



OPERATING AND REFERENCE MANUAL

NITROBEV 360

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**NITROGEN 2 U ®
OPERATING AND REFERENCE MANUAL**

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1. BASIC SAFETY

The Following safety guidelines should be followed:

1. PREVENT INJURY.....Wear all appropriate safety gear including safety glasses. Ensure all tools and devices used during the installation process are in good condition. Also be alert that gas at high velocity may be released from safety valves and vents.
2. PREVENT FIRES AND EXPLOSIONS.....When doing maintenance, make sure all sources of ignition are eliminated. Do not permit open flames, or the uses of matches, lighters or the use of tobacco products near the compressed gas equipment.
3. KNOW EVACUATION ROUTES.....Develop and train all employees on the proper evacuation routes from the facility in case of emergency
4. PROTECT EQUIPMENT AND PERSONNEL..... Never bypass factory installed safety devices. Always operate equipment within the operating parameters it was designed for.
5. FOLLOW POSTED PRECAUTIONS.....Follow all warning labels on equipment and train operators on the proper precautions to take while working near the equipment.
6. PREVENT ELECTRICAL SHOCK..... Unplug the power cord from the equipment before performing maintenance. Lock-out and tag all appropriate controls. Use only tools designed for use on electrical equipment.

EMERGENCY PHONE NUMBERS

AMBULANCE	
FIRE	
POLICE	

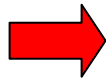
Situations may develop that no written procedure covers. Think carefully before acting. Know the function of the unit controls, valves, and switches, and their effect on the overall gas production process. Carefully review all procedures before operating the equipment.

2. FIRE RESPONSE

Items listed below are not intended to replace your facility's Emergency Response Plan. In case of fire:

1. Turn in fire alarm immediately and evacuate all facility personnel
2. Isolate areas where fire is contained by closing facility doors and windows

3. Follow appropriate fire fighting procedures for the combustible materials (see MSDS). Call facility manager for further instructions.
4. If involved in fire fighting, wear appropriate safety apparatus.
5. When fighting an electrical fire, always use carbon dioxide (CO₂). *Never use water to fight an electrical fire.*



WARNING!

Fire and equipment damage caused by fire may result in death. The release of gases due to fire or heating of gas handling equipment may result in exposure to gases with toxic or asphyxiating properties. It may also cause explosions or combustion rate increases. If fire or explosion occurs, follow procedures set up in your Emergency Response Plan.

Types of Fire:

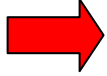
1. Electrical.....Failure of electronic components could initiate a fire in the unit or ignite hazardous accumulations of flammable gases. Ensure all equipment is properly grounded.
2. Chemical.....Flammable materials can occur in areas without an operator's knowledge or warning. Use only spark-proof tools and explosion proof equipment when working around flammable materials.

3. ELECTRICAL HAZARDS

Electrocution.....Adhering to the following guidelines will reduce the risk of electrocution and shock.

1. Tampering or unauthorized substitution of component parts may adversely affect the safety of this equipment. Order only genuine factory replacement parts for repairs.
2. Turn off all power sources before opening the cabinet or other equipment, or checking any component.
3. Carefully follow and observe all lock-out/tag-out procedures for your facility.
4. Do not come in contact with any live components inside the unit. Electrical shock caused by voltage inside the control circuit can cause death or serious injury.
5. Keep equipment clean and free from hazards. Do not allow grease or oils near the unit.

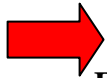
6. Allow only qualified electrical technicians and certified electricians to work on the unit. Persons operating or installing without proper knowledge of the electrical system may cause harm to themselves and/or others.



WARNING!

Electrical shock can kill! Use extreme caution. Only allow qualified electrical service personnel, who are in compliance with all local, state and federal guidelines, to service the unit.

4. SAFETY AND REPAIR PROCEDURES



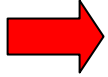
WARNING!

