



Nitrogen Infusion Box



Configuration varies
Model NIB3 shown

READ AND SAVE THESE INSTRUCTIONS

NOTICE TO INSTALLER: Please leave this booklet with the machine.

Key Features/Specifications/System Requirements..... FS104
Important Safeguards..... IS11
Pre-Installation ChecklistPC1
Installation InstructionsII43
Cleaning Instructions..... CI32
Rough-In Drawing..... RD103
Illustrated Parts/Recommended Parts..... IP190
Troubleshooting GuideTG43
Product Warranty.....PW3

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Due to continued product improvement, the products illustrated/photographed in this guide may vary slightly from the actual product.

Key Features

- Converts existing, N² pressurized, cold brew and drink systems for nitrogen infused cold drink dispensing.
- Gives cold drinks a creamy, velvety texture and taste. Can be used with cold brew coffee, beer, dairy drinks and juices.
- Compact design allows for under-counter installation.
- Equipped with quick connect system for fast installation.
- 2 and 3 head versions enable you to serve more than one type and flavor of nitrogen infused cold drink at a time (additional pouring heads required). You can also custom tailor the amount of nitrogen infusion for each beverage individually.

Specifications (Selected Models)

Dimensions			Beverage Connections				N ² ** Supply Requirements			
MODEL	DESCRIPTION	HEIGHT	WIDTH	DEPTH	SHIP WEIGHT	SHIP CUBE	BEVERAGE INLET*	BEVERAGE OUTLET	N2 CONNECTOR	N2 PRESSURE***
NIB1	Nitrogen infusion box, 1-head	4.61" [12.1 cm]	6.43" [16.3 cm]	10.02" [25.5 cm]	5.0 lbs [2.3 kg]	0.33 cu. ft. [0.01 m ³]	3/8" John Guest	3/8" John Guest	3/8" John Guest	30 - 50 psi 207 - 345 kPa
NIB2	Nitrogen infusion box, 2-head	4.61" [12.1 cm]	6.43" [16.3 cm]	10.02" [25.5 cm]	5.0 lbs [2.3 kg]	0.33 cu. ft. [0.01 m ³]	3/8" John Guest X 2	3/8" John Guest X 2	3/8" John Guest	30 - 50 psi 207 - 345 kPa
NIB3	Nitrogen infusion box, 3-head	4.61" [12.1 cm]	6.43" [16.3 cm]	10.02" [25.5 cm]	5.0 lbs [2.3 kg]	0.33 cu. ft. [0.01 m ³]	3/8" John Guest X 3	3/8" John Guest X 3	3/8" John Guest	30 - 50 psi 207 - 345 kPa

* Beverage temperature not to exceed 80°F (27°C).

** Food grade nitrogen required.

*** Pressure into NIB must not exceed 50 psi (345 kPa).

Symbols



This is the safety alert symbol. It is used to alert you to potential physical injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.



DANGER - Indicates a hazardous situation which, if not avoided, will result in death or serious injury.



WARNING - Indicates a hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION - Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.



NOTICE - Indicates a situation which, if not avoided, could result in property damage.



IMPORTANT - Provides information and tips for proper operation.



SANITATION REQUIREMENTS



WARNING - This product can expose you to chemicals including Acrylamide and Bisphenol A (BPA), which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information visit www.P65Warnings.ca.gov.

Important Safeguards/Conventions



WARNING:

- Make sure that this appliance is installed according to the INSTALLATION INSTRUCTIONS by qualified personnel before attempting to use it. Failure to follow the INSTALLATION INSTRUCTIONS could result in personal injury or void the warranty.
- This appliance is designed for commercial use. Any service other than cleaning and preventive maintenance should be performed by an authorized Wilbur Curtis service technician.
- This product is rated for dispensing beverage products at ambient or cold temperatures. Do not use it to dispense hot beverage products. See SPECIFICATIONS section.
- DO NOT open the service panels. There are no user serviceable parts inside.
- Clean the appliance and any dispensers completely before using them for the first time as according to the CLEANING INSTRUCTIONS. Clean them regularly as instructed in the CLEANING INSTRUCTIONS.
- Use this appliance only for its intended use, brewing/dispensing cold beverages/water.
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.

CE Requirements

- This appliance must be installed in locations where it can be overseen by trained personnel.
- For proper operation, this appliance must be installed where the temperature is between 5°C to 35°C.
- This appliance must not be cleaned by water jet.
- This appliance can be used by persons aged from 18 years and above if they have been given supervision or instruction concerning use of the appliance in a safe way and if they understand the hazards involved.
- Keep the appliance out of reach of children aged less than 18 years.
- Appliances can be used by persons 18 years and above with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.
- Children under the age of 18 years should be supervised to ensure they do not play with the appliance.
- Cleaning and user maintenance shall not be made by children unless they are older than 18 years and supervised.
- This appliance is intended to be used in household and similar applications such as:
 - staff kitchen areas in shops, offices and other working environments;
 - by clients in hotels, motels and other residential type environments;
 - bed and breakfast type environments.
- This appliance not intended to be used in applications such as:
 - farm houses
- Access to the service areas permitted by Authorized Service personnel only.
- The A-Weighted sound pressure level is below 70 dBA.



IMPORTANT: The Curtis Nitrogen Infusion Box is designed for locations with an existing draft system. If the NIB will be a component of a new draft system installation, please consult with your draft technician for integration of the NIB into your new draft system. See the *INSTALLATION INSTRUCTIONS* section for a typical system layout.

Checklist





The checklist below will assist you in preparing your location for the installation of your equipment. Please make sure that everything is prepared to these requirements prior to scheduling your installation. See the *ILLUSTRATED PARTS* section for a list of available installation accessories.

