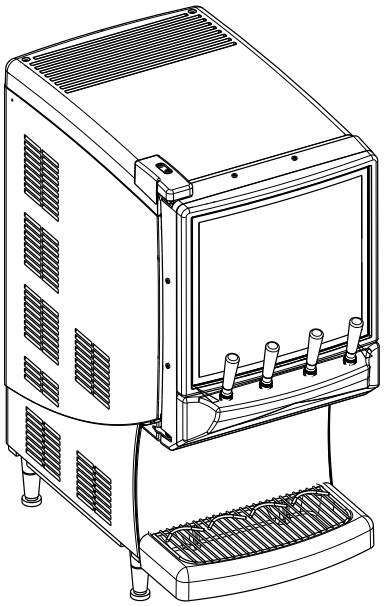
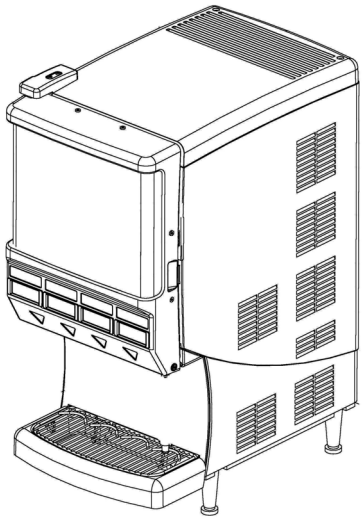
QUEST ELITE 4000/QUEST CAFE

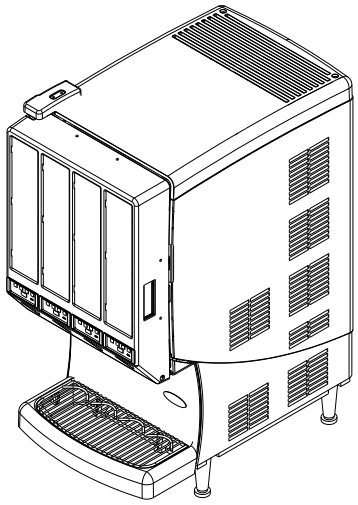
Installation And Operator Manual



QUEST CAFE



QUEST ELITE 4000



QUEST ELITE 4000 (VERTICAL)

Release Date: December 10, 2010

Publication Number: 620048956INS

Revision Date: July 16, 2018

Revision: H

Visit the Cornelius web site at www.cornelius.com for all your Literature needs.

The products, technical information, and instructions contained in this manual are subject to change without notice. These instructions are not intended to cover all details or variations of the equipment, nor to provide for every possible contingency in the installation, operation or maintenance of this equipment. This manual assumes that the person(s) working on the equipment have been trained and are skilled in working with electrical, plumbing, pneumatic, and mechanical equipment. It is assumed that appropriate safety precautions are taken and that all local safety and construction requirements are being met, in addition to the information contained in this manual.

This Product is warranted only as provided in Cornelius' Commercial Warrant applicable to this Product and is subject to all of the restrictions and limitations contained in the Commercial Warranty.

Cornelius will not be responsible for any repair, replacement or other service required by or loss or damage resulting from any of the following occurrences, including but not limited to, (1) other than normal and proper use and normal service conditions with respect to the Product, (2) improper voltage, (3) inadequate wiring, (4) abuse, (5) accident, (6) alteration, (7) misuse, (8) neglect, (9) unauthorized repair or the failure to utilize suitably qualified and trained persons to perform service and/or repair of the Product, (10) improper cleaning, (11) failure to follow installation, operating, cleaning or maintenance instructions, (12) use of "non-authorized" parts (i.e., parts that are not 100% compatible with the Product) which use voids the entire warranty, (13) Product parts in contact with water or the product dispensed which are adversely impacted by changes in liquid scale or chemical composition.

Contact Information:

To inquire about current revisions of this and other documentation or for assistance with any Cornelius product contact:

www.cornelius.com

800-238-3600

Trademarks and Copyrights:

This document contains the original instructions for the unit described.

CORNELIUS INC
101 Regency Drive
Glendale Heights, IL
Tel: + 1 800-238-3600

Printed in U.S.A.

Publication Number: 620048956INS

SAFETY INSTRUCTIONS

READ AND FOLLOW ALL SAFETY INSTRUCTIONS

Safety Overview

- Read and follow **ALL SAFETY INSTRUCTIONS** in this manual and any warning/caution labels on the unit (decals, labels or laminated cards).
- Read and understand ALL applicable OSHA (Occupational Safety and Health Administration) safety regulations before operating this unit.

