

# Ingersoll Rand

Nitrogen Compressed Air Technology



# Opportunity is in the air

## **Nitrogen (N<sub>2</sub>) is a clean, inert gas**

that comprises 78 percent of the air we breathe. Not only is nitrogen abundantly available, it's also a safe, more beneficial alternative to regular compressed air for tire inflation. For years, nitrogen has been used to fill tires in a variety of industries such as aviation, mining, heavy construction, and commercial fleets, as well as by the military, NASA, and in auto racing. Users know nitrogen offers benefits that not only enhance tire performance, wear, and safety characteristics, but also has a large environmental impact.



# Good for all of us

**Government and industry studies show that use** of nitrogen in tires improves pressure retention and enhances fuel economy. As consumers learn of these benefits and nitrogen tire inflation is made more readily available, the impact on our environment can be positively huge.

For every gallon of gasoline used, roughly 220 pounds of carbon dioxide (CO<sub>2</sub>) are released into the atmosphere. Now consider that there are 330 million vehicles on the nation's roads, and the average fuel savings with nitrogen use is 4%. Given its effects on pressure retention and fuel economy, if every tire in the United States were filled with nitrogen, we could reduce our creation of damaging greenhouse gasses by nearly 76 billion pounds annually. That's the equivalent of planting nearly seven million acres of forest per year.



# Are you N<sub>2</sub> your tires?

## Invest in an Ingersoll Rand nitrogen tire inflation system

and you'll be providing your customers, your business, and the environment with some great benefits.



### Better pressure retention

The oxygen in regular compressed air permeates through tire walls up to 40 percent faster than nitrogen, leading to accelerated underinflation. Since nitrogen permeates more slowly, it helps maintain proper tire pressure longer.

### Improved tire safety

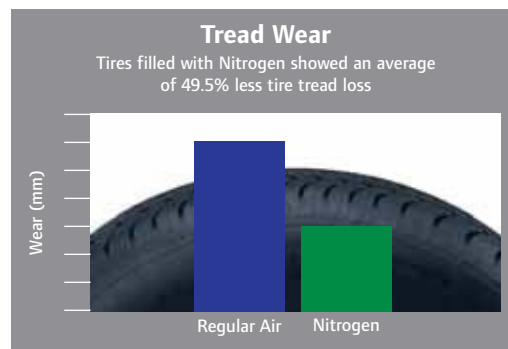
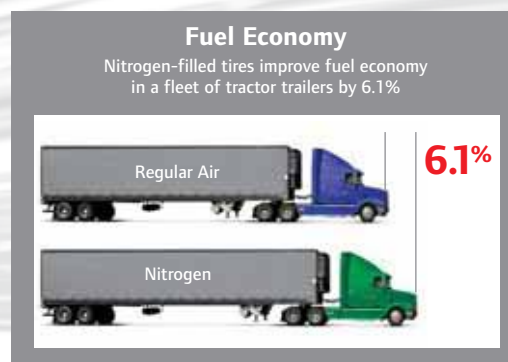
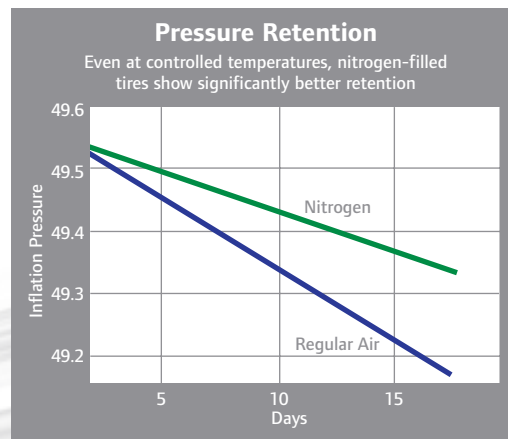
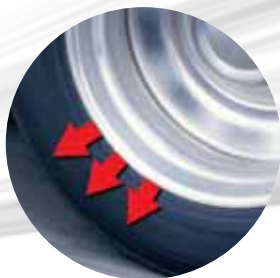
The vast majority of drivers on the road don't check their tire pressure regularly, and studies suggest roughly 60 percent of tire blowouts are caused by poorly maintained tire pressure. Since nitrogen helps improve pressure retention, a tire's handling, control, and grip are improved, minimizing the danger of catastrophic road failure.

