



All-in-One Nitrogen Generation Systems for Microbreweries

**Experts in
On-site Nitrogen
Generation**





Brewers fight the same headaches every day, oxidation, short shelf life, CO₂ burn, and packaging issues that steal time, flavour, and money.

...We're here to help you take control.



"Adding a nitrogen generator to our brewery has been a game-changer.

It's given us more control, better beer stability, and one less logistical headache, which for a small brewery is huge."

***Plant Engineer -
Microbrewery, Midwest USA***



The Oxygen Problem

Oxygen: The Enemy of Freshness, Flavour & Stability

For microbrewers, oxygen is the enemy of everything that makes your beer unique. Every transfer, dry-hop, and packaging step creates opportunities for oxygen to sneak in. Even careful handling can't stop dissolved oxygen (DO) from creeping up.

Why does this matter?

Hop aroma disappears:

Oxygen dulls those bright, juicy, expressive notes.

Flavour stability drops:

Malt sweetness turns stale, bitterness becomes sharper and harsher.

Shelf life shortens:

Your beer loses its freshness long before it reaches the taproom.

CO₂ use increases:

Brewers often compensate with extra carbonation, driving up gas consumption.

The Consequences

Shorter shelf life.

Higher production costs.

Compromised quality.

Damage to brand reputation.





Why Nitrogen is the Answer

Nitrogen: The Brewer's Best Defense Against Oxygen

Nitrogen is inert, flavour-neutral, and won't mess with your carbonation or mouth feel. It simply creates a safe, oxygen-free environment wherever your beer needs it.

Your Payoff with Nitrogen

- Longer shelf Life
- Freshness protected
- Lower CO₂ usage
- Costs dissolved oxygen (DO) under control
- Process you can trust

Where Microbrewers Use Nitrogen:



Line & Vessel Purging

Clears air from hoses before transfers.



Sparging & Packaging

Reduces dissolved oxygen and lowers TPO for longer shelf life.



Tank Blanketing

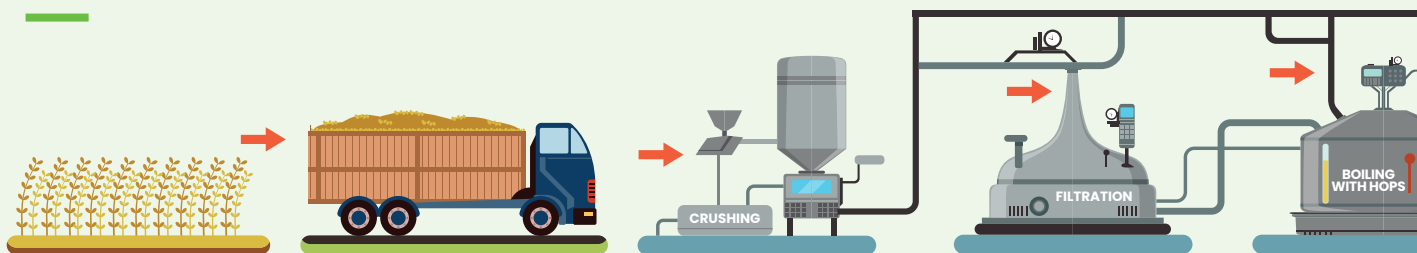
Protects beer during conditioning and storage.



Pneumatic Transfers

Moves beer gently without introducing oxygen.

The Brewing Process



Where Nitrogen Supports the Brewing Process

Nitrogen supports key brewing stages, from purging tanks to protecting product quality during transfer and packaging. This diagram shows where on-site nitrogen generation will boost your efficiency, consistency, and flavour stability.

