

Fizz

Dispense Optimization Group

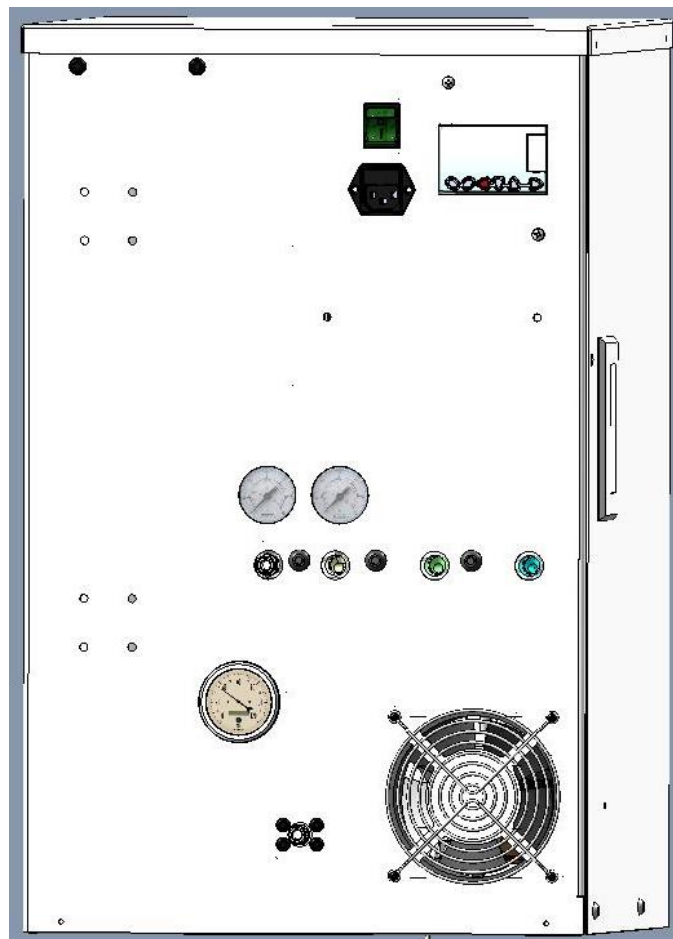
Nitro-Draught

Revision 2016

Blend Gas Dispense System

Includes Models ND0101, ND0102, ND0201, ND0202

Installation, Operation and Service Manual



Revision 1.0

SAVE THIS MANUAL FOR FUTURE REFERENCE

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SECTION 1

Safety guidelines & definitions



WARNING: The WARNING symbol draws attention to an operating procedure or practice that can cause injury if it is not observed or performed correctly. Do not continue past a WARNING symbol until you have fully understood or satisfied the indicated conditions.



CAUTION: The CAUTION symbol draws attention to an operating procedure or practice that can damage the unit if it is not observed or performed correctly. Do not continue past a CAUTION symbol until you have completely understood or satisfied the indicated conditions.

SECTION 2

Unit safety warnings

Do not operate the Nitro-Draught unit until the information contained in this document has been read and understood by all personnel concerned. The unit should be connected to an electrical supply in accordance with local safety regulations. Ensure that the rating plate corresponds to the supply voltage. **Ensure that the unit is grounded.**

Nitrogen (N₂) & carbon dioxide (CO₂) are not poisonous gases but in a concentrated form present a risk of asphyxiation. The Nitro-Draught unit produces a small flow of mixed gases that quickly disperse in the atmosphere. However, do not directly inhale any gases produced by the unit. Refer to Compressed Gas Association publications for further information.

Before service or maintenance is performed on the Nitro-Draught system, the electrical supply must be switched off and the main electrical cord disconnected. All personnel handling, using or maintaining the Nitro-Draught unit must employ safe working practices and observe all relevant local health and safety regulations.

SECTION 3

Unit description & features

The Nitro-Draught blend gas dispense system extracts nitrogen (N₂) from ambient air, blends it with carbon dioxide (CO₂) and supplies the mixed gas to a draught beer system. As a component of a properly designed and maintained draught system, the Nitro-Draught assures brewery quality beverage presentation while it eliminates excessive foaming and wasted beer.

The Nitro-Draught system uses proven Pressure Swing Adsorption (PSA) technology with Carbon Molecular Sieve (CMS) to separate N₂ from the atmosphere and store it at a purity level of at least 99.8%. It uses a mechanical blender to combine the N₂ with CO₂ from another storage vessel into CO₂ / N₂ “beer gas” blend ratios, commonly two blends are used, 25% / 75% and 70% / 30%. Blends can be customized for any application. Pure nitrogen can be withdrawn directly from the storage tank to use in inert wine dispense equipment.