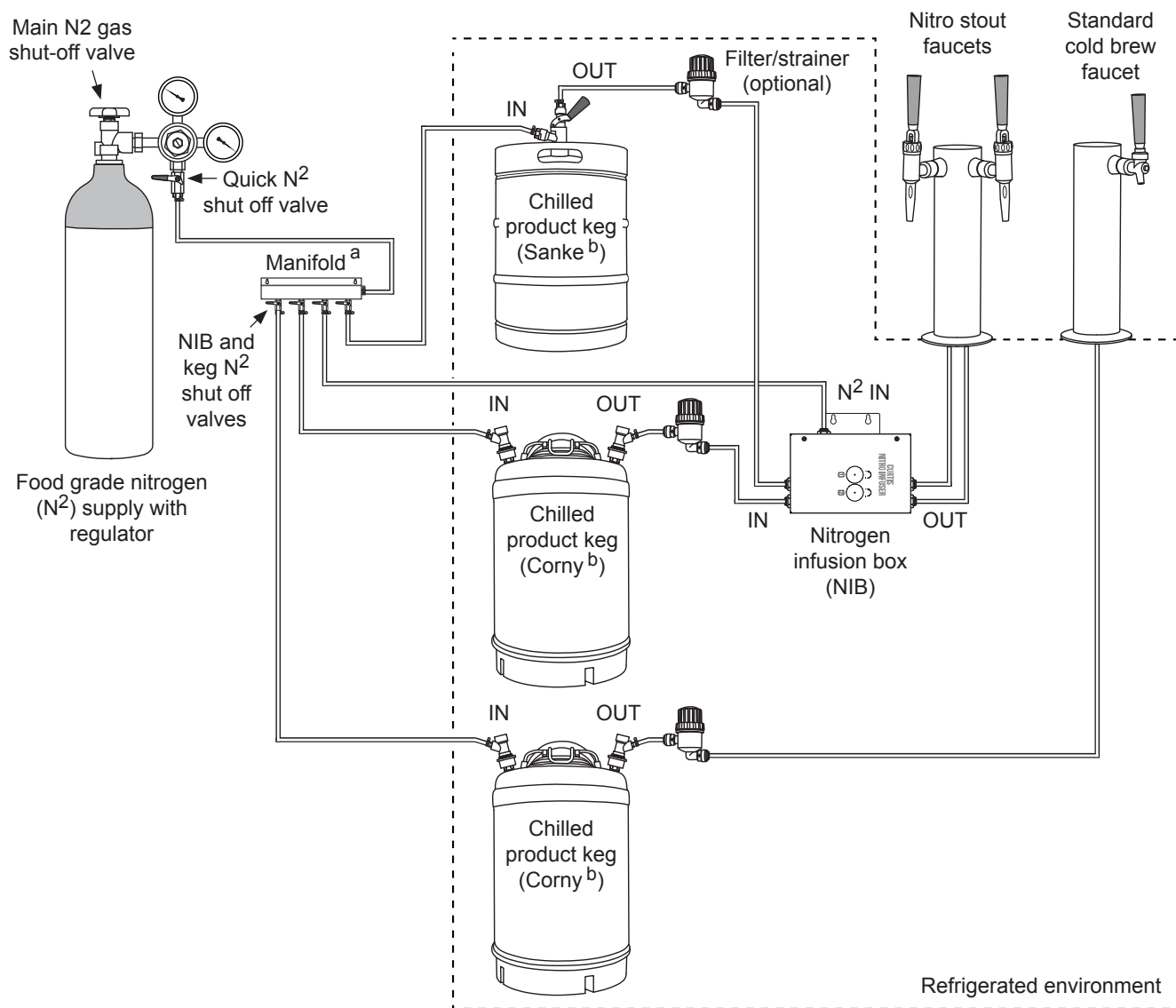
REQUIRED SYSTEM COMPONENTS

	DESCRIPTION	NIB1 QTY/TYPE	NIB2 QTY/TYPE	NIB3 QTY/TYPE	COMMENTS
<input type="checkbox"/>	A food grade nitrogen (N ²) supply with a nitrogen regulator set to 30 - 50 psi (207 - 345 kPa)	1	1	1	
<input type="checkbox"/>	A kegerator or under counter refrigerator with approximately 4.75"(H) x 6.42"(W) x 10.02"(D) of free space on one of the sides, inside, for installation of the NIB	1	1	1	Allow room for plastic beverage and N2 lines (allow for bend angles) and mounting bracket (if used) around mounting location.
<input type="checkbox"/>	Product keg(s)*	1	2	3	Sanke or Cornelius (Corny)
<input type="checkbox"/>	Keg connector(s)	1 Sanke or 2 Corny	2 Sanke or 4 Corny	3 Sanke or 6 Corny	Sanke kegs require 1 D style coupler per keg. Corny kegs require 1 liquid ball lock connector and 1 gas ball lock connector per keg.
<input type="checkbox"/>	Dedicated tap(s) with a nitro stout faucet installed	1	2	3	
<input type="checkbox"/>	Tees or manifold for N ² supply lines. One supply line required for NIB and each keg.**	1 tee or 1:2 manifold	2 tees or 1:3 manifold	3 tees or 1:4 manifold	A manifold allows for greater system control (independent shut off of keg N ²).
<input type="checkbox"/>	3/8" beverage line (food grade)	-	-		From nitrogen regulator to gas distribution tees or manifold
<input type="checkbox"/>	3/8" beverage line (food grade)	1 x 3 feet minimum	1 x 3 feet minimum	1 x 3 feet minimum	From gas distribution tees or manifold to NIB
<input type="checkbox"/>	3/8" beverage line (food grade)	1 x 3 feet minimum	2 x 3 feet minimum	3 x 3 feet minimum	From gas distribution tees or manifold to kegs
<input type="checkbox"/>	1/4" beverage line (food grade)*	1 x 3 feet minimum	2 x 3 feet minimum	3 x 3 feet minimum	From taps to inside of kegerator with a minimum of 3' of line running from kegerator ceiling
<input type="checkbox"/>	John Guest 3/8" barb(s)	1	2	3	
<input type="checkbox"/>	John Guest 1/4" barbs	2	4	6	
<input type="checkbox"/>	Hose Clamps	7	14	21	Oetiker type recommended
<input type="checkbox"/>	Mesh filter/strainer (food grade)*	1	2	3	Optional, recommended. Installed on each beverage supply line between keg and NIB.
<input type="checkbox"/>	3/8" John Guest type plug	-	-	-	Unused input(s) and output(s) on NIB should be plugged when not in use. This allows for the purchase of larger capacity NIB than needed to allow for future expansion.

* The NIB, the kegs, beverage supply lines and filters (if applicable) must be installed inside the kegerator/refrigerator. The kegerator/refrigerator must be set between 36°F/2°C to 40°F/4°C to avoid spoilage.

** Add additional tees/manifold ports for any standard cold brew kegs/faucets attached to the system that do not utilize ports on the NIB.

-  **WARNING:** Installation is to be performed only by a qualified installer.
-  **WARNING:** Do not exceed the maximum gas pressure and beverage temperature stated in the *SPECIFICATIONS* section.
-  **IMPORTANT:** Observe all governing codes and ordinances.
-  **IMPORTANT:** Before proceeding with installation, make sure that you have all the required components listed in the *PRE-INSTALLATION CHECKLIST*.



Example of Possible System Layout

Configuration varies based on requirements
 Two nitro beverage lines (NIB2) and one standard cold brew line shown

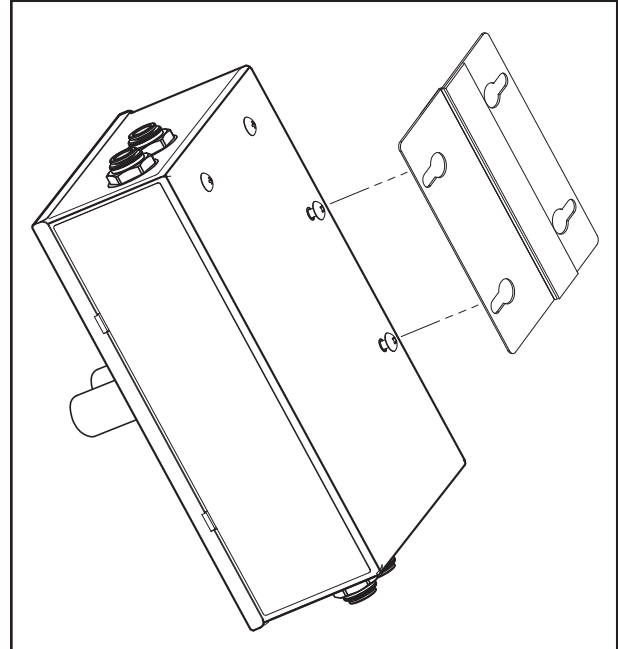
^a Either a manifold or a series of tees may be used to create the necessary number of N² lines for the system.
^b Either type of keg may be used by substituting the correct type of fittings.

