AC Beverage Infusion Kit (AC-NITRO-KIT)

Installation & Operation Manual

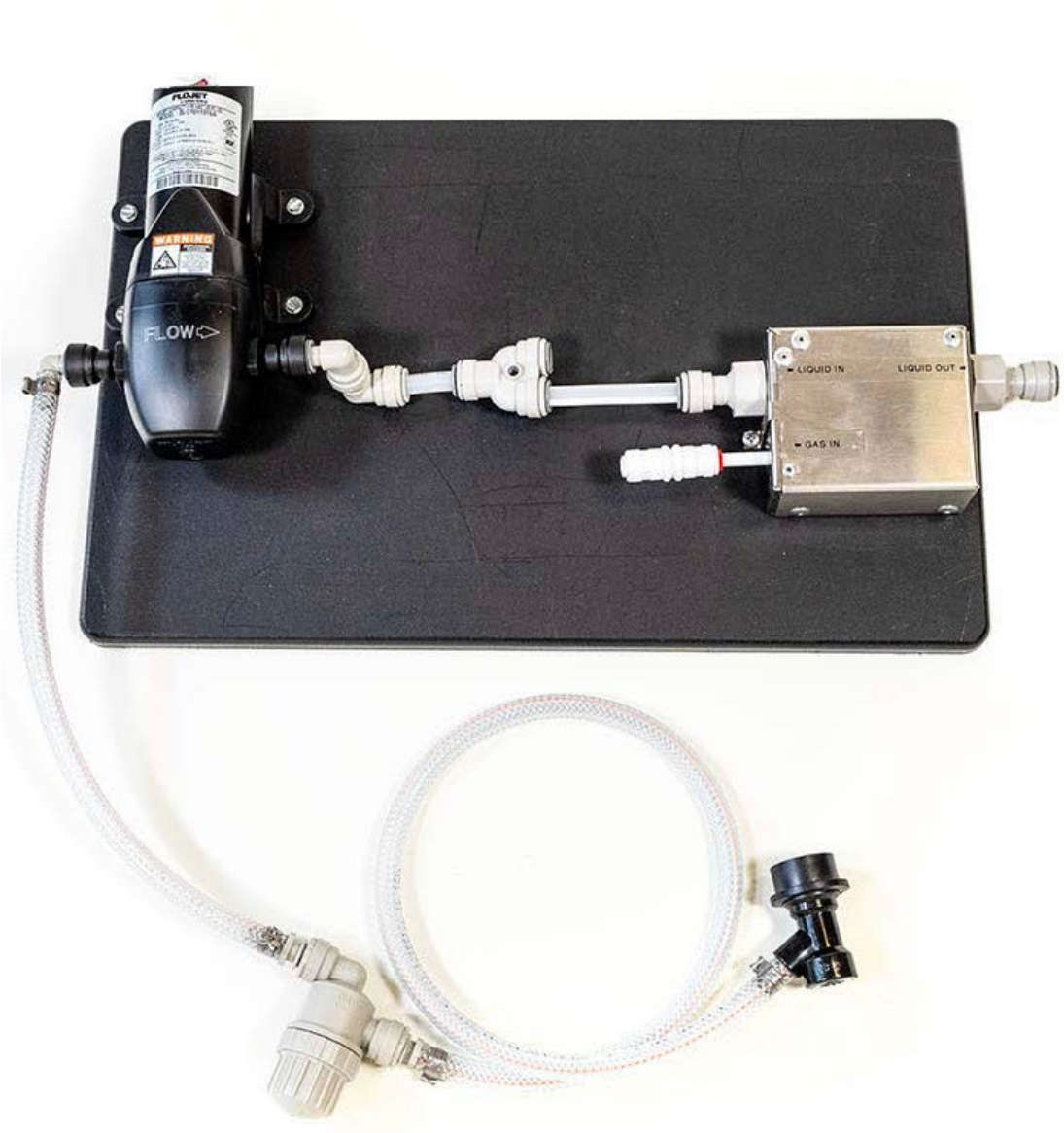


Table of Contents

Safety & Procedural Notices

Correct use of the Infusion Kit is important for your personal safety & for trouble-free use. Incorrect use can cause damage to the Infusion Kit & shorten the lifespan of the components, or in rare cases, cause personal injury.