While in Production Mode, the internal air compressor will cycle on and off on approximately two minute cycles. Each compression cycle will be followed by an exhaust cycle. At the start of the exhaust cycle, an audible release of internal air pressure will occur. This compress-exhaust alternating cycle will continue until the unit fully pressurizes the storage tank. At that point the unit will move into Economy Mode, and power down all internal components after a few minutes. The Nitro-Draught will enter into Economy Mode at “Switch Off” tank pressure and then return to Production Mode when the tank pressure drops to “Switch On” pressure (see section 3.1 Technical Specifications for settings), as nitrogen is used.

This manual contains the information necessary for the correct use of the Nitro-Draught. Should any questions arise regarding safe and proper installation, operation or maintenance of the Nitro-Draught system, contact the supplier before proceeding.

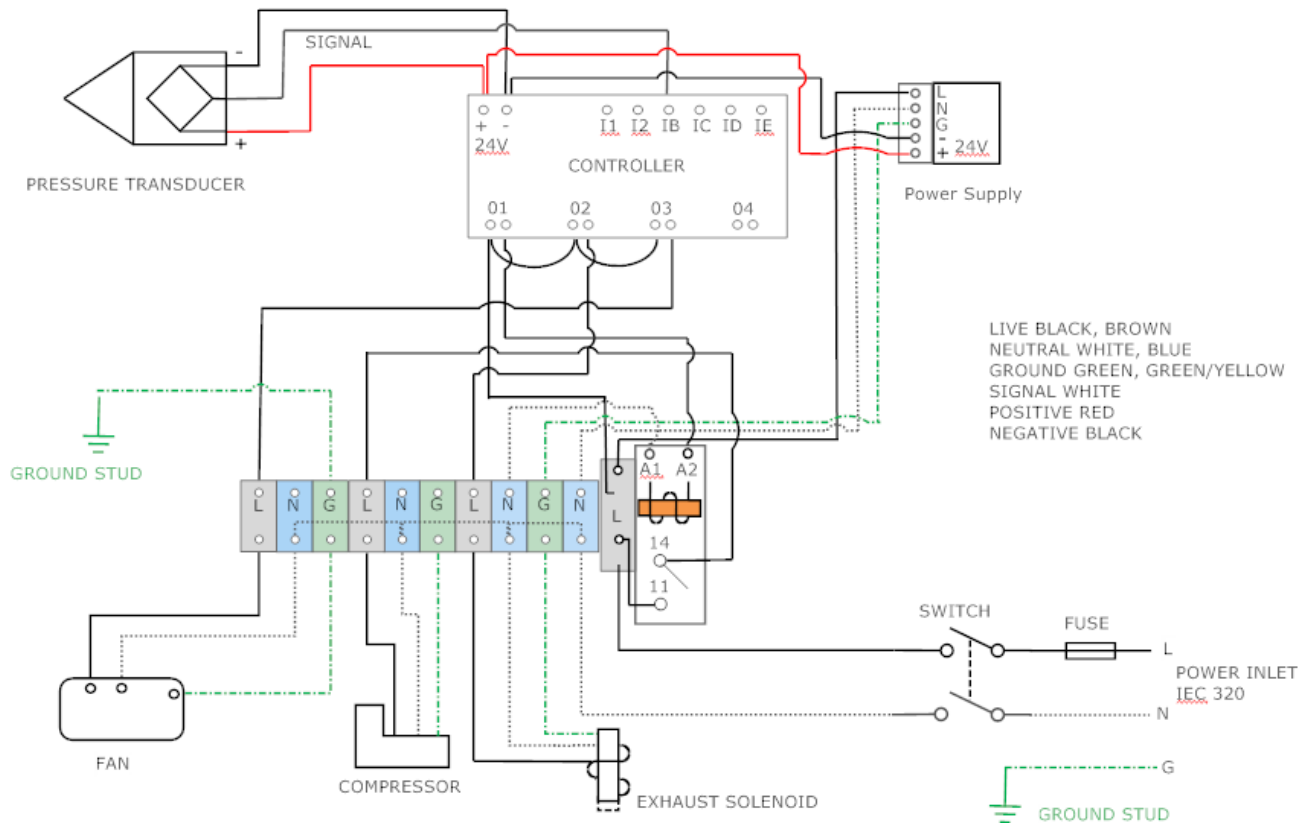


Warning: Ensure that all personnel involved in the installation, operation and maintenance of the Nitro-Draught system, as well as those persons who will act as supervisory personnel, have read and fully understand the instructions before attempting to install, operate or perform maintenance on the unit.

