



Tyre Filling

Nitrogen Tyre Inflator Range

aerospace
climate control
electromechanical
filtration
fluid & gas handling
hydraulics
pneumatics
process control
sealing & shielding



ENGINEERING YOUR SUCCESS.

Air in tyres

The air we breathe consists largely of nitrogen, oxygen and water. The oxygen and water contained in compressed air have a negative impact on tyres. They negatively influence handling, fuel efficiency, tyre life and rim condition, the environment and your own safety.

The solution is to inflate your tyres with a high concentration of nitrogen.

Nitrogen in tyres

Tyres filled with nitrogen last longer, are safer and more eco-friendly. In the near future, every vehicle will have nitrogen-inflated tyres. Nitrogen is used in tyres to avoid air leaking through the tyre wall, which results in under-inflation. The reason why nitrogen is used is because it is easy to produce, does not support combustion, has no smell and is also a component of the air we breathe. The difference between the pressure in a tyre and the

pressure outside causes oxygen to permeate through the tyre. If we can create the same concentration of oxygen inside and outside a tyre (equal partial pressure), then oxygen is not forced to leak through the tyre wall. Using nitrogen in tyres maintains the correct pressure, and reduces all the problems associated with under-inflation.

Correct inflation versus under-inflation

Correct inflation is highly significant when considering tyre

life and performance. It is not always possible to look at a tyre and detect under-inflation. However, under-inflation causes many tyre-related problems. As inflation pressure largely determines a tyre's load capacity, under-inflation results in an overloaded tyre. An under-inflated tyre operates at high deflection resulting in decreased fuel economy, sluggish handling, and may result in excessive mechanical flexing and heat build-up, leading to catastrophic tyre failure.

Advantages of nitrogen in tyres

- Increased fuel efficiency
 - Reduced CO₂ emission
 - Increased tyre life due to more stable tyre pressure and less oxidation of the tyre
 - Increased safety results in more reliable tyre pressure, lower tyre temperature improved grip and handling
 - Increased rim life because nitrogen is completely dry; no oxidation of the rim
- All of the aforementioned advantages **benefit** the environment!

Users of nitrogen-filled tyres

- Aeroplanes (compulsory for safety reasons)
- Competition racing (Formula 1, Nascar, MotoGP)
- Government services (army, police, fire dept., ambulance)
- Fleet owners (lease vehicles, taxis, public transport)
- Off The Road (OTR) Trucks
- End-users (trucks, cars, vans, trailers and motorcycles)

Parker nitrogen tyre inflators

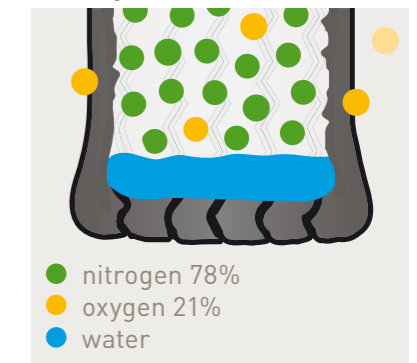
Parker has developed the Tyre-Saver range. These nitrogen tyre inflators can be connected to any compressor and automatically generate nitrogen from compressed air: simple and, above all, inexpensive.

Parker hollow fibre membrane

Parker hollow fibres are like tiny plastic straws. A tube (module) contains thousands of these straws. Only the ends are glued in.

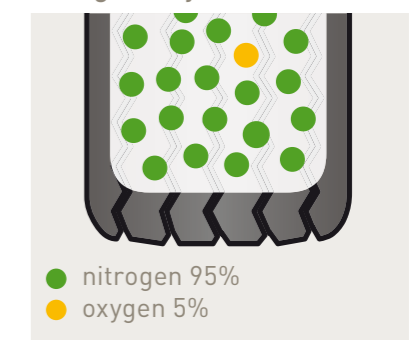
The space between the fibre ends is glued. Therefore when you pass compressed air through the module, the air is forced inside the fibres. The plastic fibres behave in such a way that their walls "like" the oxygen (O₂) and water (H₂O) molecules much better than the nitrogen (N₂) molecules. The fibres let the O₂ and H₂O molecules pass through the wall more easily than the N₂ molecules. The H₂O and O₂ molecules can pass through the fibre wall and they leave the module. However, the N₂ molecules stay inside the fibre and will be pushed out of the opposite glued end.