Recognition

Recognize Safety Alerts

This is the safety alert symbol. When you see it in this manual or on the unit, be alert to the potential of personal injury or damage to the unit.

Different Types of Alerts

DANGER:

Indicates an immediate hazardous situation which if not avoided **WILL** result in serious injury, death or equipment damage.

WARNING:

Indicates a potentially hazardous situation which, if not avoided, **COULD** result in serious injury, death, or equipment damage.

CAUTION:

Indicates a potentially hazardous situation which, if not avoided, **MAY** result in minor or moderate injury or equipment damage.

SAFETY TIPS

- Carefully read and follow all safety messages in this manual and safety signs on the unit.
- Keep safety signs in good condition and replace missing or damaged items.
- Learn how to operate the unit and how to use the controls properly.
- **Do not** let anyone operate the unit without proper training. This appliance is **not** intended for use by very young children or infirm persons without supervision. Young children should be supervised to ensure that they do not play with the appliance.
- Keep your unit in proper working condition and do not allow unauthorized modifications to the unit.

NOTE: The dispenser is not designed for a wash-down environment and MUST NOT be placed in an area where a water jet could be used.

Publication Number: 620048956INS

QUALIFIED SERVICE PERSONNEL

⚠ WARNING:
Only trained and certified electrical, plumbing and refrigeration technicians should service this unit.

ALL WIRING AND PLUMBING MUST CONFORM TO NATIONAL AND LOCAL CODES. FAILURE TO COMPLY COULD RESULT IN SERIOUS INJURY, DEATH OR EQUIPMENT DAMAGE.

IF THE SUPPLY CORD IS DAMAGED, IT MUST BE REPLACED BY THE MANUFACTURER, ITS SERVICE AGENT OR SIMILARLY QUALIFIED PERSONS IN ORDER TO AVOID A HAZARD.

SAFETY PRECAUTIONS
This unit has been specifically designed to provide protection against personal injury. To ensure continued protection observe the following:

⚠ WARNING:
Disconnect power to the unit before servicing following all lock out/tag out procedures established by the user. Verify all of the power is off to the unit before any work is performed.

FAILURE TO DISCONNECT THE POWER COULD RESULT IN SERIOUS INJURY, DEATH OR EQUIPMENT DAMAGE.

⚠ CAUTION:
Always be sure to keep area around the unit clean and free of clutter. Failure to keep this area clean may result in injury or equipment damage.

DO NOT STORE EXPLOSIVE SUBSTANCES SUCH AS AEROSOL CANS WITH A FLAMMABLE PROPELLANT IN THIS APPLIANCE.

CHILDREN SHALL NOT PLAY WITH THE APPLIANCE.

CLEANING AND USER MAINTENANCE SHALL NOT BE MADE BY CHILDREN WITHOUT SUPERVISION.

SHIPPING AND STORAGE

⚠ CAUTION:
Before shipping, storing, or relocating the unit, the unit must be sanitized and all sanitizing solution must be drained from the system. A freezing ambient environment will cause residual sanitizing solution or water remaining inside the unit to freeze resulting in damage to internal components.

MOUNTING IN OR ON A COUNTER

⚠ WARNING:
When installing the unit in or on a counter top, the counter must be able to support a weight in excess of 140 lbs. (63.5 kg.) to insure adequate support for the unit.

FAILURE TO COMPLY COULD RESULT IN SERIOUS INJURY, DEATH OR EQUIPMENT DAMAGE.