3.1 Technical specifications

- Model: ND0101, ND0102, ND0201, ND0202
 - Dimensions (approximate):
 - ND0101, ND0102 - Height 24 in/ 600 mm, Width 15 in/ 380 mm, Depth 15 in/ 380 mm
 - ND0201, ND0202 - Height 28 in/ 710 mm, Width 15 in/ 380 mm, Depth 15 in/ 380 mm
 - Weight (approximate):
 - ND0101, ND0102 - 80 lb/ 36 kg
 - ND0201, ND0202 - 100 lb/ 45 kg
 - Electrical Power Supply: 120 Vac 60 Hz
 - Fuse Rating: 10 amps
 - Ambient Temperature: 36 to 95°F (+2 to +35°C)
 - N₂ Storage Vessel Size: Approx 25 gal/ 95 liters
 - Nitrogen Purity: >99.8% (<0.2% oxygen)
 - N₂ Generation Cycle Start/Stop Pressures:
 - ND0101, ND0201 – Switch Off 100 psig/ 6.2 barg;
Switch On 92psig (6.2 barg)
 - ND0102, ND0202 - Switch Off 135 psig/ 9.3 barg;
Switch On 128psig (8.8 barg)
 - CO₂ Gas Requirement: 90 – 300 psig (6 – 20 barg)
 - Mixed Blends (CO₂/N₂): (25% / 75%) & (70% / 30%)
 - Max Blend Outlet Pressure: 60 psig (4.8 barg)
 - Inlet and Outlet Bulkhead Ports: 1/4" FNPT
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3.2 Electrical Schematic