Failure to properly isolate and protect equipment and piping can cause asphyxiation, fire, and/or explosion. Prior to performing any service work on the unit, be sure to positively isolate the equipment from the gas supply and the process material. It is not enough to simply close valves. Lines and tubing must be blanked or disconnected.

1. All repair work must be done by a qualified service technician
2. Be sure to de-pressurize supply gas piping before servicing the unit
3. All employees should be protected from hazards related to unexpected start-up or release of stored energy during unit maintenance or servicing. Strict lock-out/tag-out procedures ensure that all employees are protected. Be sure to post proper procedures for this lock-out process.
4. All piping subject to pressurization on this unit contains proper pressure relief devices (pressure relief valves) for over pressure protection. These devices must be maintained properly to ensure proper operation.
5. Before starting the equipment after maintenance or repair, be sure all parts of the unit affected by repair have been restored to their proper operating condition, and that pressurized lines have no leaks.
6. All questions regarding safety and/or proper operation should be directed to the manufacturer.

5. Venting and Atmospheric Monitoring

Listed below are guidelines detailing the conditions for safe installation and operation of the Nitrogen 2 U® Series. Failure to adhere to these ventilation guidelines can result in serious injury or death.



WARNING!

Care must be taken to install the Nitrogen 2 U® series in a well ventilated area, and/or provide for exhaust ventilation of the waste gas and O₂ monitoring. Failure to do so may result in asphyxiation or fire.

1. The Nitrogen 2 U® series, produce continuous streams of oxygen enriched air and nitrogen. If installation area ventilation is inadequate to allow for dissipation or exhaust of these gases, an oxygen rich or and oxygen deficient atmosphere can result. The operator should post warning signs visible to the general public near the entrance or access to the unit. The oxygen rich permeate gas exits the unit at just above atmospheric pressure. Care must be taken in exhaust piping to insure no back pressure exists on this waste stream.
2. Room ventilation must be provided for any indoor installation to allow for dissipation of nitrogen gas in case of unit piping or valve leaks. In cases where additional piping or vent lines are not practical, diligent care must be taken to install the unit in a large, well ventilated area.
3. A common method of monitoring oxygen content in a confined area is through the installation of atmospheric analyzing equipment. The manufacturer of the Nitrogen 2 U® system can provide a list of suppliers for this type equipment.
4. Use of the waste gas stream is not recommended due to its moisture saturated content and low pressure. Any back pressure on the waste gas stream (permeate) will result in poor membrane unit performance and possible system shutdown. Waste gas composition is approximately 34-38% oxygen enriched air. It is NOT pure oxygen.

6. SYSTEM SPECIFICATIONS

The Nitrogen 2 U® Nitrobev 360 has been designed to be simple in operation and setup. The operating parameters are set at the factory and require little or no adjustment at the use point. Due to varying altitudes and environmental temperatures, actual performance may vary slightly depending on specific locations of installation.

1. Electrical Requirements:

Voltage	Phase	HZ	Amp Outlet
120	1	60	15

2. Dimensions

Model	Height (in.)	Width (in.)	Depth (in.)	Weight (lbs)
N2360C	18.25"	18"	8.25"	55
N2360BC	18.25"	18"	8.25"	57

7. INSTALLATION / START-UP N2360C Model

Careful installation of the Nitrogen 2 U® series is essential to the safe and reliable operation of the unit. Make sure all safety items in Section 1 have been followed.

