

Nitrogen Advantage[®]

NITROGEN TIRE INFLATION SYSTEM, 4/7/14/21 CFM

- ▶ Better Tire Pressure Retention
- ▶ Improved Fuel Economy
- ▶ Extended Tread Life
- ▶ Elimination of Oxidation
- ▶ Reduction in Tire Failures



CHAMPION[®]

The Nitrogen Advantage

NITROGEN INFLATION SYSTEM

The Future of Tire Pressure

Champion has been manufacturing air compressors since 1919. We understand and have supplied air compressors to the automotive and tire industries for over 85 years!

For tire inflation though, there is a dramatic movement occurring... and it is called **NITROGEN**.

The pneumatic tire has been filled with the same air we breathe—which is made up of 78% nitrogen, 21% oxygen and a small amount of trace gases. When it comes to tires, however, moisture within oxygen causes oxidation and other heat related problems.

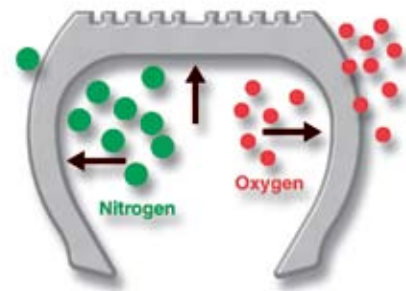


Nitrogen alone is a dry, non-flammable gas, with inert properties proven safe enough to be used for tire inflation by NASA, the U.S. Military, Boeing, Indy, NASCAR and the airline industry. Nitrogen provides a more consistent tire pressure for better handling, enhanced safety, and longer tire life.

When you factor in better fuel economy and fewer tire purchases, nitrogen pays for itself in no time! Plus, it is better for the environment.

Benefits of Nitrogen... The Champion Advantage

Better Tire Pressure Retention - Nitrogen migrates through a tire 3 to 4 times slower than air. Nitrogen molecules are larger than oxygen molecules which means that it may take 6 months to lose 2 psi with nitrogen compared to less than a month with air.



Improved Fuel Efficiency - properly inflated tires provide a 3.3% increase in miles/gallon.

Extended Tread Life - tires inflated with nitrogen retain the optimum designed profile and run cooler than tires inflated with compressed air. As a result, tire life improves by up to 25%.

Elimination of Oxidation - oxygen in air is highly reactive at high pressures and temperatures. Replacing air with dry nitrogen helps eliminate oxidation that damages inner liners and belt packages.

Handling - Proper tire inflation ensures the recommended "contact patch" of your tire is on the road.

Safety and Reliability - Under-inflated tires cause 90% of blowouts and account for 60–80 deaths and 10,000 injuries a year. Nitrogen provides more reliable pressure for reduced blowout potential. Without the oxidation and excessive heat, tire failures can be significantly reduced.

Better for the Environment - Nitrogen in your tires can help improve fuel efficiency and reduce toxic emissions.

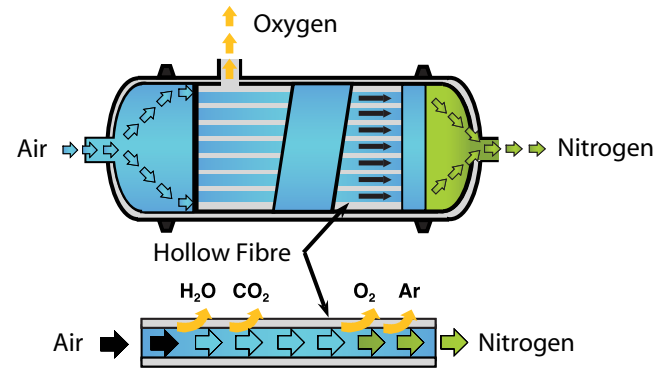
Stationary Nitrogen Inflation System

Unique Features

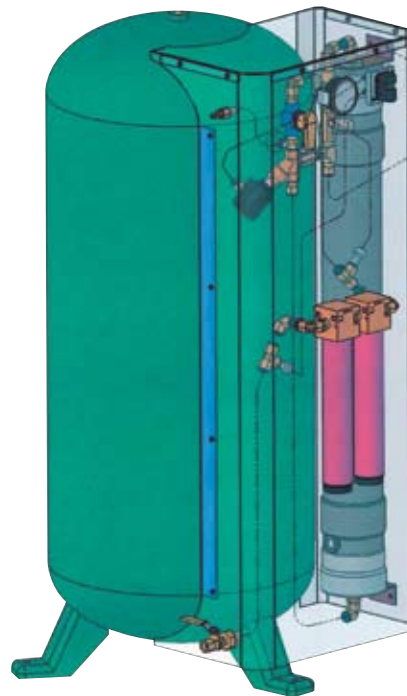
- ▶ 95–99.9% Nitrogen Purity Guarantee
- ▶ 60 and 80 Gallon vertical 200 PSI working pressure ASME Code receivers are standard
- ▶ Industrial type receiver base
- ▶ (1) Coalescing and (1) Particulate Filter eliminate moisture and contaminants prior to entering the membrane. A carbon prefilter is **NOT** required
- ▶ Filter Replacement Indicators
- ▶ 40–150°F Operating Temperature Range
- ▶ Automatic Shut Off halts air consumption while unit is not in operation
- ▶ Dew point: -70°F @ atmosphere
- ▶ Compact footprint for minimum space requirements
- ▶ Manual Tank Drain
- ▶ 24/7 Customer Service
- ▶ Easy to Install with Existing Air System
- ▶ Low Annual Maintenance
- ▶ No Electric Power Needed
- ▶ 5 Year Limited Membrane Warranty