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

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

Receiving & Inspecting

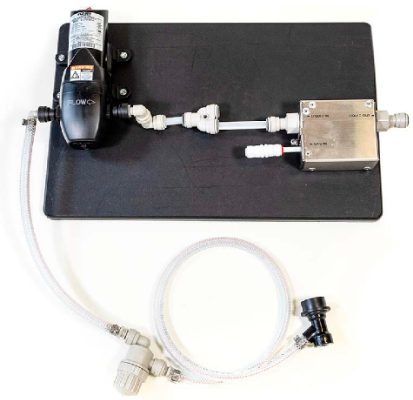
Upon receipt of your Infusion Kit, check the package(s) & unit(s) for any damage that may have occurred during transportation. Visually inspect the exterior of the package(s). If damaged, open & inspect the contents & report with the carrier & shipper/supplier. Any damage should be noted & reported on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

If the packaging is not damaged, yet upon opening, there is concealed damage to the equipment, notify the carrier & the shipper/supplier 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 packaging material until inspection has been made.

What's Included?

- (1) Infusion Kit (AC-NITRO-KIT)
  - Includes Flojet pump, infusion module, liquid corny keg fitting & 150-micron inlet strainer (see image on cover page)
- (1) Power supply adapter for Flojet Pump
- (1) Custom restrictor disc for improved infusion/flow
- (1) 3/8" stem plug
- (2) 3/8" stem x 3/8" barb adapter
- (2) 3/8" stem x 1/4" barb elbow adapter
- (4) Stainless steel self-tapping screws
- (2) Oetiker® 12.3 stainless steel stepless clamp
- (2) Oetiker® 15.7 stainless steel stepless clamp

Specifications



- **Consistent in-line nitrogen infusion.**
  - Designed for coffee, tea, cocktails & more.
- **Serve still & nitro pours from a single keg.**
  - No waiting, shaking kegs or guesswork to get incredible nitro.
- **Intelligent design only infuses while dispensing.**
  - Prevents oversaturation.
  - Minimizes gas consumption.
  - Ensures consistent performance.
- **No Nitrogen source required.**
  - Save on recurring costs & time associated with gas cylinders.
  - Eliminate wasteful & potentially dangerous gas leaks.
- **Simple installation: Mount, Connect, Pour.**
  - Compact design fits in walk-in cooler & direct draw applications.
  - Works w/ long-draw, direct-draw & through-the-wall systems.
- **Compatible w/ Bag-in-Box in a ready to drink (RTD) format.**

Electrical	115 VAC, 3.5 Amps (max), 2.5 Amps (25 psi), 2.0 Amps (30 psi), NEMA 5-15P
Liquid Pressure	40 PSI (max)
Flow Rate	1.0 GPM (max)
Liquid Filtration Requirement	No particulates greater than 150 microns in diameter
Liquid Viscosity Requirement	Less than 100 centipoise
Liquid Temperature	34°F (min) - 120°F (max)
Liquid Inlet Connection	Corny keg liquid ball lock connector included (bag-in-box connectors available)
Liquid Outlet Connection	3/8" female push-to-connect (3/8" OD stem x 1/4" OD barb adapter included)
Dimensions	11" L x 17" W x 3" D
Weight	5.5 lbs

Installation

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

Storage

Store Infusion Kits in a dry & climate controlled (40-95°F) room.

Always keep Infusion Kits in box as shipped until arriving at installation location.

Never place/stack objects on top of the Infusion Kit.

Note: Do not proceed until this document has been read completely & all connections are made as stated within this manual.

Location & Mounting Requirements

The Infusion Kit should be installed indoors, in an environment between 33F & 95F, where it will not be damaged by moving equipment.

The Infusion Kit should be mounted to a wall using the included hardware & pilot holes on all four corners.

Note: The panel must be installed in a refrigerated space (below 39F) if used with perishable liquids & above 32F if used with non-alcoholic &/or water-based products.

