



Model OG-20 & OG-20 Compressorless Oxygen Generator

Installation, Operation &
Maintenance Manual



Oxygen Generating Systems International

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Freight Damage Claims & Initial Inspection

The crate should be opened and inspected immediately upon delivery. If the exterior of the crate is noticeably damaged at the time of delivery, make a note on the freight bill before signing it. Unpack the unit at once and perform a visual inspection to determine if it is dented, bent or scratched. Also check to make sure the power cord is attached and that the control panel has not been damaged in any way during shipment.

Do not discard the shipping crate. If for any reason the unit should need to be returned in the future, this crate is the best way to ship it back to the manufacturer.

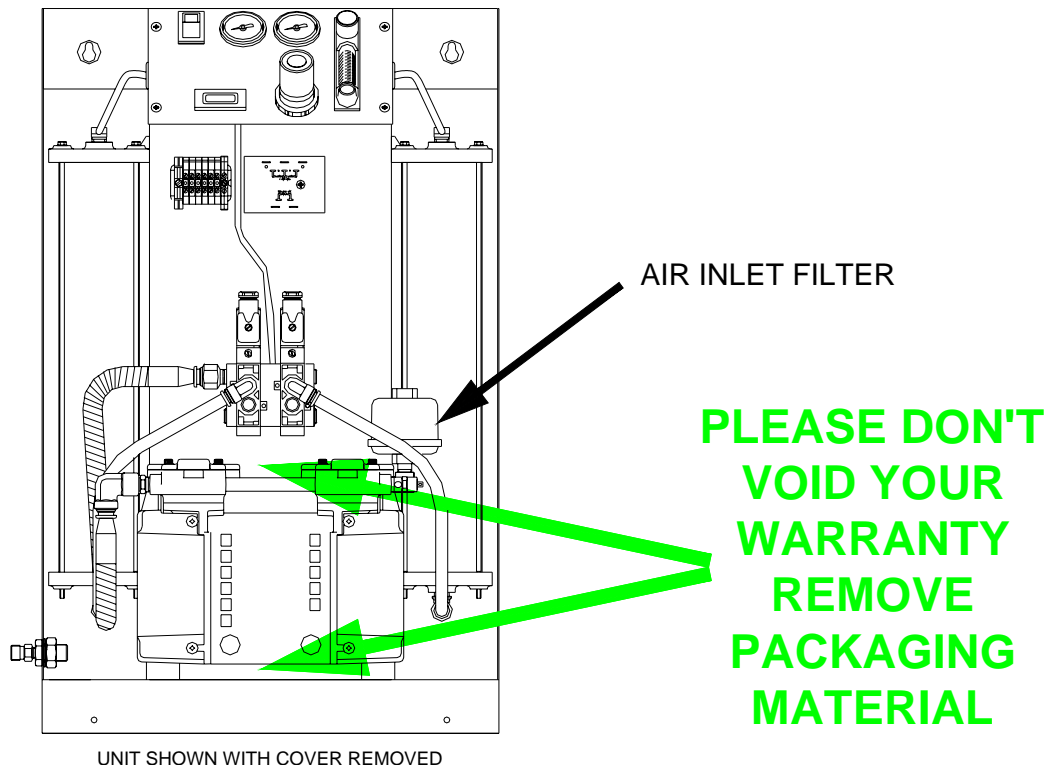
If any damage is discovered during the initial visual inspection, call the Freight Company immediately. ***This must usually be done within 24 hours of delivery.*** Claims of damage due to freight handling can only be filed by you, the consignee, as **OGSI** shipping terms are Free On Board (FOB), North Tonawanda, NY USA. This means that once the equipment leaves our dock you are the owner of it. **OGSI** has no legal claim to make against any shipping company for damage.

At **OGSI**, we are committed to using shipping companies with good reputations for taking care in the handling of freight and providing service in the event of damage. In our experience, we have found United Parcel Service (UPS) to be a poor carrier choice for equipment of this size and weight. Although they will accept and deliver it, we have often encountered problems with the way they handle the systems, and recommend other carriers be used.

Unpacking Instructions

ADDITIONAL PACKAGING MATERIAL INSIDE THE UNIT MUST BE REMOVED AND THE AIR INLET FILTER MUST BE INSTALLED PRIOR TO OPERATING THE GENERATOR.

- 1) Make sure the unit is ***NOT*** plugged into an electrical outlet.
- 2) Remove the (6) screws with nylon washers located on the front and both sides of the unit.
- 3) Lift the front cover up and away from chassis.
- 4) Remove packaging material from top, behind, and under the air compressor (per drawing).
- 5) Install air inlet filter (on top of the air compressor as shown below).
- 6) Install the front cover and secure the (6) screws with nylon washers.



Technical Service and Assistance

This manual is intended as a guide for operators of **OGSI** Oxygen Generators and Oxygen Generating Systems. It includes information on our warranty policy, on how the machines work, on proper set up and operation, and finally on how to maintain them.

It is our intention to provide complete customer satisfaction. This manual is one way in which we hope to provide you with technical assistance.

If you do not find what you need in this manual or you have other questions about this equipment, please feel free to contact us directly. This can be done in a number of ways that are listed below. We look forward to serving your oxygen needs and invite your inquiries. We will respond to you as promptly as possible.

Technical service personnel are available at **OGSI** from 8:00 A.M. through 5:00 P.M. Eastern (U.S.) Standard Time which is Greenwich Mean Time minus 5 hours (GMT - 5). You may reach **OGSI** personnel through the following means:

- **By Telephone from within the United States** two numbers may be used:
 - (800) 414-6474 - our toll free number (from within the USA only)
 - (716) 564-5165 - our direct number
- **By Telephone from outside the United States** you must dial:
 - Your local International Access Code (usually 0 or 00), followed by
 - The Country Code for the U.S. which is (1), followed by
 - Our Area Code and Number (716) 564-5165
- **By Automated Voicemail:**
 - at the numbers listed above -available 24 hours/day.
- **By Fax from within or outside the United States** as above at:
 - (716) 564-5173 - available 24 hours/day
- **By E-Mail or through our World Wide Web site** at:
 - ogsimail@ogsi.com - available 24 hours/day
 - <http://www.ogsi.com> - available 24 hours/day
- **By Mail** at:
 - OGSI**
 - 814 Wurlitzer Drive
 - North Tonawanda, New York 14120 USA
- **By UPS, FedEx or Common Carrier** at: *(This address for return shipments)*
 - OGSI**
 - 814 Wurlitzer Drive
 - North Tonawanda, New York 14120 USA

We also have a list of Distributors and Authorized Service Agents available upon request.

