needs on site. It can reduce cylinder deliveries and handling; continuous supply depends on the complete installation, including feed air, power, treatment, storage, maintenance and any backup the process needs.

PSA separation



Product and vent flows shown at different parts of the cycle.

PSA principle, simplified. The two smallest nitrogen units use membranes instead; feed treatment and buffer storage complete the installation.



Count what a cylinder actually costs

Not the gas. The gas, the rental on the bottle, the delivery, the demurrage on bottles sitting idle, and the hours your people spend changing them. The fourth and fifth of those are usually the ones nobody has added up.



It runs when you run

The generator makes gas from a suitable compressed air supply. Size the complete installation for the shift pattern, storage and any backup the process needs.



You already own half of it

The expensive part of the installation is the compressed air supply, and most plants that need gas already have one. We will tell you whether yours has the capacity before we quote anything.

PURITY COSTS MONEY

Buy the purity the process needs, not the purity on the cylinder. Higher purity generally needs more air and power. Confirm the process requirement before choosing it; purity alone does not establish suitability. Gas quality, pressure and flow matter too, particularly for laser cutting and semiconductor work.

What the two technologies do. A membrane lets oxygen pass through its wall faster than nitrogen. PSA uses a sieve loaded under pressure and cleared at low pressure, with alternating vessels and buffer storage supporting a steady outlet. In this range, membrane serves the smaller duties and PSA reaches the high nines.

Purity	Duties to assess with us	In this brochure
95 %	Tyre inflation, general blanketing where a little oxygen is tolerated	GAC-N 10, membrane
99 %	Tank blanketing, purging, pipeline packing	GAC-N 25, membrane
99.5 %	Food packaging, general process blanketing	GAC-N 60, PSA
99.9 %	Laser cutting assist or moulding, subject to process requirements	GAC-N 150, PSA
99.99 %	Heat treatment, soldering, sensitive chemistry	GAC-N 400, PSA
99.999 %	Analytical instruments; semiconductor duties require process review	GAC-N 900, PSA

Purity and size are not independent on this range.

The two smallest machines are membrane units and reach 95 and 99 per cent; the four larger ones are PSA and reach 99.5 upwards. You cannot order the smallest machine at the highest purity. If you need 99.999 per cent at a small flow, say so and we will quote a PSA machine sized down rather than a membrane one pushed up.

Oxygen is sold differently.

These plants are listed at 93 ± 3 per cent. Cutting, welding, aquaculture, water treatment and furnace enrichment each need a process review. Confirm concentration, gas quality, pressure, flow and supply continuity; flow alone does not establish suitability.

One nine too many is a permanent cost

Higher purity can mean more air, more power and a larger machine. Tell us the process so we can confirm the purity it needs and compare the running costs.



NITROGEN GENERATORS

What it is. Six machines from a 45 kg membrane unit making 1 Nm³/h to a 1,850 kg PSA plant making 90. Purity from 95 to 99.999 per cent.

What decides the size. Start with the flow your process draws while running, at its required purity and pressure. Check peaks and storage as well as average demand; a cylinder store reflects delivery intervals, while a generator must meet the process duty.

Model	Technology	Capacity		Purity	Weight		Dimensions
		Nm³/h	scfm		kg	lb	
GAC-N 10	Membrane	1	0.6	95%	45	99	400 × 300 × 900
GAC-N 25	Membrane	2.5	1.5	99%	78	172	500 × 350 × 1100
GAC-N 60	PSA	6	3.5	99.5%	220	485	800 × 700 × 1800
GAC-N 150	PSA	15	8.8	99.9%	480	1058	1200 × 900 × 2000
GAC-N 400	PSA	40	23.5	99.99%	980	2161	1800 × 1100 × 2200
GAC-N 900	PSA	90	53	99.999%	1850	4079	2400 × 1400 × 2400

Capacity is nitrogen delivered. The outlet pressure depends on the air supply feeding the generator and is confirmed with the quotation. Imperial figures are converted from the metric values and rounded.

OXYGEN GENERATION PLANTS

What it is. Eleven plants from 10 to 200 Nm³/h, all at 93 ± 3 per cent purity, 4 to 5 bar g, with a -45 °C dew point.