THE APPLIANCE HAS TO BE PLACED IN A HORIZONTAL POSITION

UNIT DIMENSIONS

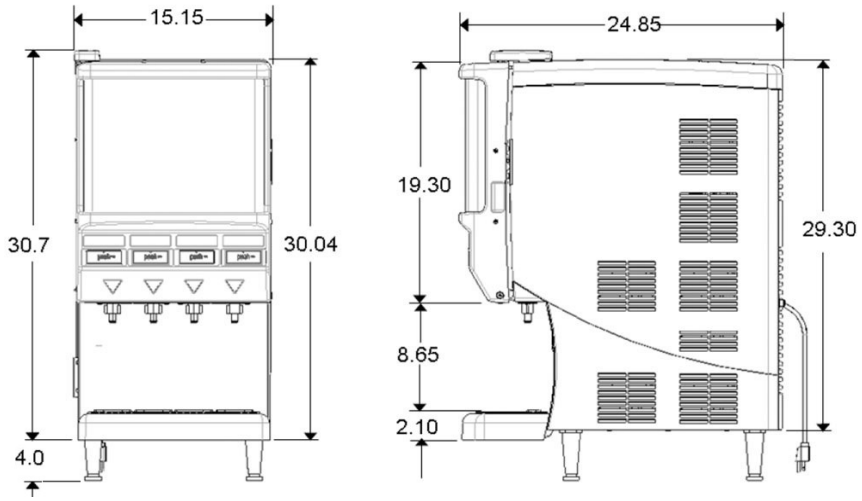


Figure 1. Quest Elite 4000

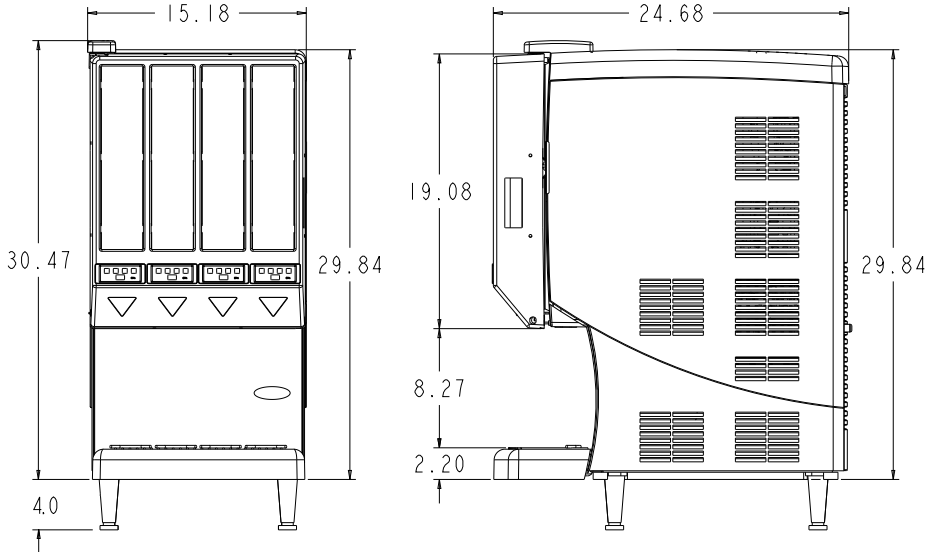


Figure 2 Quest Elite 4000 (Vertical)

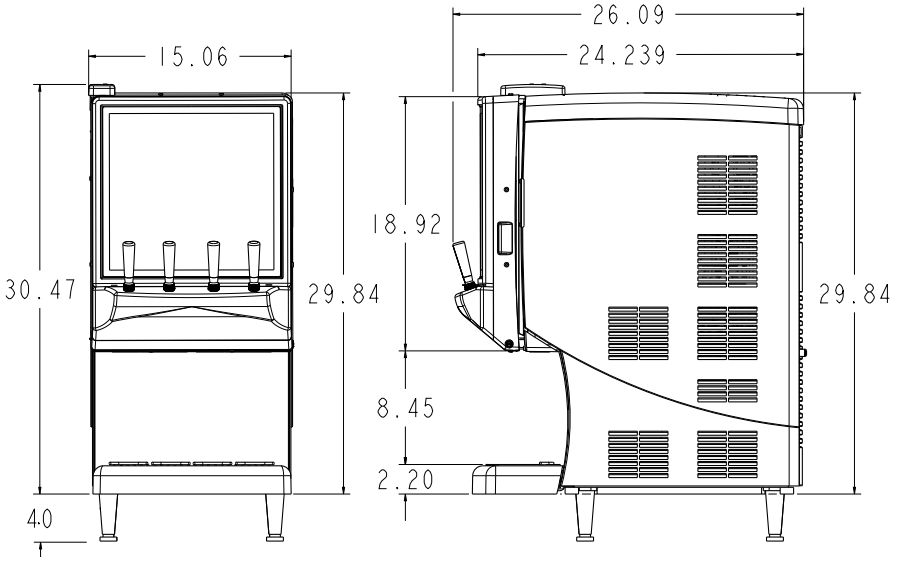


Figure 3 Quest Cafe

Publication Number: 620048956INS

RECEIVING

Each unit is completely tested and inspected before shipment. At the time of shipment, the carrier accepts the unit and any claim for damage must be made with the carrier.

Upon receiving the unit(s) from the carrier, inspect the carton for visible damage. If damage exists, have the carrier make a note on the bill of lading and file a claim with the carrier.

UNPACKING

- Remove staples securing carton to pallet.
- Lift carton up and off of unit.
- Remove inserts and shipping bag.
- Open upper cabinet door and remove installation kit.
- Remove bolts securing unit to pallet.
- Lift unit off of pallet.

NOTE: Do not lay the unit on it's side or back. This may cause vital oils to drain from the compressor resulting in damage during start-up and consequently voiding the warranty.