Warranty

Oxygen Generating Systems International (hereinafter **OGSI**) provides a warranty on its products against defects in material and workmanship, under normal use and operation, as applicable in the statements below.

The **OGSI** Warranty provides the following:

- a.) Free replacement of the product where defects in the material and/or workmanship are evident at the time of delivery, **EXCLUSIVE** of shipping damages. **OGSI** will pay shipping both ways. **(If shipping damage is evident, contact shipper immediately).**
- b.) Free repair or replacement of product (excluding filter elements) where defects in material and/or workmanship become evident between the time of shipment and one (1) year from the date of shipment. **OGSI** will pay shipping one (1) way.

Note - *A Return Authorization Number must be obtained from **OGSI** prior to return shipment of equipment. The Return Authorization Number **MUST** be visibly written on the outside of the package of the returned goods or **OGSI** will **NOT** accept the package.*

These warranties shall also become null, void and not binding on **OGSI** if a defect or malfunction occurs in the product or any part of the product as a result of:

- c.) A failure to provide the Required Operating Conditions (see page 9)
- d.) Repair, Attempted Repair, Adjustment or Servicing by anyone other than an authorized representative of **OGSI**
- e.) External Causes

Molecular Sieve Replacement:

The breakdown of the molecular sieve inside the generator (dusting of the sieve) only occurs if excess water/oil are entrained in the feed air stream. Under no circumstances is molecular sieve covered under warranty by **OGSI**. If sieve dusting occurs on your machine, check the air compressor, air dryer and filter elements.

This warranty may be transferred to subsequent owners of a given machine only with the prior approval of **OGSI**. The warranties above are given expressly in lieu of any other warranty stated or implied and constitute the only warranties made by **OGSI**.

Limits of Liability

OGSI shall not be liable for any special, indirect, incidental or consequential damages resulting from the use, or as a result of the malfunction of an Oxygen Generator.

OGSI does not market or manufacture these oxygen generators for any medical or human life support purposes. In the event the buyer or leasee chooses to use the **OGSI** oxygen generator for medical or human life purposes, **OGSI** will not be liable for any special, indirect, incidental, or consequential damages resulting from such use.

Operational Warnings

OGSI Oxygen Generators are self-contained systems for the production of high concentration oxygen. Although oxygen itself is not combustible, it can be very dangerous. It greatly accelerates the burning of combustible materials.

- Precautions should be taken to avoid a fire in the area of the generator.
- Smoking should not be permitted in the area where the generator is located.
- All oxygen connections and hoses should be kept clean and free of grease, oil and other combustible materials.
- Valves controlling oxygen flow should be opened and closed slowly to avoid the possibility of fires or explosions that can result from adiabatic compression.
- When bleeding a tank or line, stand clear and do not allow oxygen to embed itself within clothing. A spark could ignite the clothing violently.
- High-pressure gasses may be present within the system. Valves should be opened and closed slowly, and safety glasses and hearing protection should be worn at all times while gasses are being vented.
- Do not attempt to modify or enhance the performance of a Generator in any way.

Safe Handling of Compressed Gas Cylinders

Many of the following procedures for the handling, storage, and utilization of compressed gas in cylinders are taken from material furnished by the Compressed Gas Association, which complies with OSHA standards.

- If visual inspection indicates obvious damage, the cylinder should be returned to the supplier without any attempt at using the machine.
- If a cylinder leaks, other than normal venting, and the leak cannot be corrected by tightening a valve gland or packing nut, the valve should be closed and a tag attached stating that the cylinder is not serviceable. Remove the cylinder outdoors to a well-ventilated or open area, notify the supplier, and follow the supplier's instructions for the return of the cylinder.
- Keep the cylinder valve closed at all times except when in active use. When removable caps are provided for valve protection, they should not be removed except for active use. Remember to replace removable caps when not in use.
- Do not place cylinders in a position where they might become part of an electric circuit. When electric welding is taking place, precautions should be taken to prevent accidental grounding of cylinders, permitting them to be burned by electric welding arc.
- Cylinders should not be dropped or permitted to strike each other or any other surface. Do not drag or slide cylinders; use a suitable hand truck, fork truck, roll platform or similar device, firmly securing the cylinders for transporting.
- Always ensure that compressed gas cylinders be securely strapped or chained in place to prevent tipping or falling. Do not store near elevators, stairs, or passageways.
- Do not store oxygen cylinders with flammable gas cylinders. Stored oxygen and fuel gas cylinders should be at least 20 feet apart; preferably separated by a fire resistant partition.
- For additional information refer to the CGA publications that can be found at <http://www.cganet.com>
- See also ISO publication 10083, available by request at OGSi, or online at <http://www.iso.ch>

Pressure Swing Adsorption (PSA) Technology

The **OGSI** Oxygen Generator is an on-site oxygen-generating machine capable of producing oxygen on demand in accordance with your requirements. It requires less than 600 Watts of electrical power to control its operation.

In effect, it separates the Oxygen (21% of air) from the air it is provided and returns the Nitrogen (78% of air) to the atmosphere through a waste gas muffler. The separation process employs a technology called Pressure Swing Adsorption (PSA). At the heart of this technology is a material called Molecular Sieve.

This Molecular Sieve is an inert, ceramic-like material that is designed to adsorb Nitrogen more readily than Oxygen. Each of the two beds that make up the generator contains this sieve. As air is fed into one of the beds, the sieve in that bed holds the Nitrogen to it and allows the Oxygen to flow through it and out to the surge tank as product gas. Eventually the sieve becomes saturated with Nitrogen. When this occurs, the feed air is directed to the other bed where the oxygen production/separation process continues. While the second bed is being fed air, the first is depressurized and safely releases the Nitrogen it has trapped through the waste gas muffler. This regenerates the sieve in the first bed and prepares it to accept feed air again continuing the process. The two beds continue to work in this alternating fashion to provide a continuous supply of Oxygen.

