

# ONYX™

## Self-Contained Oxygen Generators for Commercial Use

- Advanced engineering
- Low operating cost
- Transportable with rollerbase design
- Easy to operate and maintain
- Time-proven reliability
- Thousands in use around the world



Oxygen Generating Systems • PSA Plants • VPSA Plants



Worldwide solutions  
for global impact

**AIRSEP**®

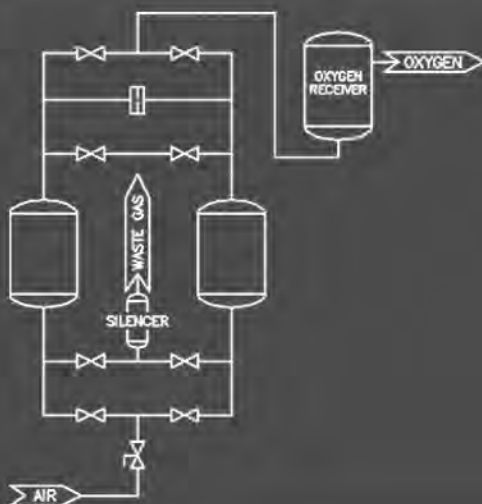


# How Do AirSep PSA Systems Work?

Air contains 21% oxygen, 78% nitrogen, 0.9% argon, and 0.1% other gases. AirSep Oxygen Generating Systems separate oxygen from compressed air through a unique Pressure Swing Adsorption process. The PSA process uses molecular sieve (a synthetic zeolite), which attracts (adsorbs) nitrogen from air at high pressure and releases (desorbs) it at a low pressure.

AirSep Oxygen Generators use two vessels filled with molecular sieve as adsorbers. As compressed feed air flows through one of the vessels, the molecular sieve adsorbs nitrogen. The remaining oxygen passes through the vessel and exits as the product gas. Before the adsorber becomes saturated with nitrogen, the feed air is diverted to the second vessel. At that point, the sieve in the first vessel regenerates by desorbing the nitrogen through depressurization and purging it with oxygen from the second vessel.

This process is then repeated in the second vessel to complete a cycle that allows the oxygen generator to deliver a constant flow of product oxygen at 90% minimum purity. Under normal operating conditions, the molecular sieve is completely regenerative and will last indefinitely.



# ONYX™ PSA Oxygen Generator

## SPECIFICATIONS

### Operating Characteristics

Product Flow: 6 LPM / 0.31 Nm<sup>3</sup>/hr (Onyx): 8 LPM / 0.44 Nm<sup>3</sup>/hr (Onyx Plus)  
 Standard Product Pressure: 9 psig / 62 kPa (Onyx): 20 psig / 138 kPa (Onyx Plus)  
 Product Purity: 93% ± 3%  
 Product Dew Point: -100°F (-73°C)  
 Sound Level: 49 dB

### Ambient Operating Conditions

Locate the oxygen generator in a well-ventilated area that is protected from weather elements and remains between 40°F (4°C) and 120°F (44°C)

### Power Requirements<sup>1</sup>

100V~±10%, 50/60Hz, Single Phase, 5.5A  
 120V~±10%, 60Hz, Single Phase, 5.0A  
 220V~±10%, 50 or 60Hz, Single Phase, 2.5A  
 Typical Power Consumption: 350 W

### Physical Connections

Product Gas Outlet: 1/4" NPT/B size oxygen adapter

### Certifications and Approvals

CSA, CE

### Warranty

1-Year Parts and Factory Labor<sup>2</sup>

### Dimensions

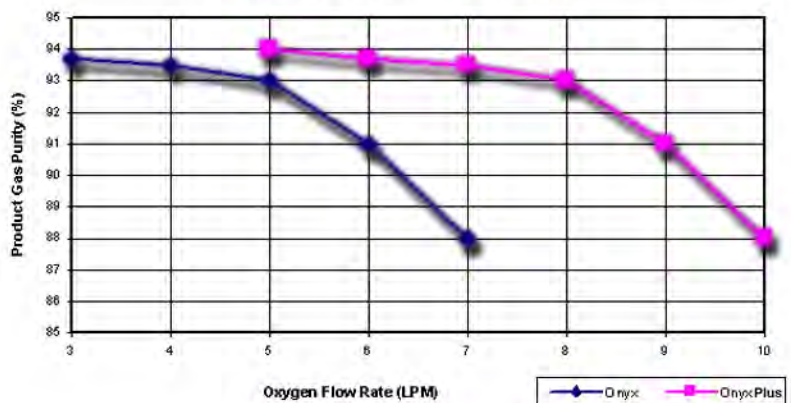
Generator Dimensions: 15.7" x 14.5" x 28.5" (40 x 37 x 73 cm)  
 Shipping Dimensions: 17" x 15.5" x 33.5" (44 x 40 x 85 cm)  
 Weight: 54 lb (25 kg) Net; 65 lb (30 kg) Gross

<sup>1</sup>Specify required voltage and frequency at time of order

<sup>2</sup>An unprotected or inadequately ventilated environment or improper control power may cause damage to the oxygen generator that is not covered under warranty.

\*AirSep Corporation reserves the right to change specifications and/or design without notice.

Onyx/Onyx Plus Product Gas Purity



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