Nameplate Data

Models	VAC	Amps	Ph	Hz	Refrigerant			Test Pressure psi (Kpa) (bar)	
					Oz	Grams	Type	High side	Low side
QST Elite 4000	115	5	1	60	6.34-6.41	180-182	R-134a	400 (2757.9) / 27.6	88 (606.7) (6.1)
QST Elite 4000	230	2	1	50	6.34-6.41	180-182	R-134a	400 (2757.9) / 27.6	88 (606.7) (6.1)
QST Elite 4000	220	2	1	60	6.34-6.41	180-182	R-134a	400 (2757.9) / 27.6	88 (606.7) (6.1)
QST Cafe 4000	115	5	1	60	6.34-6.41	180-182	R-134a	400 (2757.9) / 27.6	88 (606.7) (6.1)
QST Elite 4000 (Vertical)	115	5	1	60	6.34-6.41	180-182	R-134a	400 (2757.9) / 27.6	88 (606.7) (6.1)

Concentrate Storage

Four 0.8 gallon (3.0 liter) disposable bottles.

NOTE: Refillable Concentrate reservoirs also available.

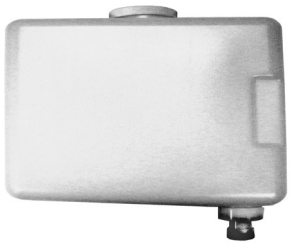


Figure 4. Concentrate Storage

Ice Bank/Pull Down

Weight 14-16 lbs. (6.35 - 7.25 kg.). Pull Down: 3.5 - 5.5 hours at 75°F (24°C)

APPLICATIONS

This appliance is intended to be used in household and similar applications such as the following:

- Staff kitchen areas in shops, offices and other working environments.
- Farm houses and by clients in hotels, motels and other residential type environments.
- Bed and breakfast type environments.
- Catering and similar non-retail applications.

Publication Number: 620048956INS

REQUIREMENTS

COUNTER LOCATION

Select a location in a well ventilated area, close to a grounded electrical outlet. If possible do not place the unit close to hot and/or steaming machines.

MINIMUM AIRFLOW CLEARANCE

The minimum airflow clearance is: 4” (10.16 cm) in back, 12” (30.48 cm) on top, 4” (10.16) at sides and open to the front.

⚠ IMPORTANT:

Condenser air is drawn in from the bottom of the rear panel and discharged out the top of the rear panel & side panels. Failure to maintain clearance space will reduce capacity of the unit and cause premature compressor failure.

The Dispenser needs to be placed using 4” legs that are included.

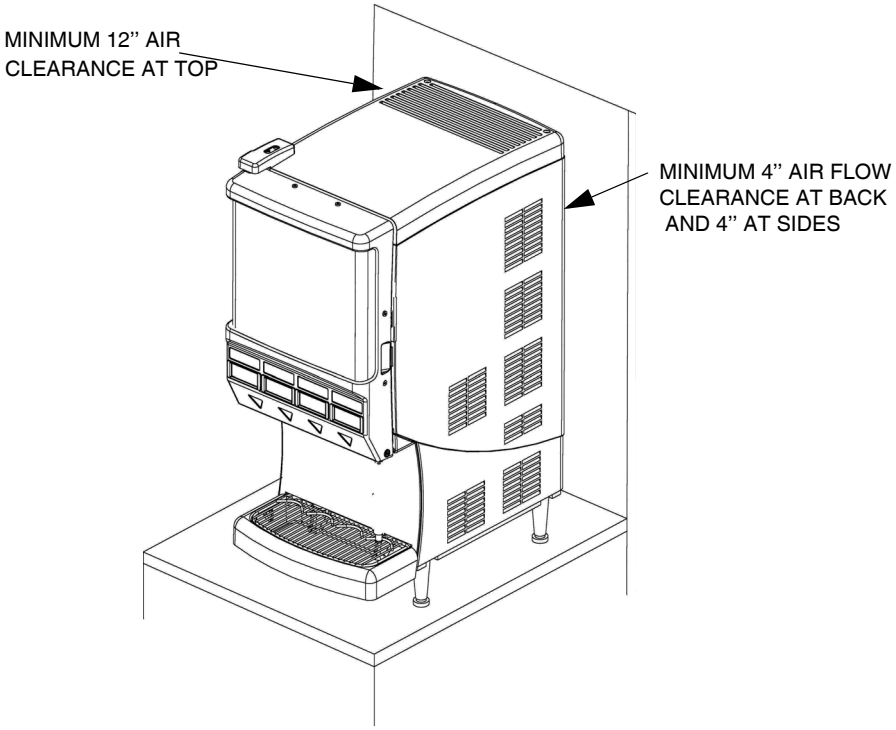


Figure 5. Minimum Clearances

Connecting the Water Supply

The Quest Elite series Juice Dispenser is designed to dispense juice at a high flow rate. It is very important that the incoming water line be dedicated for use by the dispenser only and does not have other machines connected which could cause a water surge, (i.e., a dishwasher, coffee maker, etc.).