Installation

Mount the NIB

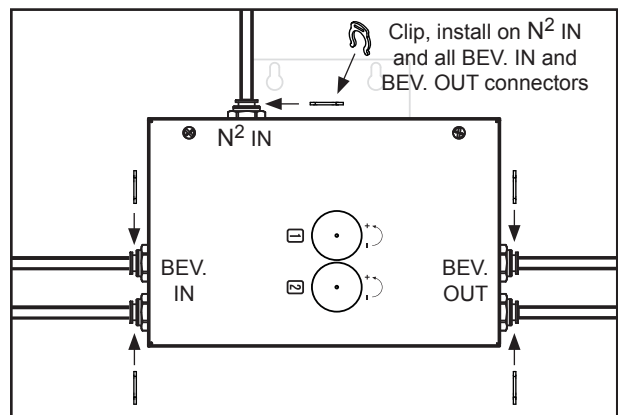
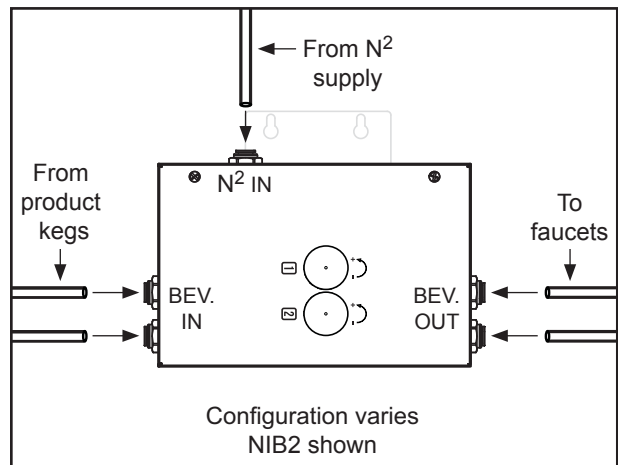
i IMPORTANT: When mounting the nitrogen infusion box (NIB), be sure to allow room for the plastic beverage and N² lines (allow for bend angles) around the mounting location.

- 1 Determine the location for the NIB, inside the kegerator (or refrigerator). The NIB can be installed horizontally or vertically.
- 2 If using the mounting bracket, loosen the appropriate screws on the back of the NIB and slide the mounting plate into place, then re-tighten the screws. Use the included self-drilling screws to attach the NIB to the selected location.
- 3 If using the double-sided tape to mount the NIB, clean the desired mounting location thoroughly with rubbing alcohol before mounting to assure good adhesion. Allow the alcohol to dry, then remove the backing from the double sided tape on the back of the NIB mounting plate and affix it to the selected location.



Connect the N2 and Beverage Delivery Lines

- 4 Insert the plastic tubing coming from the N² supply into the N² IN connector on the NIB. Push the tubing in until it stops.
- 5 Insert the plastic tubing coming from the keg into the BEVERAGE IN connector on the NIB. Push the tubing in until it stops. Repeat for systems having more than one beverage line.
- 6 Insert the plastic tubing running to the faucet into the BEVERAGE OUT connector on the NIB. Push the tubing in until it stops. Repeat for systems having more than one beverage line.
- 7 Plug any unused BEV. IN and BEV. OUT connectors.
- 8 Secure all John Guest connectors using locking clips (Curtis PN WC-2431, not included). Pull back gently on each of the tubes inserted into the NIB, in turn, to make sure that they are properly secured.



continued....

Prepare for Operation

- 9 Open the main gas shut-off valve and adjust the regulator on the N² supply to between 30 - 50 psi/207 - 345 kPa (40 psi/276 kPa recommended). The pressure required for your system may vary, but do not exceed 50 psi.
- 10 Open the quick shut off valve on the tank. Open the keg and NIB N² supply valves on the manifold, if applicable.
- 11 Clear air from the line(s) by opening the faucet(s) until all large air bubbles are removed.
- 12 Sanitize the dispensing system according to the instructions in the **CLEANING INSTRUCTIONS** section before using the system for the first time. While flushing out the system, check the beverage delivery line connections for leaks.
- 13 Place the product keg(s) inside the kegerator (set between 36°F/2°C and 40°F/4°C) and allow sufficient time for the product in the keg to chill.
- 14 Connect the chilled beverage product keg(s) to the system. Connect the keg N² supply line (IN) and keg beverage line (OUT).
- 15 Remove the covers over the infusion level adjustment knob(s). Make sure that the knob(s) are unlocked and set the level to position 5.
- 16 If the dispensed beverage does not have enough foam, turn the knob(s) slightly counter-clockwise (+) and retest. Repeat until the foam level is acceptable. If the foam level is too high, or the system is "blowing foam" turn the knob(s) slightly clockwise (-) and retest. Repeat until the foam level is acceptable. Lock the knob(s) and replace the knob cover(s) after adjustment.



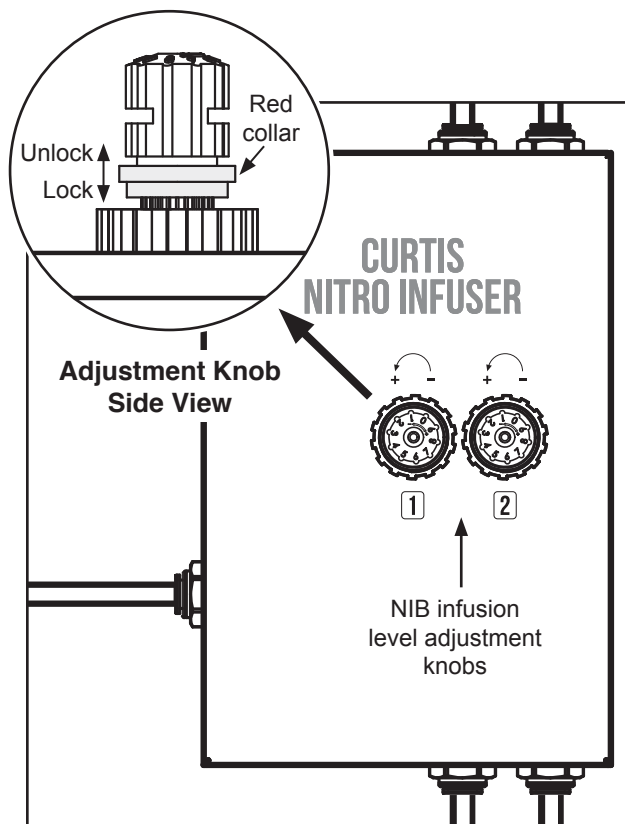
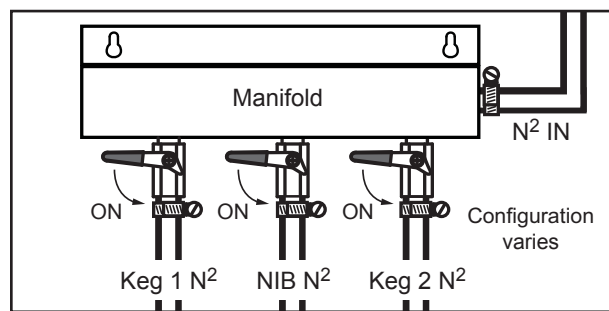
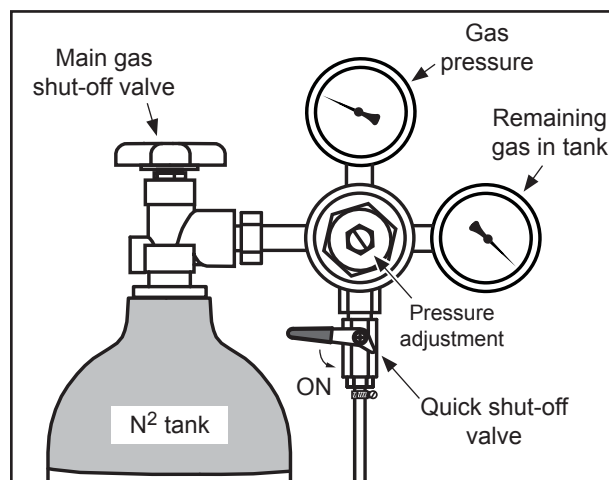
NOTICE: To avoid damage to the adjustment valve, do not over-tighten the knob.