### Enhanced fuel economy

With improved tire inflation comes improved gas mileage. Studies show a 4 to 10% increase in fuel economy can be realized, depending on the type of vehicle and driving conditions.

### Longer tire and rim life

Industry field studies show tires inflated with nitrogen instead of air can last from 30 to 50% percent longer. Since nitrogen is a clean, inert, moisture-free gas, it slows down internal tire oxidation and prevents rim rust, enhancing the life of the tire and the rim. Nitrogen also helps tires run cooler, further minimizing the risk of failure.

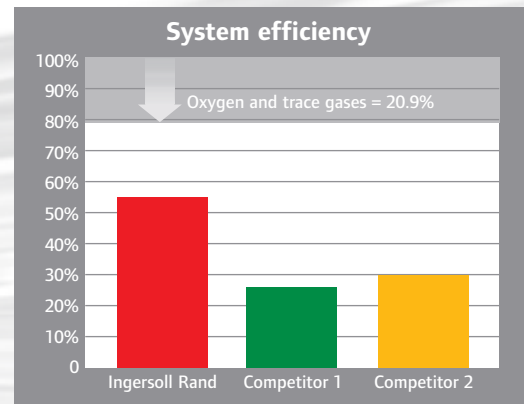


# The preferred technology from the compressor experts

**As the leader in compressor technology** for decades, Ingersoll Rand has applied unmatched experience and expertise to deliver a nitrogen tire inflation system that sets the industry standard for performance. If you want to make the jump to nitrogen — and you should — then the smart choice is Ingersoll Rand.

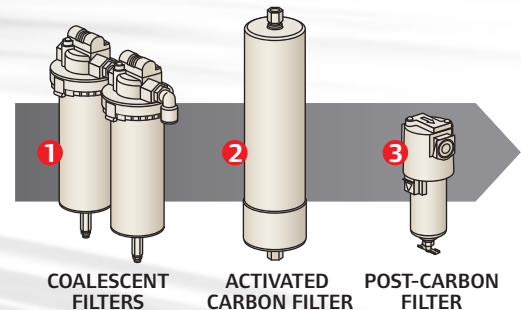
## Best-in-class efficiency

The Ingersoll Rand nitrogen tire inflation system requires 20% less airflow than competitive units to produce the same volume of nitrogen — which means you save on energy costs, with less stress on your compressed air system. Other units separate less than half the 78% nitrogen level in the air, at less than 37% efficiency. This means that for every three units of air used, only one unit of nitrogen is produced. Ingersoll Rand membranes separate up to 70% of the nitrogen, giving us a best-in-class efficiency of 55%. For every two units of compressed air used, one unit of nitrogen will be produced.



## Best-in-class filtration

Moisture and oxygen are a tire's worst enemies. So, in addition to the membranes, compressed air must also go through a filtration process to ensure the best quality of nitrogen is retained for use. With decades of proven engineering as a foundation, we've developed a filtration system that is second to none. Our system features two coalescent filters, one activated carbon bed and one post-carbon bed filter. This array ensures that air passing over the membrane is of the highest quality, with no moisture, particulates, or hydrocarbons entering a tire.