⚠ IMPORTANT:

The water supply should be consistent with proper water quality standards (neutral pH of 7.0 to 8.0), and should not be connected to a water softener. It is the installer's responsibility to ensure that all water connections to the dispenser are sized, installed with adequate backflow protection and maintained to comply with Federal, State, and Local Laws.

Plumbing and Water Supply Requirements

This dispenser must be connected to a **COLD WATER** system with operating pressure between 30 psi (206.8 kPa) (2.1 bar) minimum (dynamic) and 60 psi (413.7 kPa) (4.1 bar) maximum (static). This water source must be capable of producing a minimum flow rate of 3 fluid ounces (88.7 ml) per second. A shut off valve should be installed in the line before the dispenser. Install a regulator in the line when pressure is greater than 60 psi (413.7 kPa) to reduce it to 50 psi (345 kPa) (3.5 bar) (dynamic). The regulator is also necessary if the water source has pressure fluctuations.

⚠ WARNING:

This equipment must be installed to comply with the International Plumbing Code of the International Code Council and the Food Code Manual of the Food and Drug Administration (FDA). For models installed outside the U.S.A., you must comply with the applicable Plumbing/Sanitation Code for your area.

Failure to comply could result in serious injury, death or damage to the equipment.

1. Secure the 3/8" (0.95 cm) swivel nut on the flexible supply tubing to the water inlet located at the rear of the dispenser. Make sure that the flared gasket is used (flared gasket P/N 311304000 is included with the installation kit).

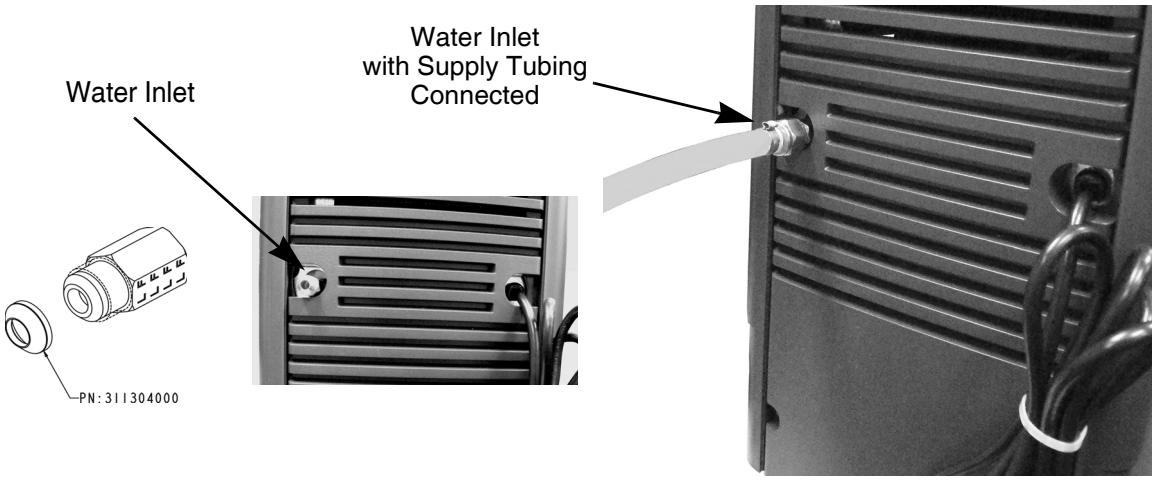


Figure 6 Water Supply Connection on Rear of Unit

2. When securing flare nut, use a backup wrench on the male side of the inlet fitting (unit side) to prevent twisting of the copper tube inside the unit and/or possible damage to the water strainer/solenoid. Water shut off outside the unit is recommended.

Publication Number: 620048956INS

FILLING THE ICE BATH

The ice bath holds approximately 3.5 gallons (13.4 liters) of water. The fill tube is located behind the front splash plate and capped with a 0.5” plug.

1. Remove the 0.5” plug and attach the tube to any one of the dispense nozzles.
2. Open the door and verify that the flush/dispense lever is in the dispense mode. (see Figure 7) Ice bath must always be filled in the dispense mode.