SECTION 4

Installation & operation

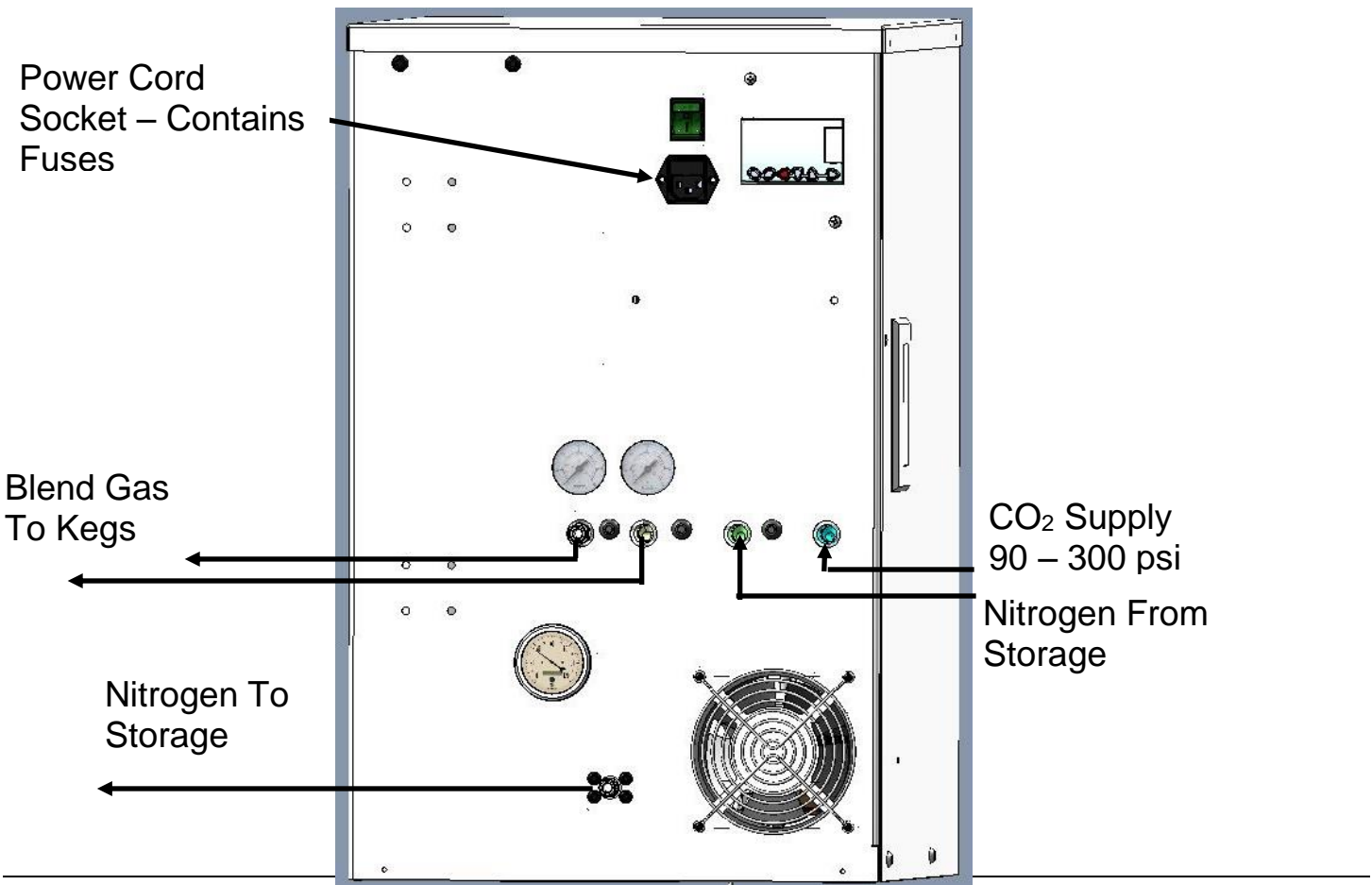
4.1 Unpacking your unit

Remove the items from the box and check for damage. The box contains one Nitro-Draught unit, a manual, and a power cord. If any of the items are in a damaged condition, request an immediate inspection by the carrier. If any of the items are missing, please contact Fizz.

4.2 Powering up your unit

Installation quick checklist

1. Unpack and inspect unit
2. Mount unit to a solid and secure surface
3. Plug into suitable electrical outlet
4. Connect unit port "To Storage" to external pressure vessel and start nitrogen production. Connect a return pressure line from external vessel to unit port "From Storage."
5. Make CO₂ and blend gas connections
6. Connect to draught and wine dispense system
7. Recheck connections and equipment for proper operation



SECTION 5

Maintenance & replacement parts

5.1 *Recommended maintenance*



Replacement of the compressor air compressor inlet filter, coalescing filter element and exhaust silencer should be performed at least every twelve months or more frequently, depending on environmental conditions. Cooling vents should be cleaned of any dust accumulation during filter changes. Verify the unit is leak tight before returning to service.

Before performing maintenance on a Nitro-Draught unit, disconnect the main power supply.

Failure to perform specified service may result in damage to the Nitro-Draught unit and may invalidate any warranty. Use only genuine parts as supplied by Fizz.

The quality and reliability of the Nitro-Draught unit is maintained through preventive maintenance performed on a scheduled, regular basis.

Keep a written record of all maintenance activity.

5.2 *Maintenance service kits & instructions*

Filter Replacement (Kit p/n 83108)

Switch off the electrical power supply before performing any service on a Nitro-Draught unit. Close the “CO₂ Inlet” and N₂ To Storage” isolation valves. Depressurize the system by switching the unit on again for 20 seconds allowing it to exhaust (and depressurize). Shut the unit off.

Replace the compressor air intake filter element:

1. Lift up tabs on both sides of filter assembly and pull cover off assembly.
2. Pull the used filter element from the housing cap and dispose of the used element.
3. Fit the replacement element by pushing the element, narrow end first, into the bottom of the assembly.
4. Replace the cover by pressing it down onto bottom piece until it snaps tight.