Why every row says the same purity. These plants are specified at 93 ± 3 per cent. The process must accept that concentration and the delivered gas quality, pressure and flow. Suitability for cutting, welding, aquaculture, waste water treatment or furnace enrichment is confirmed against the complete duty.

What the table does not carry, and why. These plants have no single weight or footprint, because the plant is engineered around the air supply and the buffer storage the duty needs. Ask us for a general arrangement for your flow and we will send one — it is not a figure we will guess at in a brochure.

Model	Capacity		Pressure		Purity	Dew point
	Nm ³ /h	scfm	bar g	psi g		
GA-OG-10	10	5.9	4 – 5	58 – 73	93 ± 3 %	-45 °C
GA-OG-15	15	8.8	4 – 5	58 – 73	93 ± 3 %	-45 °C
GA-OG-20	20	11.8	4 – 5	58 – 73	93 ± 3 %	-45 °C
GA-OG-30	30	17.7	4 – 5	58 – 73	93 ± 3 %	-45 °C
GA-OG-40	40	23.5	4 – 5	58 – 73	93 ± 3 %	-45 °C
GA-OG-50	50	29.4	4 – 5	58 – 73	93 ± 3 %	-45 °C
GA-OG-60	60	35.3	4 – 5	58 – 73	93 ± 3 %	-45 °C
GA-OG-70	70	41.2	4 – 5	58 – 73	93 ± 3 %	-45 °C
GA-OG-80	80	47.1	4 – 5	58 – 73	93 ± 3 %	-45 °C
GA-OG-100	100	58.9	4 – 5	58 – 73	93 ± 3 %	-45 °C
GA-OG-200	200	117.7	4 – 5	58 – 73	93 ± 3 %	-45 °C

Capacity is oxygen delivered at the stated purity and dew point. Weights and footprints depend on the air supply and buffer storage specified with the plant and are issued with the general arrangement drawing. Imperial figures are converted and rounded.

IT RUNS ON YOUR AIR

A generator is only as good as the air feeding it, and this is where an installation succeeds or disappoints.



Enough air, with something in hand

A generator draws several times its own output in compressed air, and the ratio rises steeply with purity. The first thing we check is whether your existing compressor can feed it without starving the rest of the plant.



Dry air, every hour of the year

Moisture can damage the separation media. Drying and feed-air treatment are specified for the selected generator and the inlet conditions throughout the year.



Clean air, including of oil

Oil carried over from a lubricated compressor can damage separation media. The filtration ahead of the generator is specified against the compressor and the generator's feed-air requirements.



Somewhere to put the buffer

A generator makes gas at a steady rate and most processes draw it in bursts. A receiver on the gas side is what bridges the two, and it needs planning with the floor space, not after it.

We will check your air first

Before we quote a generator we work out what it will draw and compare it with what your compressor can spare. Sometimes the honest answer is that you need a second compressor before you need a generator, and we would rather say so now.



FIVE ANSWERS AND A QUOTATION

A generator is sized against a process, not chosen from a page. These five settle it.



Which gas, and what for

Nitrogen or oxygen, and what it touches at the far end. The application decides the purity, and the purity decides most of the cost.



What compressor you already have

Rating, pressure, and whether it has capacity to spare. This decides whether the generator is an addition or a project.



How much, while it is running

The flow drawn during the process, not the total in a month. If you only know the monthly bottle count, tell us that and we will work backwards from it.



What it costs you now

Gas, bottle rental, delivery and the hours spent changing bottles. With that we can tell you what the generator pays back in, and if it does not pay back we will say so.



What purity you actually need

Use the process requirement. If it was specified around bottled gas, check whether that purity is necessary before selecting the generator.



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SEND US A GAS BILL, NOT A SPECIFICATION

The hardest part of buying a generator is knowing whether it is worth it, and that is arithmetic rather than engineering. Send us what you spend on gas — the gas itself, the bottle rental, the deliveries and an honest guess at the hours your people spend handling cylinders — together with what the gas is used for and what compressor you already run. You get back the machine, what it will draw from your air supply, what it will cost to run and what it pays back in. Where the answer is that bottles are cheaper for your volume, we will tell you that too. It costs nothing and carries no obligation.

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Specifications are subject to change without notice. Figures are nominal and apply at the reference conditions stated. © Green Air Compressor.