Note: Use best general practices to ensure the wall will support the panel at its full weight.

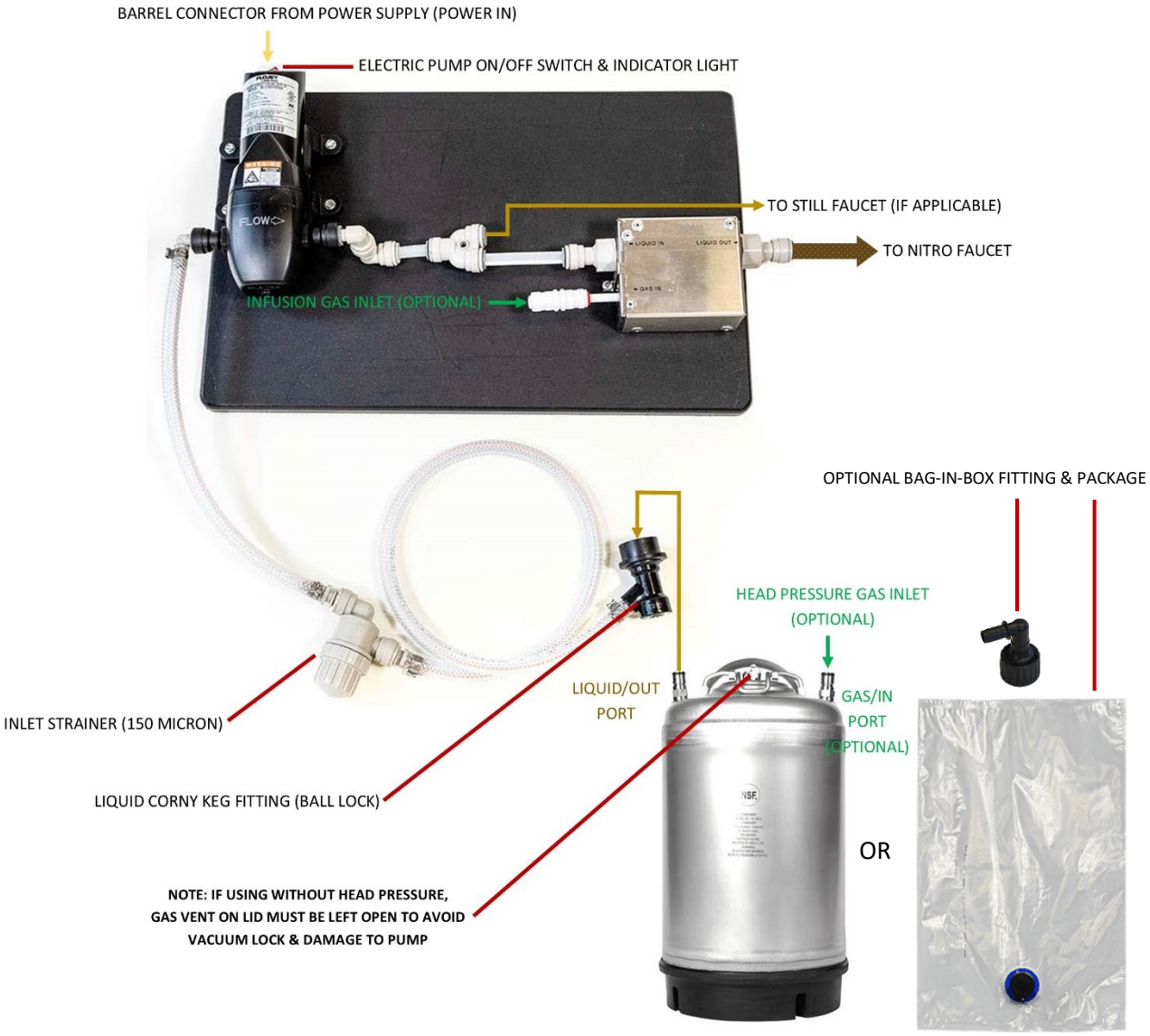
Making Connections

The system is equipped with a Liquid Corny Keg fitting for the liquid connection & a 1/4” female push-to-connect for the Infusion Gas Inlet connection. Ensure ports have been connected before system startup. Plug the Still Faucet connection if not in use. DO NOT plug Infusion Gas Inlet port if not in use.