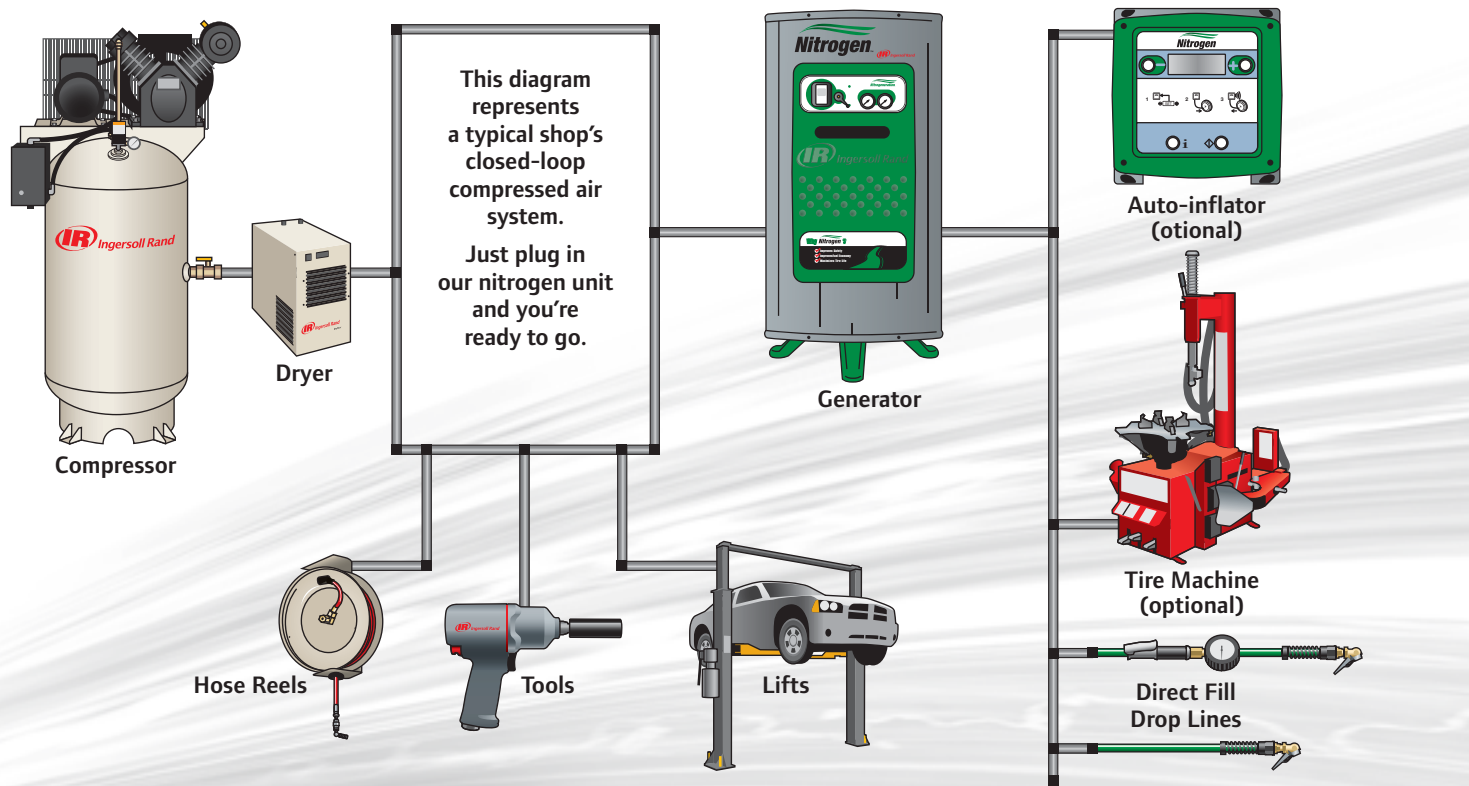
## Best-in-class operation

We've engineered our system to be highly efficient and flexible enough to meet the demands of any operation. With our system, when you have increased demand, there's no need to purchase additional generators. Our system is easily upgraded from 4 cfm capacity to 8, 12, or even 16 cfm — all in the same compact footprint, the smallest on the market.



# Typical stationary installation

**Our nitrogen unit is highly configurable and easy to install** into any existing compressed air system. Its compact footprint design is ideal for situations where space is a premium.