NOTE: The adjustment knob is sensitive. Small adjustments result in significant change. There is a short delay before infusion adjustments take effect at the faucet.



NOTE: Purge 6-8 oz. (175-250 ml) of product at the beginning of each business day. Curtis recommends that the N₂ gas supply be turned off at night, when not in use.



Unlock the knobs and turn them counter-clockwise (+) for more head and clockwise (-) for less head



NOTICE - Do not use cleaning liquids, compounds or powders containing chlorine (bleach) or corrosives. These products promote corrosion and will damage the finishes. **USE OF THESE PRODUCTS WILL VOID THE WARRANTY.** Do not immerse the unit in water or any other liquid.

Cleaning and Sanitizing - Daily

Overview

The following 2 step process involves the use of an empty keg (one for each beverage line). Each keg is filled with cleaner/sanitizer. The liquid is drawn through the entire system to clean and sanitize it.

1) Clean

- a Use a commercial, food grade, cold brew system cleaner. Mix it according to the directions on the package.* Fill an empty keg with enough cleaner to fill all beverage lines between the keg and the faucet. Fill additional kegs with cleaner for each beverage line in the system.
- b Connect the N2 and beverage output lines from the system to the keg(s).
- c Place an empty container under the faucet(s).
- d Open each faucet, pouring until you see cleaning fluid begin to fill the container.
- e Allow the system to sit for the amount of time specified by the cleaner manufacturer, with the cleaning solution in the hoses/lines before flushing.

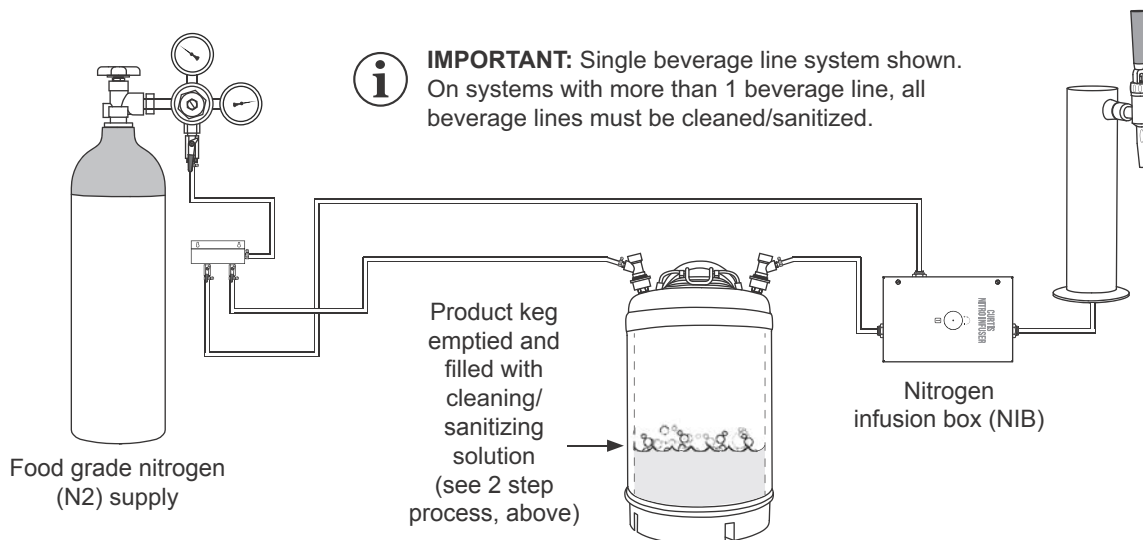
* DO NOT use hot water. Solution temperature should be between ambient and 80°F (27°C).

- f Empty the remaining cleaning solution from the keg(s). Fill the keg(s) with rinse water. Open the faucet(s). Refill the keg(s) with water until all the cleaning solution has been flushed from the system.

- g Discard the solution that poured into the container.

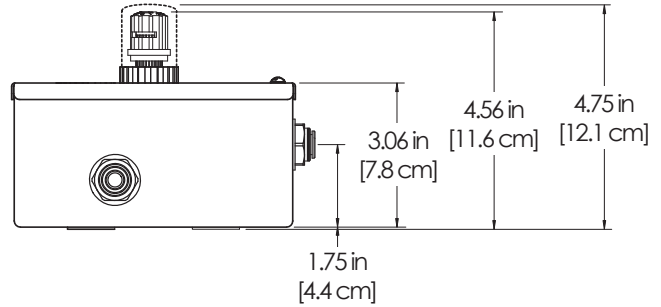
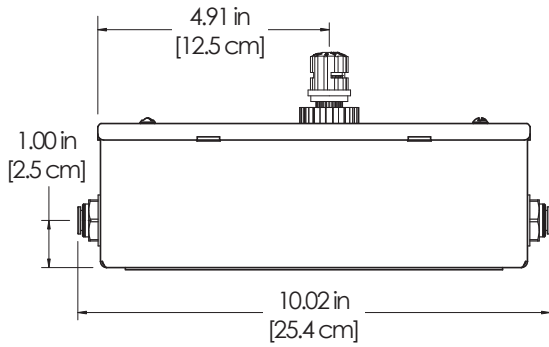
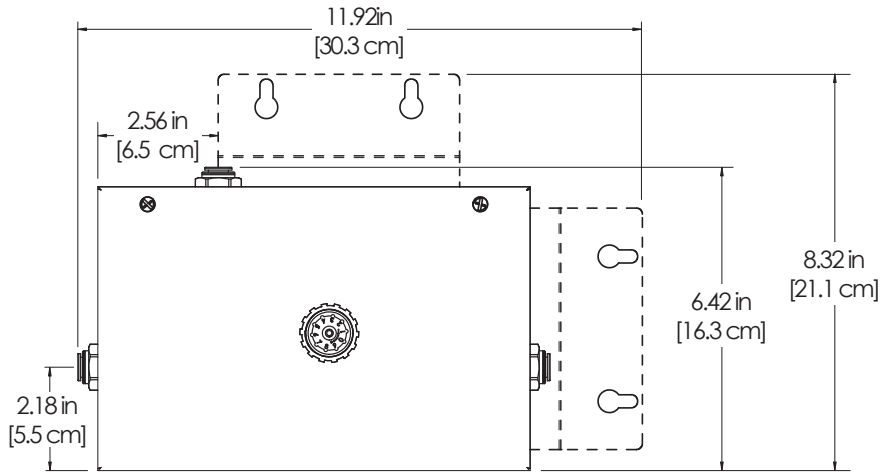
2) Sanitize

- h Use a commercial, food grade, cold brew system sanitizer. Mix it according to the directions on the package.* Fill an empty keg with enough solution to fill all beverage lines between the keg and the faucet. Fill additional kegs with cleaner for each beverage line in the system.
- i Connect the N2 and beverage output lines from the system to the keg(s).
- j Place an empty container under the faucet(s).
- k Open each faucet, pouring until you see sanitizing solution begin to fill the container.
- l At a minimum, allow the system to sit for the amount of time specified by the sanitizing solution manufacturer. Curtis recommends leaving the sanitizer in the system when not in use. Flush the system thoroughly with water before returning it to use.