NOTE: Non flush units does not have a flush/dispense lever hence for filling water bath on non flush units please remove the concentrate Storage bottles first and then attach the tube to any one of the dispense nozzles and close the door, press and hold the dispense button (push) until the tank is filled and water trickles from the overflow

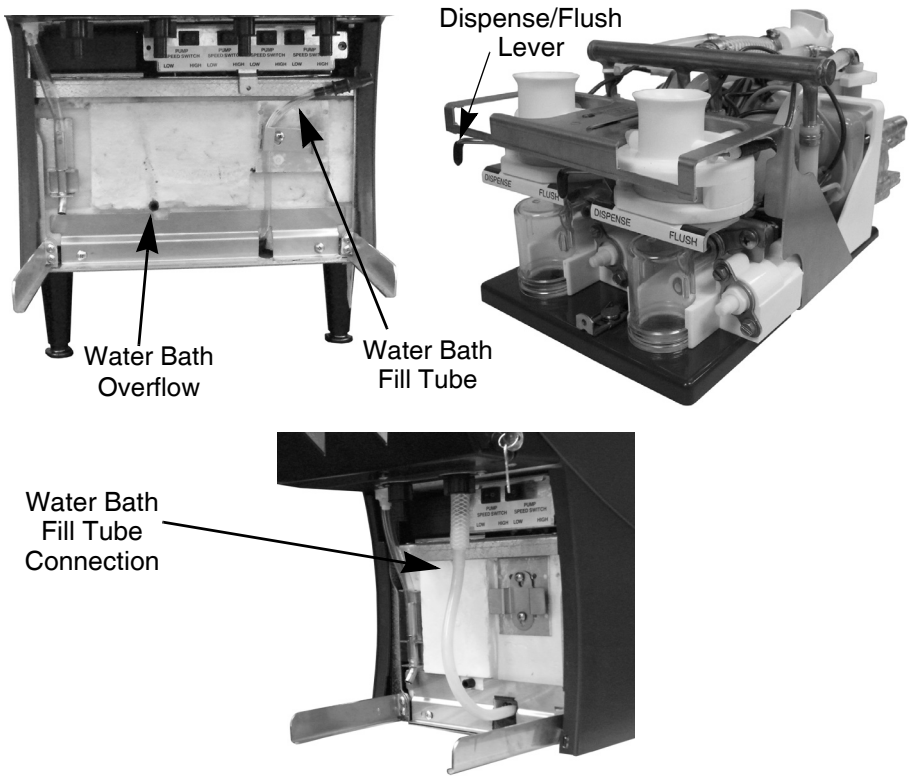


Figure 7. Water Bath and Dispense/Flush Lever

3. Close the door, press and hold the dispense button (push), shown in . Dispense Buttons, until the tank is filled and water trickles from the overflow.

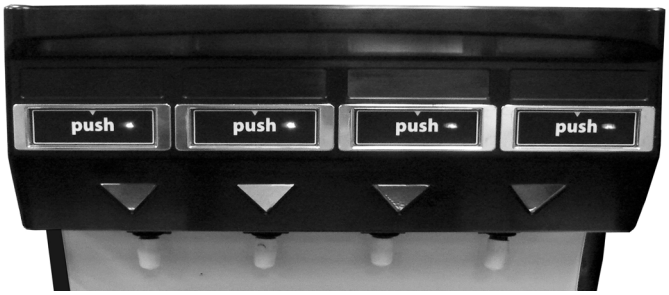


Figure 8. Dispense Buttons

4. Once the ice bath is full, store the fill tube in the vertically recessed holder. The fill tube can now be used as a “sight glass” to monitor the water level in the ice bath.

ELECTRICAL REQUIREMENTS

⚠ CAUTION:

Only trained and certified electrical technicians should replace the power cord or the unit should be returned to an Authorized Service Center for power cord replacement." The replacement cord must meet all requirements of the original equipment manufacturer.

FAILURE TO COMPLY COULD RESULT IN SERIOUS INJURY, DEATH OR DAMAGE TO THE EQUIPMENT.

1. A minimum of 15 amps electrical service is needed for 120VAC power supply. A minimum of 10 amps electrical service is needed for 230VAC power supply.
2. 6 ft. long (1.83 m) power cord with 3-prong plug attached to dispenser. Export models are shipped with a European plug.

Publication Number: 620048956INS

PRIMING/FLUSHING WATER SYSTEM

To properly prime the unit with water and remove air pockets in the system, open the cabinet door and make sure that all the valve levers are in the **Dispense** position.

Close the door and press the dispense button for a few seconds. Repeat until a steady flow of water is observed from all dispense valves.

NOTE: Some splashing may occur during this purge cycle.