## Using the nitrogen tire inflation system is easy

### Car-mounted tires

- Auto-inflator can fill four tires simultaneously, using locking chucks
- Adjust auto-inflator setting to recommended tire pressure set by manufacturer
- Simple push-button filling control and easy-to-monitor display
- Total tech time is minimal\*

### Replacement / new tires

- Nitrogen line can be piped directly to a tire machine
- Additional nitrogen drop-down hoses can be used

### Mobile unit usage

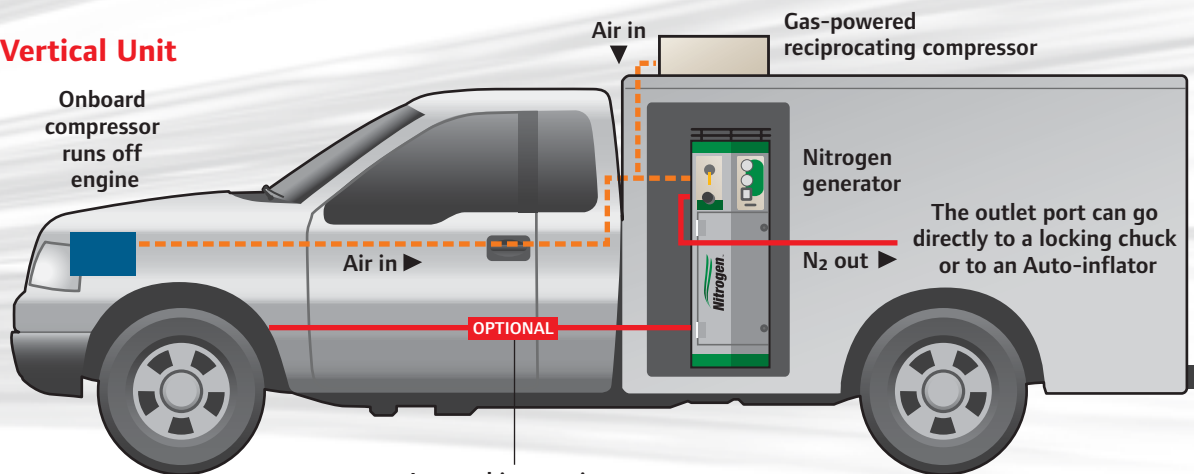
- Mobile configuration doesn't change standard tire-filling steps in the field

\*Consult auto-inflator operator's manual before usage.

# Typical mobile installation

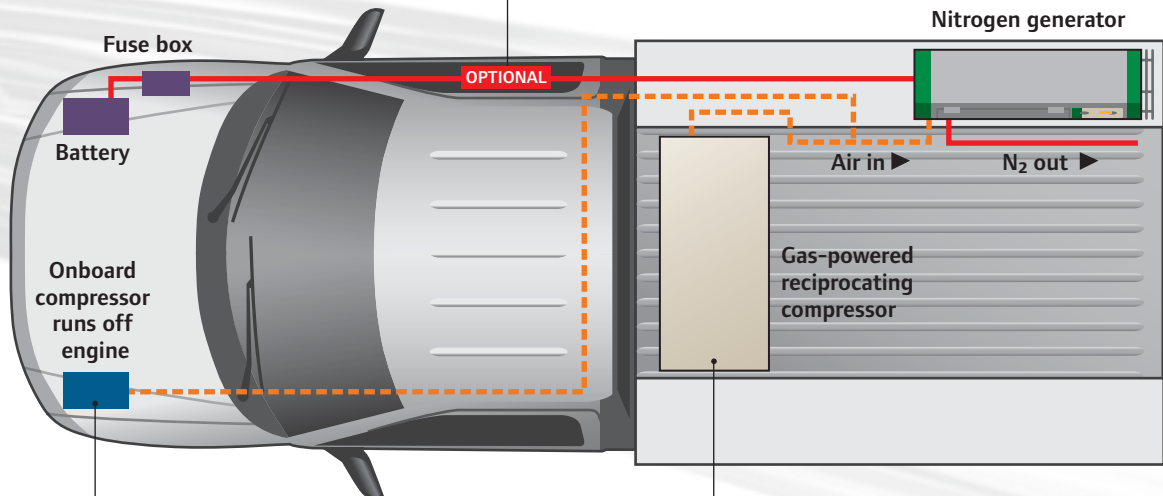
**Mobile nitrogen** is now available for the service truck and fleet industries through Ingersoll Rand. Our units provide the best in mobility and efficiency in a compact design for multiple installation applications. Select whatever configuration you need — horizontal or vertical — based on your specific package requirement.

