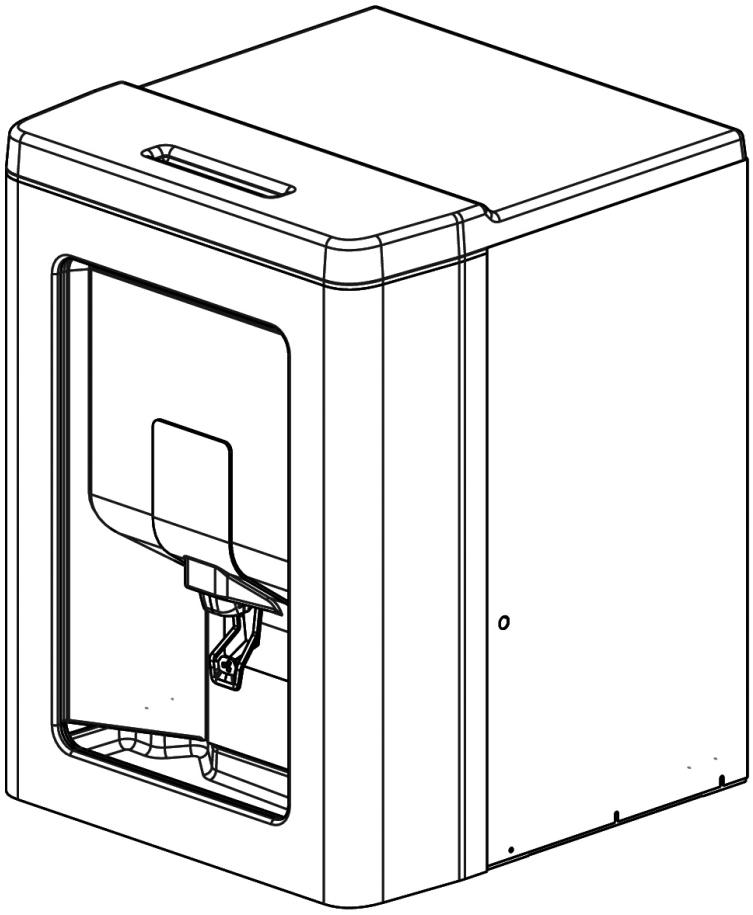
INSTALLATION & OPERATION MANUAL

MODEL: PHANTOM IDC255, FOR USE WITH SPIRE 2.0



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Revision: B

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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.

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Contact Information:

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800-238-3600

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

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Correct Disposal of this Product

RECYCLE

This marking indicates that this product should not be disposed with other household wastes throughout the EU. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmental safe recycling.

TABLE OF CONTENTS

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.

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.**

SAFETY PRECAUTIONS

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

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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.

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.

CO_2 (Carbon Dioxide) Warning

DANGER:
CO_2 displaces oxygen. Strict attention **MUST** be observed in the prevention of CO_2 gas leaks in the entire CO_2 and soft drink system. If a CO_2 gas leak is suspected, particularly in a small area, **IMMEDIATELY** ventilate the contaminated area before attempting to repair the leak. Personnel exposed to high concentrations of CO_2 gas experience tremors which are followed rapidly by loss of consciousness and **DEATH.**

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 580 lbs. to insure adequate support for the unit. **FAILURE TO COMPLY COULD RESULT IN SERIOUS INJURY, DEATH OR EQUIPMENT DAMAGE.**

NOTE: Many units incorporate the use of additional equipment such as ice makers. When any additional equipment is used, you must check with the equipment manufacturer to determine the additional weight that the counter will need to support to ensure a safe installation.

NOTE: Units not mounted on legs MUST be sealed to the counter. Apply a continuous bead of NSF silastic sealant (Dow 732 or equal) around the entire base and front of the unit once the front cladding is secured in place. Immediately wipe off any excess sealant to form a watertight seal. If the front cladding is removed for service, the seal must be reapplied.

Machine Usage

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.

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

- 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

Storage within the Machine

CAUTION:
Do not store explosive substances such as aerosol cans with a flammable propellant in this appliance.

Decommissioning and/or Transporting the Unit

CAUTION:
Whenever the unit is going to be removed from service and/or transported, the unit must be completely drained of product and rinsed out to remove residual product.

CAUTION:
When transporting the unit, make sure that the unit is carefully tied down or stored in such a manner that the unit will not move during shipment.