1. Make sure the area to be used for installation is clean, free from hazards and well ventilated at ambient temperatures ranging from 60-80 degrees Fahrenheit and does not to exceed 90 degrees. Allow 3 inches of clearance on each side of the NitroBev 360 within the foot print of the installation. Area should be secure, and free of corrosive vapors, oils, excessive particulate. Area should be indoors.
2. Once you have removed your Nitrobev 360 from the shipping packaging, be sure to check all valves, fittings, and cabinet to make sure no items are loose from transit. Check all piping connections to ensure they are tight *Ref. 4*. Included with your Nitrobev 360 C model nitrogen generator you will find a (1) 3/8" nut, stem, and nylon washer (1) 10' of 3/8 beverage line, and (2) worm clamps *Ref. 2*.
3. Be sure there is a 1/4" flare fitting in the valve marked "N2 Out" as shown below in *Ref. 4.*, and the valve is closed. Connect a 3/8" stem and nut fitting with nylon washer to the flare fitting at the "N2 Out" point *Ref. 6*. Push the 3/8" beverage line on to the hose barb and secure it with the clamp provided *Ref. 8*. Run your beverage line to your coffee/beverage refrigerator, and secure the other end of the beverage line to a ball lock liquid connector, or keg coupling.
4. It is recommended to run the drain tubing into a floor drain, or moisture receptacle. The amount of moisture that is accumulated over time is dependent on the % of humidity at the installation site. Best to be safe, and keep water off surfaces *Ref. 15*.
5. Now you are ready to plug your Nitrogen Generator to your 120V 15A power supply, and begin to pressurize the system. The Nitrobev 360 will run for a few minutes until it reaches the compressor cut-off pressure. **note: The supply pressure is factory set to deliver 30 PSI. In the event the desired pressure needs to be changed please see page 12 on how to adjust pressure. If you have more than one faucet it is recommended to install a secondary regulator for each keg.*
6. Slowly adjust the black handle of the "N2 OUT" to the on position.
7. You are now ready to Nitrogenate! Once your preferred beverage is cold and under pressure for 48 hours you will be ready to enjoy. You can speed up the Nitrogenating process down to a few hours if Nitrogenating kegs are used. Contact us for more info.

8. INSTALLATION / START-UP N2360BC Model

Careful installation of the Nitrogen 2 U® series is essential to the safe and reliable operation of the unit. Make sure all safety items in Section 1 have been followed.

8. Make sure the area to be used for installation is clean, free from hazards and well ventilated at ambient temperatures ranging from 60-80 degrees Fahrenheit and does not to exceed 90 degrees. Allow 3 inches of clearance on each side of the NitroBev 360 within the foot print of the installation. Area should be secure, and free of corrosive vapors, oils, excessive particulate. Area should be indoors.
1. Once you have removed your Nitrobev 360 from the shipping packaging, be sure to check all valves, fittings and cabinet to make sure no items are loose from transit. Check all piping connections to ensure they are tight *Ref. 1*. Included with your Nitrobev 360BC model nitrogen generator you will find (3) 3/8" nut, stem, and nylon washer (1) 10' of 3/8 beverage line, and (6) worm clamps *Ref. 3*.
2. Be sure there is a 1/4" flare fitting in the valve marked "CO2 Line In", and "25% CO2" as shown below in *Ref. 5*, and all valves are closed. Connect a 3/8" stem and nut fitting with the nylon washer to the flare fitting at the "CO2 Line In", and "25% CO2" point *Ref. 7*. Connect your CO2 hose to the "CO2 Line In" by pushing the 3/8" beverage line on to the hose barb and secure it with the clamp provided. Repeat this step for connecting the "25%CO2" outlet *Ref. 9*. Run your beverage line from the "25%CO" outlet to your keg refrigerator, and secure the other end of the beverage line to a ball lock liquid connector, secondary regulator, or keg coupling.
3. It is recommended to run the drain tubing into a floor drain, or receptacle. The amount of moisture that is accumulated over time is dependent on the humidity of the installation site. Best to be safe, and keep water off surfaces *Ref. 15*.
4. Now you are ready to plug your Nitrogen Generator to a 120V 15A power supply, and begin to pressurize the system. The Nitrobev 360 will run for a few minutes until it reaches the compressor cut-off pressure. At this point you will want to open your CO2 tank to allow gas into the Nitrobev360 system. **note: The supply pressure is factory set to deliver 30 PSI. In the event the desired pressure needs to be changed please see page 12 on how to adjust pressure. If you have more than one faucet it is recommended to install a regulator for each keg.*
5. Slowly adjust the black handle of the "25% CO2", and "CO2 Line In" to the on position.
6. You are now ready to Nitrogenate! Once your beer is cold and under pressure for 48 hours you will be ready to enjoy, much like when you force carbonate other styles. **Note: If you need to use the N2 Out in conjunction with the 25%CO2 refer to Section 7 for setup.*