Optional Equipment

- ▶ Promotional Materials Kit
- ▶ Hose Reel (green hose)
- ▶ Valve Stem Caps (green)
- ▶ Auto Fill Cart
- ▶ Handheld Nitrogen Analyzer



MEMBRANE SEPARATION
BY PERMEATION



NA4-60



MEMBRANE COMPONENT



NA4-60

Stationary Nitrogen Systems Sizing & Specifications

SUGGESTED NITROGEN SYSTEM SIZING

Application	Nitrogen Advantage Model	Recommended Champion Compressor CFM @ 175 PSIG	Refrigerated Air Dryer CFM
Automotive	NA4-60	10	15
Automotive & Light Volume Truck	NA7-80	16	25
Medium Volume Truck & OTR	NA14-80	34	50
Large Volume Truck & OTR	NA21	41	50

SPECIFICATIONS

Model Number	Min. Inlet CFM Required	Set Inlet* PSIG	Nitrogen Output CFM	Receiver Tank	Dimensions L X W X H inches	Approx. Weight LBS
NA4-60	8.4	160	4.3	60	32 x 32 x 55	279
NA7-80	13.8	160	7.1	80	32 x 32 x 80	391
NA14-80	27.6	160	14.2	80	32 x 32 x 80	416
NA21	41.4	160	21.3	N/A	19 x 19 x 72	235

NA21 NITROGEN OUTPUT EXAMPLES

95% Purity**	98% Purity**
11.4 SCFM @ 100 psi	6.3 SCFM @ 100 psi
15.6 SCFM @ 125 psi	8.4 SCFM @ 125 psi
19.8 SCFM @ 150 psi	10.8 SCFM @ 150 psi
23.7 SCFM @ 175 psi	13.2 SCFM @ 175 psi

* Stationery generator factory preset on/off pressure 145/160 psig.

** Changes to air temperature, supplied air pressure and supplied air flow will impact the result of nitrogen purity.



Stationary Nitrogen Systems

The Model NA4-60 is a perfect solution for medium duty passenger and light truck shops. The Model NA7-80 is the best value when you consider cost per scfm output of nitrogen. The Model NA14-80 is the most popular nitrogen generator for most commercial truck tire applications and is capable of generating enough nitrogen to inflate an average truck tire in less than three minutes. The Model NA21 is the largest generator in the Champion line producing more nitrogen per hour than any other standard system on the market and is ideal for high volume applications.



NA21

SPECIFICATIONS

Feature	NA4-60	NA7-80	NA14-80	NA21
Air Input – @ 160 psi @ 75° F	8.4 SCFM	13.8 SCFM	27.6 SCFM	41.4 SCFM
Air Input Range	100–175 PSI	100–175 PSI	100–175 PSI	100–175 PSI
N2 Output – @ 160 psi @ 75 ° F	4.3 SCFM	7.1 SCFM	14.2 SCFM	21.3 SCFM
N2 Purity	95–99.9 %	95–99.9 %	95–99.9 %	95–99.9 %
N2 Dewpoint	-70°F	-70°F	-70°F	-70°F
Operating Temperature	40° to 150° F	40° to 150° F	40° to 150° F	40° to 150° F
Inlet & Outlet Ports	3/8" NPT	3/8" NPT	3/8" NPT	3/8" NPT
N2 Purity Port	Yes	Yes	Yes	Yes
Auto Shut Off	Yes	Yes	Yes	Yes
Pre-Filters	2	2	2	2
Filter Maintenance Indicator	Yes	Yes	Yes	Yes
N2 Outlet Pressure Gauge	Yes	Yes	Yes	Yes

Portable Nitrogen Inflation System



MODEL NA6-3P

Champion model number NA6-3P is the ideal solution for passenger and light truck facilities which need to be able to bring the generator and purge system to the vehicle instead of the vehicle to the system. This new portable system offers 3.2 scfm of nitrogen output and an automatic purge system that allows you to purge and inflate four tires at once! With an easy to read control panel, four quick-disconnect hoses and a balanced package for uneven floors, the Champion NA6-3P is the package you need.

