Nitrogenator EZ-2 & EZ-PRO

Installation & Operation Manual

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Safety & Procedural Notices

Correct use of the Nitrogenator is important for your personal safety and for trouble-free use. Incorrect use can cause damage to the Nitrogenator, lead to incorrect gas supply, personal injury, or asphyxiation if used in an unventilated room.

The Nitrogenator models produce a gas blend of Carbon Dioxide (CO2) and Nitrogen (N_2) at a low flow rate, which quickly dissipates into the air. CO2 and N_2 gases are not poisonous but they should not be directly inhaled, since in high concentrations, they can cause asphyxiation. It is imperative that the unit is installed within a well-ventilated room - one that is not sealed off from normal living space air changes.

All personnel involved with installation, operations, and maintenance of the Nitrogenator models must follow safe working practices, OSHA, and local health/safety code regulations during the installation, operation, and maintenance of the unit.

Warning:

This manual must be read in its entirety prior to installing and operating the Nitrogenator to prevent accidents, damage, personal injury, or asphyxiation. Contact your supplier if you detect a problem that you cannot solve with this manual. Only use the Nitrogenator in accordance with its designed purpose. This system should be kept out of the splash zone. Only service technicians that are qualified to work on beverage, electric and pneumatic equipment are permitted to perform the installation, maintenance, and repairs. Do not tamper or experiment with the equipment or exceed the technical specifications.

Receiving & Inspecting

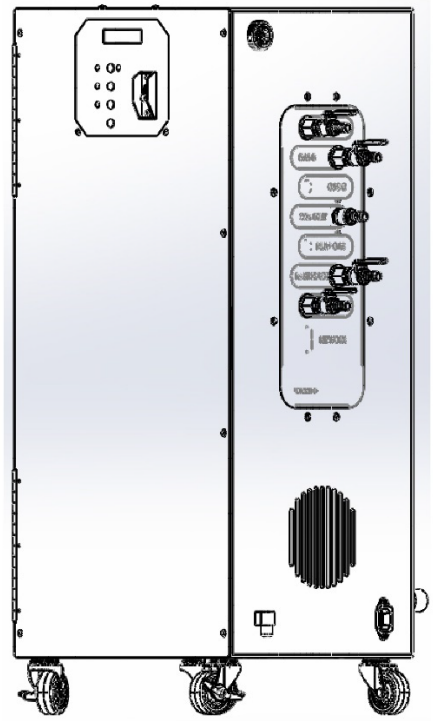
Upon receipt of your Nitrogenator, check the package(s) and unit(s) for any damage that may have occurred during transportation. Visually inspect the exterior of the package(s). If damaged, open and inspect the contents with the carrier. Any damage should be noted and reported on the delivering carrier's receipt.

In the event that the packaging is not damaged, yet upon opening, there is concealed damage to the equipment, notify the carrier immediately. Notification should be made verbally as well as in written form. Request an inspection by the shipping company of the damaged equipment. Retain all crating material until inspection has been made. Finally, contact your supplier.

Specifications (EZ-2 & EZ-PRO)

NITROGENATOR **EZ-2 & EZ-PRO** DATA SHEET

Intertek



	EZ-2	EZ-PRO
Electrical	115V/60Hz/1PH	
Power Consumption	5.8 amps	7.5 amps
Dimensions	14" W x 30" H x 12" D	
Weight	75lbs	90lbs
Mounting Options	Wall & Floor (must use leg/caster set if placed on floor)	
Output	7.5 SCFH	15 SCFH
Gas Purity	99.7% minimum	
Air Clearance	1" (back/bottom) & 4" (right side)	
CO2 Inlet Pressure	75-150 (min-max) PSIG	
Mixed Gas Outlet Pressure	60-65 PSIG	
N2 Storage Tank Options	12, 24 or 28 gallons (top-mount not available for 28gal)	
Ambient Temperature	40 - 95° F	
Noise Level	59 db (A)	69 db (A)
Tubing Connections	3/8" barbs (gas in/out) & 1/4" barb (condensate drain)	
Duty-Cycle	100% continuous for up to 12 hours*	

*All internal components designed for continuous, 100% duty-cycle. 12-hour run timer designed specifically to indicate user of any potential gas leaks downstream via audio-visual alarm.

Flow/Performance Data (EZ-2)

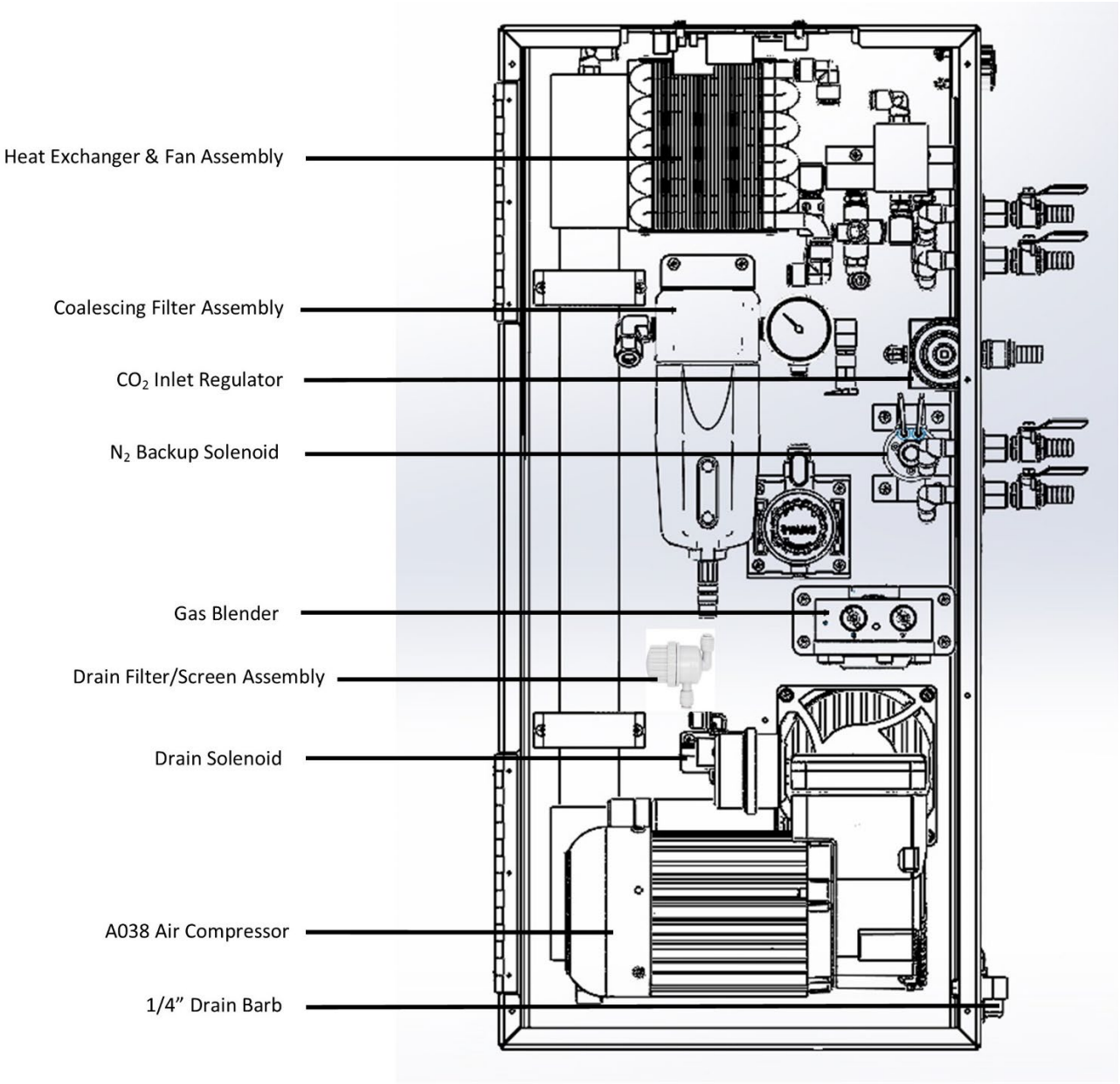
	Single Storage Tank	Two Storage Tanks
60 % CO2 / 40% N2		
	Nitrogenator EZ-2	**Nitrogenator EZ-2**
Kegs/hour (continuous)	5.2	5.2
1 hr surge (kegs)	20.7	36.2
4 hr surge (kegs)	36.3	51.8
pints/minute (continuous)	10.8	10.8
pints/minute (1 hr surge)	42.8	74.8
pints/minute (4 hr surge)	18.8	26.8
	Single Storage Tank	**Two Storage Tanks**
25% CO2 / 75% N2		
	Nitrogenator EZ-2	**Nitrogenator EZ-2**
Kegs/hour (continuous)	2.7	2.7
1 hr surge (kegs)	10.9	19.1
4 hr surge (kegs)	19	27.2
pints/minute (continuous)	5.6	5.6
pints/minute (1 hr surge)	22.5	39.5
pints/minute (4 hr surge)	9.8	14.1
	Single Storage Tank	**Two Storage Tanks**
100% N2		
	Nitrogenator EZ-2	**Nitrogenator EZ-2**
Kegs/hour (continuous)	2	2
1 hr surge (kegs)	8.3	14.6
4 hr surge (kegs)	14.3	20.6
pints/minute (continuous)	4.1	4.1
pints/minute (1 hr surge)	17.2	30.2