9. FILTRATION

The inlet air filtration system on the Nitrobev360® system is designed for reliable filtration and removal of particulate matter as well as moisture, and any aerosols that may be present in the inlet air stream. Proper replacement of the filtration element will ensure a long life and reliability for your unit. The filter in the Nitrobev360® the auto-drain, and the compressor filter need to be replaced Annually.

1. To replace filter, and auto-drain:
 - a. Remove the cover panel on the side that holds the logo by removing all 8 screws *Ref 10*.
 - b. Be sure filter is not under pressure if so un-plug the unit.
 - c. If pressurized wait for the pressure to be depleted.
 - d. Disconnect the drain tubing by loosening the clamp with a flat head screwdriver. *Ref. 11*
 - e. Remove filter bowl by turning the bowl (clear) clock wise.
 - f. Clean the filter bowl of any debris, and remove any residual water.
 - g. Replace filter element with genuine Miller Carbonic, Inc. replacement filter element. *Ref. 12*
 - h. Begin to remove the auto drain by placing an 11/16 wrench on the nut at the bottom of the filter bowl *Ref. 13*. Once the nut is removed the drain can be replaced *Ref. 14*.
 - i. Finish the filter change by locking the filter bowl back into place by turning it counter clock-wise into the filter head until it is tight.
 - j. Re-attach the drain tubing and secure it to the drain port with the clamp *Ref. 11*.

2. To replace compressor filter:
 - a. Turn the black inlet filter located at the compressor counter clock-wise to remove the filter housing *Ref. 16*.
 - b. Remove the filter element by pulling up on it *Ref. 17*.
 - c. Install the new element by pushing it down on the plastic prongs, and re-attach the filter housing by setting it in the base grooves, and locking it into place turning it clock-wise.



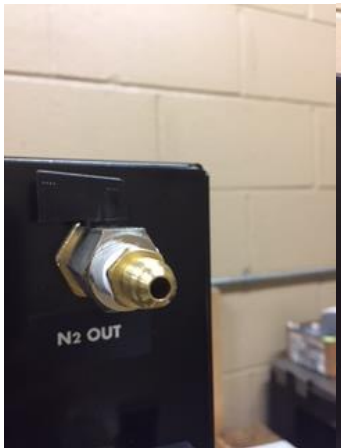
REF. 1



REF. 2



REF. 3



REF. 4



REF. 5



REF. 6



REF. 7

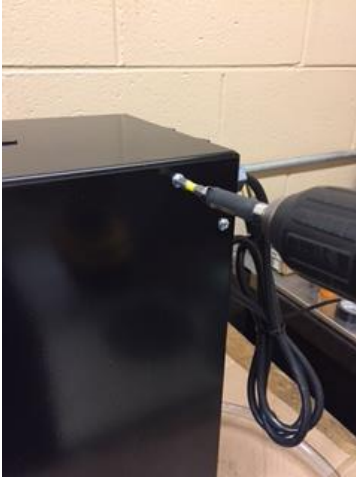


REF. 8



REF. 9

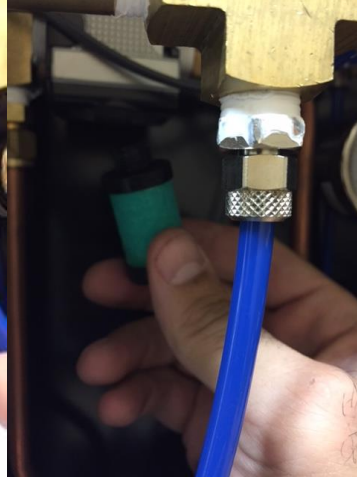
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REF. 10