Standard Features

- ▶ 30 Gallon Receiver
- ▶ Four 25' Inflation Hoses
- ▶ Nitrogen Purity Port
- ▶ Pre-filters
- ▶ Air Products Prism™ Membrane
- ▶ Six Auxilliary Ports

Options

- ▶ Promotional Advertising Materials Kit
- ▶ Valve Stem Caps
- ▶ Additional Hose for Auxilliary Ports
- ▶ Hand-held Nitrogen Analyzer

PORTABLE NITROGEN INFLATION SYSTEM

Feature	Details
Air Input	6.3 SCFM @ 125 psi @ 75° F
Air Input Range	100–175 PSI
N2 Output	3.2 SCFM @ 125 psi @ 75 ° F
N2 Purity	95–99.9 % Purity
N2 Dewpoint	-70°F
Operating Temperature	40° to 140° F
Inlet Port	3/8" NPT
N2 Purity Port	Yes
Auto Shut Off	Yes
Pre-Filters	Two
Filter Maintenance Indicator	Yes
Air Inlet Pressure Gauge	Yes
N2 Outlet Pressure Gauge	Yes
Dimensions (inches)	33 x 27 x 46
Weight	265 Lbs
Inflation Hoses	Four 25' Hoses Included
Aux. N2 Outlet Port	Yes
N2 Storage Tank	30 Gallon
Inflator ByPass Port	3/8" NPT
N2 Purges	0–9
Power Supply	12V DC Ni-MH (Rechargeable)
Inflator Accuracy	+/- 0.3 psi

NA6-3P NITROGEN OUTPUT

95% Purity	98% Purity
2.3 scfm @ 100 psi	1.3 scfm @ 100 psi
3.2 scfm @ 125 psi	1.7 scfm @ 125 psi
4.0 scfm @ 150 psi	2.2 scfm @ 150 psi
4.8 scfm @ 175 psi	2.6 scfm @ 175 psi

* Changes to air temperature, supplied air pressure and supplied air flow will impact the result of nitrogen purity.

Nitrogen Accessories

Nitrogen Auto Fill Cart

Every nitrogen generator used in the automotive industry would benefit from an Auto Fill Cart. Ease of use is always a priority. Simply connect the nitrogen generator to the inflation/purge cart. After the cart has been piped to the nitrogen generator, connect the four discharge hoses to the vehicles tires, set the controller to the desired pressure, and start the system. The system automatically purges all four tires, refills them with nitrogen to the set pressure, purges the tires again, and then refills the tires again for the second time. The second purge and fill will be at the set pressure and at the purity levels desired, between 95–99.9%.

STANDARD FEATURES

- ▶ The controller is a digital battery powered inflation/purge system mounted to the mobile inflation cart.
 - Battery operated and rechargeable
 - Accurate to ± 0.3 psig
- ▶ Program number of purge cycles (0–9)
- ▶ Four 24' hoses with clip on valve stem chucks are included on each side of the unit, an additional port is supplied in case the spare needs to be inflated at the same time. No hose is included for that function.
- ▶ The cart has two 8" thermoplastic rubber wheels
- ▶ $\frac{3}{8}$ " NPT inlet port
- ▶ 150 psig maximum inlet pressure
- ▶ Valve cap storage compartments
- ▶ Shelf for analyzer/charger
- ▶ Cart Dimensions:
22 $\frac{1}{2}$ " W x 15 $\frac{1}{2}$ " D x 49 $\frac{3}{4}$ " H



Nitrogen Accessories



POINT OF SALE PROMOTION KIT

CC1010413

Kit includes: 1 Banner (3' x 5'),
1 Tire Cover, Flyers, Green Valve
Stem Caps



NITROGEN ANALYZER

CC1010674

Valve Stem Caps
Green
CC1010411



Valve Stem Caps
Brass
CC1020777



Valve Stem Caps
Aluminum
CC1020779



Valve Stem
Sleeves
VP1021897



O-Rings
VP1021896



Warranty

Champion warrants each new Nitrogen Membrane to be free from defects in material and workmanship under normal use and service for a period of 60 months from the date of installation or 63 months from the date of shipment by Champion. This assumes proper pre-filter maintenance has been performed and no oil contaminants have been allowed into the membrane. The presence of any oil in the Nitrogen Membrane will void the manufacturers warranty.

Twenty four (24) months from date of delivery on oxygen/nitrogen analyzers.

Twelve (12) months from date of delivery on all other Nitrogen Product components.

This warranty does not cover defects in the product caused by ordinary wear and tear, abuse, misuse, overloading, accident (including shipping damage), improper maintenance, alteration, or any other cause not the result of defective materials or workmanship.



To learn more about nitrogen go to
www.getnitrogen.org

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Member

