

## On Site O<sub>2</sub> generation



### **Oxygen Generators**

On-Site systems use either PSA (Pressure Swing Adsorption) or membrane technology to generate gas (Note that is AD-sorption, not AB-sorption. Adsorption is the physical process of separating molecules of gas from each other, while absorption is a chemical process)





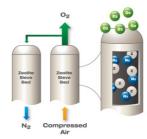


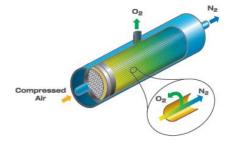
#### **The Process**

Compressed air is used to pressurize a vessel, filled with either carbon or zeolite (CMS), which separates molecules by physical composition or structure.

By forcing air down the fibre, the smaller O2 molecules are captured and the N2 molecules escape at the other end. The air in the membrane is usually heated to excite the molecules and increase the chance that they will permeate through the holes.

Pressure is released to draw off the  $O_2$  or  $N_2$  molecules which are collected in a tank. A pressure release valve vents the captured molecules of the unwanted gases into the air, where they immediately combine back to ambient percentages. Upon saturation the first sieve bed releases the  $N_2$  while the second sieve bed starts the process over again









#### **Features and Benefits**

•	Convenient	Easy to install and maintain with an unlimited supply of O2	
•	Touch Screen control	Precision system control for purity level, troubleshooting diagnosis, maintenance schedules and operations diagrams	
•	Cost Savings	Produce your won gaseous nitrogen for a fraction of purchasing cylinders	
•	PFX	Up to 3 different purity levels from the same machine	
•	Fast Payback	Systems average less than 12 months ROI. No delivery fees tank rental, long term contracts or price increase	
•	<b>Low Operation Cost</b>	Low Air-to-oxygen ratio and limited maintenance	
•	Expandable	Take advantage of our equipment expansion /return customer program	
•	Fully Automated	Oxygen production begins when downstream demand is sensed	
•	Reliable	System operating over 20 years on some of the most remote locations in the world	
•	Lease/ Rental Option	Write off the cost of your generator as an operating expense, rather than using capital	
•	Flexible	Replace or augment your current oxygen system	

# **Applications**

•	Ambulance Service	•	First Responders

- Ambulatory Oxygen
   Fish Farms/ hatcheries
- Auto Repair / Muffler
   Glass Blowers
- Brazing Gold Mining
- Disaster Management

  Hospitals, Shelters, Medical, Military Oxygen and Ozone Generation
- Emergency Medical Response Neon Light Manufacturing
- Ethanol Production / Bio-fuels Waste Water Treatment