This air separation process is reliable and virtually maintenance free. The Molecular Sieve will last indefinitely, as long as it does not become contaminated with water and oil vapors. This is why regular filter element replacement is critical to trouble free operation. The filter elements are very inexpensive, semi-annual maintenance.

OG-20/20 Compressorless Oxygen Generator Specifications

PERFORMANCE :

Oxygen Volume -	0 - 22 SCFH @ 0 – 15.0 PSI 0 - 0.62 Nm ³ /hr @ 103.1 k Pa
Oxygen Pressure -	
OG-20	0 - 15 psig
OG-20 Compressorless-	0 - 30 psig
Oxygen Purity-	93% +/- 3% [See Graph, Page 9]
Oxygen Dew point -	- 60° F (-51° C)
Feed Air Requirement -	
OG-20-	None, Compressor Included
OG-20 Compressorless-	4 SCFM @ 30 – 50 PSIG
Response Time -	After initial start-up or extended shutdown is approximately 2 minutes to attain maximum purity.

PHYSICAL :

Oxygen Outlet Fitting -	B Size Oxygen Adapter
Air Inlet Fitting -	
OG-20-	None
OG-20 Compressorless-	¼" FNPT Bulkhead
Sound Levels -	
OG-20-	68 dba @ 1 meter without cover 66 dba @ 1 meter with cover
OG-20 Compressorless-	35 dba @ 1 meter
Dimensions -	17 x 10 x 27.5 inch (W x D x H) 43 x 25.5 x 72.5 cm (W x D x H)
Weight -	
OG-20-	67 lbs. (30.15 kg) without cover 80 lbs. (36 kg) with cover
OG-20 Compressorless-	42 lbs. (18.9 kg) without cover 55 lbs. (24.75 kg) with cover (option)

Power Requirements:

OG-20:

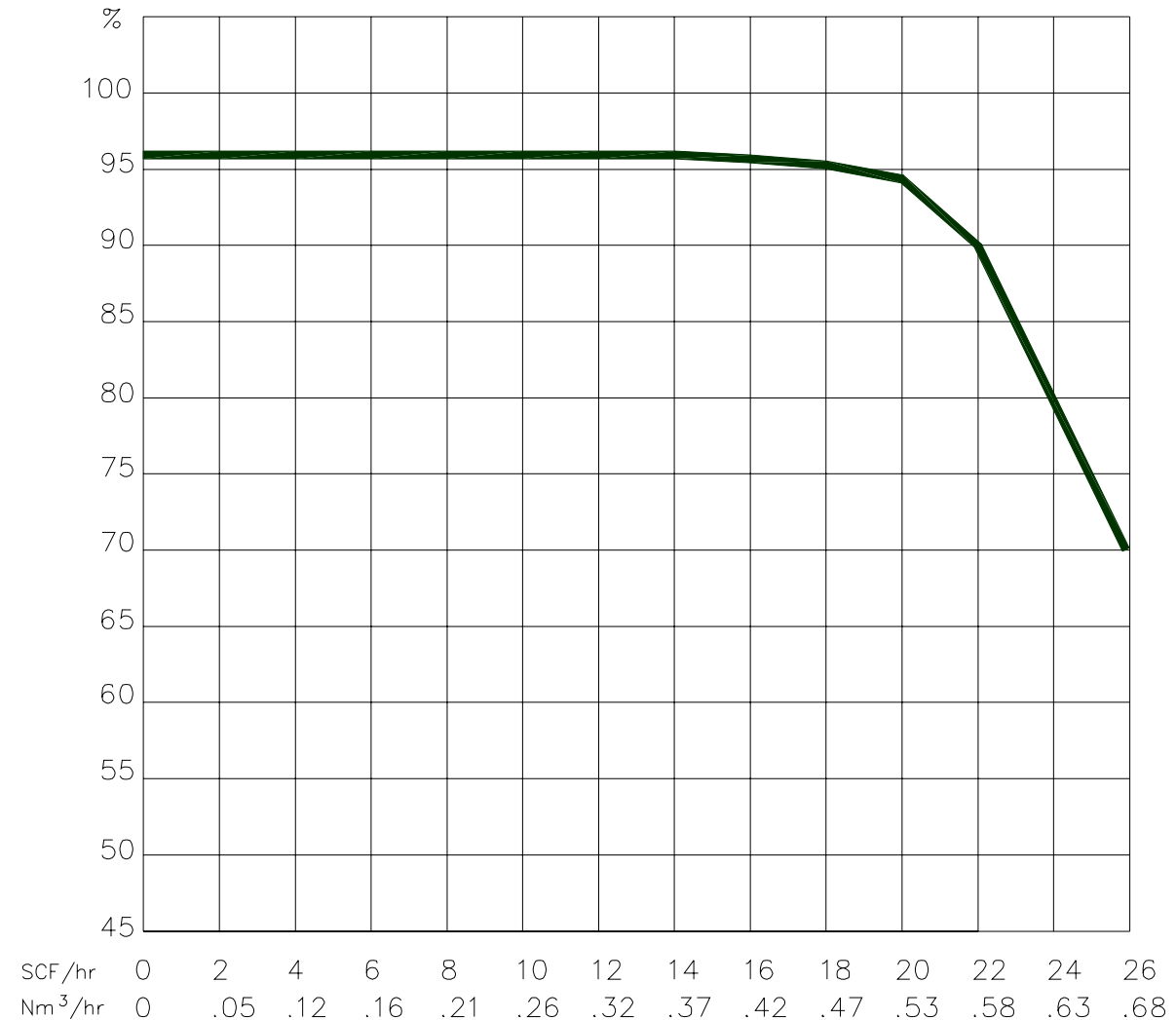
Standard (Domestic) - 115 VAC, 60 Hz, Single Phase 6.0 amps
Optional (International) - 230 VAC, 50/60 Hz, Single Phase, 3.0 amps

OG-20 Compressorless:

Standard (Domestic) - 115 VAC, 60 Hz, Single Phase, 0.2 amps
Optional (International) - 230 VAC, 50/60 Hz, Single Phase, 0.1 amps

OG-20/20 COMPRESSORLESS PERFORMANCE CURVE Oxygen Purity versus Flow

OXYGEN PURITY (+/-3%)



NOTE: SCF (standard cubic foot) gas measured at 1 atmosphere and 70°F and 0% humidity. Nm (normal cubic meters) gas measured at 1 atmosphere, 0°C and 0% relative humidity.