Flow/Performance Data (EZ-PRO)

	Single Storage Tank	Two Storage Tanks
60 % CO2 / 40% N2		
	Nitrogenator EZ-PRO	**Nitrogenator EZ-PRO**
Kegs/hour (continuous)	10.4	10.4
1 hr surge (kegs)	25.9	41.4
4 hr surge (kegs)	57.1	72.6
pints/minute (continuous)	21.5	21.5
pints/minute (1 hr surge)	53.5	85.6
pints/minute (4 hr surge)	29.5	37.5
	Single Storage Tank	**Two Storage Tanks**
25% CO2 / 75% N2		
	Nitrogenator EZ-PRO	**Nitrogenator EZ-PRO**
Kegs/hour (continuous)	5.4	5.4
1 hr surge (kegs)	13.6	21.8
4 hr surge (kegs)	29.8	38
pints/minute (continuous)	11.2	11.2
pints/minute (1 hr surge)	28.1	45.1
pints/minute (4 hr surge)	15.4	19.6
	Single Storage Tank	**Two Storage Tanks**
100% N2		
	Nitrogenator EZ-PRO	**Nitrogenator EZ-PRO**
Kegs/hour (continuous)	4	4
1 hr surge (kegs)	10.3	16.6
4 hr surge (kegs)	22.3	28.6
pints/minute (continuous)	8.3	8.3
pints/minute (1 hr surge)	21.3	34.3
pints/minute (4 hr surge)	11.5	14.8

Components

Primary Internal Components

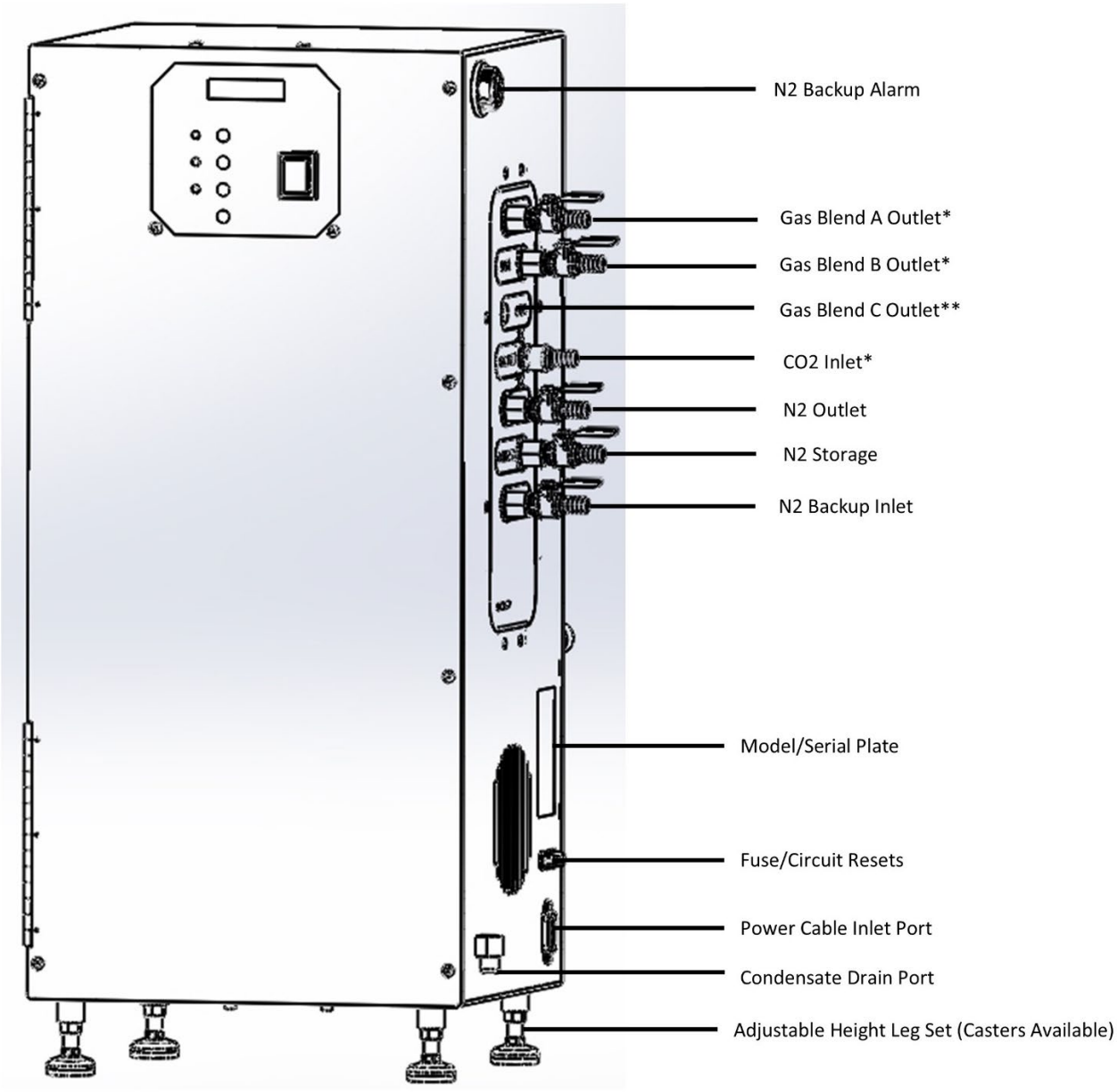


*Nitrogenator EZ-2 with Blender Shown (simplified for illustrative purposes)

*EZ-2 uses the AO38 Compressor

*EZ-PRO uses the AO65 Air Compressor

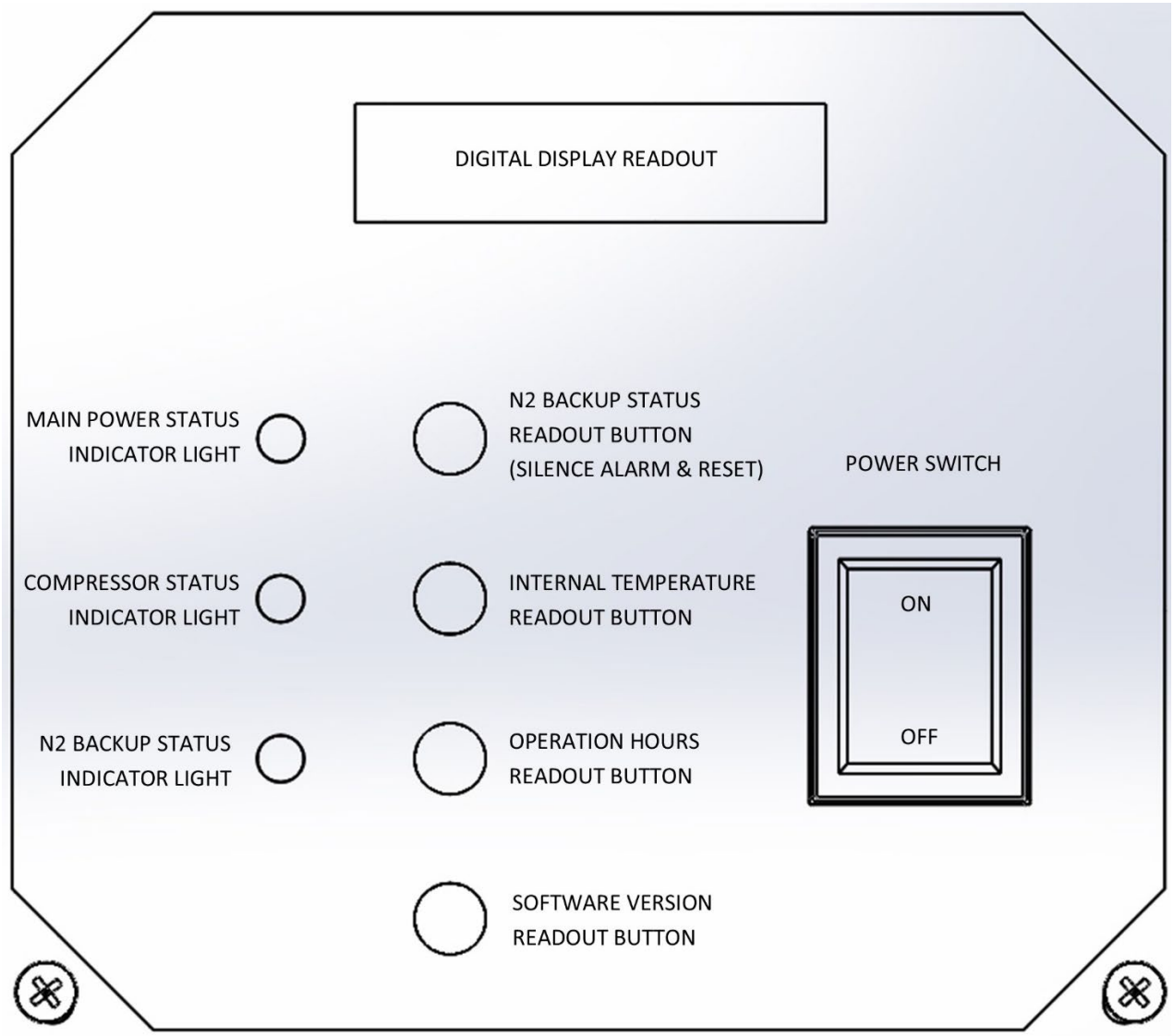
Primary External Components & Connections