## Vertical Unit



Low ambient option:  
runs power to 12 volt source

## Horizontal Unit



A service vehicle will have one of these  
compressed air sources on board

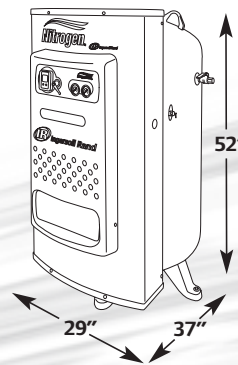
# Model specifications

## Stationary models

Model Number	Description	Max Inlet Pressure psi (bar[g])	N <sub>2</sub> * cfm (m <sup>3</sup> /min)	Receiving Outlet Pressure psi (bar[g])	Tank Capacity gal (L)	N <sub>2</sub> Purity	Dimensions L x W x H in (cm)	Weight lb (kg)	Use Tire filling
N20406-PG	4 cfm stationary nitrogen generator	175 (12.1)	4 (0.11)	135 (9.3)	60 (227)	95%	29 x 37 x 48 (74 x 94 x 122)	285 (130)	Small to medium tire service shops
N20808-PG	8 cfm stationary nitrogen generator	175 (12.1)	8 (0.23)	135 (9.3)	80 (302)	95%	29 x 37 x 52 (74 x 94 x 132)	320 (145)	Medium tire service shops
N2208-PG	12 cfm stationary nitrogen generator	175 (12.1)	12 (0.34)	135 (9.3)	80 (302)	95%	29 x 37 x 52 (74 x 94 x 132)	335 (152)	Medium to large tire service shops
N21612-PG	16 cfm stationary nitrogen generator	175 (12.1)	16 (0.45)	135 (9.3)	120 (454)	95%	29 x 37 x 59 (74 x 94 x 150)	365 (166)	Large tire shops and fleet service

## General Specifications

Separation method	Semi-permeable membrane
Operating temp. range	40 – 100° F
Nitrogen purity	95% – 99.9%**
Noise level	< 54 dBA
Pre-filters	2 coalescing, 1 carbon, 1 after-carbon
Automatic pressure switch	15 psi range
Nitrogen analyzer	+ / - 1% accuracy
Receiver tank	Max 200 psi, ASME certified



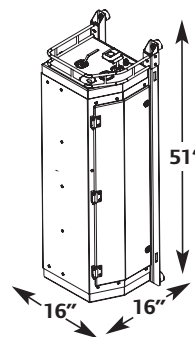
\*Nominal conditions: feed pressure at inlet of 145 psi, ambient temperature of 68° F, ambient pressure of 1.45 psi, generating 95% – 99.9% purity.  
\*\*Adjustable by Ingersoll Rand trained technician. Factory set at 95%.

## Mobile models

Model Number	Description	Max Inlet Pressure psi (bar[g])	N <sub>2</sub> * cfm (m <sup>3</sup> /min)	Receiving Outlet Pressure psi (bar[g])	Tank Capacity gal (L)	N <sub>2</sub> Purity	Dimensions L x W x H in (cm)	Weight lb (kg)	Use Tire filling
N2-M08-V	Vertical 8 cfm mobile nitrogen generator	175 (12.1)	8 (0.23)	140 (9.7)	No tank	95% – 99.9%	55 x 16 x 16 (138 x 41 x 41)	198 (90)	Mobile service fleets for car and light truck
N2-M08-H	Horizontal 8 cfm mobile nitrogen generator	175 (12.1)	8 (0.23)	140 (9.7)	No tank	95% – 99.9%	16 x 16 x 55 (41 x 41 x 138)	198 (90)	Mobile service fleets for car and light truck
N2-M12-V	Vertical 12 cfm mobile nitrogen generator	175 (12.1)	12 (0.34)	140 (9.7)	No tank	95% – 99.9%	55 x 16 x 16 (138 x 41 x 41)	200 (91)	Mobile service fleets for tractor trailer service
N2-M12-H	Horizontal 12 cfm mobile nitrogen generator	175 (12.1)	12 (0.34)	140 (9.7)	No tank	95% – 99.9%	16 x 16 x 55 (41 x 41 x 138)	200 (91)	Mobile service fleets for tractor trailer service