Required Operating Conditions

Location of Machine: The standard Oxygen Generator is intended for use indoors in a commercial or light industrial setting. The enclosure meets **NEMA 12** protection guidelines, which provides a degree of protection against dust, falling dirt and non-corrosive liquids.

Feed Air/Ambient Air Quality: The useful life expectancy of any PSA Oxygen Generator is directly related to the air quality that is fed into it. Hot, humid, dirty, oily air deteriorates and degrades the performance of molecular sieve. In order to preserve the effectiveness and extend the useful life of the generator, all precautions should be taken to insure that Cool, Dry, Clean, Oil-Free air is provided to it.

Changing the inlet air filter is a simple and easy way to provide the unit with some protection. Where possible, it would be advantageous to locate the unit in an air-conditioned space, or at least a well-ventilated area. The room should also be free of toxic gases and high concentrations of hydrocarbons, especially carbon monoxide. Additionally, to the degree possible, humid, oily areas should be avoided as installation sites.

Ambient Air Temperature: The machine is designed for use over a temperature range of 40°F to 100°F (5°C to 38°C). Since hot air has the ability to hold much more water, in the form of humidity, than cool air, operating the units in hot areas will reduce the effective life of the molecular sieve.

Note: Operation outside of this temperature range will not be warranted by **OGSI**.

Electrical Power: On U.S. models, the power for the control circuitry of the Oxygen Generator is a single-phase electrical supply of 115 Volts AC and about 6 Amps at a frequency of 60 Hz. This equates to approximately 600 Watts of power. It is required that a 15 Amp circuit be **dedicated** to each OG-20. Additionally, the unit must be plugged into this circuit using only the supplied power cord, and without additional extension cords.

Feed Air Requirements (OG-20 Compressorless Only): 4 SCFM at 30-50 psig incoming pressure is required for proper functioning of this machine. The air should be cool and clean, filtered to remove any contaminants, such as dust particles and moisture. It is recommended that it meet the requirements of ISO8573.1 Class 1.4.1

Positioning: The unit must be operated in an upright position only, with no obstruction blocking airflow around the unit.

Pre-Installation Check Instructions

Although every **OG-20/20 Compressorless** is thoroughly tested and checked before it is shipped from our factory, the following checks are necessary to insure that none of the internal components have been damaged in shipment. This check should take less than five minutes to perform.

- 1.) Make a visual inspection of the machine and make sure all parts are properly attached.
- 2.) Plug the unit into an electrical outlet. A receptacle plug of local configuration will need to be attached first if the machine has been shipped outside North America.
 - a. Turn the On/Off, green lighted switch to the on position and make sure the green light comes on,
 - b. Listen for the sound of the compressor to start running, if you do not hear it within a few seconds shut the machine down immediately and call the factory for assistance.
- 3.) Once the machine is running, turn the knob on the upper part of the oxygen flow meter to adjust the oxygen flow to 10 LPM. The ball in the flow meter should be in the middle of the flow meter indicating 10 LPM flow and the oxygen pressure gauge should read 13-15 PSIG. If it does not, turn the oxygen regulator either clockwise to decrease the pressure or counter-clockwise to increase it until it reaches 13-15 PSIG.
- 4.) You should be able to feel oxygen being discharged from the lower left oxygen outlet port. If these things do not occur, check to make sure that none of the hose connections have come loose. Call the factory if no loose connections are found and trouble persists.

Setup & Installation Instructions

Before installing the **OGS/** Oxygen Generator, it is necessary to consider the location, space available and power supply for the generator.

1.) Locating the **OG-20:**

- a. The oxygen generator should be located in an area that is indoors and remains between 40°F (5°C) and 100°F (38°C). **Location of the machine outdoors or in an area that is not normally within this temperature range will void the OGS/ Warranty.**
- b. There should also be at least 8 inches (20 cm) between the unit and any side wall in the room that it will be located. This is to ensure that airflow into the machine through the cooling fans is not restricted.
- c. (20 Compressorless Only) The machine must be located within reach of a air supply line, as this machine requires an external pre-existing source of pressurized air.

2.) Space Available for the **OG-20/20 Compressorless:**

- a. If the **OG-20/20 Compressorless** is going to be located in a room that is small, (less than 1000 cubic feet or 25 cubic meters), that room should be well ventilated (at least 5 air changes in the room per hour). There are two reasons for this. The first is that the generator will be discharging nitrogen into the atmosphere of the room, and a nitrogen build up could be dangerous to people entering the room. The second is that if, for instance, the generator was located in a small closet the air in that closet would become enriched with nitrogen. As the generator continues to run it would become more and more difficult for it to separate the oxygen from the air because oxygen will make up a smaller and smaller fraction of the air that is fed into the generator.

3.) Power Supply for the **OG-20/20 Compressorless:**

- a. The oxygen generator should be positioned within 8 feet (2.2 meters) of the electrical outlet that will power it. The reason for this is that the motor has a large current draw especially during the first few seconds of startup. **It is also very important for this reason NOT to use any extension cords with the unit.** They could overheat and melt, possibly causing a fire.

Safety Precautions

It is very important that you read the precautions below and make yourself aware of the hazards of oxygen in general. While it can be handled and used very safely it can also be mishandled or applied incorrectly causing dangerous situations.

1.) **Oxygen is a fire hazard.** It can be very dangerous as it vigorously accelerates the burning of combustible materials. To avoid fire and/or the possibilities of an explosion, oil, grease or any other easily combustible materials must not be used on or near the oxygen generator. Smoking, heat and open flames are also not recommended near the unit. Individuals who have experience handling oxygen systems should become the designated operators of the oxygen generator within your facility.

2.) **Ensure that the oxygen outlet stream is not directed toward anyone's clothing.** Oxygen will embed itself in the material and one spark or hot ash from a cigarette could ignite the clothing vigorously.