Air in tyres



Oxygen permeates through the tyre wall three to four times faster than nitrogen. Water affects the tyre, rim and steel belt.

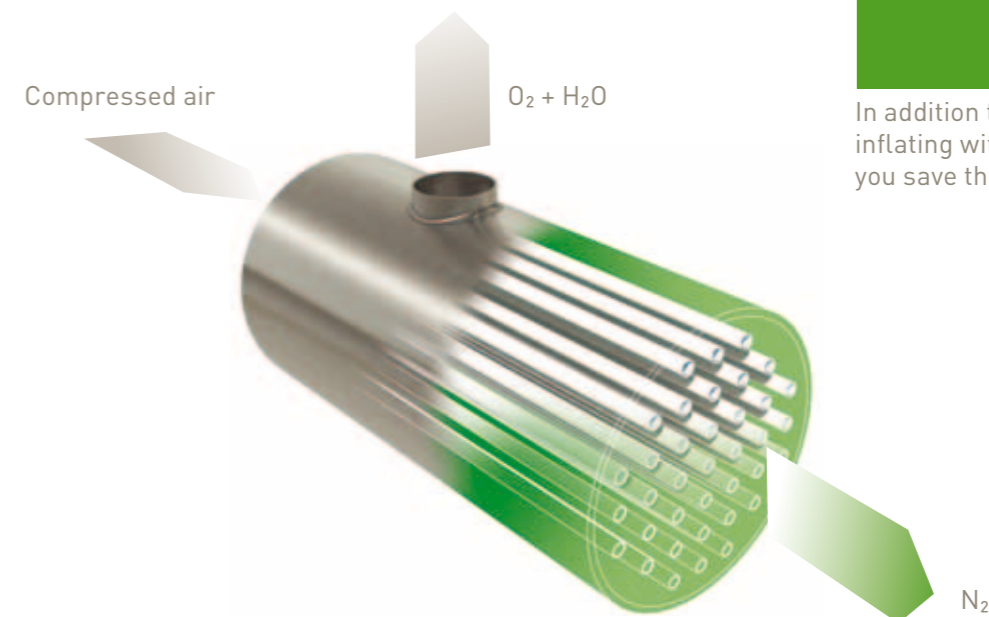
Nitrogen in tyres



Nitrogen is safe, dry and keeps the tyre in optimal condition.



Parker hollow fibre membrane



In addition to saving your tyre, inflating with nitrogen helps you save the environment

NEW

TyreSaver 3.0

A revolutionary design and engineering project has led to a truly unique nitrogen tyre inflation tool. This tool can be used to inflate the tyres of cars, vans, trailers and motorcycles. Parker has developed the innovative TyreSaver 3.0; a robust, lightweight, mobile, nitrogen tyre inflator for the automotive industry, with low investment costs and an undeniably high sales potential and profit margin.

Click, fill, earn money!

This workshop tool can be connected to a compressor and automatically generates nitrogen from compressed

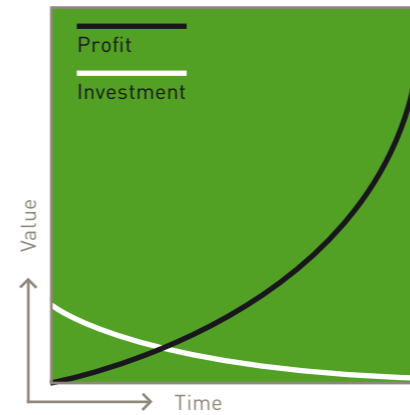
air: simple and, above all, inexpensive. This means that your investment will pay for itself in no time at all. The TyreSaver is fitted with an

exchangeable membrane cartridge that will serve for thousands of tyre inflations.

Features



Click, fill, earn money!