*Only applicable for units equipped with standard two-outlet gas blenders

** Only applicable for units equipped with custom three-outlet gas blenders

Digital Display & Control Panel



Installation

Note: Only service technicians that are qualified to work on beverage, electric and pneumatic equipment are permitted to perform the installation, maintenance, and repairs.

Storage

Store the Nitrogenator in a dry and climate controlled (40-95°F) room.

Always keep the Nitrogenator in an upright position / or in box as shipped.

Do not connect the AC power cable until this manual has been read completely and all connections are made as stated within.

Keep all gas lines dry so moisture does not enter the generator upon hookup.

Never place/stack objects on top of the Nitrogenator.

Location Requirements

The Nitrogenator can be placed on the floor, a shelf, or mounted to a wall. It is recommended that the Nitrogenator be mounted to a weight-bearing wall that can support its weight as specified in the Specifications section. If placed on the floor, it should still be fastened in place so that it cannot move due to vibration or be damaged from falling over. It is mandatory that the leg or caster set be used if the system is placed on the floor.

The Nitrogenator should be installed indoors, in an environment between 40° and 95° F, in the upright position where it will not be damaged by water or moving equipment. Leave at least 1" of clearance on the back, bottom, and right sides. Ensure no other equipment will be exhausting heat directly into the air inlets on the right and bottom sides.

There is a ¼" OD barb drain port on the bottom right side of the cabinet. This can be plumbed to the nearest drain on site.

Ensure that the unit is installed within a well-ventilated room - one that is not sealed off from normal living space air changes.

Warning: Installation in an unventilated room can result in asphyxiation.

Mounting

The Nitrogenator can be placed on the floor, a shelf, or mounted to a wall. If placing on a floor or shelf, the Nitrogenator should still be fastened in place so that it cannot move or fall over. The included legs or optional casters ***must be used*** if the Nitrogenator is not being mounted to a wall.

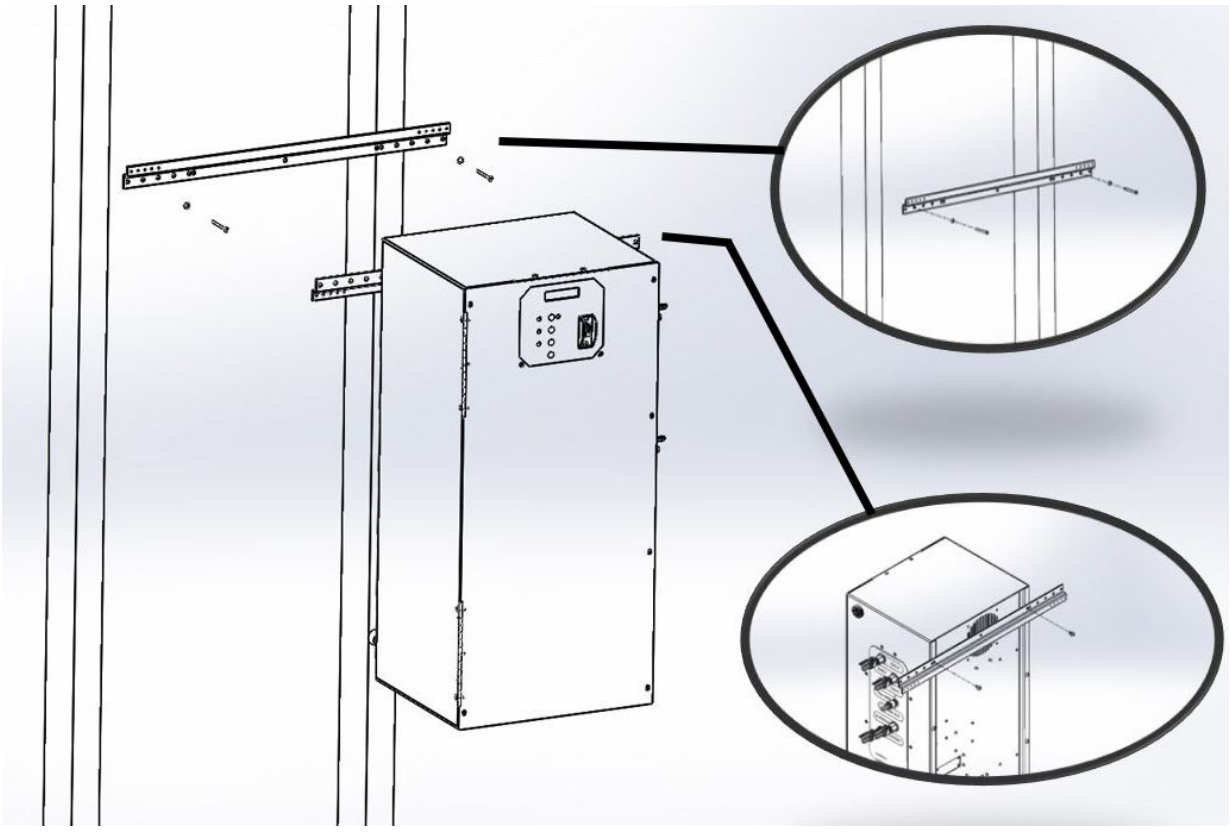
It is recommended that the Nitrogenator be mounted to a load-bearing wall that can support its weight as listed in the Specifications section. If the wall studs are not 16" center to center, or you have the need to reinforce the mounting area, it is recommended that at least ½"-thick plywood be installed prior to mounting.

The Nitrogenator comes with a French Cleat Bracket wall mounting system. If mounting the system to a wall, this mount should be utilized. The French Cleat mounting system has pre-drilled holes for a standard 16" wall stud width.

See mounting diagrams below for instruction on how to properly mount using French Cleat Brackets.

Note: Use best general practices to ensure that the wood and system will be secure at its full weight.

Note: The Nitrogenator will vibrate during operation. Do not mount to a wall with other fixtures that could be damaged or fall due to vibration. Amongst other variables, please keep in mind the vibration and sound output when choosing mounting location.



