


# On-Site Nitrogen Generators

14-437 m<sup>3</sup>/hr @ 97% Gas Purity,  
7.5 barg Inlet Pressure



## Boost Your Bottom Line

With quality and reliability built in, Ingersoll Rand's on-site nitrogen generators offer a wide variety of innovative solutions to meet your production needs and reduce operating costs compared to traditional nitrogen supply.

 [Learn More About PSA Nitrogen Generators](#)

## The Benefits of On-Site Nitrogen Generation

The earth's atmosphere is composed of 78% nitrogen, making it one of the most readily available and economical inert gases. It is used to avoid combustion, corrosion and product spoilage. Many industries rely on nitrogen for their manufacturing processes, including food and beverage, electronics, petrochemicals, pharmaceutical and metal operations.

Ingersoll Rand offers a complete line of nitrogen generation solutions that allow you to forgo traditional nitrogen delivery, reduce operating expenses and simplify your operations.

On-site nitrogen generation with Ingersoll Rand helps your business realise the following benefits:

- Lower operating costs with year-over-year savings
- Simplify business processes with a single trusted partner for your nitrogen generation needs
- Reduce waste and operate more sustainably
- Avoid safety and footprint issues associated with storing nitrogen

**Let Ingersoll Rand be your trusted partner for complete nitrogen generation system solution and service.**



# Advantages of On-Site Modular Nitrogen Generation

Ingersoll Rand's Pressure Swing Adsorption (PSA) nitrogen generators eliminate the need for traditional nitrogen shipments and storage, providing you with real cost savings. With access to our entire portfolio of related products and services, you'll have a trusted partner for nitrogen solutions from start to finish.

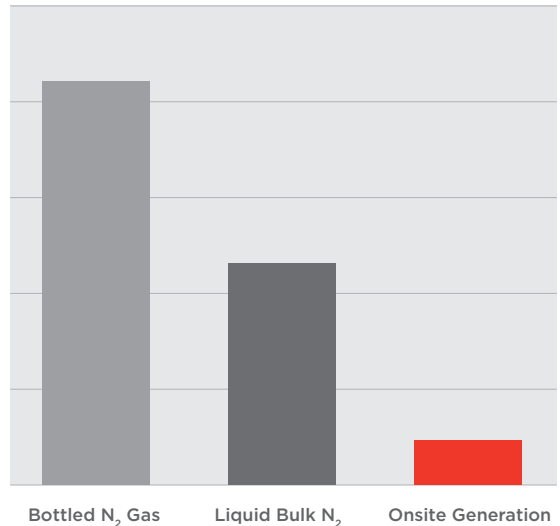
## On-Site Nitrogen Generation with Ingersoll Rand:

- Lowers your operating cost by generating nitrogen at your facility from freely available air
- Maximises system energy efficiency by providing efficient air-to-nitrogen utilisation
- Provides N<sub>2</sub> purity tailored to your operation, from 97% to 99.999%
- Gives you access to local, trained Ingersoll Rand technicians to ensure peace of mind

## KNOW THE FACTS

10-20% of bulk nitrogen is typically wasted through bleed off or failure to extract all product from canisters.

## Annual Operating Cost



Ingersoll Rand nitrogen generators typically provide a one-year payback. After year one, you'll realise year-over-year savings.

## How PSA Nitrogen Generators Work

PSA technology utilises a twin tower design where nitrogen production and tower regeneration occur simultaneously.

### N<sub>2</sub> Production

- 1 Compressed air enters the generator and
- 2 O<sub>2</sub> is adsorbed from the air by the carbon molecular sieve (CMS).
- 3 The remaining N<sub>2</sub> is removed for use.

### Regeneration

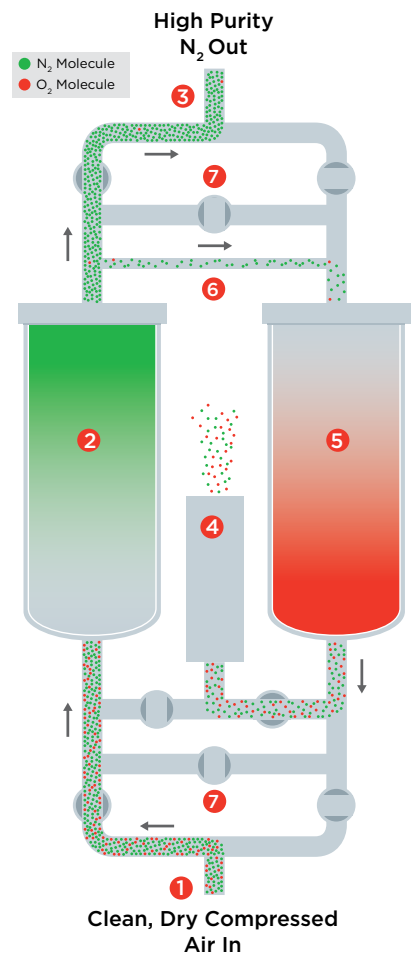
- 4 Pressure is released from the regeneration tower to the atmosphere.
- 5 The O<sub>2</sub> in the CMS is adsorbed back into the depressurised air exiting the tower.
- 6 A small amount of N<sub>2</sub> is redirected to the tower to assist with CMS regeneration.

### Pressure Equalisation

- 7 After regeneration, the generator's inlet and outlet valves are closed and the two towers are opened to one another to equalise pressure using stored pressurised N<sub>2</sub>.