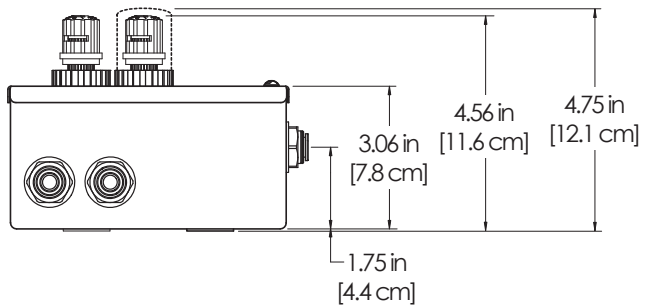
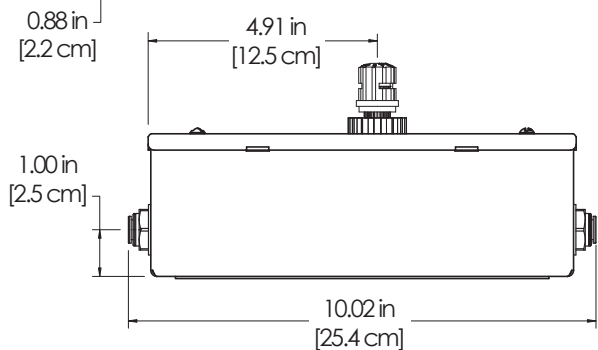
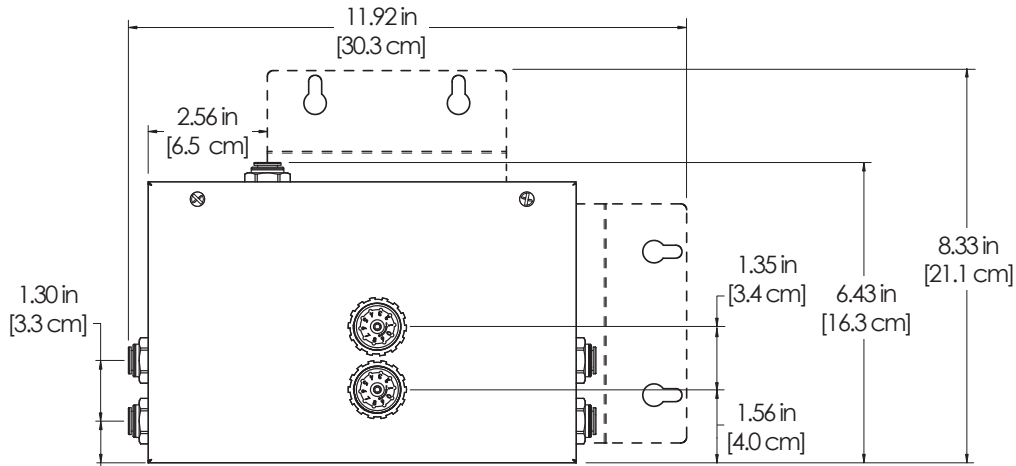