Making Connections

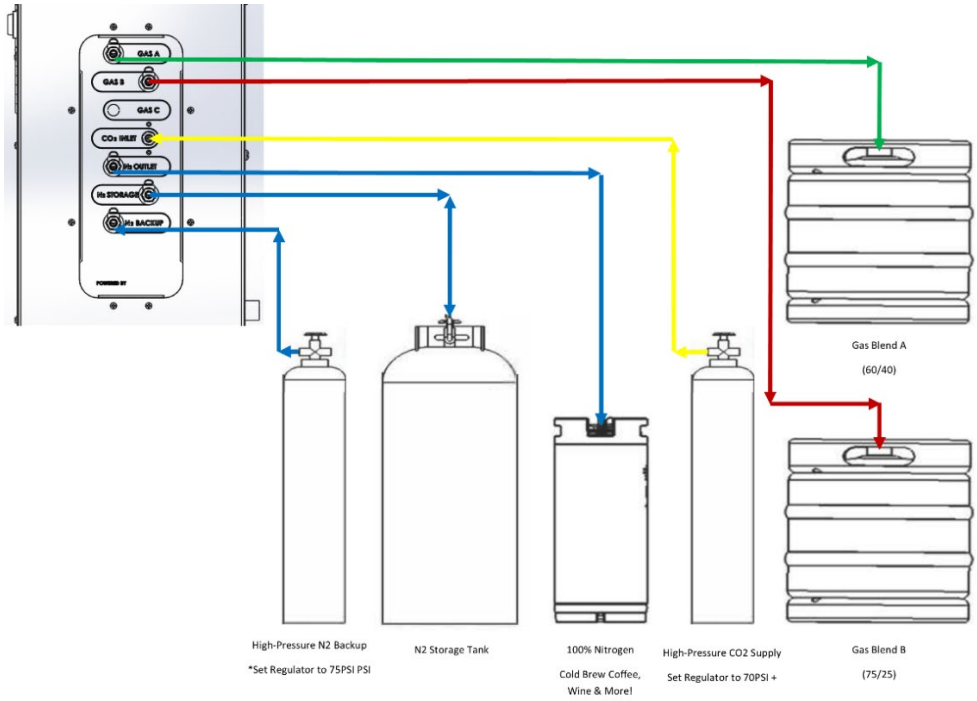
The system is equipped with 3/8” OD hose barbs for all connection points except the drain port, which is equipped with a ¼” OD hose barb. A flexible, food-grade 3/8” ID braided gas tubing/hose capable of handling at least 200 PSI is recommended for making all gas connections. A ¼” ID tube is recommended for the drain port and should be plumbed to the nearest drain on site.

To minimize gas leaks, it is recommended that appropriately sized Oetiker Stepless® Ear Hose Clamps be utilized. To determine proper clamp size, refer to technical data sheets of both the clamp and tubing manufacturers. Always make sure to fully compress/tighten the clamp when making connections.

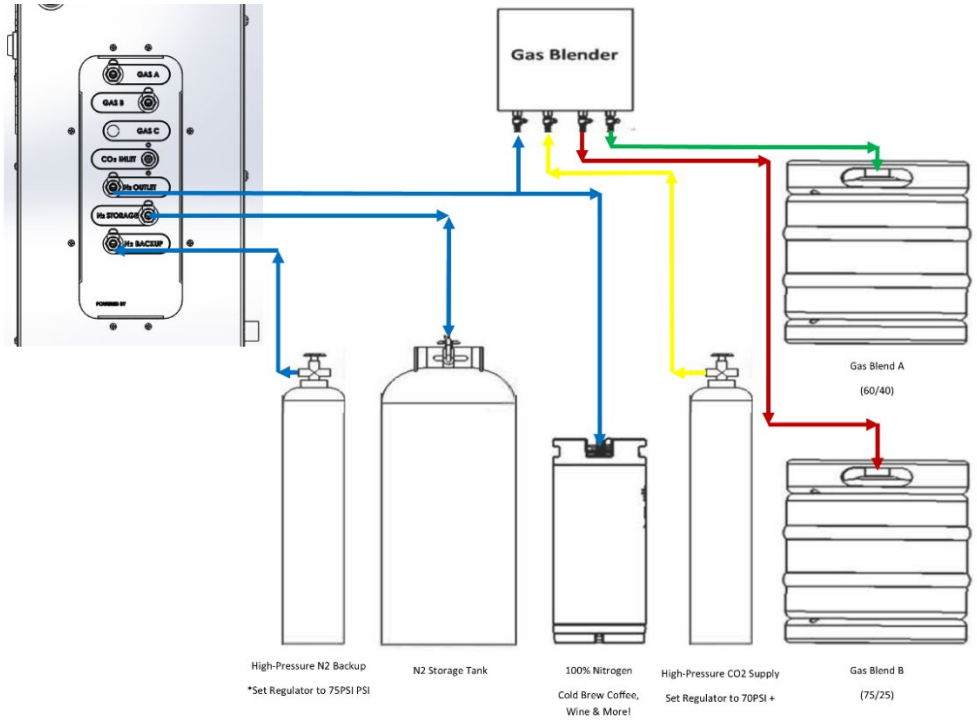
Warning: improper clamp or tubing can result in gas leaks, personal injury, or asphyxiation in an unventilated room.