## General Specifications

Separation method	Semi-permeable membrane
Operating temp. range	3° – 50° C (38° – 120° F)
Nitrogen purity	95% – 99.9%**
Noise level	< 54 dBA
Pre-filters	1 water separator, 2 coalescing, 1 carbon, 1 after-carbon
Operating range	Direct from compressor, inlet air minus 5 psi. No pressure switch required
Nitrogen analyzer	+ / - 1% accuracy
Receiver tank	N/A



\*Nominal conditions: feed pressure at inlet of 145 psi, ambient temperature of 68° F, ambient pressure of 1.45 psi, generating 95% – 99.9% purity.  
\*\*Adjustable by customer. Factory set at 95%.

# Global reach, local service

**No matter where you're located,** Ingersoll Rand is committed to serving you 24 hours a day, seven days a week. Our nationwide network of certified, factory-trained technicians and engineers are a phone call away — ready to support you with innovative and cost-effective service solutions that will keep you running at peak performance.

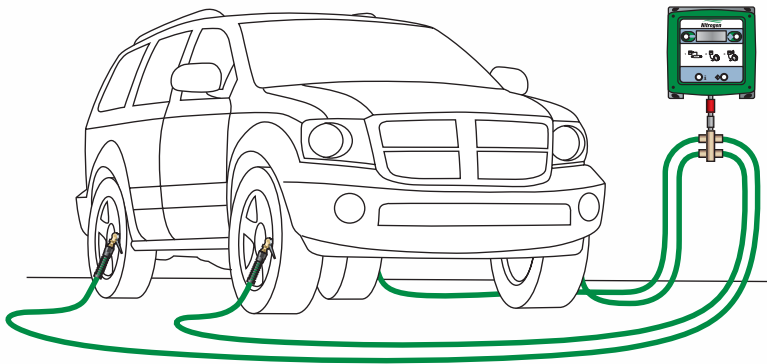


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# Auto-inflation unit

**Our state-of-the-art auto-inflation unit** allows you to easily and accurately fill tires with nitrogen at the push of a button. It's the perfect accessory to the nitrogen generator, as it will automatically purge and fill tires with minimal time and effort.



## Hands-free tire fill

Cycle times range from 7 to 10 minutes (depending on the tire size) for a four tire purge and fill. Locking chucks allow the operator to set the system and continue servicing the rest of the vehicle until the autoinflation process is complete. Total tech time involvement is less than two minutes.

Model number	Description
<b>Auto-inflator Units</b>	
N2ATF-HV-K	High-volume inflator kit, includes 4 hoses and all manifold connections, 110 V
N2ATF-HV	High-volume inflator (bare, no hoses), 110 V
N2ATF-HV-BMT	High-volume inflator and inflator cart with manifold and hoses, battery-operated
15282270	Battery-operated inflator (replacement bare, no hoses)
<b>Accessories</b>	
N2-HMVN	1/2" manifold for multiple tire inflation
N2-3W	1/2" airflow control valve
N2-IN-20	Core removal and inflation tool*
N2G-02-HH	Hand-held nitrogen analyzer kit (analyzer, oval chuck, hose, connectors, clip mount)
N2-CH-360	Tire chuck, clip-on, bulk
<b>Hoses</b>	
N2-HKC-25C	Coil hose with coupler and CH-360-OP chuck (25')
N2-HKT-25C	Coil hose with coupler and CH-360-OP chuck (25')
N2-HKC-12	Straight hose with coupler and CH-360 chuck (12')
N2-HKC-24	Straight hose with coupler and CH-360 chuck (24')
N2-HKC-35	Straight hose with coupler and CH-360 chuck (35')
N2-HKC-50	Straight hose with coupler and CH-360 chuck (50')
N2-HKC-IN-20-12	Straight hose with coupler and IN-20 core removal tool (12')
N2-HKC-IN-20-24	Straight hose with coupler and IN-20 core removal tool (24')