TyreSaver 3.0 benefits

- High profit margin
- Low investment
- Quick return on investment
- No use, no costs
- Increased customer loyalty
- Can be connected to standard airline
- Mobile and lightweight

Targetgroup*

- Cars
- Vans
- Trailers
- Motorcycles

After sales & Marketing

- Nitrogen filling hose
- Parker tyre valve caps
- Marketing material online: www.parkertyresaver.com

TyreSaver 3.0 indications

Fills per cartridge**	12,000
Capacity N ₂	3800 NI/hr*** at 10 bar(g)/145psig/1.0MPa inlet press.
Purity	95% N ₂
Inlet pressure	5-11 bar(g)/72-188psig/0.5-1.1MPa
Max tyre pressure	50% of the inlet pressure
Temperature	-20 to +50°C / -4 to +122°F
Weight	< 1.2 kgs
Dimensions (HxWxD)	230 x 90 x 640 mm
Grip lifetime	50,000 fills**
Certification	CE approved
Warranty grip	1 year or 50,000 fills whichever occurs first
No maintenance due to innovative Parker hollow fibre membrane technology	
Patent pending	

TyreSaver 3.0 box contents

Grip
Cartridge
Wallmount
Parker tyre valve caps (500 pcs)
Hose (30 cm)
Desktop flyer holder
Manual

* fill tyres up to max. 5.5 bar(g)/80 psig/0.55 MPa
 ** tyre 205/55R16
 *** Reference condition for NI/hr = 20°C and 1013 mbar(a)

TyreSaver 3.0 cartridge indications

Number of fills**	12,000
Weight	< 0.7 kg
Dimensions (H x Ø)	450 x Ø 90 mm
Warranty cartridge	1 year or 12,000 fills** whichever occurs first

TyreSaver 3.0 cartridge box contents

Cartridge
Pressure chamber gasket

Net earnings calculation TyreSaver 3.0

A	Investment TyreSaver3.0 (Fill in what you paid for the tool)	
B	Number of average fills per cartridge	12,000
To fill one tyre with the right amount of N₂, you have to fill the tyre twice		
C	Number of average tyre fills per cartridge (Calculation: B / 2)	6,000
D	Costs per tyre fill (Calculation: A / C)	
E	What amount will you charge for one N ₂ tyre fill? (Fill in what you want to charge for one tyre fill)	
F	After how many tyres will I earn money? (Calculation: A / [E - D])	
G	How many tyre fills are left on the cartridge? (Calculation: C - F)	
H	Total net earnings (Calculation: G x E)	
I	With the replacement cartridge your net earnings will increase even more	

TruckTyreSaver

The compact designed TruckTyreSaver can fill up to 35 super single tyres per hour.

There is no extra filling time compared to compressed air. Installation is very easy. While not in operation there is no air-loss, thus saving energy use of your compressor. The generator can be connected directly to the filling piston or storage vessel. It includes a high quality compressed air filtration train resulting in minimum maintenance.

Features



TruckTyreSaver benefits

- High profit margin
- Quick return on investment
- No use, no costs
- Increased customer loyalty
- Can be connected to a standard airline
- Compact design

Target group

- Trucks
- Buses
- Big vans
- Airplanes
- Off The Road (OTR) Trucks

After sales

- Hose tyre inflator gauge

TruckTyreSaver specifications

TruckTyreSaver 10	10 Nm ³ /hr* N ₂ at 10 bar(g)/ 145 psig inlet pressure
TruckTyreSaver 20	20 Nm ³ /hr* N ₂ at 10 bar(g)/ 145 psig inlet pressure
TruckTyreSaver 30	30 Nm ³ /hr* N ₂ at 10 bar(g)/ 145 psig inlet pressure
TruckTyreSaver 40	40 Nm ³ /hr* N ₂ at 10 bar(g)/ 145 psig inlet pressure
Purity	95% N ₂
Inlet pressure	5 – 13 bar(g) / 72 – 188 psig
Temperature	10 – 40°C / 50 – 104°F
Weight	35 – 40 kg
Dimensions HxWxD	843.5 x 555.5 x 154 mm
Warranty	2 years

* Reference condition for Nm³ = 20°C and 1013 mbar(a)



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