Schematics

Internal Gas Blender

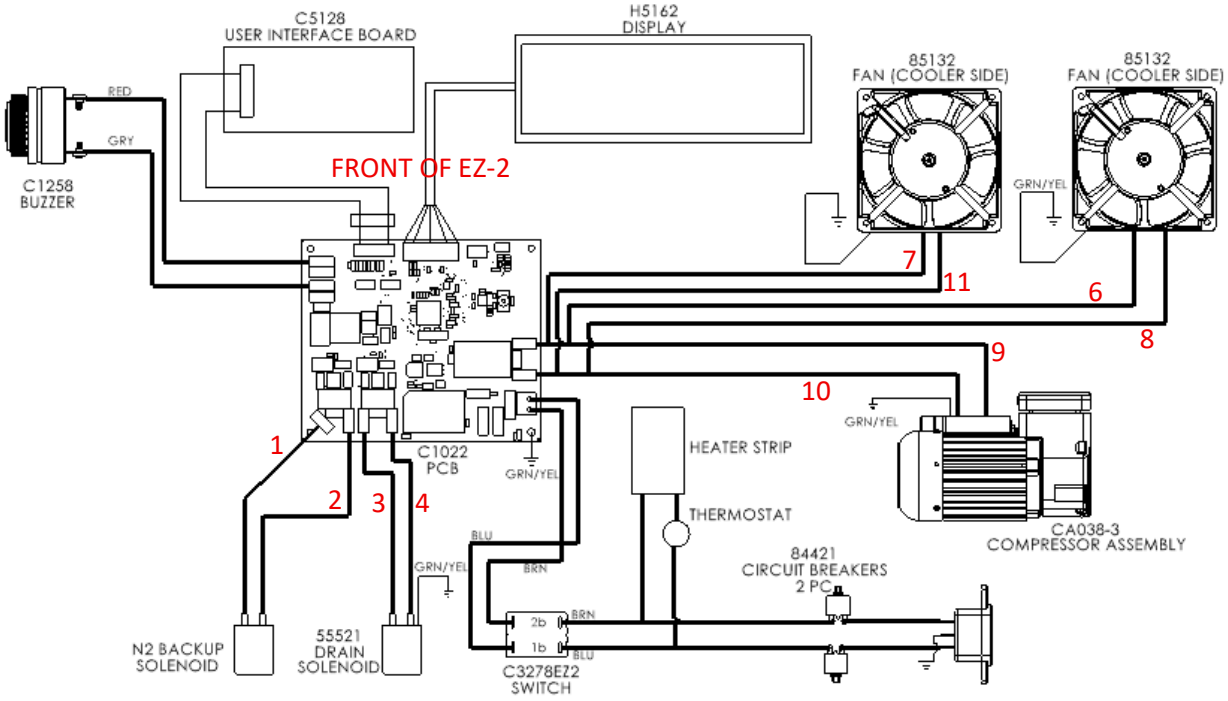


External Gas Blender

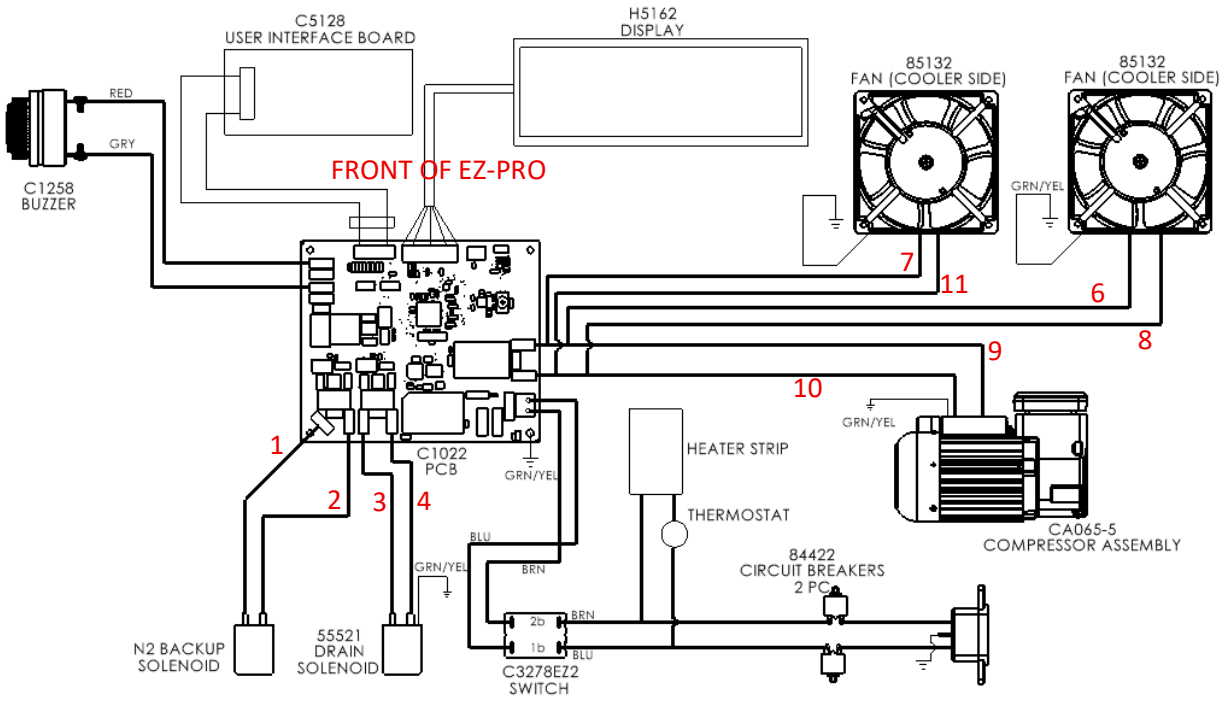


Electrical

EZ-2



EZ-PRO



Startup Procedure

Before proceeding, confirm all location requirements have been met (see Location Requirements section), the system is properly mounted (see Mounting section), all gas connections have been properly made (see Schematics and Making Connections sections), and that the unit is plugged in to an electrical outlet in accordance with its specifications (see Specifications section).

Once powered on (see POWER SWITCH in Components section), the Nitrogenator should take approximately 4 hours to fill one storage tank. The storage tank fill time assumes the entire system is leak free and that no gas is being used.

If the system takes longer than expected to fill the storage tank(s), and no gas is being used, it may be necessary to perform a gas leak test (See Checking for Gas Leaks section). If more than one storage tank is being used, multiply the appropriate storage tank fill time approximation above by the number of storage tanks being used to determine approximate storage tank fill time upon startup.

Note: Upon initial startup, N2 BACKUP ON ALARM will sound and be displayed. Simply press the N2 BACKUP STATUS (silence alarm) button to turn off alarms and return to default display readout.

States of Operation

No User Intervention Necessary

Standby (N_2 STORAGE TANK PRESSURE IS ABOVE 85PSI):

- **MAIN POWER STATUS** indicator light will be illuminated **GREEN**
- **COMPRESSOR STATUS** indicator light will be **OFF**
- **N2 BACKUP STATUS** indicator light will be **OFF**
- **DIGTAL DISPLAY** will readout N_2 STORAGE TANK PRESSURE & N_2 BACKUP STATUS by default
  - Press the INTERNAL TEMPERATURE readout button to view internal temperature
  - Press the OPERATION HRS readout button to view total hours on the air compressor
  - Press the SOFTWARE VERSION readout button to view current software version
  - Press the N_2 BACKUP STATUS readout button to return to default screen

N2 Production (N2 STORAGE TANK FELL BELOW 85PSI & WILL BUILD PRESSURE UP TO 105PSI)

- **MAIN POWER STATUS** indicator light will be illuminated **GREEN**
- **COMPRESSOR STATUS** indicator light will be illuminated **GREEN**
- **N2 BACKUP STATUS** indicator light will be **OFF**
- **DIGTAL DISPLAY** will readout N2 STORAGE TANK PRESSURE & N2 BACKUP STATUS by default

User Intervention Required (Audible & Visual Alarms)

N2 Backup In Use (N2 STORAGE FELL BELOW 70PSI & N2 BACKUP IS SUPPLYING AT LEAST 75PSI)

- **MAIN POWER STATUS** indicator light will be illuminated **GREEN**
- **COMPRESSOR STATUS** indicator light will be illuminated **GREEN**
- **N2 BACKUP STATUS** indicator light will be **YELLOW**
- **DIGTAL DISPLAY** provides a message recommending action(s) user should take
  - When N2 BACKUP IS IN USE, the display will indicate “N2 BACKUP ON”

NOTE: When the N2 BACKUP IS IN USE, an alarm will sound, triggering the user to intervene. First, read the message on the display and perform all recommended steps listed on display. In the case that N2 Backup Gas is in use, it is recommended that backup gas level(s) be checked, and usage monitored until a replacement is delivered or until the N2 generator can be serviced (if applicable). If there is a gas leak and/or the generator needs serviced, you may need to call the gas provider (to refill backup tanks) and your local authorized service tech to ensure the Nitrogenator is working properly.

TO TURN OFF THE ALARM SOUND, PRESS THE N2 BACKUP STATUS BUTTON.

N2 Backup Empty (N2 STORAGE FELL BELOW 70PSI & N2 BACKUP CAN'T SUPPLY AT LEAST 75PSI)

- **MAIN POWER STATUS** indicator light will be illuminated **GREEN**
- **COMPRESSOR STATUS** indicator light will be illuminated **GREEN**
- **N2 BACKUP STATUS** indicator light will be **FLASHING YELLOW**
- **DIGTAL DISPLAY** provides a message recommending action(s) user should take
  - When N2 BACKUP IS EMPTY, the display should indicate "N2 BACKUP OFF"

NOTE: When the N2 BACKUP IS EMPTY, an alarm will sound, triggering intervention from the user. First, read the message on the display and perform all recommended steps listed on display. In the case that the N2 BACKUP IS EMPTY, a new cylinder must be connected. If a new/full cylinder is unavailable, we recommend ordering one as soon as possible. It is also recommended that service be scheduled on the draught system to determine whether it was a gas leak, just a very busy night, or a problem with the N2 generator. It is imperative to determine why backup gas was used and why it ran completely out.

TO TURN OFF THE ALARM SOUND, PRESS THE N2 BACKUP STATUS BUTTON

ONCE A FULL BACKUP CYLINDER IS CONNECTED, HOLD THE N2 BACKUP STATUS BUTTON FOR FIVE SECONDS TO ALERT THE SYSTEM THAT YOU HAVE CONNECTED A NEW CYLIDNER

Air Compressor 12-Hour Run Timeout (COMPRESSOR RAN FOR 12 HOURS CONTINUOUSLY)

- **MAIN POWER STATUS** indicator light will be illuminated **GREEN**
- **COMPRESSOR STATUS** indicator light will be illuminated **FLASHING YELLOW**
- **N2 BACKUP STATUS** indicator light will be **OFF**
- **DIGITAL DISPLAY** provides a message recommending action(s) user should take

NOTE: When the AIR COMPRESSOR HAS RUN FOR 12 HOURS CONTINUOUSLY, an alarm will sound, triggering the user to intervene. First, read the message on the display and perform all recommended steps listed on the display. In the case that the air compressor has run for 12 hours continuously, it is recommended that an appointment be scheduled with an authorized draft service provider to determine why the generator had run for such a long interval.

TO TURN OFF THE ALARM SOUND, PRESS THE N2 BACKUP STATUS BUTTON

TO EXIT THE 12-HOUR RUN TIMER LOCKOUT, HOLD THE N2 BACKUP STATUS BUTTON FOR FIVE SECONDS

NOTICE: IT IS IMPORTANT TO WAIT AT LEAST 1-HOUR AFTER A 12-HOUR RUN TIMER LOCKOUT HAS OCCURRED (TO ALLOW AIR COMPRESSOR TO COOLDOWN). RESETING THE 12-HOUR RUN TIMER IMMEDIATELY AFTER BEING TRIGGERED CAN RESULT IN DAMAGE TO THE COMPRESSOR AND WILL NOT BE COVERED BY WARRANTY.