3.) In critical applications it is important to have a backup supply of oxygen, as it should be remembered that the generator does not come with any reserve storage tank and it does require electrical power to operate. Therefore **during power outages oxygen will not be produced.**

4.) As previously mentioned, **do not use extension cords to bring power to the generator.** The current draw into the unit is high and could overheat some extension cords. It is also important to use only a properly grounded outlet.

5.) **High Pressure Oxygen may present a Hazard.** Always follow proper operating procedures, and **open valves slowly.** Rapid pressurization may result in personal injury. Safety glasses and hearing protection are required when venting oxygen under high pressure.

Start up Procedures

Once the system has been installed in accordance with the setup and installation instructions, it may be run. The following steps should provide some direction. Please keep in mind that this system is not designed for use as a medical oxygen concentrator.

- 1.) Connect the oxygen outlet to the application
- 2.) Plug the power cord into a grounded outlet.
- 3.) Press the On/Off switch, check to see that the green light on the switch goes on and listen for the air compressor.
- 4.) Wait 2 minutes for the unit to come up to maximum purity.
- 5.) The oxygen delivery pressure should be set to 13-15 PSIG.
- 6.) Open the flow meter to the desired level of flow as indicated by the ball float inside the flow meter.
- 7.) Begin using the oxygen

Shutdown Procedures

- 1.) To stop the flow of oxygen out of the unit temporarily, simply close the valve on the flow meter by turning the knob at the base of it fully clockwise. Within a few seconds 0 LPM flow will be indicated on it.
- 2.) To shut the machine off, press the On/Off button to off. The light should go out on the switch and the compressor noise should quickly die out.

OG-20 Troubleshooting Guide

DUSTING OF SIEVE BEDS

Signs of Problem: White powder visible in machine
or
Pressure levels too high

Causes of Problem: High pressuring of machine

Solution to Problem: Replace Sieve Beds

VALVES STICKING

Signs of Problem: Pressure levels too high

Causes of Problem: Dusting of Sieve
or
Filters not replaced let dirt & dust into machine

Solution to Problem: Remove valve block from machine and clean valves and spools completely

PRESSURE SWITCH NOT WORKING

Signs of Problem: Machine not shutting on/off at target pressures

Causes of Problem: Faulty switch

Solution to Problem: Remove switch and return for replacement

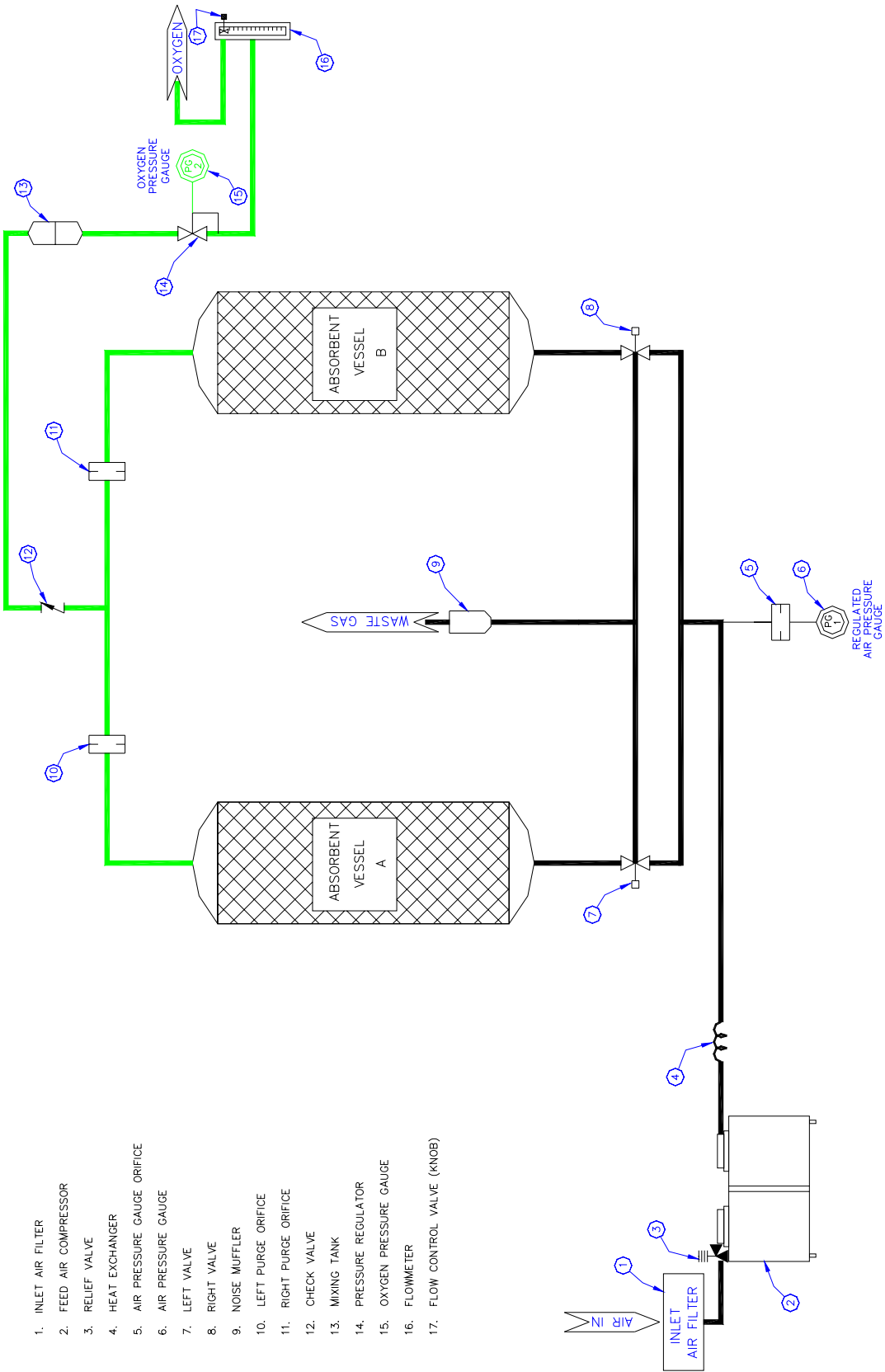
Detailed Warning Description

Low Oxygen Pressure- This may be a result of a leak in the system. Use a leak testing solution to locate and repair any air leaks.