Cleaning/Sanitizing Process Setup

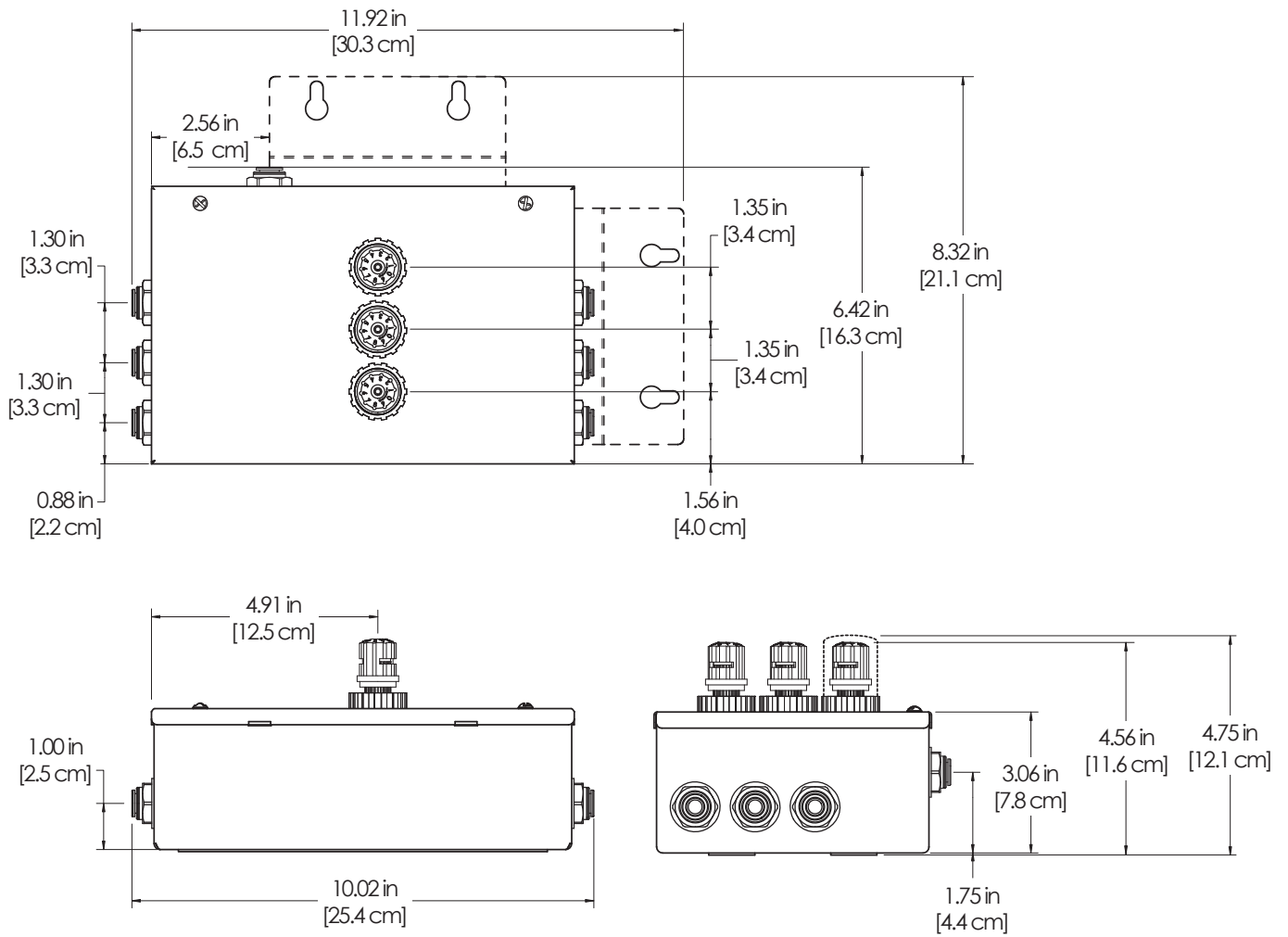
NIB1



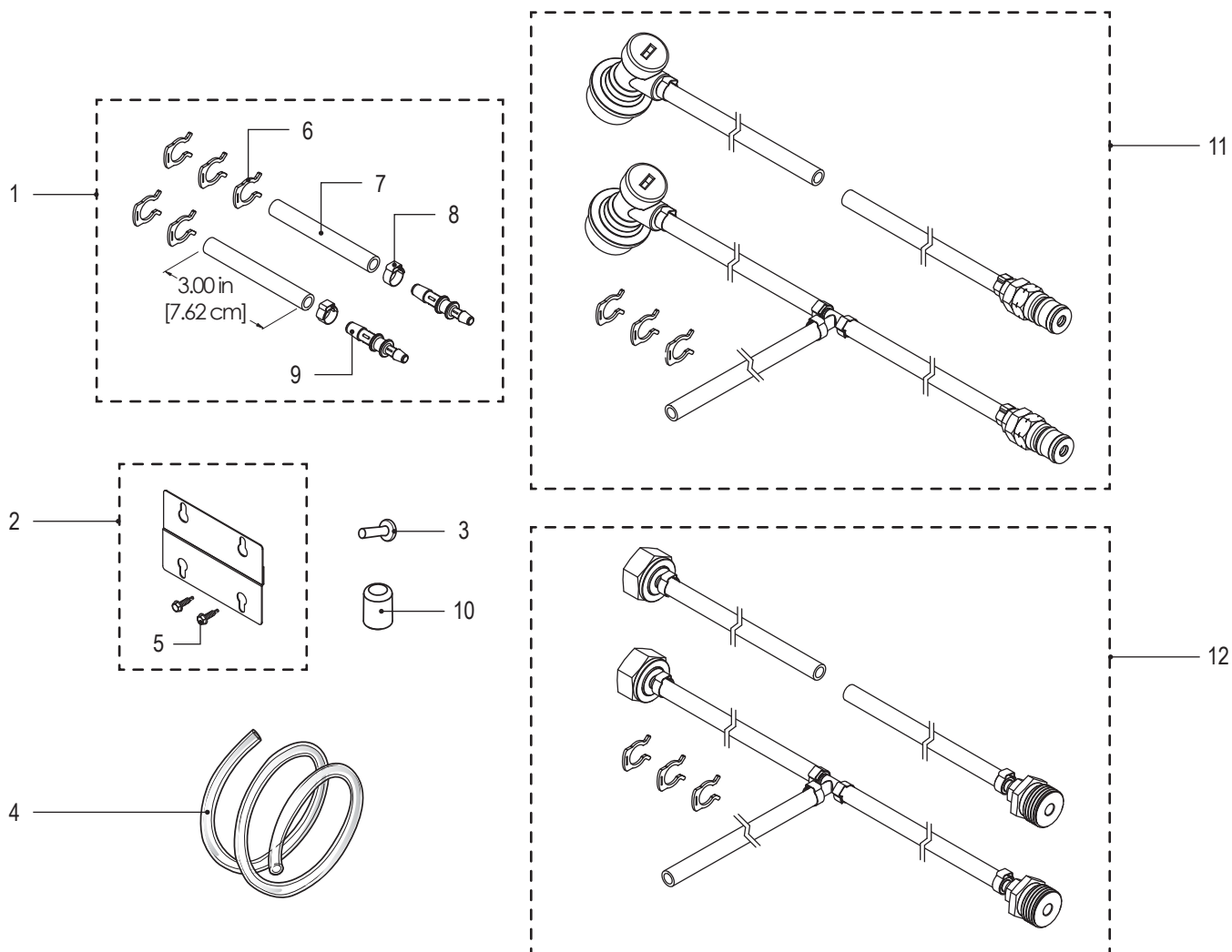
NIB2



NIB3



NIB - Installation Accessories - Exploded View



Parts List

ITEM #	PART #	DESCRIPTION	USE
1	WC-53170K	KIT, INSTALLATION NIB	TO CONVERT 3/8 INCH O.D. BEVERAGE IN AND OUT CONNECTIONS FOR USE WITH 1/4 INCH O.D. TUBING
2	WC-65096K	KIT, PLATE MOUNTING	TO MOUNT NIB TO WALL. MAY BE MOUNTED 2 WAYS USING 2 SELF DRILLING SCREWS OR DOUBLE SIDED TAPE (BOTH INCLUDED)
3	WC-2564	PLUG, STEM 3/8 TUBE JOHN GUEST	TO PLUG UNUSED BEVERAGE IN AND OUT CONNECTIONS
4	WC-53118-120K	KIT, TUBING 3/8 OD X 10FT LONG	SYSTEM BEVERAGE LINE CONNECTIONS. CONNECTS DIRECTLY TO BEVERAGE IN AND OUT JOHN GUEST CONNECTORS.
5	WC-4621	SCREW, 10-16 X3/4 HEX HD SELF DRILLING 18-8 SS	REPLACEMENT MOUNTING PLATE SCREWS
6	WC-2431	CLIP, LOCKING 3/8" TUBE JOHN GUEST	SECURING TUBING IN JOHN GUEST CONNECTOR
7	WC-53170	TUBING, 3/8" O.D. X 1/4" I.D. CLEAR PVC	USE ITEM 4
8	WC-14023	CLAMP, TUBING 8.8-10.5MM SS OETIKER	CLAMPING 3/8 O.D. TUBING
9	WC-29133	FITTING, BARB 1/4 X 3/16	CONNECTS 1/4 INCH I.D. TUBING TO 3/16 INCH I.D. TUBING
10	WC-3545	CAP, PUSH-ON WC-29125 NIB	COVERS THE INFUSION LEVEL KNOB(S)
11	WC-37582	KIT, SALES DEMO/INSTALLATION FOR CORNY KEGS	TEMPORARY INSTALLATION KITS (WITHOUT MANIFOLD) FOR DEMONSTRATION PURPOSES
12	WC-37583	KIT, SALES DEMO/INSTALLATION FOR SANKE KEGS	TEMPORARY INSTALLATION KITS (WITHOUT MANIFOLD) FOR DEMONSTRATION PURPOSES

Troubleshooting Guidelines

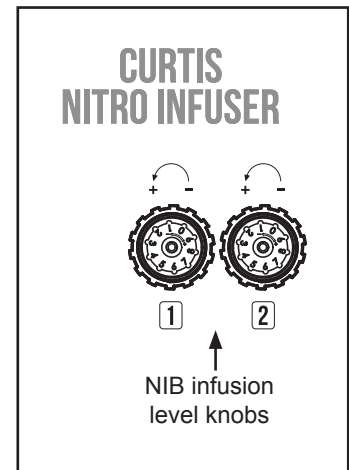
This troubleshooting guide identifies some, but not all, of the possible causes for problems that can occur.

Nothing Comes Out of the Faucet or Flow Out of the Faucet is Slow

- 1 Check to see if the nitrogen supply tank is empty or low.
- 2 Check to make sure that the regulator is set to between 30 - 50 psi (207 - 345 kPa).
- 3 Check to make sure that the main tank valve, the quick shut-off valve and the manifold valves are completely open.
- 4 Some kegs are equipped with a shut off valve. If your keg is equipped with a shut-off valve, make sure that it is completely open.
- 5 Make sure that the lid on the keg is tightly shut and that it is not leaking.
- 6 Check for a leaky or crimped N² supply line between the supply tank and the keg(s). Check to make sure all N₂ supply connections are tight. Check for leaky keg fittings.
- 7 Check for a clogged beverage supply line filter.
- 8 Check for a clogged beverage supply line. A common cause is a keg that is being stored below freezing. Raise the keg storage temperature to between 33°F - 40°F (1°C - 4°C) to prevent the beverage lines from freezing.

Product Flows, But There is Too Little or No Foam

- 1 Check to make sure that the NIB N² valve on the manifold is open.
- 2 Check for a leaky or crimped N² supply line between the supply tank and NIB.
- 3 Check to see if the nitrogen supply tank is low.
- 4 Check to make sure that the regulator is set to between 30 - 50 psi (207 - 345 kPa).
- 5 Make sure that all air bubbles are purged from the system.
- 6 Check for a malfunctioning faucet. Check for clogged or missing components. Check to make sure that the nozzle restrictor plate holes are clear.
- 7 Check to make sure that the NIB adjustment knob is properly set. Turn counter-clockwise slightly to increase infusion and test. Note that there will be a slight delay before the adjustment takes effect at the faucet. Repeat as necessary.