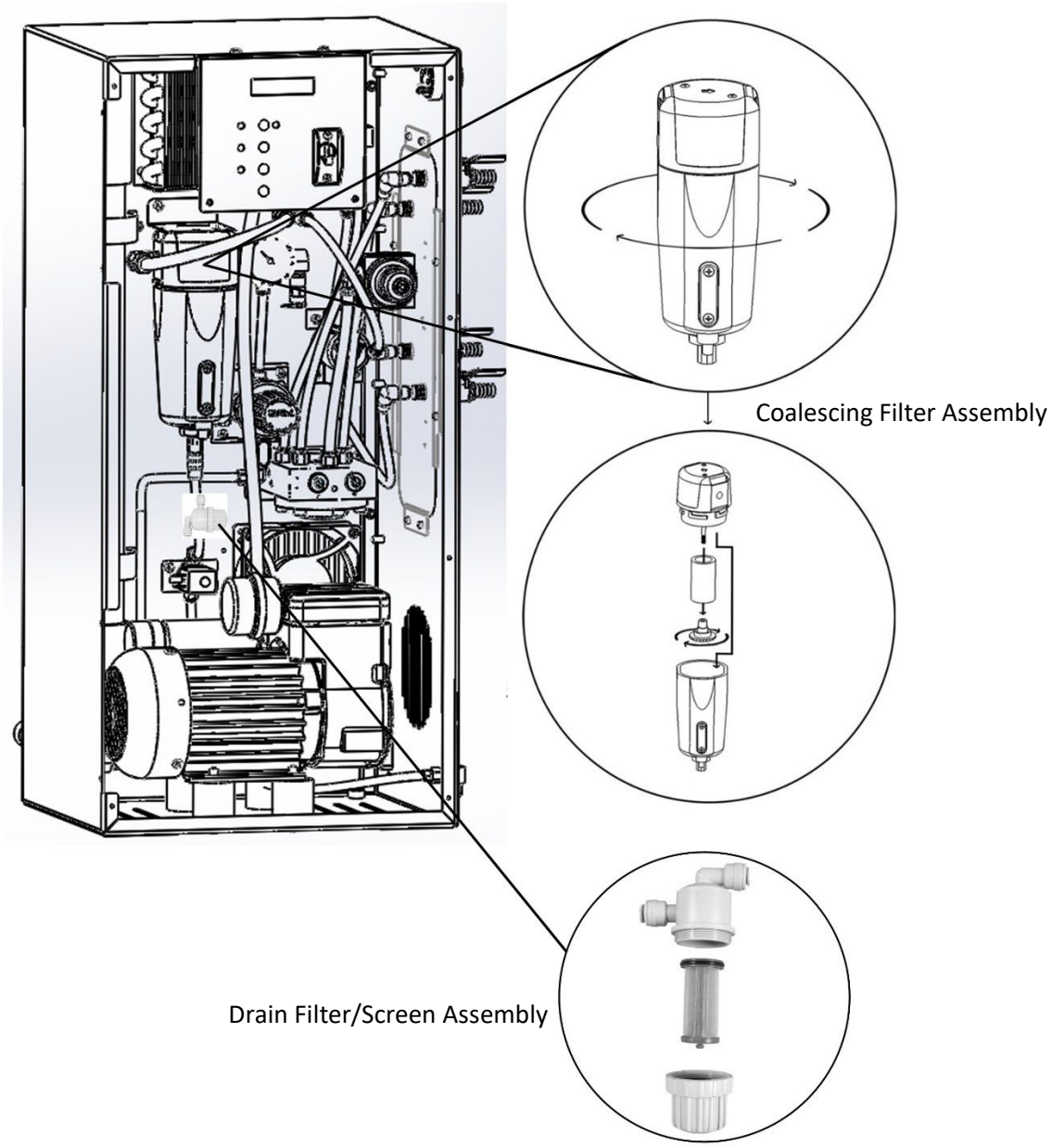
Routine Maintenance

Coalescing Filter

The coalescing filter bowl cartridge/element must be replaced every 6 months.

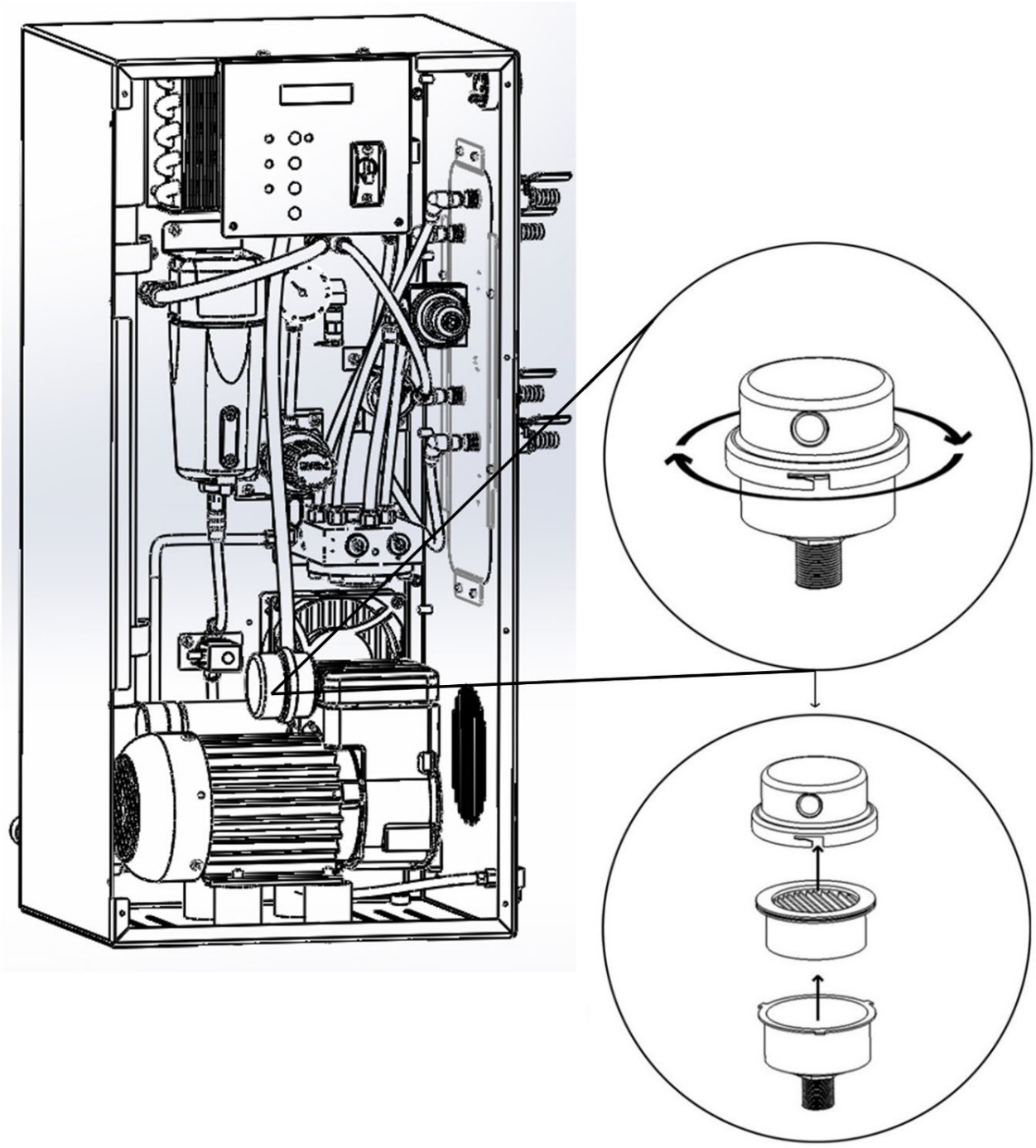
When replacing the coalescing filter, always check and clean off the drain filter screen.

Thread filter bowls counterclockwise to access filters.



Air Compressor Inlet Filter

The inlet filter must be checked every 6 months and changed as needed (varies by air quality).



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Cup Seal Replacement for AO38 Compressor (EZ-2):

The air compressor cup seal must be replaced every 5,000 hours.

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Cylinder and Cup Seal Replacement Kit

P/N C1052

This document provides the instructions necessary to replace the cylinder, cylinder gasket, valve plate gasket and cup seal in the head assembly of compressor model A038 using the Cylinder and Cup Seal Replacement Kit, PN C1052. Component replacement consists of disassembling the assembly enough to access the defective parts, removing the defective parts, and reassembling the unit installing the new parts provided in the kit. Refer to Figures 1 and 2 and perform the following procedure to replace the cylinder, cylinder gasket, valve plate gasket and cup seal.
Table 1 lists the parts identification per the numeric call outs in Figures 1 and 2.

Replacement Kit Components
Replacement Kit, PN C1052, consists of the following items:

Item 3	Valve Plate Gasket	Item 8	M6x20 Countersunk Screw
Item 6	Cylinder Gasket	Item 10	Cup Seal
Item 7	Cylinder		

Disassembling Cylinder Head & Cup Seal
1. Undo 4 screws (1) and remove cylinder head (2).
2. Remove parts (5), (6) and (7).
3. Undo countersunk screw (8) and take off retaining disc (9).
4. Take off cup seal (10).

Reassembling Cylinder Head & Cup Seal
1. Remove replacement cup seal (10) from replacement cylinder (7).
2. Place replacement cylinder (7) over piston (11).
3. Place replacement cup seal (10) through the replacement cylinder (7) with seal lips facing up on piston (11).
4. Position the original retaining disc (9) onto the replacement cup seal (10).

During assembly, fasten the new screw (8) hand-tight to prevent damage to the existing thread.