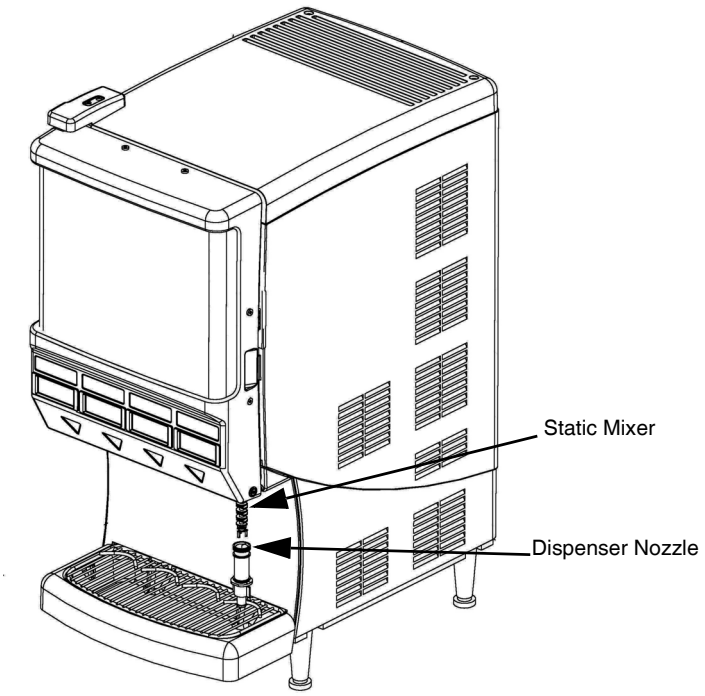


Figure 9. Dispense Nozzle

BRIXING PROCEDURE

NOTE: If concentrate is not properly thawed, it will adversely affect the amount of concentrate dispensed. Thawed product should be between 35°F/1.6°C to 40°F/4.4°C.

SUPPLIES

- 1 - Small 12 oz. cup (354.8 ml)
- 1 - Large 21 oz. cup (621.1 ml)
- 1 - Straw
- Paper Towels
- 1 - Thermometer
- 1 - Refractometer
- 1 - Flat Bladed Screwdriver

NOTE: The refractometer shown is P/N 511004000, and is available through your local Cornelius Distributor.

CHECKING/ADJUSTING THE BRIX SETTING

The following instructions are for use with a refractometer.

1. Dispense approximately 8 oz. (237 ml) of drink and discard. Now draw a second 8 oz. (237 ml) drink.
2. Check drink temperature with a accurate thermometer (target is 35 to 45°F, or 1.6 to 7.2°C). Discard this drink after checking temperature.

NOTE: If drink temperature is not within the target range, refer to the basic troubleshooting section.

3. Dispense a 12 oz (354.8 ml) drink sample into a clean, 21 oz (621.ml) dry cup. Thoroughly stir the sample using a straw.
4. Using the straw, transfer a small sample of the finished drink to the refractometer lens (refer to operating instructions supplied with your refractometer). Check the BRIX reading against the BRIX chart shown in Table 2.

NOTE: The BRIX chart shown in Table 2 is generic and intended for reference use only. Contact your frozen concentrate supplier for specific BRX readings.

Table 1.

Flavor	Ratio	BRIX
Orange Juice	4+1	11.8
Grapefruit Juice	5+1	10.6
Cranberry Cocktail	4+1	13.5
Apple Juice	5+1	12.0
Grape	5+1	13.0
Lemonade	5+1	10.5
Tropical Punch	5+1	11.8
Sweetened Ice Tea	7+1	6.0
Pineapple Juice	4+1	12.8
Prune Juice	2+1	16.0

5. To change the BRIX setting, simply re-adjust the water flow rate. Located on each of the valve assemblies inside the refrigerated compartment are the adjusting screws for the water flow rate (one per valve).

Publication Number: 620048956INS

If the BRIX reading is too high or low, rotate the appropriate water flow control according to Figure 10. Repeat steps 1-5 until the proper BRIX setting is achieved.