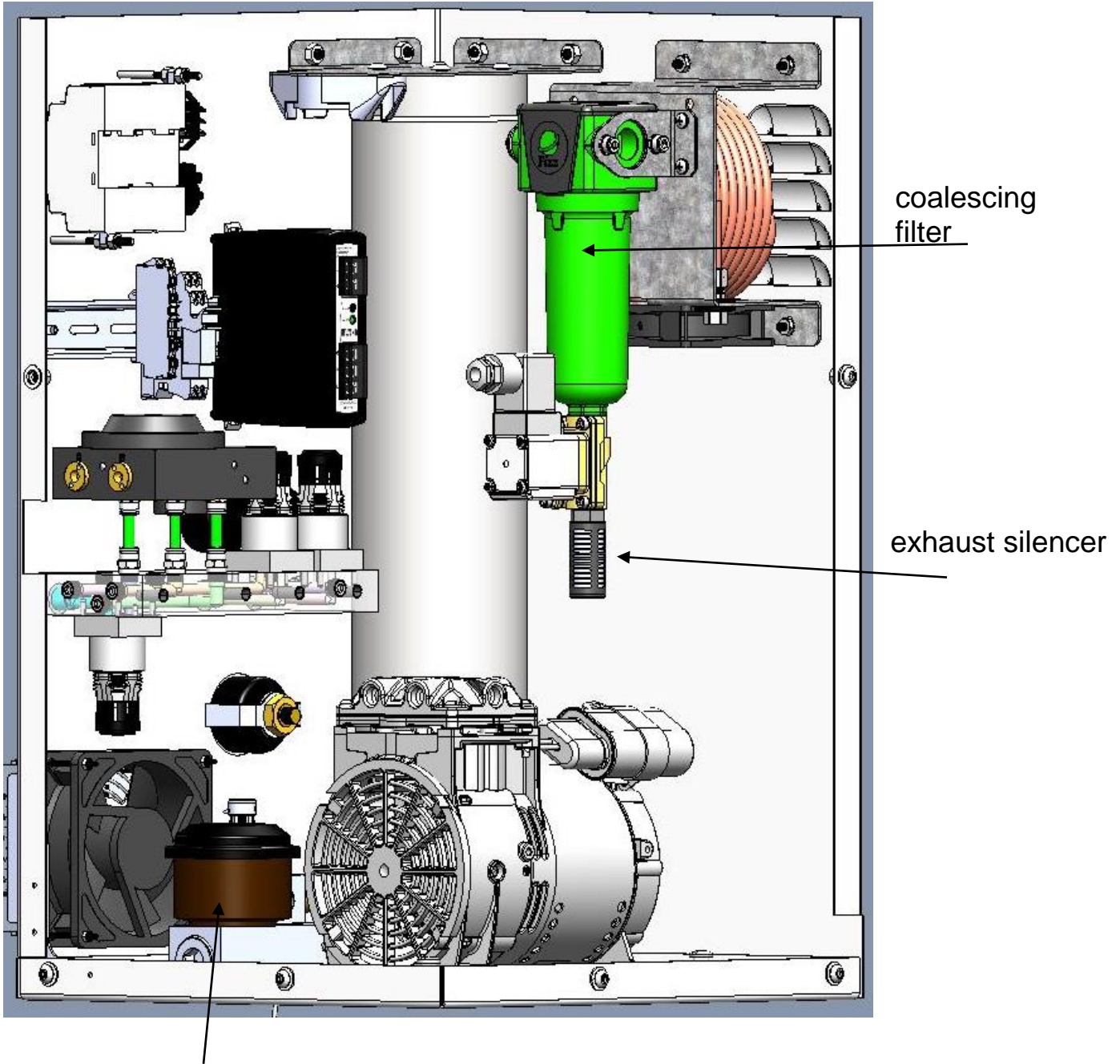
Replace exhaust silencer:

1. Unscrew used silencer by turning counter clockwise.
2. Replace with new silencer, tightening only finger tight.

Replace the coalescing filter:

1. Make sure the housing is completely depressurized before continuing.
 2. Unplug solenoid electrical connector.
 3. Unscrew body/bowl of green coalescing filter.
 4. Remove the element from the bowl and dispose in accordance with local waste regulations.
 5. Carefully remove the new element from the packaging and insert into the bowl by aligning
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proper tabs on element until it seats completely into bowl. There is only one proper orientation. Screw bowl back into filter head until it seats.



compressor air
intake filter element

5.3 Other replacement parts

97007 Cabinet Cooling Fan
97025 Fuse, 10 amp
97028 Power Cord
80008 Power Switch
80009 Power Socket
58010 Power Supply 24V
80013 Regulator, Blender Manifold
80018 Regulator, Sieve Column Outlet

All parts are available by calling or emailing Fizz.

5.4 Factory repair and refurbishment

Fizz will service any unit (whether within warranty period or not) at the request of the customer. Authorization must be obtained from Fizz prior to shipping any equipment to Fizz facilities. The model and serial number of the unit must be provided in order to process the return. The customer returning the goods is responsible for all freight, proper packing, and any damage incurred during shipment of the goods back to Fizz.