Too Much Foam

- 1 Check to see if the keg is empty.
- 2 Check for a malfunctioning faucet. Check for clogged or missing faucet components.
- 3 Make sure that the NIB adjustment knob is properly set. Turn clockwise slightly to decrease infusion and test. Note that there will be a slight delay before the adjustment takes effect at the faucet. Repeat as necessary.

Only Gas and spurts of liquid come out of faucet

- 1 Check to see if the keg is empty.
- 2 Check to make sure that the NIB adjustment knob is properly adjusted.
- 3 Some kegs are equipped with a shut off valve. If your keg is equipped with a shut-off valve, make sure that it is completely open.
- 4 Make sure that the lid on the keg is tightly shut and that it is not leaking.
- 5 Check to make sure that there are no kinks or clogs in the beverage line between the keg and the NIB.
- 6 Check for a malfunctioning faucet. Check for clogged or missing faucet components.

Watery Output from Faucet

Check the keg temperature. Keep the keg temperature at 40°F (4°C) or less. After the keg temperature is lowered, slosh the contents around to remix.

Product Taste Has Deteriorated or Has Become Slimy

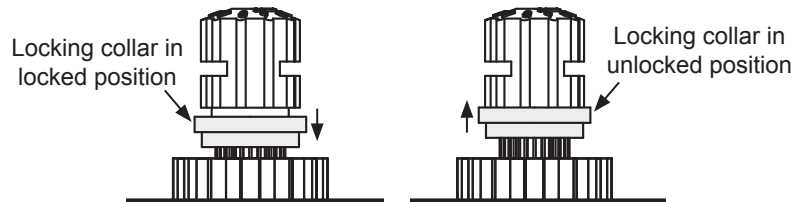
- 1 Check the product expiration date on the keg. Replace old product.
- 2 The product may have spoiled because the keg temperature has been above 40°F (4°C). Replace spoiled product and maintain a keg storage temperature between 33°F - 40°F (1°C - 4°C).
- 3 The cooling lines in the faucet tower are not working. Inspect and repair as necessary.
- 4 The beverage lines have not been cleaned as specified. See *Cleaning Instructions*.

Product Tastes of Soap or Chemicals

Make sure the beverage lines are thoroughly flushed with water following cleaning.

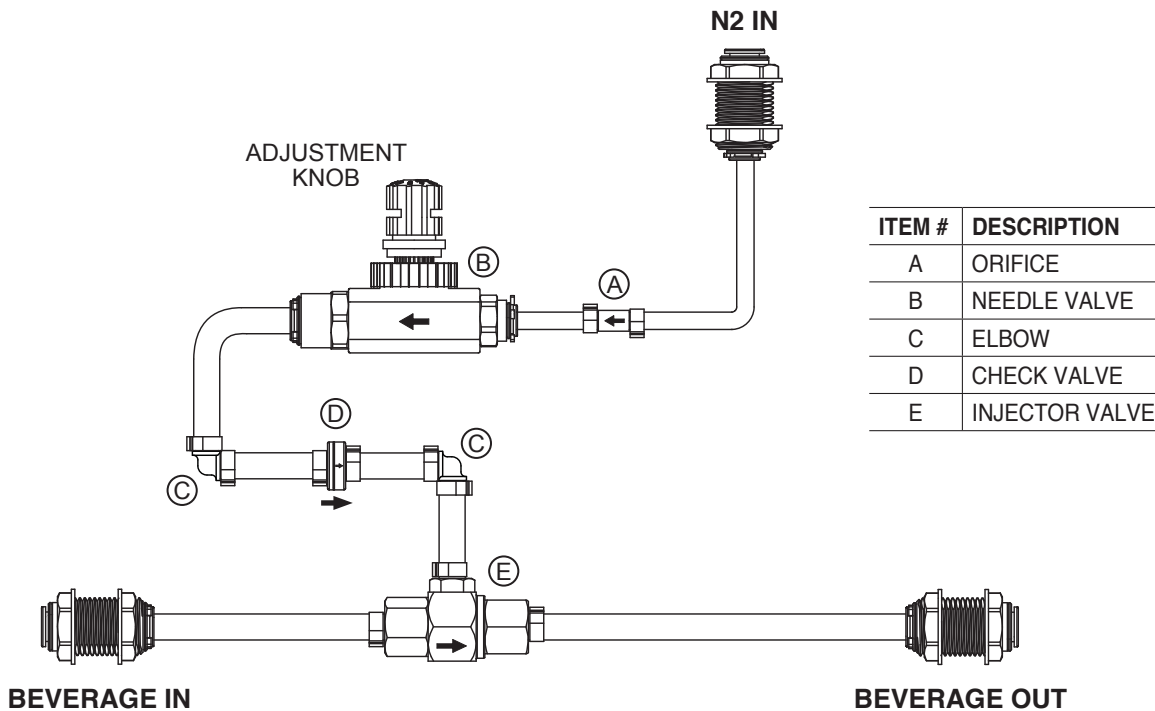
Adjustment Knob Does Not Turn

Make sure adjustment knob is not locked.