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SPECIFICATIONS

Model Description	Phantom IDC255 Part Number	Value	Units
Intelli Carbonation Pump Recirculation Pump	620408124 620057498	100	GPM
Cold Plate			
# of Syrup Circuits		10	
# of Water Circuits		2	
CO_2 Operating Pressure		75	PSI
Power Requirements			
Carbonation Pump		120/60	Volts
		7	Amps
Recirculation Pump		120/60	Volts
		6.2	Amps
Dispenser		120/60	Volts
		1.3	Amps
Install Kit Dual Tower	629097274		
Install Kit Single Tower	629097275		
Dimensions	Width:	30 (76.2)	in. (cm)
	Depth:	31 (78.7)	in. (cm)
	Height (top of bin):	39 (99)	in. (cm)
	Height (top of lid)	39-3/4 (101)	in. (cm)

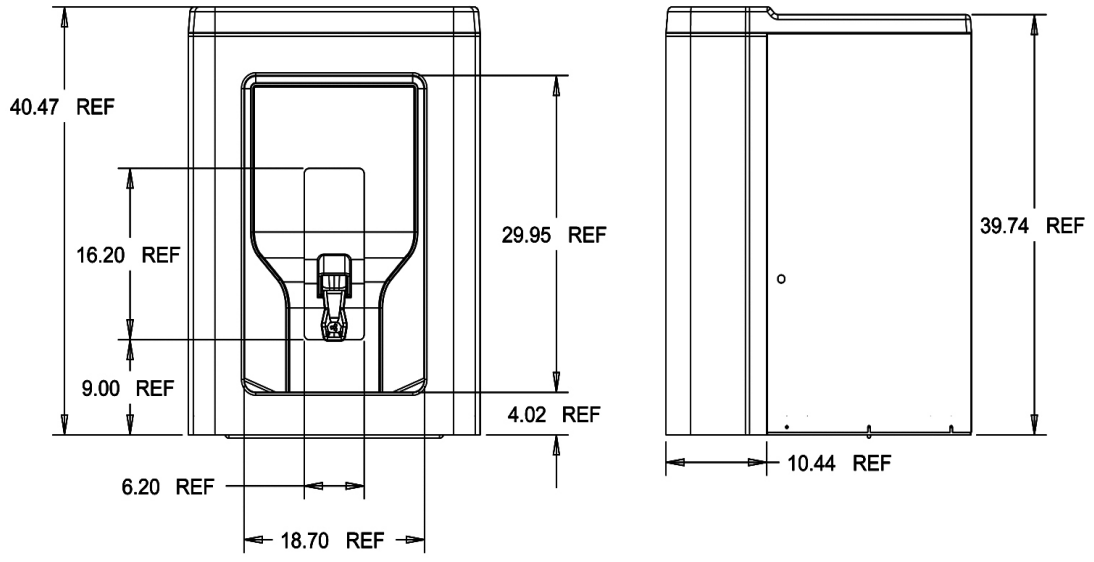

Figure 1.

INSTALLATION

The following directions are provided to mount the tower to a table or other fixture if a Cornelius approved cabinet is not supplied.

MOUNTING TEMPLATE

1. Locate the Phantom IDC255 on the counter and mark the front of the drip tray.
2. Using the mounting template dimensions (Figure 2) drill the appropriate holes for this application.