The included power supply must be used for the Flojet pump. Do not replace with alternatives.

Note: Push-to connect locking clips are recommended to secure connections once tested to be leak free.

Schematic



Note: Cut off Liquid Corny Keg fitting & install the Bag-in-Box (BIB) fitting to use Bag-in-Box packaging.

Note: Product must be full strength. This system is not compatible with concentrates unless premixed.

Note: Corny Kegs/fittings & refillable BIB packaging/fittings available through AC Beverage.

Startup Procedure

Before proceeding, confirm all location & mounting requirements have been met & all connections have been made properly.

1. Locate a full keg or Bag-in-Box (BIB) & connect it to the Liquid Corny Keg or BIB fitting.
2. Open faucet(s) & turn on the Flojet pump using the power switch on the top of the pump.
3. Observe faucet(s) until product begins dispensing & then close it(them).
4. Open one faucet at a time until the product dispenses without any air pockets or sputtering.

System Calibration

Flojet Pump

The pump should run continuously while the nitro faucet is wide open. If the pump turns on/off while the faucet is wide open, the flow rate must be improved. First, ensure the custom restrictor disc supplied with the Infusion Kit has been installed inside of the nozzle of the nitro faucet, & that the tubing downstream is clean & free of any buildup. If the pump still pulses on/off, explore other methods for improving flow rate - such as decreasing the length of the tubing, increasing the diameter of the tubing, &/or removing any additional restriction in the line.

Infusion Level

To increase the amount of gas being infused (Infusion Level), the flow rate must be improved. The Infusion Kit comes with a custom restrictor disc to do just that. If the level of infusion is still not enough, explore other methods for improving flow rate - such as decreasing the length of tubing, increasing the diameter of the tubing, &/or removing any additional restriction in the line. To decrease the amount of gas being infused (infusion level), the flow rate must be decreased. Try using the standard nitro restrictor disc that came with your faucet to reduce infusion levels. Or, increase length of tubing, decrease diameter of tubing, or add restriction/flow control to the line.

Note: Use a clean pitcher or bucket while calibrating the system to avoid waste. Pour product back into keg once system calibration has been completed.

Note: If supplying the kit with a pressurized gas source, increase the pressure to increase level of infusion & decrease pressure to decrease the infusion level. Do not exceed 50psi.

Daily Operation

Dispensing a Beverage

Always ensure to open the faucet all the way when dispensing, especially when using the nitro faucet. Failure to open the faucet entirely can result in less or inconsistent infusion.

Note: Do not pull with excess force or lean/pull body weight on faucet when dispensing.

Changing a Keg

When a keg/BIB is empty, eventually the product will stop dispensing from the faucet. Close the faucet, disconnect the empty keg/BIB, attach a full keg/BIB, cycle the power switch off/on, fill the fob with liquid using vent port & ensure float rises (if applicable), & finally open the faucet(s) until product is dispensed.

Maintenance & Line Cleaning:

Daily

1. Wipe down & clean all surfaces with warm soapy water.
2. Clean stout faucet nozzle(s) by removing & soaking in approved sanitizer/cleaner for at least 5 minutes.

Note: Cleaners/sanitizers with chlorine can damage the stainless-steel components in the nose cone & infusion system. Contact your supplier to purchase an approved & compatible cleaning/sanitizing solution. If possible, soaking the nose cone overnight in an approved cleaning/sanitizing solution is recommended.

Line Cleaning Procedure (at least monthly):

⚠WARNING

When using cleaning fluids or chemicals, rubber gloves and eye protection should be worn.