REF. 11



REF. 12



REF. 13



REF. 14



REF. 15



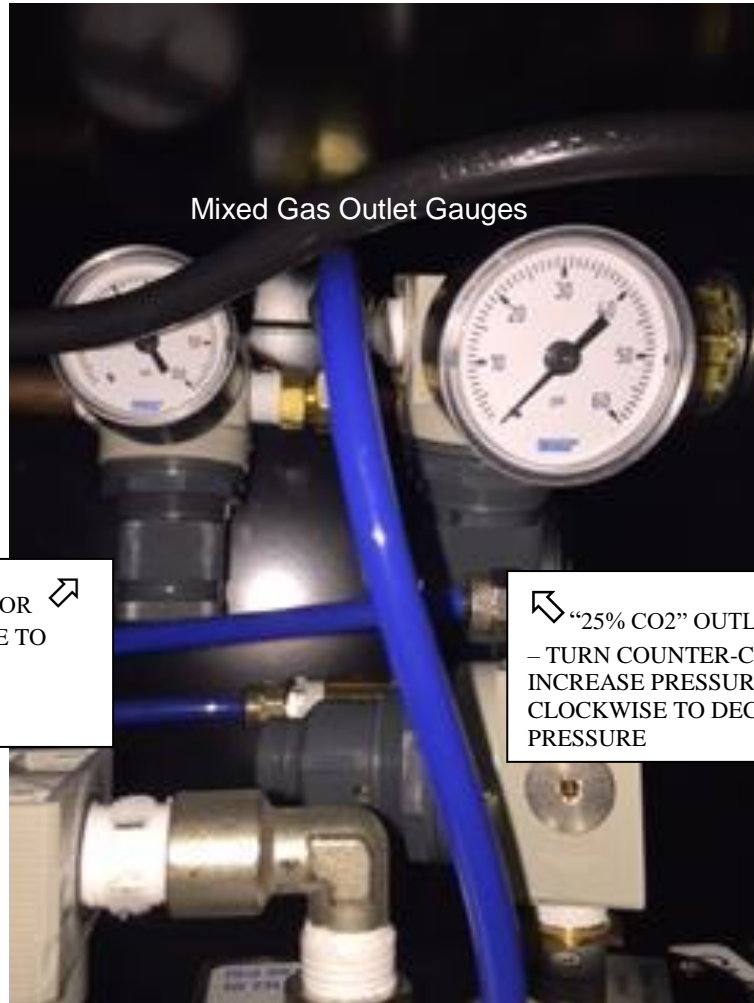
REF. 16



REF. 17

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ADJUSTING OUTLET PRESSURE REFERENCE IMAGE



“N2 OUT” OUTLET REGULATOR ↗
TURN COUNTER-CLOCKWISE TO
INCREASE PRESSURE, AND
CLOCKWISE TO DECREASE
PRESSURE

↖ “25% CO2” OUTLET REGULATOR
– TURN COUNTER-CLOCKWISE TO
INCREASE PRESSURE, AND
CLOCKWISE TO DECREASE
PRESSURE

**Note: Factory pre-set is 30 PSI. Depending on the application, pressure may need to be increased, or decreased.*

TROUBLESHOOTING

For support, filters, or replacement parts please call (888)562-0299

If your Nitrobev360 is running more than often or constantly you most likely have a leak on a beverage line, or keg connection. Once a leak is corrected the generator will stop running. To make sure you have no leak in the nitrogen generator, shut all valves to the closed position to see if the unit holds pressure.

If your Nitrobev360 is unable to shut off with all of the valves closed, the compressor may need a filter change, or there could be a leak coming from the auto-drain, or unload valve at the pressure switch. Before checking for leaks be sure to always unplug your generator, and call the phone number listed above. If by chance a leak is discovered within the Nitrobev 360 the unit will need to be sent back to the factory for repair.

Reference Diagram