### Tower Switch

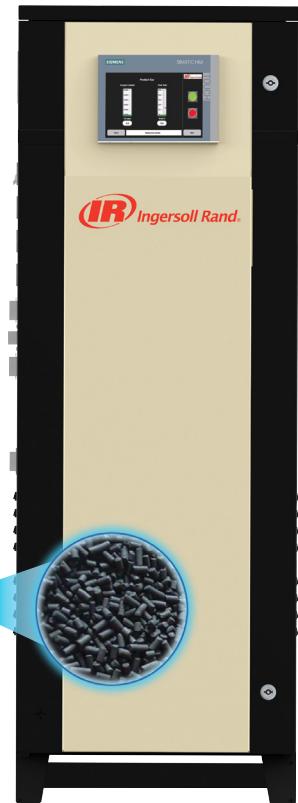
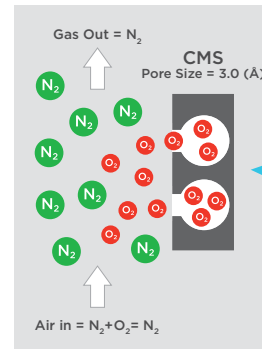
Once equalised, the freshly regenerated tower now becomes the production tower while the other tower is regenerated.



## Built-In Reliability

Your success depends on safety and reliability—that's why it's built into all of our PSA nitrogen generators. Each system comes pre-assembled and tested at the factory for simple, plug-and-play installation at your site to maximise productivity and ensure out-of-box operation. Our robust design includes:

- Superior quality CMS media extends product life and simplifies maintenance
- Intelligent controls designed to optimise set points, improve performance and protect your entire nitrogen generation system
- On-board oxygen analyser with zirconium oxide ( $ZrO_2$ ) based sensor eliminates regular instrument calibration and/or replacement
- Optional high-quality flow meter needs no calibration



## Modular Flexibility

The modular design of our on-site nitrogen generators provides a flexible, scalable solution to meet your precise production requirements, as well as an easy expansion path as your operation grows.

**A Single Controller Manages Up to Three Additional Multi-bank Units**



**Add Additional Modules as Needed for Expansion**



- Patented modular design adapts to demand and plant scale changes
- Flexible capacity expansion by addition of modules or multiple banks
- Add up to eight modules in each standard cabinet, and control up to three additional multi-bank units with a single controller
- Easy to install on-site—no specialised tools or equipment required

**PSA Nitrogen Generator Performance, 20°C Ambient, 60% RH, 1,013 bar**

Model	Flow Rate, m <sup>3</sup> /hr at Different Nitrogen Purities @ 7.5 barg							Inlet NPT	Outlet NPT	Dimensions (LxWxH) mm	Weight kg
	L 97%	L 99%	L 99.50%	H 99.90%	U 99.95%	U 99.99%	U 99.999%				
NG9	14.1	10.7	8.9	6.3	5.4	3.8	2.4	1"	1/2"	520 x 830 x 1,422	256
NG18	28.1	21.3	17.7	12.2	10.7	7.6	4.6	1"	1/2"	520 x 955 x 1,422	366
NG26	41.9	31.8	26.4	18.8	16.0	11.3	7.1	1"	1/2"	520 x 1,183 x 1,422	476
NG35	55.6	42.1	35.1	24.9	21.2	15.1	9.4	1"	1/2"	520 x 1,411 x 1,422	586
NG44	69.2	52.4	43.6	31.0	25.5	18.6	11.7	1"	1/2"	520 x 1,639 x 1,422	696
NG52	82.6	62.6	52.1	37.0	31.5	22.5	13.9	1"	1/2"	520 x 1,867 x 1,422	806
NG61	96.0	72.7	60.5	43.0	35.4	25.8	16.2	1"	1/2"	520 x 2,095 x 1,422	916
NG69	109.2	82.7	68.9	48.9	41.6	29.7	18.4	1"	1/2"	520 x 2,323 x 1,422	1,026

Model	Flow Rate, m <sup>3</sup> /hr at Different Nitrogen Purities @ 13.0 barg							Inlet NPT	Outlet NPT	Dimensions (LxWxH) mm	Weight kg
	L 97%	L 99%	L 99.50%	H 99.90%	U 99.95%	U 99.99%	U 99.999%				
NG9HP	18.3	13.4	10.3	6.1	5.0	3.1	n/a	1"	1/2"	520 x 830 x 1,422	256
NG18HP	36.5	26.6	20.5	12.1	10.0	6.1	n/a	1"	1/2"	520 x 955 x 1,422	366
NG26HP	54.5	39.7	30.6	18.0	15.0	9.1	n/a	1"	1/2"	520 x 1,183 x 1,422	476
NG35HP	72.3	52.7	40.7	23.9	19.9	12.1	n/a	1"	1/2"	520 x 1,411 x 1,422	586
NG44HP	89.9	65.6	50.6	29.8	24.8	15.0	n/a	1"	1/2"	520 x 1,639 x 1,422	696
NG52HP	107.4	78.4	60.4	35.6	29.6	17.9	n/a	1"	1/2"	520 x 1,867 x 1,422	806
NG61HP	124.8	91.0	70.2	41.3	34.3	20.8	n/a	1"	1/2"	520 x 2,095 x 1,422	916
NG69HP	141.9	103.5	79.9	47.0	39.1	23.7	n/a	1"	1/2"	520 x 2,323 x 1,422	1,026



## Maintenance Programs

Compressed air and nitrogen are critical to your operation. A proper maintenance strategy is crucial to avoiding unplanned, unbudgeted downtime and production interruptions. Invest in your future with a trusted global partner by using one of our maintenance service programs. Our programs can include full risk transfer for up to 10 years with any of our compressed air and nitrogen generation equipment.



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