Notes: When inflating multiple tires simultaneously, an N2-HMVN is required and all hoses should be same length, not exceeding 25 feet. An "M" should be attached to the end of the hose part number as well, indicating a closed air chuck is to be assembled. The IN-20 core removal and inflation tool is designed to service individual tires.

\*By removing the core with the IN-20 tool, the inflation / deflation time is decreased by nearly 50%.



N2-CH-360



N2-IN-20



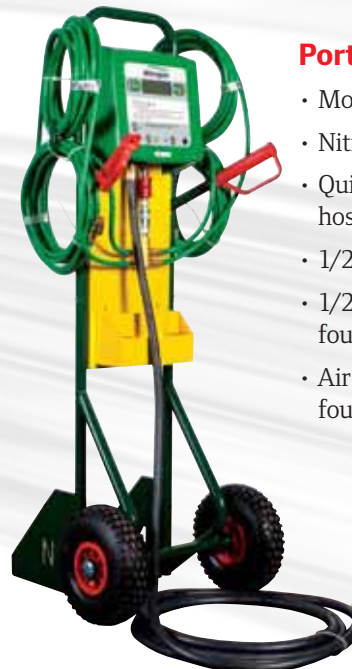
N2-HKC-24



N2-HKC-IN-20-24

### Auto-inflation unit

- Rugged and durable design
- Large backlit LCD display
- Maintenance-free
- Rechargeable battery
- Self-calibration ensures accuracy
- Indoor / outdoor use
- Automatic purging programs
- Power-saving auto power off



### Portable cart

- Mobile cart with pneumatic wheels
- Nitrogen AutoInflator (N2ATF-HV)
- Quick-connect 3/4" air supply hose (25' length)
- 1/2" air-flow control valve (N2-3W)
- 1/2" manifold for simultaneous four-tire inflation (N2HMVN)
- Air hose with locking chuck — four hoses included (N2-HKC-24)

# Accessories

Get the most out of an Ingersoll Rand nitrogen generator with our wide variety of accompanying accessories.

Model number	CCN number	Description
<b>N<sub>2</sub> Analyzer</b>		
N2G-02-HH-K	38444378	Nitrogen Analyzer Kit W/Tire Chuck, Fitting, Tube, and Case
<b>Accessories</b>		
N214-30	10559383	Green Recoil Hose - 30 Ft. 1/4"
N214-10	10559375	Green Recoil Hose - 10 Ft. 1/4"
N238-30	10564391	Green Recoil Hose - 30 Ft. 3/8"
N238-10	10564409	Green Recoil Hose - 10 Ft. 3/8"
6358G	10565943	Green Hose Reel - 50 Ft. 3/8"
<b>Gauges/Caps</b>		
N2-201	15218589	Tire Pressure Gauge (10 Ct. Box)
N2-218	80151244	Green O-Rings (1000 Ct. Bag)
N2-219	80150865	Green Anodized Valve Stem Sleeves (1000 Ct. Box)
N2-222	80167877	Chrome Valve Caps W/Green O-Rings, 4-Pc Card (10 Ct. Box)
N2-222-1000	80167885	Chrome Valve Caps W/Green O-Rings (1000 Ct. Bag)
N2-224	10559391	Green Plastic Valve Caps (1000 Ct. Bag)
N2-220	15218597	Green Aluminum Valve Caps And Sleeve, 4-Pc Carded (10 Ct. Box)
N2-221	15218605	Combo Pk Card: Grn Al. Caps (4)/Sleeves (4)/Tire Gauge (10 Ct. Box)
<b>Tire Chucks</b>		
N2-101	15218530	Tire Chuck, Standard For Dual Rear Wheels
N2-102	15218548	Tire Chuck, Dual Rear Wheels
N2-103	15218555	Tire Chuck, Quick Connect
N2-104	15218563	Tire Chuck, Heavy Duty, Clip-On
N2-120	15218571	Heavy Duty Tire Inflator, Handheld Unit W/Gauge
N2-CH-360	15268402	Tire Chuck, Clip-On, Bulk
<b>Replacement Parts: Stationary Product</b>		
15233364	15233364	Membrane
15239957	15239957	N <sub>2</sub> sensor
15249634	15249634	1st coalescent filter
15249618	15249618	2nd coalescent filter
15241631	15241631	Carbon filter
15249600	15249600	After-carbon filter
15244338	15244338	Tank, 60-gal
22429997	22429997	Tank, 80 gal
15242126	15242126	Tank, 120 gal
<b>Filter bowl replacement parts</b>		
15274087	15274087	Delta P indicators
15275209	15275209	Filter float drains