5. Insert the new countersunk screw (8) into the retaining disc (9) and cup seal (10) hand-tight, making sure to catch the threads, and then tighten with a maximum torque of 9 Nm.
6. Carefully install new cylinder gasket (6) onto the replacement cylinder (7). Please note: the circular stamps on cylinder gasket (6) must be facing up to the valve plate (5).
7. Install valve plate (5); replace the valve plate gasket (3) with the one supplied and install cylinder head (2). Secure head assembly by fastening the 4 screws (1) with a torque between 9 Nm and 10 Nm.

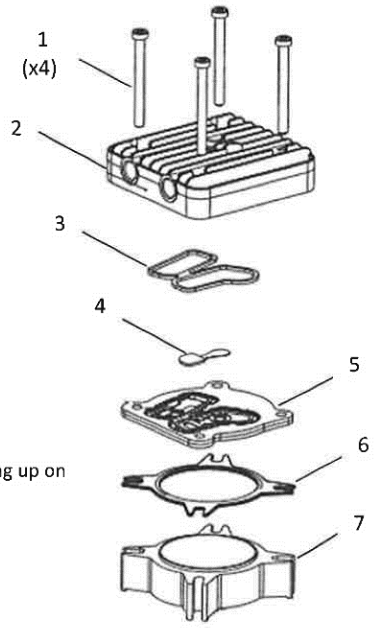

Figure 1

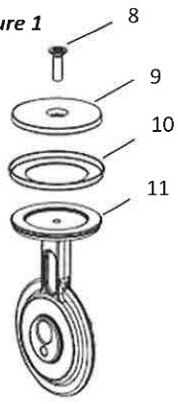

Figure 2

Table 1. Parts Identification (See Figures 1 and 2)

Item	Description	Item	Description	Item	Description
1	Screw (Qty 4)	5	Valve Plate	9	Retaining Disc
2	Cylinder Head	6	Cylinder Gasket	10	Cup Seal
3	Valve Plate Gasket	7	Cylinder	11	Piston
4	Flapper Valves	8	M6x20 Countersunk Screw		

P/N C1052-1 Rev E

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Cup Seal Replacement for A065 Compressor (EZ-PRO):

The air compressor cup seal must be replaced every 5,000 hours.

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Cylinder and Cup Seal Replacement Kit

P/N C1053

This document provides the instructions necessary to replace the cylinder, cylinder gasket, o-ring and cup seals in the head assembly of compressor models A065 and AG132 using replacement kit, PN C1053. Component replacement consists of disassembling the assembly enough to access the defective parts, removing the defective parts, and reassembling the unit installing the new parts provided in the kit. Refer to Figures 1 and 2 and perform the following procedure to replace the cylinder, cylinder gasket, o-ring and cup seals.

Table 1 lists the parts identification per the numeric call outs in Figures 1 and 2.

Replacement Kit Components

Replacement Kit, PN C1053, consists of the following items:

Item 3	Cylinder Gasket	Item 7	M8x25 Countersunk Screw
Item 5	O-Ring Seal	Item 9	Cup Seal
Item 6	Cylinder		

Note: Model A065 uses 1 kit while model AG132 requires 2 kits.

Disassembling Cylinder Head & Cup Seal

1. Undo 4 screws (1) and remove cylinder head (2).
2. Remove parts (3), (4), (5) and (6).
3. Undo countersunk screw (7) and take off retaining disc (8).
4. Take off cup seal (9).

Reassembling Cylinder Head & Cup Seal

1. First, remove replacement cup seal (9) from replacement cylinder (6)
2. Place replacement cylinder (6) over piston (10).
3. Place replacement cup seal (9) through the replacement cylinder (6) with seal lips facing up on piston (10).
4. Position the original retaining disc (8) onto the replacement cup seal (9).

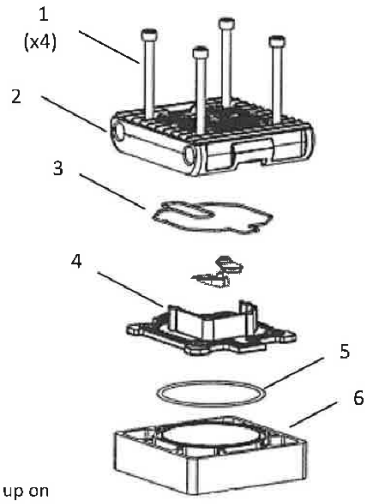

Figure 1

During assembly, fasten the new screw (7) hand-tight to prevent damage to the existing thread.

5. Insert the new countersunk screw (7) into the retaining disc (8) and cup seal (9) hand-tight, making sure to catch the threads, and then tighten with a maximum torque of 20 Nm.
6. Carefully install new O-Ring seal (5) into groove of replacement cylinder (6).
7. Install valve plate (4); insert new cylinder gasket (3) and install cylinder head (2). Secure head assembly by fastening the 4 screws (1) with a torque between 9 Nm and 10 Nm.

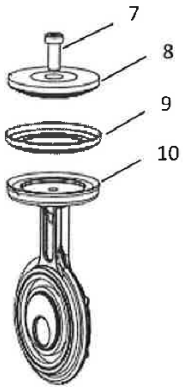

Figure 2

Table 1. Parts Identification (See Figures 1 and 2)

Item	Description	Item	Description	Item	Description
1	Screw (Qty 4)	5	O-ring Seal	9	Cup Seal
2	Cylinder Head	6	Cylinder	10	Compact Piston
3	Cylinder Gasket	7	M8x25 Countersunk Screw		
4	Valve Plate	8	Retaining Disc		

P/N C1053-1 Rev C

Troubleshooting

Note: Do not make adjustments to the system unless you are authorized to do so. If you feel uncertain, unqualified, or uncomfortable performing any of the steps outlined in the Troubleshooting section below, please call your distributor or local service provider immediately for assistance.

Basic System Check

Power/Electrical

- ✓ Is the Nitrogenator plugged into an appropriate power source and powered on?
  - See Specifications section for electrical requirements
  - See Components section to locate master power switch and power on indicator light

See Electrical/Power Issues section for more troubleshooting information.

Gas

- ✓ Are all the red shutoff valves on the right side of the Nitrogenator in the open position?
- ✓ Are gas blender outlet valves in the open position?
- ✓ Are the secondary regulator outlet valves (feeding the kegs) in the open position?
- ✓ Is the gas blender being fed with at least 80 PSI of N_2 and C02?
- ✓ Does the system have any apparent gas leaks?
  - See Checking for Gas Leaks section for more information on leak detection.

See Gas Issues section for more troubleshooting information.

Temperature/Liquid

- ✓ Is the walk-in cooler set/cooling to an appropriate temperature? (32F -39F)
- ✓ Is the beer in the lines between the faucet and walk-in cooler being kept cold?
- ✓ Is the beer pouring at an appropriate temperature? (below 40F)

See Temperature/Liquid Issues section for more troubleshooting information.

Electrical/Power Issues

If the Nitrogenator is not supplied with power, it will stop producing nitrogen, and eventually, once the N_2 storage tank(s) become depleted, beer system performance will be compromised.

Confirm that the Nitrogenator is plugged into an appropriate power source and that the unit is turned on (red power indicator light should be on) and has not tripped its onboard fuse or a GFCI and/or circuit breaker in the building. If the onboard circuit breaker or the GFCI and/or circuit breaker in the building continue to trip after being reset, there is either an internal electrical problem with the Nitrogenator, or the circuit in the building could be overloaded, faulty or inadequate. Call your distributor or local service provider to troubleshoot and/or schedule service.

Gas Issues

If the beer system is not getting sufficient N_2 and/or C02 supply, the performance of the system will be compromised. There are a few reasons a beer system may not be getting proper gas supply, including:

1) C02 supply (bulk CO2 or high-pressure C02 cylinder depleted and/or turned off)
2) N_2 supply (N_2 generator is not on, operating properly, or unable to keep up with demand)
3) At least one gas shutoff valve for system has been turned off
4) Gas leak(s)

CO2 Supply

Begin gas troubleshooting by checking on the CO2 supply pressure gauge. Ensure the supply can provide at least 80psi and no more than 150psi to the gas blender. Also, make sure the shutoff valve (if applicable) on the primary regulator is in the on position. The beer system cannot operate properly without adequate CO2 supply pressure.

N_2 Supply

Determine if the N_2 pressure feeding the gas blender is adequate. As was the case for CO2, the N_2 pressure feeding the gas blender should be at least 70psi and no more than 150psi. You can determine the supply pressure to the blender by observing the N_2 pressure gauge on the dashboard of the Nitrogenator. If the supply pressure is less than 70psi, the N_2 supply must be addressed before proceeding with any additional troubleshooting.