Required Materials:

1. Plastic bucket
2. Rubber gloves
3. Potable water
4. Protective eyewear
5. Approved cleaning/sanitizing solution
6. Sink to dump excess coffee, water & cleaning/sanitizing solution
7. Clean product tank (for cleaning/sanitizing & rinsing, if applicable)

Line Cleaning Procedure:

1. Inspect & clean the filter bowl screen by turning off the red switch on the pump, disconnecting the black liquid ball lock from the product tank, & twisting the cap counterclockwise until it releases from the body (see image below). Remove strainer element & rinse off any buildup with warm water. Once the strainer is rinsed, reassemble the filter bowl assembly, assure the faucet is closed, & turn the red switch on top of the pump back to the on position.
2. Following the mixing/preparation instructions on the approved cleaner, mix/dilute the cleaner to yield the appropriate amount cleaning/sanitizing solution for each faucet being cleaned.
    a. To determine the appropriate portion of cleaning solution per faucet, determine volume or product contained in tube/line between the keg & the faucet & then double that value.
3. Pour the approved cleaning/sanitizing solution into a clean product tank & attach the liquid corny keg fitting to the liquid/out port of the keg & gas corny keg fitting to the gas/in port (if applicable). If a clean product tank is not available, clean/rinse one now using an approved cleaner/sanitizer.
4. Open the faucet that corresponds to tube/line being cleaned until pure cleaner is dispensed.
5. Allow the cleaner/sanitizer to soak in the line for at least five minutes & no longer than 30 minutes.
6. Open the faucet & allow the remaining cleaning/sanitizing solution to be dispensed.
7. If the cleaner/sanitizer being used is a no-rinse formula, reattach a clean product tank (full of product) & follow step “8) a.” If the cleaner/sanitizer being used requires a rinse, follow step “8) b.”
8.
    a. Open faucet(s) & dispense product to rinse residual cleaner. At least one 12oz serving must be discarded to rinse remaining cleaning/sanitizing solution. For long draw systems, calculate volume contained in the lines & dispense at least this much before consuming or serving any product.
    b. If a clean product tank is not available, thoroughly rinse out cleaner/sanitizer &/or product inside of product tank & fill with potable water. Fill the product tank with water (at least twice as much as the volume of liquid required to fill the tube/lines between the keg & faucet). Attach the product tank (filled with water) to the system & open faucet(s) until half of the rinse water has been dispensed. Allow the water to soak in the lines for at least 5 minutes. Open the faucet(s) & allow the remaining half of the rinse water to be dispensed. Reattach a clean product tank (full of product) to the system & open faucet(s) until undiluted product is dispensed.
9. Repeat above steps for all faucets/lines being cleaned.

