

High-Flow Nitrogen Generators

Airgas® Monobed Nitrogen

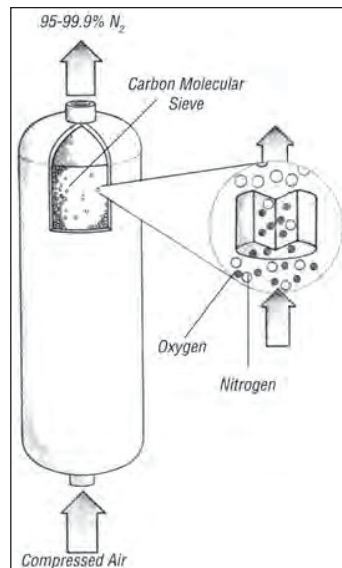
GENERATORS

Description: Airgas® Monobed Nitrogen Generators produce up to 99.95% pure, compressed nitrogen at dewpoints to -70°F (-21°C) from nearly any compressed air supply. The generators are designed to continually transform standard compressed air into nitrogen at safe, regulated pressures without operator attention.

Airgas® PSA Nitrogen Generators utilize a combination of filtration and pressure swing adsorption technologies. High-efficiency prefiltration pretreats the compressed air to remove all contaminants down to 0.1 micron. Air entering the generator consists of 21% oxygen and 78% nitrogen. The gas separation process preferentially adsorbs oxygen over nitrogen using carbon molecular sieve (CMS). At high pressures the CMS has a greater affinity for oxygen, carbon dioxide, and water vapor than it does at low pressures. By raising and lowering the pressure within the CMS bed, all contaminants are captured and released, leaving the CMS unchanged. This process allows the nitrogen to pass through as a product gas at pressure. The depressurization phase of the CMS releases the adsorbed oxygen and other contaminant gases to the atmosphere.

Once the generator is installed, a continuous nitrogen supply of consistent purity is available within minutes from start-up.

Installation consists of simply connecting a standard compressed air line to the inlet and connecting the



outlet to a nitrogen line. Plug the electrical cord into a wall outlet, and the unit is ready for troublefree operation. This system is designed to operate 24 hours per day, 7 days per week.

Once the system is operating, it requires little monitoring. The only maintenance involves changing the coalescing prefilter cartridges and final sterile air filter periodically. The PSA towers do not require any maintenance.

An oxygen monitor to measure the oxygen concentration of the nitrogen stream is available as an option. An audible alarm signals high or low oxygen concentrations (determined by the application). The oxygen analyzer is supplied with alarm relay outputs which may be used to signal a remote alarm, open a backup supply or the process stream, or close the process flow for protection of downstream equipment or processes.

Design Features

- Lower cost...eliminates the need for costly gas cylinders
- Complete package with prefilters, final filters, and receiving tank
- Compact - frees up valuable floor space
- Hassle-free, easy to install, easy to operate
- Safe and reliable



Nitrogen Purity / Flow Chart

Models AGS200 and AGS400

Model	Flow Rate (SCFH)	Flow Rate (SCFH)
	99.9%, 140 psig	99.99%, 140 psig
Y80-AGS200	235	47
Y80-AGS400	470	94

Principal Specifications

Model	Y80-AGS200, Y80-AGS400
Nominal Conditions	
Feed Pressure	40 psig
Temperature	80°F
Ambient Pressure	1 Atm.
Compressed Air Specifications	
Maximum Pressure	140 psig
Temperature Range	60°F - 105°F
Dewpoint	40°F pressure dewpoint or better
Residual Oil Content	Trace
Particles	<.01 micron
Ambient Conditions	
Temperature	45°F-90°F
Ambient Pressure	Atmospheric
Air Quality	Clean air without contaminants
Dimensions	28.5"L x 32.25"D x 76.25"H
Weight	520 lbs (AGS200), 738 lbs (AGS400)
Inlet	1/2" NPT
Outlet	1/2" NPT