



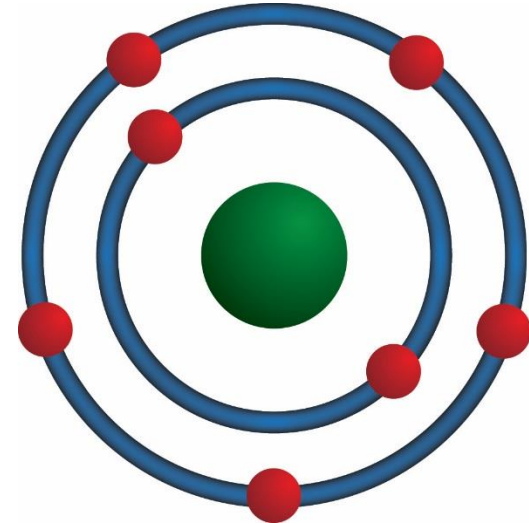
Basics of Nitrogen Tire Inflation

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What is Nitrogen

- Nitrogen makes up the majority of the air we breath, about 78%
- Nitrogen is inert, under normal circumstances it is non-flammable and non-reactive
- Concentrated nitrogen is a clean, dry gas
- Nitrogen molecules are physically larger than oxygen, a small but significant difference when used for tire inflation
- Nitrogen is readily available either in bottles or using a nitrogen generator





Why Nitrogen for Tire Inflation

- Improved Pressure Retention
 - #1 benefit of nitrogen tire inflation, permeates through tire 3 – 4 times more slowly than oxygen
 - Proper pressure improves tire life, fuel economy and tire to road contact
 - Fewer TPMS warnings
- Clean and Dry Inflation Medium
 - Generating nitrogen removes water vapor, dirt and oil Temperature changes affect water vapor more than a pure gas, causing larger pressure variation
 - Dirt and oil can get stuck in the valve stem and bead seat, creating slow leaks
- No Oxidation
 - Oxygen, which causes oxidation, is removed during the generating process





How to Get Nitrogen

- **Bottle / Tank**
 - Most gas suppliers, such as suppliers of welding gas, also offer pressurized nitrogen
 - Only requires proper regulator to be used for inflation
 - More expensive over time than purchasing a generator to create your own
- **On-Site Nitrogen Generator**
 - Uses either a membrane or pressure swing adsorption (PSA) method to produce purified nitrogen from air
 - Higher initial cost than bottle but much cheaper long term
 - Prevents the possibility of running out of nitrogen



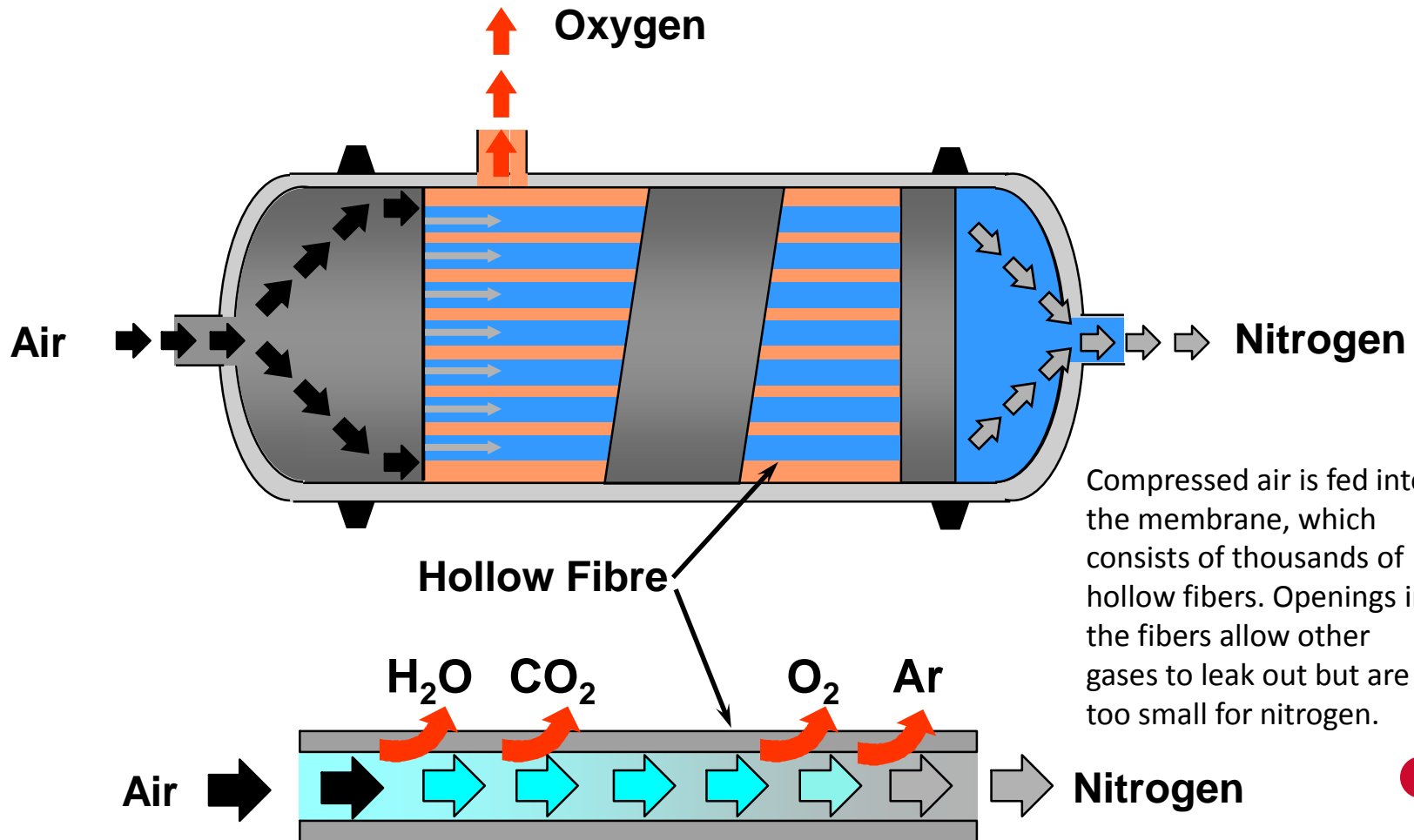


Nitrogen Inflation System Types

- Cart
 - Perfect if only converting a couple vehicles per day
 - Usually includes wheeled cart to hold tank, regulator and inflator
 - Lowest initial cost
- Pressure Swing Adsorption (PSA)
 - Cyclic nitrogen generation (purity changes during cycle)
 - High maintenance requirements with high long term costs
 - Mid-level initial cost
- Membrane
 - Most versatile and dependable
 - Requires very little maintenance with low long term costs
 - Highest initial cost



How a Membrane Generator Works



Compressed air is fed into the membrane, which consists of thousands of hollow fibers. Openings in the fibers allow other gases to leak out but are too small for nitrogen.





Benefits of Branick Generators

- Features
 - Best air to nitrogen ratio (1.9:1) of all membrane systems
 - Auto-shut off or auto-inflator included
 - Adjustable nitrogen purity to suit application
 - Largest nitrogen line available for everything from bicycles to heavy machinery
 - Only requires filter maintenance (5 years of free filters included)
- Dependability
 - No moving parts to wear out
 - American made steel construction
 - Rugged membrane resists damage from moisture and particulates
 - More years of experience and real world use than any other manufacturer of nitrogen tire inflation equipment