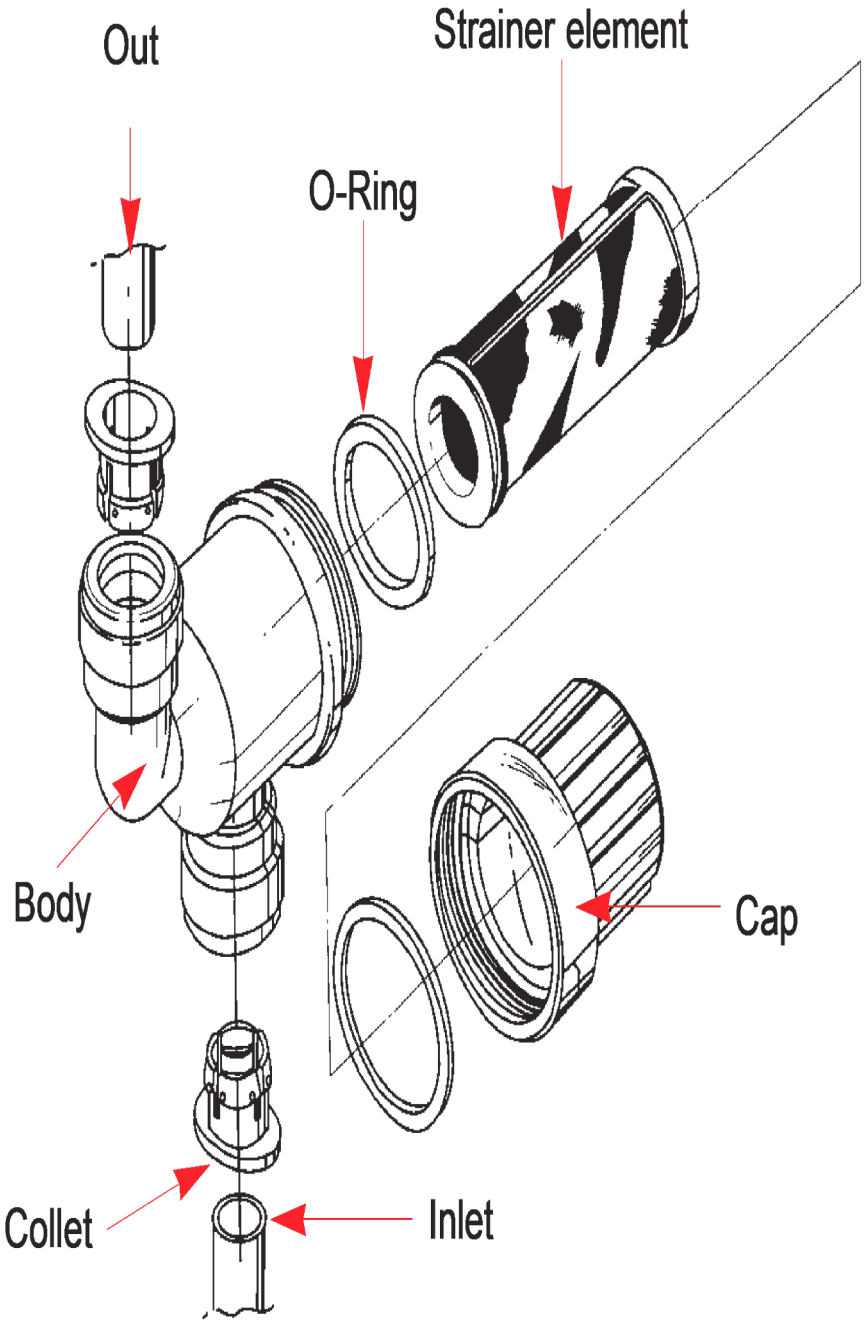
Troubleshooting

Basic Checklist:

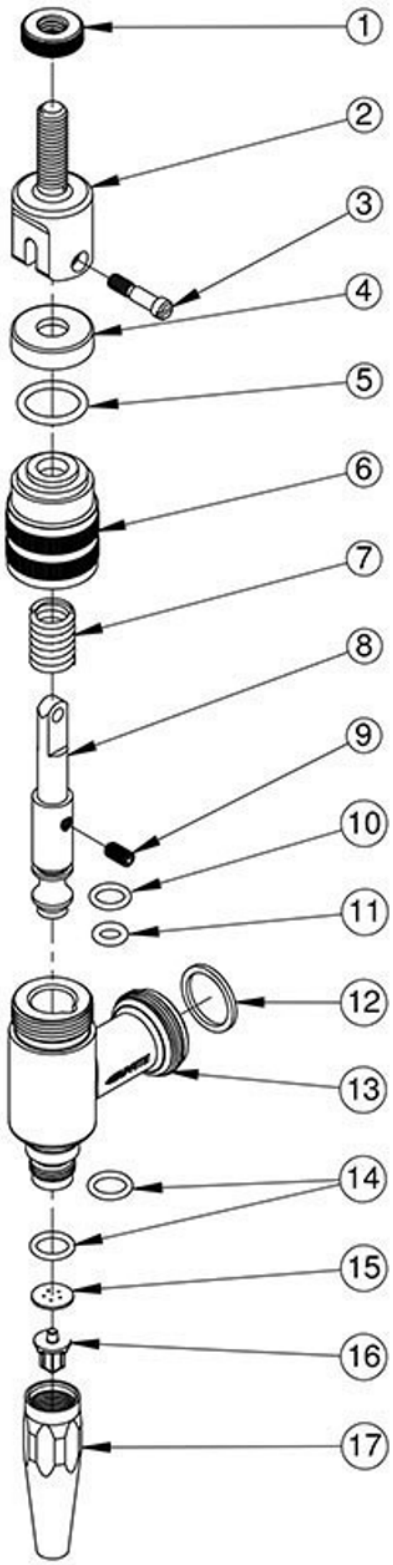
- ✓ Is the inlet strainer clean?
- ✓ Does the keg/BIB have product/liquid inside?
- ✓ Is the Flojet pump power switch blinking red?
- ✓ Has a Line Cleaning Procedure been performed in the last 30 days?
- ✓ IF APPLICABLE: Is the system vacuum locked? Does the corny keg pressure relief valve need opened?
- ✓ IF APPLICABLE: Is the gas supply turned on & supplying adequate pressure?
- ✓ IF APPLICABLE: Is there liquid in the FOB? Is the float at the top of the sight glass?
- ✓ IF APPLICABLE: Is the flow control lever on the still faucet in the open position?