SECTION 6

Troubleshooting

Service or maintenance on the Nitro-Draught should be performed only by Fizz trained and authorized professional service agents who are familiar with mixed gas pressure systems and all pertinent safety and service procedures. Fizz recommends the use of Fizz approved replacement parts.

Symptom – Low pressure in nitrogen storage tank

Low pressure in the nitrogen storage tank may have been caused by excessive demand from the downstream system, such as a leaking keg coupler. Close the “To Storage” valve on the tank to allow the generator to build pressure in this line (tank will be isolated). Pressure in the “To Storage” line will be shown on the N₂ pressure gauge as well as the controller display screen. If the pressure increases to “Switch Off” pressure and holds without leaking down, the unit is operating properly. The storage tank and downstream system should be checked for leaks. Allow the generator time to refill the storage tank.

If the “To Storage” line pressure does not increase after 3-4 compression cycles, the unit will need to be serviced by a trained technician.

Symptom – Low blend gas pressure

Low blend gas pressure is usually caused by a lack of N₂ or CO₂ pressure coming into the unit. Verify both of these gases are being adequately supplied to the Nitro-Draught unit.

SECTION 7

Warranty information

7.1 Warranty policy

Fizz Dispense Optimization Group, LLC warrants to the Purchaser the Nitro-Draught blend gas system shall be free from any defects in workmanship and materials for 30 months from the date of shipment from Fizz. Purchaser agrees that as a pre-condition to any Fizz liability hereunder, Purchaser or its appointed agents shall fully inspect all goods immediately upon delivery and shall give Fizz written notice of any claim or purported defect within ten (10) days after discovery of such defect.

Use of the Nitro-Draught system without the recommended inlet air quality or genuine parts will expressly invalidate the warranty.

As a further pre-condition to any Fizz liability hereunder, parts replacement must be supplied by a Fizz approved service company. Fizz may elect to repair or replace any defective component or part thereof which proves to be defective, or to refund the purchase price paid by the original Purchaser. Fizz shall not be liable for defects caused by the effects of normal wear and tear, erosion, corrosion, fire, explosion, misuse, or unauthorized modification.

Alterations or repair by others than those designated and approved by Fizz or operation of such equipment in a manner inconsistent with Fizz accepted practices and all operating instructions, unless pre-authorized in writing by Fizz, shall void this Warranty.

Fizz's sole and exclusive liability under this Warranty is to the Purchaser and shall not exceed the lesser of the cost of repair parts, cost of replacement, or refund of the net purchase price paid by the original Purchaser. Any accessories, parts and equipment supplied by Fizz but not manufactured by Fizz shall carry whatever warranty the manufacturer has given to Fizz providing it is possible for Fizz to pass on such warranty to the customer.

Fizz is not liable for any losses (including CO₂ or beer), back up gas supply, damages, or costs of delays, including incidental or consequential damages. These include lost profits and the cost of the installation or removal of any products or parts, the installation of replacement products, and any inspection, testing, or redesign caused by any defect or by the repair or replacement of products arising from a defect in any product. Fizz specifically makes no warranties or guarantees, expressed or implied, including the warranties of merchantability or fitness for a particular purpose or use, other than those warranties expressed herein.

7.2 Claims process

All warranty claims must be previously authorized in writing by Fizz Dispense Optimization Group, LLC.

Electronic approval may be obtained by contacting Fizz Technical / Customer Services at:
customer@fizzdog.com

-Telephone: 800-253-6610

-Fax: 678-792-7784

Or by writing to:

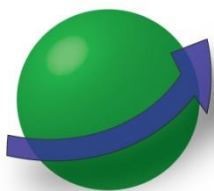
Fizz Dispense Optimization Group, LLC
PO Box 1003
Adairsville GA 30103 USA

Authorization must be obtained from Fizz prior to shipping any equipment to Fizz facilities.

The model and serial number of the unit must be provided in order to process the return. If approved, a Return Material Authorization (RMA) number will be provided. The RMA number must be prominently indicated on the packing slip and any packaging that accompanies the goods being returned. The customer returning the goods is responsible for all freight, proper packing, and any damage incurred during shipment of the goods back to Fizz.

Shipments to:

Fizz Dispense Optimization Group
1 Johnson Street, Bldg 120
Cartersville GA 30120 USA



Fizz
Dispense Optimization Group

PO Box 1003
Adairsville, GA 30103
Phone: 678-360-0394
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