The machine has run for 30 minutes and Purity has not yet been Reached- This may be a result of a leak in the system. Use a leak testing solution to locate and repair any air leaks.

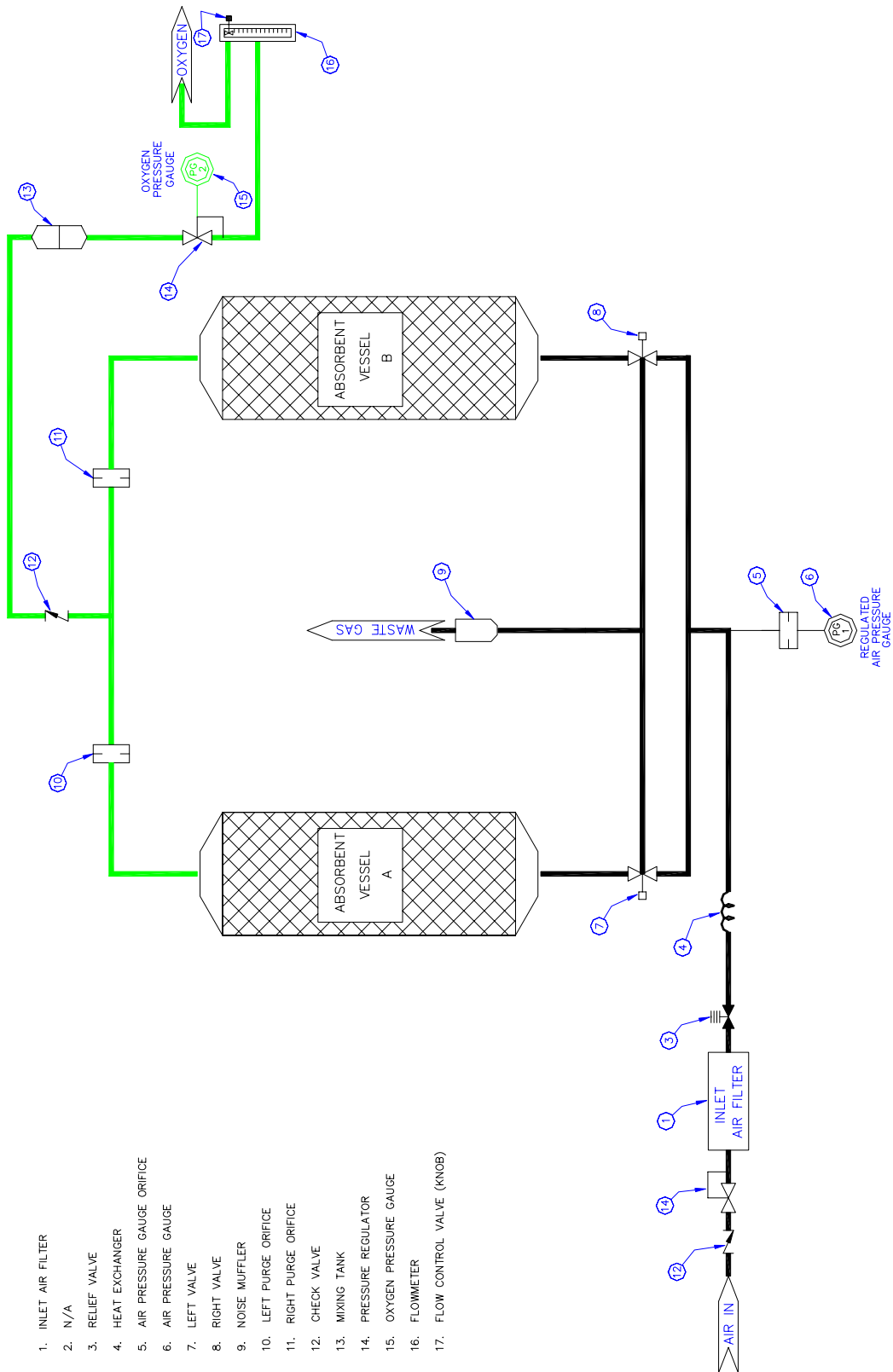
Oxygen purity has Fallen below Acceptable limits- This may be an indication of a leak within the system. Use a leak testing solution to locate and repair any leaks.

Process Flow Schematic: OG-20



- 1. INLET AIR FILTER
- 2. FEED AIR COMPRESSOR
- 3. RELIEF VALVE
- 4. HEAT EXCHANGER
- 5. AIR PRESSURE GAUGE ORIFICE
- 6. AIR PRESSURE GAUGE
- 7. LEFT VALVE
- 8. RIGHT VALVE
- 9. NOISE MUFFLER
- 10. LEFT PURGE ORIFICE
- 11. RIGHT PURGE ORIFICE
- 12. CHECK VALVE
- 13. MIXING TANK
- 14. PRESSURE REGULATOR
- 15. OXYGEN PRESSURE GAUGE
- 16. FLOWMETER
- 17. FLOW CONTROL VALVE (KNOB)