Symptom	Potential Issue	Potential Solution(s)
Nothing dispensing from the faucet	**1. Inlet strainer clogged. 2. Keg/BIB empty. 3. Pump timeout (on/off switch light blinking). 4. Power supply unplugged or faulty. 5. Vacuum lock (if using keg). 6. Line(s) is(are) dirty. 7. Gas supply off, empty or compromised. 8. FOB float is down & blocking flow. 9. Flow control faucet lever closed. 10. Line is frozen.**	**1. Disassemble & clean inlet strainer. 2. Detach empty keg/BIB, reattach full keg/BIB & cycle power switch off/on. 3. Cycle power switch off/on to reset. 4. Check barrel connector on the pump & power outlet to ensure they are fully plugged in. The red on/off switch on the pump should be illuminated red when on. Test a known working device or appliance on the same outlet to ensure there is power. 5. Pull the pressure relief pin on lid of the corny keg to relieve vacuum. Turn pressure relief pin once pulled to leave it open & avoid future vacuum lock or damage to pump. 6. Perform in Place Line Cleaning Procedure. 7. If applicable, check on gas supply - change gas cylinder or call for service. 8. Hold vent port to fill w/ liquid. Use lever to force the FOB float up if necessary. 9. Open faucet & adjust the flow control lever to reach desired flow rate. 10. Call for service.**
Product dispensing with too much or not enough nitro	**1. Flow rate is compromised: a. Lines are dirty (buildup). b. Inlet Strainer beginning to clog. c. Restrictor disc hole(s) clogged. d. Incorrect restrictor disc installed. e. The system needs recalibrated. 2. Infusion pressure set too high/low.**	**1. Improve flow rate: a. Perform in place line cleaning procedure. b. Disassemble & clean inlet strainer. c. Remove nozzle & inspect/clear restrictor disc holes of any debris. d. Remove nozzle & install the correct disc. e. Call for service. 2. If applicable, adjust inlet pressure up for more infusion or down for less infusion.**
Product being dispensed is too warm/cold	**1. Refrigeration is set too high/low. 2. Refrigeration failure.**	**1. Check the thermostat on the refrigerator (keg storage area) & power pack (long-draw only). Typically, refrigeration should be set above 32F to avoid freezing & below 40F to slow down product degradation. 2. Call for service.**

Inlet Strainer (Exploded View)



Nitro Faucet (Exploded View)



ITEM	DESCRIPTION
1	- STOP NUT
2	- LEVER
3	- SCREW, LEVER
4	- CAP, SLIDING
5	- O-RING, SCREW CAP
6	- SCREW CAP
7	- SPRING
8	- PISTON
9	- DOWEL PIN
10	- O-RING, UPPER PISTON
11	- O-RING, LOWER PISTON
12	- GASKET, FAUCET BODY
13	- HOUSING, BODY
14	- O-RING, NOZZLE
15	- JET DISC
16	- REGULATION CONE
17	- NOZZLE

Warranty

AC Beverage warrants that its products will be free from defects in material & workmanship, under normal use, regular service, & 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 sold 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 & cleaned regularly. In case of equipment failure, the 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 & explaining the complete circumstances. AC Beverage must be notified & 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 if all above mentioned prerequisites are satisfied. The customer is responsible for the return of the defective part or product to AC Beverage for inspection & 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 & authorize any reimbursements. If a repair is made without the explicit authorization from AC Beverage, it will not be covered by the warranty & 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 & 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.