

# AS-D

## PSA Oxygen Generator



### THE WORLD'S LARGEST MANUFACTURER OF PSA OXYGEN SYSTEMS!



#### Features

- Produces oxygen from compressed air
- Microprocessor controlled
- Low operating cost
- Automatic and unattended operation
- Easy to install and maintain

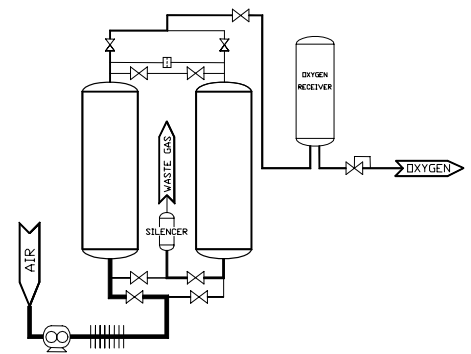
#### Typical Applications

- Ozone (Generator) Feed Gas
- Waste/Water Treatment
- Thermal/Chemical Oxidation
- Cutting/Brazing/Soldering
- Environmental Remediation
- Glass Work/Manufacturing/Blowing
- Fish Farming
- Hospital Systems

#### The Pressure Swing Adsorption (PSA) Oxygen Generating Process

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 (PSA) process. The PSA process uses molecular sieve (a synthetic zeolite), which attracts (adsorbs) nitrogen from air at high pressure and releases (desorbs) it at 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.



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For additional information,  
call Toll-Free U.S./Canada:  
**1-800-320-0303**

### Specifications

#### Product Characteristics

Product Flow: 80 - 90 SCFH (2.10 - 2.37 Nm<sup>3</sup>/hr)<sup>1</sup>  
<sup>1</sup>Factory set to your specific requirements.  
 Standard Product Pressure: 45 psig (3.10 barg)<sup>2</sup>  
<sup>2</sup>Pressures up to 55 psig (3.79 barg) available. Refer to chart for air requirement.  
 Product Purity: 93% Nominal  
 Product Dew Point: -100°F (-73°C)

#### 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 112°F (44°C)

#### Feed Air Requirements

Flow Rate: **Refer to chart.**  
 Clean and Dry "Plant Air" (Class 5.6.5 per ISO 8573.1)  
 Pressure: 90 psig (6.21 barg) minimum  
 Temperature: 122°F (50°C) maximum

#### Control Power Requirements

120 V ~ ±10%, 50/60 Hz, Single Phase, 1.0 A  
 220 V ~ ±10%, 50/60 Hz, Single Phase, 0.5 A

#### Physical Connections

Compressed Air Inlet: 1/4" NPT x 3/8" NPSM  
 Product Gas Outlet: 1/4 NPT/B size oxygen adapter

#### Certifications and Approvals

NRTL certified compliance to UL3101.1, CSA, CE

#### Warranty: 1 Year Parts and Factory Labor\*

\*An unprotected or inadequately ventilated environment, improper feed air quality, or improper control power may cause damage to the oxygen generator not covered under warranty.

AirSep Corporation continually improves its products and reserves the right to change specifications or design without notice.

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