N₂ Pressure Transfer

Less soluble than CO₂



The Hidden Cost of Delivered Gas

Why Gas Deliveries Isn't the Right Fit Microbreweries

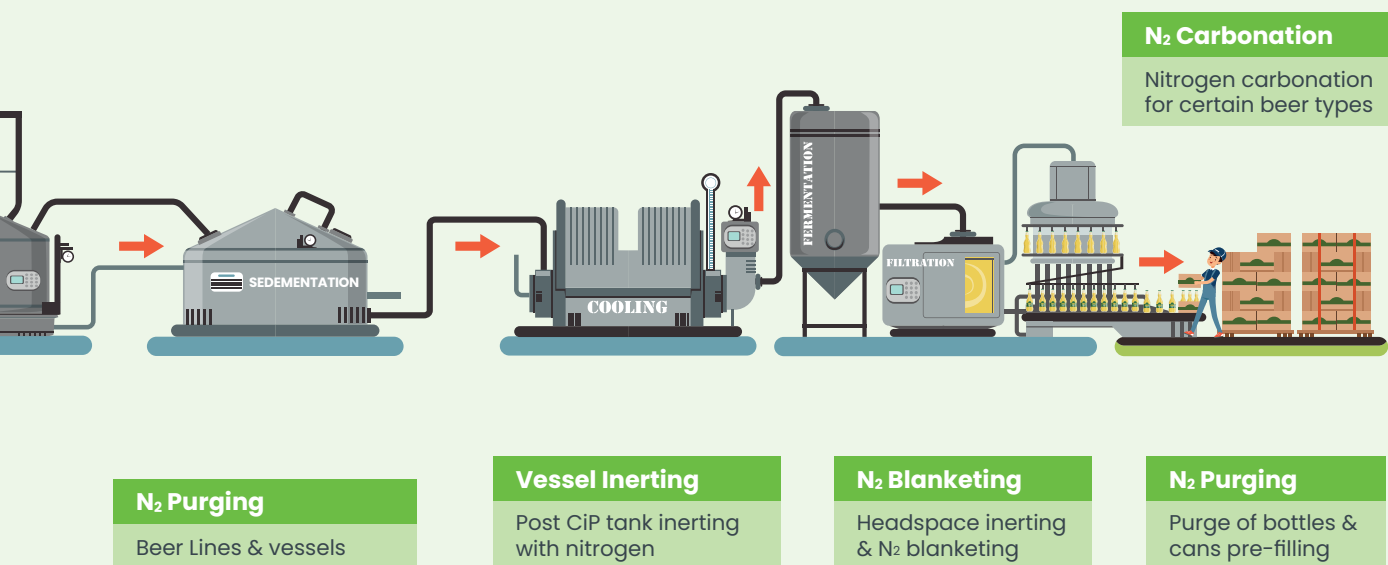
Cylinders and bulk tanks seem easy, but they create hidden costs and headaches:

Delivery Delays: Missed drops mean lost brew days.

Unpredictable Costs: Rentals, fees, and price spikes stack up fast.

Not Sustainable: Trucked-in gas leaves a heavy carbon footprint.

On-site generation gives you control, predictable costs, and a greener footprint, while protecting your beer.





The Smarter Way to Get Nitrogen

nano GEN₂ PAC: The Complete Nitrogen Solution for Microbreweries

- **One System. Zero Hassle**

All-in-one, plug-and-play system: nitrogen generator, full air-treatment package (filtration, oil-vapour removal, dryer), plus buffer tank.

- **Purity that Protects Quality**

Consistent nitrogen purity (Up to 99.995%) for blanketing, transfers, and critical packaging operations.

- **Lower Costs, Faster ROI**

No delivery fees, no rentals, no supply headaches. ROI in as little as 12 to 36 months.

- **Energy-Smart Design**

Uses only the air and power you need, no wasted energy, no wasted money.

- **Sustainability Built-In**

Cut delivery miles, shrink your carbon footprint, and support clean-label initiatives.

- **Uninterrupted Operations**

On-site nitrogen means consistent quality and zero downtime, no matter what's happening with deliveries or supply chains.