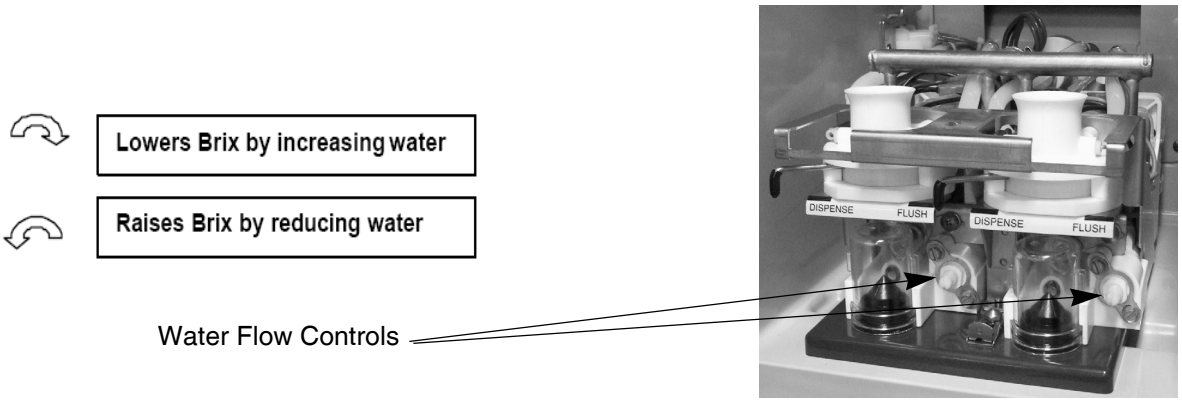


Figure 10

IMPORTANT: When making changes to the water flow control, do not rotate more than 1/4 turn per adjustment. Additionally, prior to taking your next BRIX reading, momentarily press the corresponding dispense button several times prior to drawing a sample. This clears any remnants from the dispense nozzle and helps move the flow control to its new setting.

PROGRAMMING THE PORTION CONTROL

If the dispenser has optional portion controls, they have been pre-programmed from the factory to pour 7, 12, and 16 ounce drinks. The “extra large” (pitcher icon) size has also been pre-programmed to pour 16 ounces.

To change the pour sizes, please perform the procedure described in .

Table 2.

Step	Action
1	Simultaneously, press and hold **Small** and **Extra Large** buttons on the Portion Control Module until the **Refill** light starts blinking. Release the buttons. The blinking **Refill** light indicates the programming mode is active. See . Control Panel.
2	Place a cup under the dispense nozzle and push the selected size button (small, medium, large, or extra large). Hold the button in until the cup fills to the desired portion, then release the button. Repeat the procedure for the remaining sizes.
3	After programming all the drink sizes, press and release the **Stop** button to return the Portion Control to the operational mode. The blinking **REFILL** light goes off.
4	In the future, to change the portion size of the drinks, the individual sizes can be adjusted by performing Step 2. It is not necessary to reprogram every size. Additionally, the portion control has full memory retention in case of a power failure.

Figure 11. Control Panel

STOP BUTTON

To pour a drink without using a pre-programmed portion control size, simply push and hold the Stop button. Release when the glass is full.

CLEAN SPLASH ZONES AND DISPENSE NOZZLES

1. On a daily basis, using a clean, damp cloth, clean the external cabinet and splash areas including the door gasket. Remove and wash the cup rest and drip tray using mild dish soap.
2. Remove the dispense nozzles and static mixers by rotating each 90° and pulling down. Remove the mixing chambers by pulling straight forward. Wash using mild dish soap.

IMPORTANT: DO NOT wash nozzles, static mixers, or mixing chambers in a dish washer. This will distort the plastic and damage the o-rings. Additionally, do not soak them in sanitizing solution longer than 2 minutes.

Flush once a day for better quality drinks.

⚠ WARNING:
Do not leave the unit in FLUSH mode. Leaving the unit in flush mode may result in damage.

Weekly

Check concentrate to water brix ratio (refer to the Checking/Adjusting the BRIX Setting section, Page 11).

Sanitize the Juice Dispenser

1. Rinse the unit with hot water.
2. Prepare two 2 oz. (59 ml) packets of Stera-Sheen Green Label sanitizing solution (or similar brand) by dissolving each packet in 1 gallon (3.8L) of potable water to ensure 200 ppm of available chlorine.

IMPORTANT: Use potable water at 80°F-100°F (26.7°C-37.8°C). Water above this range breaks down the chlorine count and minimizes sanitation.

3. Remove the juice concentrate containers and place them in separate refrigerated compartment.
4. Flush the system by following the instructions in Flush System on page 12.
5. Fill a clean empty concentrate container with one quart of extremely hot tap water, approximately 140°F (60°C) and place the container into the unit. Dispense all of the hot water into a large container. Repeat for all the remaining dispense valves.
6. Remove the mixing chambers, nozzles, and static mixers. Rinse in hot water to remove excess pulp and concentrate.
7. Place the mixing chambers, nozzles, and static mixers in a separate container of sanitizing solution and agitate vigorously. Allow the parts to soak for two minutes, then rinse thoroughly with fresh tap water.
8. Reinstall the static mixer, nozzles and mixing chambers.

Cornelius Inc.
www.cornelius.com