Model number	CCN number	Description
<b>Replacement Parts: Mobile Product</b>		
38451720	38451720	Kit, installation (compressor connections)
38451738	38451738	Kit, 6 mo. maintenance
38451746	38451746	Kit, 18 mo. maintenance
38450334	38450334	Kit, drain filters replacement
38450367	38450367	Kit, O-ring filters
38450342	38450342	Element, coarse
38450359	38450359	Element, fine
15421631	15421631	Carbon bed
23076144	23076144	Tubing (10' length)
15239957	15239957	N <sub>2</sub> sensor replacement
89295091	89295091	Key
23090137	23090137	Service decal replacement
23120496	23120496	Kit, low ambient
38450334	38450334	Filter, drain kit
38450367	38450367	O-ring kit for drains

## Marketing Materials

Model number	CCN number	Description
<b>Training DVDs</b>		
VSS-0905-118	80213168	Why Nitrogen DVD (10 pack)
VSS-0905-119	80213176	Nitrogen Training DVD (10 pack)
<b>Window and Pipe Decals</b>		
N2-SND	80151319	Simplair Pipe Nitrogen Decal
N2-WSD	80151327	Window N <sub>2</sub> Pressure Decal (100 pack)
<b>English Marketing Materials</b>		
VSS-0805-109	80213085	4-page sales brochure (25 pack)
VSS-0705-099	80213093	Nitrogen branded bay banner
VSS-0705-100	80213101	Point of sale counter stand/brochure holder
VSS-0705-101	80213119	Nitrogen branded tire covers
VSS-0705-102	80213127	Nitrogen branded counter mats
VSS-0705-103	80213135	Point of sale tri-fold flyers (250 pack)
VSS-0705-104	80213143	Nitrogen branded hang tags (100 pack)
VSS-0705-105	80213150	Nitrogen branded trash bags (100 pack)
N2G-LK	10566016	Full English Nitrogen Launch Kit
<b>French Marketing Materials</b>		
N2G-LKF	10566016	Full French Nitrogen Launch Kit
<b>Spanish Marketing Materials</b>		
N2G-LKS	10566016	Full Spanish Nitrogen Launch Kit

### N2G-LK Launch Kit



COUNTER CARD



COUNTERMAT



TRASH BAGS



FLOOR MATS



TRI-FOLD FLYER



TIRE COVER



HANGTAG



BANNER



WINDSHIELD STICKER



Ingersoll Rand Industrial Technologies provides products, services and solutions that enhance our customers' energy efficiency, productivity and operations. Our diverse and innovative products range from complete compressed air systems, tools and pumps to material and fluid handling systems and environmentally friendly microturbines. We also enhance productivity through solutions created by Club Car®, the global leader in golf and utility vehicles for businesses and individuals.

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