Process Flow Schematic: OG-20 Compressorless



Process Flow Description

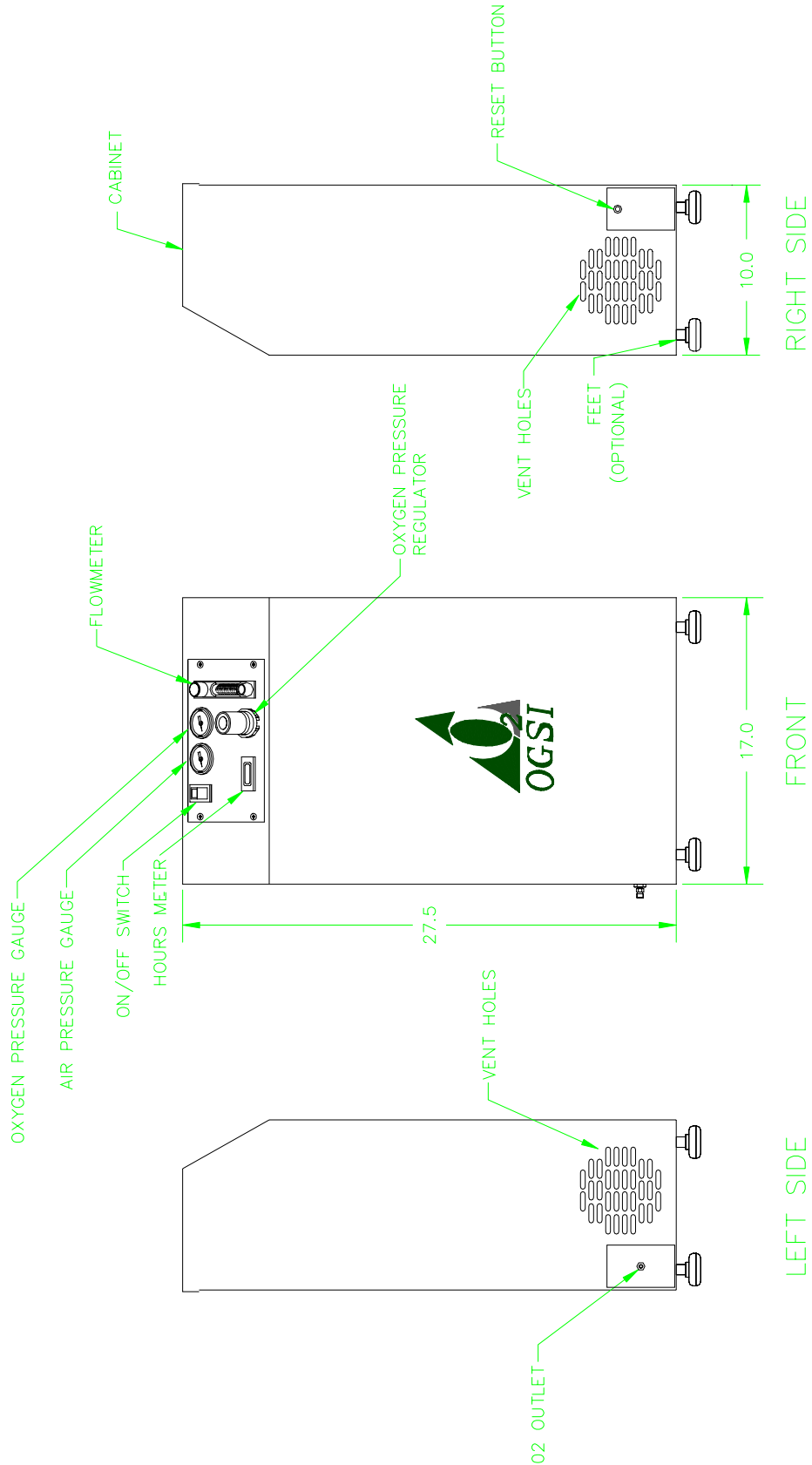
The normal flow of air through the **OG-20/20 Compressorless** is shown on the previous 2 pages in the Process Flow Schematic Drawings. As you can see once the incoming air is filtered and compressed in the **OG-20** or regulated to the proper pressure in the **OG-20 Compressorless**, it is directed into one of the two sieve beds. As the air enters the bed, the nitrogen is adsorbed by the sieve and the oxygen passes through as product gas to the mixing tank. Each bed produces Oxygen until the sieve in that bed is saturated with Nitrogen. When that occurs, the feed airflow is directed to the other bed, which continues the production process. While the second bed is producing oxygen the first is venting the nitrogen it adsorbed to the atmosphere through a waste gas muffler.

From the mixing tank, the oxygen pressure regulator and the flow meter can be used to set the oxygen delivery pressure and the oxygen flow rate.

While it is possible to set either of these parameters to the maximum levels, they cannot both be maximized at the same time. In other words, the oxygen pressure cannot be set to 15 PSIG at the same time that the flow is overdrawn to 12 liters per minute. The rated production capacity of this machine is 22 SCFH or 10 liters per minute at 13-15 PSIG. If a higher flow rate is drawn from the machine the delivery pressure will fall while at higher delivery pressures the flow rates available will decrease. Purity will also suffer in any overdraw conditions.

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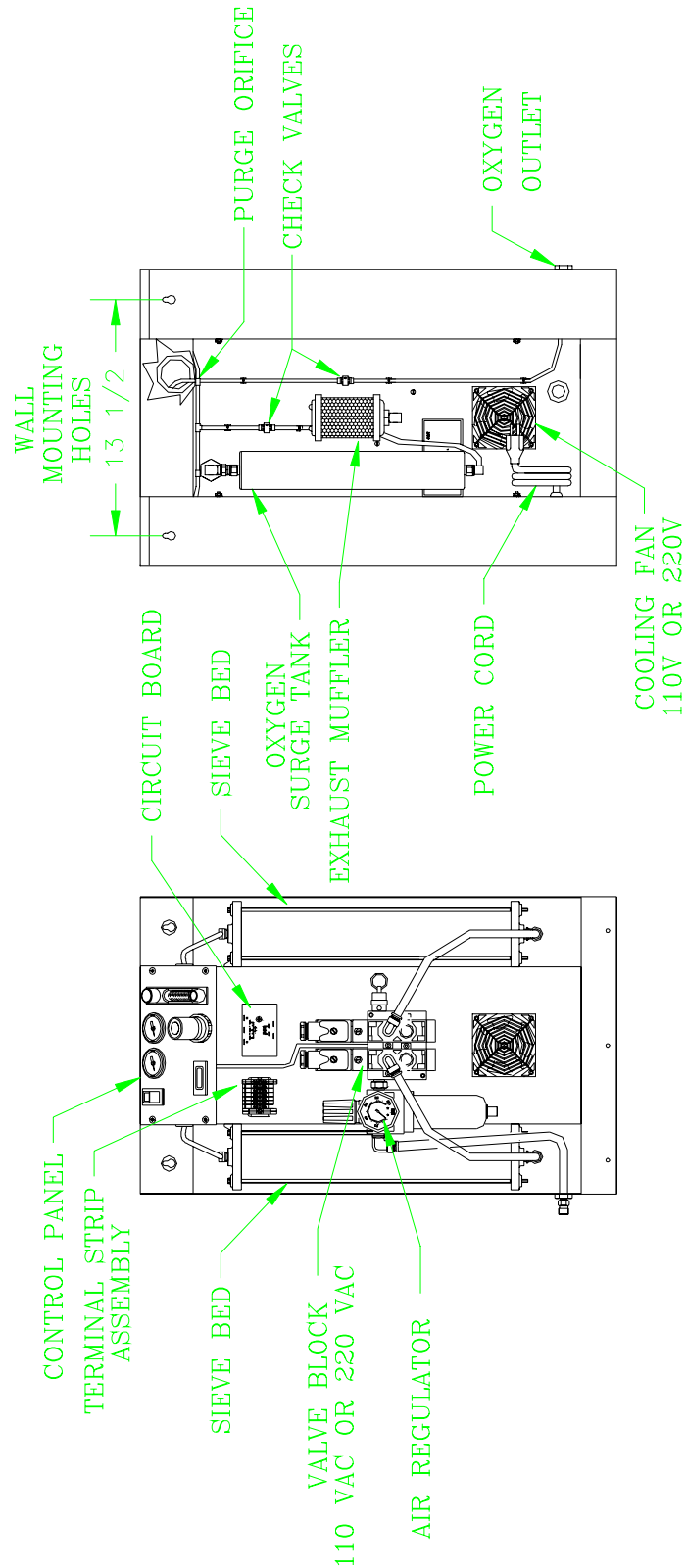
External Components Drawing