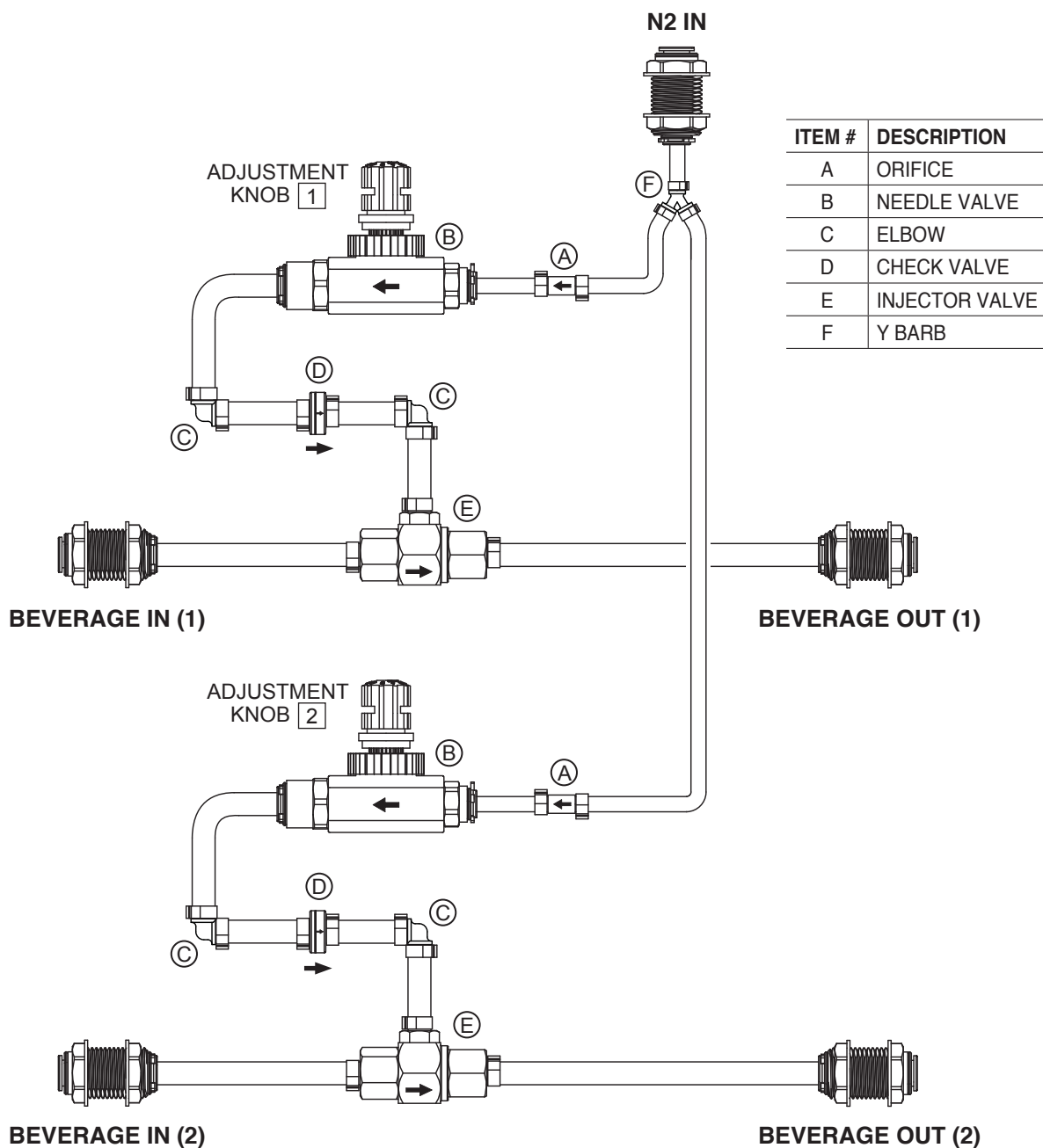


Adjustment Knob - Side View

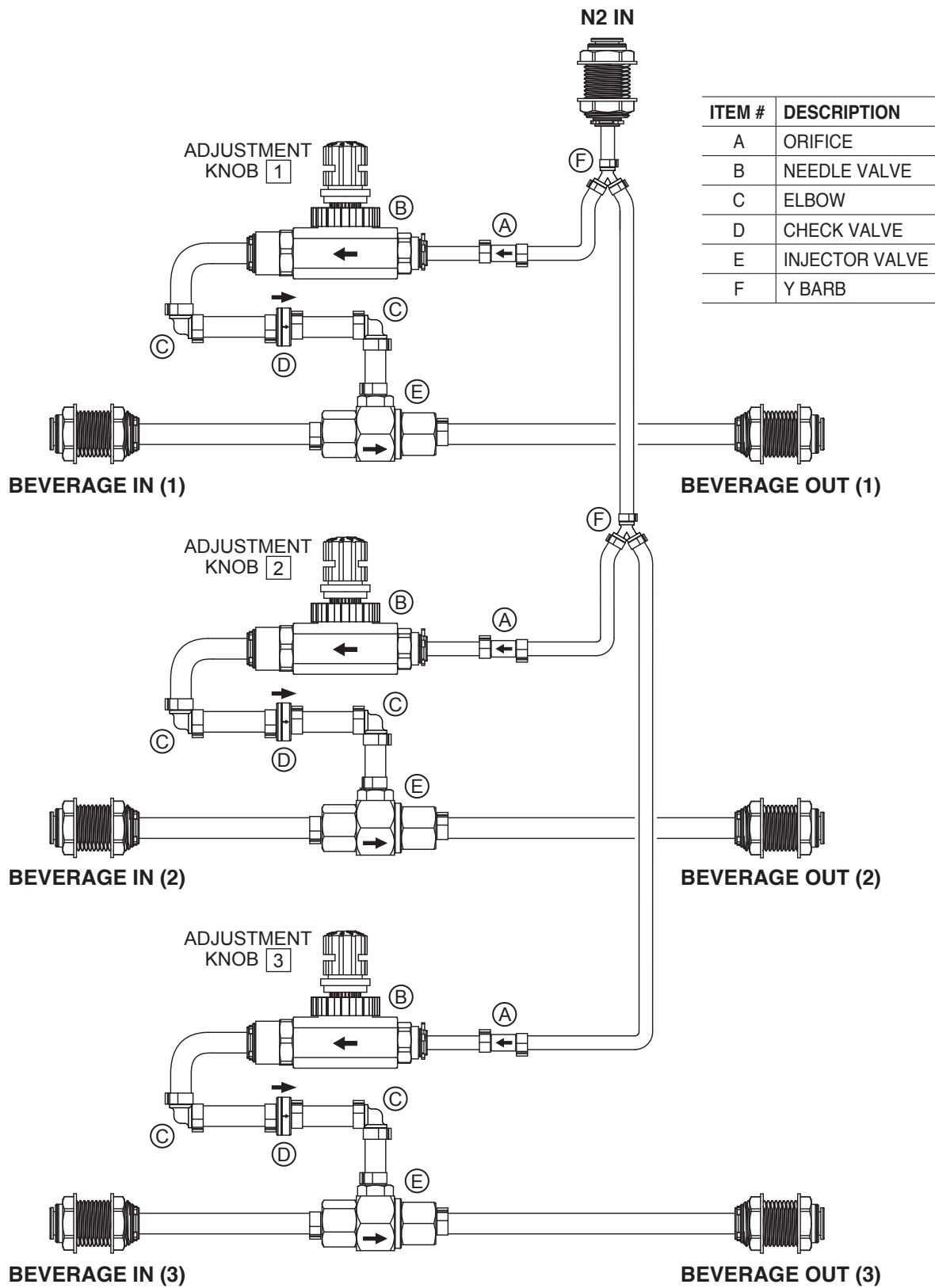
Schematic - NIB1



Schematic - NIB2



Schematic - NIB3



Wilbur Curtis Co., Inc. certifies that its products are free from defects in material and workmanship under normal use. The following limited warranties and conditions apply:

1 year, from original date of purchase.

CONDITIONS & EXCEPTIONS

The warranty covers original equipment at time of purchase only. The warranty does not cover:

- **Adjustments and cleaning:** *Valve and regulator adjustments are the responsibility of the equipment owner. The owner is responsible for proper cleaning and regular maintenance of this equipment.*
- **Replacement of equipment due to normal use and wear:** *This shall include, but is not limited to, "O" rings, gaskets, silicone tubing, silicone elbows.*
- **Losses due to down time:** *Curtis is not responsible for any losses due to down time caused by the equipment requiring repair or replacement.*

The warranty is void under the following circumstances:

- **Improper operation of equipment:** *The equipment must be used for its designed and intended purpose and function.*
- **Improper installation of equipment:** *This equipment must be installed by a professional technician and must comply with all local electrical, mechanical and plumbing codes.*
- **Improper gas supply:** *This includes, but is not limited to, excessive or low gas pressure and inadequate or fluctuating gas flow rate.*
- **Damaged in transit:** *Equipment damaged in transit is the responsibility of the freight company and a claim should be made with the carrier.*
- **Abuse or neglect (including failure to periodically clean or remove lime accumulations):** *The manufacturer is not responsible for variation in equipment operation due to excessive lime or local water conditions. The equipment must be maintained according to the manufacturer's recommendations.*
- **Unauthorized repair or modification:** *This equipment must be returned to the factory for repair or replacement. Opening the service panel will void the warranty.*

Repair or replacement is subject to Curtis' decision that the workmanship or parts were faulty and the defects showed up under normal use.

Return Merchandise Authorization (RMA): All claims under this warranty must be submitted to the Wilbur Curtis Technical Support Department prior to return of this equipment to the factory. **All returned equipment must be properly re-packaged in the original carton and received by Curtis within 45 days following the issuance of a RMA.** No units will be accepted if they are damaged in transit due to improper packaging. **NO UNITS WILL BE ACCEPTED WITHOUT A RETURN MERCHANDISE AUTHORIZATION (RMA). THE RMA NUMBER MUST BE MARKED ON THE CARTON OR SHIPPING LABEL.**