Packaging Systems

GEN₂PAC Skid System 1

SKID MODEL	50ppm		100ppm		500ppm		0.1%		0.5%		1%	
	Nm ³ /h FLOW	AIR REQUIRED	Nm ³ /h FLOW	AIR REQUIRED	Nm ³ /h FLOW	AIR REQUIRED	Nm ³ /h FLOW	AIR REQUIRED	Nm ³ /h FLOW	AIR REQUIRED	Nm ³ /h FLOW	AIR REQUIRED
GEN ₂ MINI i4.0 130	3	16.9	3.4	17	4.7	23.1	5.5	24.4	7.9	31.9	9.9	38.3
GEN ₂ MINI i4.0 120	2.2	13.1	2.5	13.4	3.7	18.9	4.3	19.8	6.2	22.6	8	26
GEN ₂ MINI i4.0 110	1.4	10.7	1.7	11.2	2.7	14.2	3.2	14.6	5.2	20.1	6.4	21.8
GEN ₂ MINI i4.0 100	1.3	8.0	1.5	8.3	2.2	12.4	2.5	12.4	4.2	14.7	5.3	16.6
GEN ₂ MINI i4.0 080	0.8	6.2	1	6.2	1.3	8.2	1.7	8.5	2.8	11.5	3.7	13.0
GEN ₂ MINI i4.0 060	-	-	-	-	0.6	5.8	0.8	6.1	1.7	7.3	2.1	7.8

GEN₂PAC Skid System 2

SKID MODEL	50ppm		100ppm		250ppm		500ppm		0.1%		0.5%		1%	
	Nm ³ /h FLOW	AIR REQUIRED	Nm ³ /h FLOW	AIR REQUIRED	Nm ³ /h FLOW	AIR REQUIRED	Nm ³ /h FLOW	AIR REQUIRED	Nm ³ /h FLOW	AIR REQUIRED	Nm ³ /h FLOW	AIR REQUIRED	Nm ³ /h FLOW	AIR REQUIRED
GEN ₂ i4.0 - 4130	14.4	95.8	16.8	99.7	20	90	22.8	102.2	26.4	119.8	37.8	135.8	42.0	143.4
GEN ₂ i4.0 - 3130	10.8	69.1	12.6	75.9	15	68	17.1	77.8	19.8	85.3	28.4	101.9	31.5	107.5
GEN ₂ i4.0 - 2130	7.2	48	8.9	52.5	10	47.6	11.4	51.5	13.2	56.5	18.9	66.9	21	74.7
GEN ₂ i4.0 - 3110	5.1	37.6	6	39.2	7.5	38.6	9	43.1	10.8	48.3	15.6	55.3	17.3	60.7
GEN ₂ i4.0 - 2110	3.4	28.9	4	30	5	29.6	6	32.6	7.2	36.1	10.4	27.3	11.6	42.9
GEN ₂ i4.0 - 1110	1.7	20.3	2	20.8	2.5	20.6	3	22.1	3.6	23.1	5.2	26.1	5.8	20.9

Build Specifications

Pressure Regulated	6 to 10 barg
Filtration	0.01 micron
Desiccant Dryer	-40°C
Oil Vapour Removal (NVR)	0.003 mg/m ³
Nitrogen Gas Generator	50ppm - 1% / Up to 99.995%



Headquarters

United States

Charlotte, North Carolina

Phone: +1 704 897 2182

Email: support@nano-purification.com

United Kingdom

Gateshead, United Kingdom

Phone: +44 (0) 191 497 7700

Email: sales_uk@nano-purification.com

United States

Maryville, Tennessee

Phone: +1 704 897 2182

Email: support@nano-purification.com

Canada

St. Catharines, Ontario

Phone: +1 905 684 6266

Email: canadasupport@nano-purification.com

Singapore

Singapore

Phone: +65 6748 7988

Email: support.asia@nano-purification.com



www.nano-purification.com