OG-20/20 Compressorless External Components Description

<i>Vent Holes-</i>	These vent holes allow cooling air to enter the enclosure
<i>Oxygen (O₂) Outlet-</i>	This fitting is a 'B' size oxygen adapter. It can be removed to expose a 1/8" female NPT pipe fitting
<i>On/Off Switch-</i>	Controls power to machine. Is lighted while machine is on
<i>Air Pressure Gauge-</i>	This gauge indicates the air pressure being delivered by the internal air compressor to the sieve beds. It should vary between 22-34 PSIG while the unit is running
<i>Oxygen Pressure Gauge-</i>	This gauge indicates the pressure at which the oxygen is being delivered. 13-15 PSIG is the rated delivery pressure for a 22 SCF per hour flow rate. The regulator can adjust the pressure
<i>Oxygen Pressure Regulator-</i>	The regulator controls the oxygen delivery pressure level. Turning it clockwise increases the delivery pressure while turning it counter-clockwise decreases the delivery pressure. The oxygen pressure gauge will indicate the level set. To lock it into place push down the adjustment knob.
<i>Hours Meter-</i>	The hours meter increments time while the unit is running. It provides an indication as to when service intervals are due.
<i>Reset Button-</i>	The reset button is actually a circuit breaker that opens if there is an electrical overload in the system
<i>Power Cord-</i>	The power cord is designed for use on 110 vac/60 Hz electrical systems and comes with a 3-pronged ground fault protected plug. For foreign shipments the plug will be removed and a plug of local configuration will need to be installed. The green wire is the Earth Ground and the black and white wires are for the AC Supply.

Internal Components Drawing (OG-20 Compressorless)



OG-20/20 Compressorless Internal Component Description

- Terminal Strip Assembly-** The terminal strip distributes electrical power as required to the compressor and control components of the machine.
- Circuit Board-** The circuit board controls the operation of the flow controlling valves. While one valve coil is energized the other is not.
- Sieve Beds-** These beds contain the molecular sieve that performs the air separation process. They are spring loaded to prevent settling and should not ever need to be opened. If the sieve becomes contaminated the beds can be easily replaced.
- Valve Block-** The valve block holds the main valves that control the direction of airflow in the machine. These are the feed and waste valves for each bed. They direct “feed” air to each bed during oxygen production and “waste” nitrogen through the muffler to regenerate the sieve. They cycle continuously while the unit is operating.
- Air Filter (Inlet)-** The air filter keeps dust and dirt from entering the compressor and needs to be changed twice a year in normal environments to maintain the unit’s performance. In especially dirty, oily areas it should be changed more often, four times a year is recommended.
- Delta Twist-** The Delta Twist (heat exchanger) runs in front of the cooling fan and delivers the feed air from the air compressor to the valve block. Using this proprietary tube design significant air temperature reduction occurs before the enters the sieve beds, improving performance
- Cooling Fan-** The cooling fan is used to draw air into the unit and to remove heat from the compressor. Whenever the unit is running, the fan will be operating.
- Air Compressor-** The air compressor supplies the feed air to the sieve beds. It is held in place by four bolted rubber feet and can be easily replaced when necessary. It should work as designed for a minimum of 10,000 hours and will last 20,000 hours in many cases.
- Air Regulator- (Compressorless)** Regulates air pressure going into valve block

Routine Maintenance Instructions

Filter Element Replacement:

The filter element provided with the OG-20 must be replaced every six (6) months. The element helps to maintain the quality of the feed air supply and preserve the molecular sieve inside of the oxygen generators. For the OG-20 Compressorless, the filters used on your own air compressor must be replaced as often as necessary to maintain proper feed air quality. (Contact the manufacturer of your compressor for recommended service intervals.) **Failure to replace the filter element on schedule will result in the warranties becoming invalid.**

Cabinet & Power Cord:

The cabinet and power cord should be occasionally washed down with a sponge or clean rag and some soapy water. Avoid the use of ammonia or other strong chemical based cleaning solvents. The intention is to avoid dust and dirt from building up on the machine.

Long Term Maintenance

Air Compressor (20 Only):

The air compressor should last at least two years under normal operating conditions. In many cases it will last five or six years. Eventually, however, it will need to be re-built or replaced. Oxygen purity and flow rate along with feed air pressure delivered to the sieve beds will all be indicators that the air compressor has expended its useful life. Replacement in the field is possible but return of the unit to the factory or an authorized service center is recommended, as by that time a complete maintenance check will be in order.

Valve Replacements:

As with compressor repairs the best practice will be to return the unit to the factory or to an authorized service center for repair.