Follow below list to address N_2 supply:

1) Electrical/power issues with the Nitrogenator
    a. See Electrical/Power Issues section
2) At least one of the valves are in the off position
    a. See Shutoff Valves section
3) N_2 gas system has a leak
    a. See Checking for Gas Leaks section
4) Nitrogenator is unable to keep up w/ demand and/or needs serviced
    a. Call your local distributor or service provider
    b. Turn on high-pressure back up cylinder if pressure gauge reads less than 70psi

Shutoff Valves

If N_2 supply and CO2 supply have been deemed adequate, and the beer system is still not pouring properly, ensure that none of the essential shutoff valves on the gas system have been turned off. These valves include the shutoff valves on the right side of the Nitrogenator, any gas blender outlet shutoff valves (located directly on the Nitrogenator for units w/ integrated blenders and on the outlet of the external gas blender for systems with external blenders), as well as all the shutoff valves on regulators that feed kegs. To be certain that no gas valves are turned off, follow gas lines from the kegs all the way back to their source to ensure there are no other shutoff valves or gas distribution manifolds that may have shutoff valves turned to the off position. Lastly, make sure the built-in shutoff valve on any storage tank(s) are all the way open. To open built-in storage tank shutoff valve, turn the handle on the top counterclockwise until it doesn't open any further.

Note: In general, a gas shutoff valve is open/on when the handle/lever is parallel to the tube and flow of gas and a gas valve is closed/off when the handle/lever is perpendicular to the tube and flow of gas.

Please see Checking for Gas Leaks section for more information on how to troubleshoot a gas leak.

Checking for Gas Leaks

Note: Gas system must be idle. Do not attempt to identify gas leaks while the gas system is being used.

Note: Once a leak has been isolated/identified, a spray bottle filled with water and soap can be used on non-electrical components to narrow down the location of the leak and identify the exact component and/or location of leak.

Internal Leak Detection:

Close all red shutoff valves on the right side of the Nitrogenator and wait for the Nitrogenator to enter standby mode (Compressor Status indicator light should turn off and N_2 pressure should read over 100 PSI). While in standby mode, observe the pressure reading on the digital display to determine if it is holding without any pressure loss. If the N_2 pressure gauge holds, the Nitrogenator is internally leak free. If the N_2 pressure gauge does not hold, the Nitrogenator has an internal leak, which will need addressed before proceeding with external leak detection.

External Leak Detection:

Begin external leak detection by assuring all valves for the gas system are closed, including:

1. All red shutoff valves on the right side of the Nitrogenator
2. Gas blender outlet valves (located on right side of Nitrogenator for units with integrated gas blender and directly on gas blender for units without an integrated gas blender)
3. Secondary regulator outlet valves feeding kegs

Nitrogenator → Storage Tank and/or Blender:

Open the N_2 storage valve and keep an eye on N_2 pressure gauge. If the pressure gauge drops steadily this could indicate a leak between the N_2 storage outlet valve and the N_2 storage tank. If the system has an external blender, it could also indicate a leak between the N_2 storage valve on the Nitrogenator and the outlet valves on the gas blender. Once leak has been isolated, it must be addressed before proceeding with further leak detection.

Gas Blender → Secondary Regulators

Confirm all secondary regulators feeding kegs have been turned off and leak test each blend feed by individually opening one blend outlet valve at a time. Observe N_2 pressure gauge simultaneously to determine if there is a pressure drop. If pressure drops when one of the blend valves is opened, there is a leak present between the blender outlet valve and the secondary regulator outlet valve. Once the leak has been isolated, it must be addressed before proceeding with further leak detection.

Secondary Regulators → Kegs

Turn all secondary regulators feeding kegs back on. Leak test the entire gas system (up to the kegs) by observing N_2 pressure gauge on the dashboard of the Nitrogenator and determining if the pressure drops with each individual blend valve open. If there is a pressure drop, and the rest of the system has been deemed leak free, a leak is present between a secondary regulator outlet valve and keg. Once the leak has been isolated, it must be addressed to ensure entire gas system is leak free.

Temperature/Liquid Issues

Pour a beer into a cold glass and take the temperature. If the beer in the glass is above 40F, there may be an issue w/ the glycol cooling system and/or walk-in cooler. The Nitrogenator does not influence beer temperature. If the problem being experienced is temperature/refrigeration related, call your local refrigeration and/or draft beer technician to have the issue resolved.

Note: If all troubleshooting measures have been taken, and the beer system is still not pouring properly, please call your distributor or local service provider for further assistance.

Decommissioning

To decommission the Nitrogenator, begin by powering the unit down (See POWER SWITCH in Components section) and unplugging it from its power source. Once the unit is powered down and unplugged, **bleed off all the pressure in the system and storage tank**.

Now that the system is depressurized, powered down and unplugged, all tubing connected to the system should be disconnected. Disconnect the tubing connected to the system by removing the clamps and pulling the tubes completely off the barbs. **Do not** cut the tubes and leave segments clamped to the barbs. Once clamps are removed, it may be necessary to cut tubes to remove them from the barbs.

If mounted to a wall, see Mounting section for insight on how the French Cleat system works and how to properly unmount the Nitrogenator. Once the system has been removed from the wall, it is important that the French Cleat system be removed from Nitrogenator/wall and retained for future use.

If storage tank(s) were originally provided, it is likely that it/they must be located and removed. To remove storage tank(s), disconnect the tubing attached and remove any hardware holding it/them in place. Always confirm the storage tank is depressurized and **do not** cut the tubes and leave segments clamped to the barbs. Once clamps are removed, it may be necessary to cut tubes to remove them from the barbs.

Locate and return the Nitrogenator and storage tank(s) to original packaging. See Storage section for insight on where the Nitrogenator can be stored.

Warranty

AC Beverage warrants that its products will be free from defects in material and workmanship, under normal use, regular service, and maintenance, for 1 year from the date of sale.

Prerequisites: This warranty is available to the first end user for equipment purchased from AC Beverage or authorized dealers. Equipment resold without such authorization will not be covered under this warranty. Equipment installed by AC Beverage carries a 90-day labor warranty. Equipment not installed by AC Beverage does Not carry a labor warranty. All equipment must be maintained and cleaned regularly. In case of equipment failure customer must contact AC Beverage for repair authorization before any repairs are made.

Warranty Period: Warranty period is one (1) year from the date of installation but no longer than fourteen (14) months from date of sale. Please do not return any item to AC Beverage without first notifying us and explaining the complete circumstances. AC Beverage must be notified and approve any merchandise returned for repair.

Warranty Coverage: If a product is deemed defective by AC Beverage within the warranty period described above, AC Beverage, at its discretion, will either repair or authorize the repair of the product. AC Beverage will be responsible for the labor charges within the warranty period provided that all above mentioned prerequisites are satisfied. The customer is responsible for the return of the defective part or product to AC Beverage for inspection and defect determination. Customer must package the part or product before shipping it. AC Beverage will cover the shipping costs for the part or product as described in the Shipping segment of this warranty.

Defect Determination: Defect determination is the sole discretion of AC Beverage. Customers must contact AC Beverage to receive authorization for any course of action prior to any repairs. A warranty claim in writing must be submitted to AC Beverage to process the claim and authorize any reimbursements. If a repair is made without the explicit authorization from AC Beverage, it will not be covered by the warranty and will not be reimbursed. “Authorization for return” is for inspection purposes only. It is the sole discretion of AC Beverage as to whether a repair will be performed under warranty.

Product Delivery: The customer is responsible for inspecting units upon receipt for concealed damage caused during shipping. The customer must report damaged or non-working units or components to AC Beverage immediately. Deliveries with physical damage should be denied. A claim must be filed with the carrier for any damages during shipping. AC Beverage is not responsible for units damaged during shipping.

Warranty does not cover:

- Physical damage or water damage to the unit caused by negligence of the user.
- Improper installation and modifications made without AC Beverage’s explicit approval.
- Damage resulting from electrical supply, water supply, drainage, flood, storm, or any other incidents.
- Repairs made without the explicit authorization of AC Beverage or without the submission of a written warranty claim.

AC BEVERAGE IS NOT RESPONSIBLE FOR ECONOMIC LOSS OR SPECIAL, INDIRECT, OR CONSEQUENTIAL DAMAGES, INCLUDING, WITHOUT LIMITATION, LOSSES OR DAMAGES ARISING FROM EQUIPMENT FAILURE.

Shipping: During the warranty period AC Beverage will be responsible for shipping charges as described in the previous segments. AC Beverage will ship replacement parts using standard ground shipping only. If expedited shipping is needed, the customer will incur the difference in shipping cost.