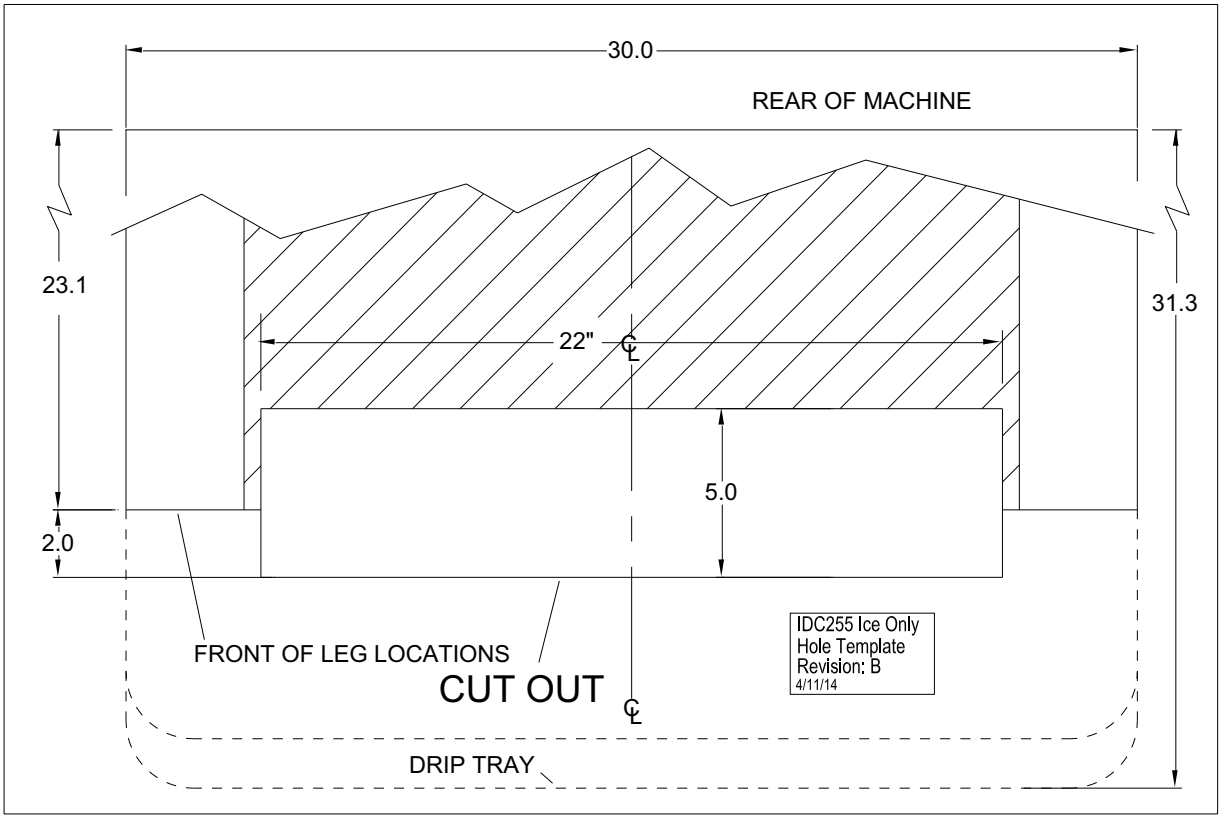

Figure 2. Counter Cutout Template

3. Connections to the tower can proceed once the Back-Room Packaging (BRP) items have been installed and tubing from the BRP has been run to the tower.

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INSTALLING ICE CHUTE COVER

1. Line up the tab of the cladding with the slot in the chute cover piece.



Figure 3

2. While tilting the chute cover into place, pull lightly on the bottom edge of the hole to help the cover clear the edge and seat downwards on the tab.

Figure 4

3. The unit is designed to seat the chute cover tightly against the cladding. Because of this there is a slight interference at the bottom edge of the cover during install.

Figure 5

4. Once the bottom edge of the cover is seated down into place overlapping the edge of the cladding, press the top of the cover to clip the cover into place.

Figure 6

Installation of Phantom and Tubing Connections

1. Remove the Ice lever by pinching the top of the wire-form.
2. Remove the Nozzle Cover Panel by pulling the top straight out to undo the clip (same as on the tower screen), and then lifting it upwards and tilting it forwards slightly to disengage the tab on the bottom.
3. Remove the front cladding by lifting it up to disengage the clips on the sides, then tilting it forward and lifting up to clear the ice nozzle
4. Remove the drip tray by pulling up the pins on either side of the drip tray.
5. If the unit is to be installed on legs, side the flexible PVC sheath over the insulated tube bundles. The sheath should come up above the level of the drip tray so the insulation is completely covered between the bottom of the unit and the counter.

   NOTE: Note that the tubes on the right side may need to be split into two sets in order to fit through the slots in the drip tray.

Figure 7

6. Place the dispenser on the counter and feed the tubes down through the slot in the counter
7. Connect the inlet still water, pre-carb water, and CO2 connections as shown in figure 4.

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NOTE: Make sure to remove any pressure regulators from the still water line to allow for maximum flow rate.

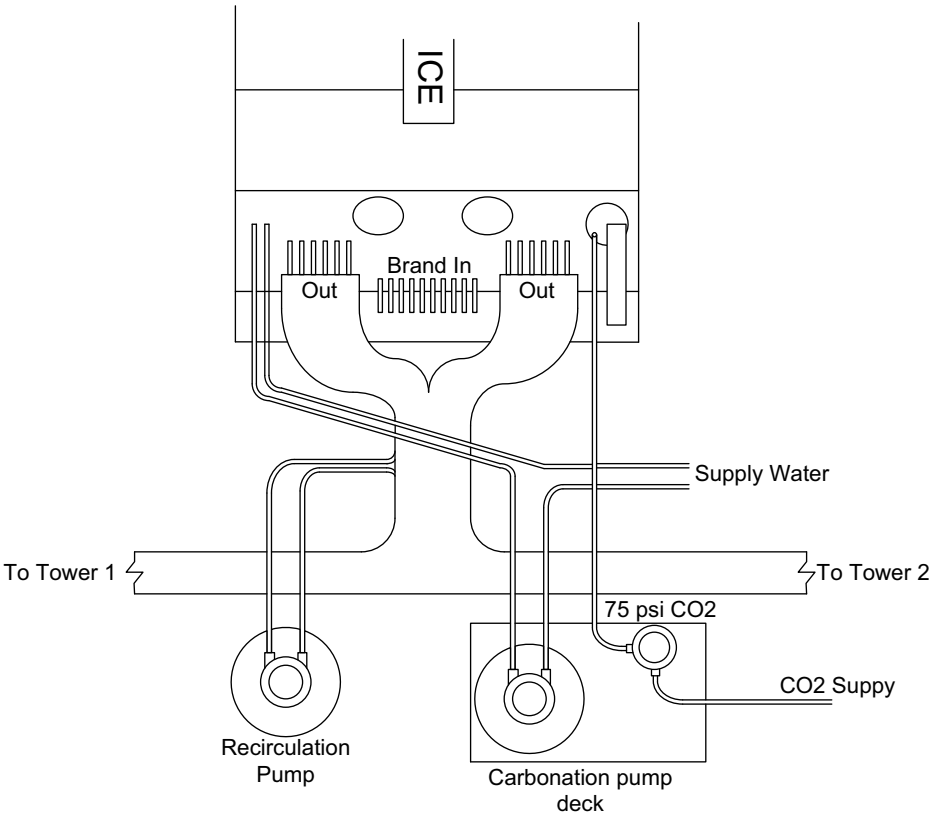
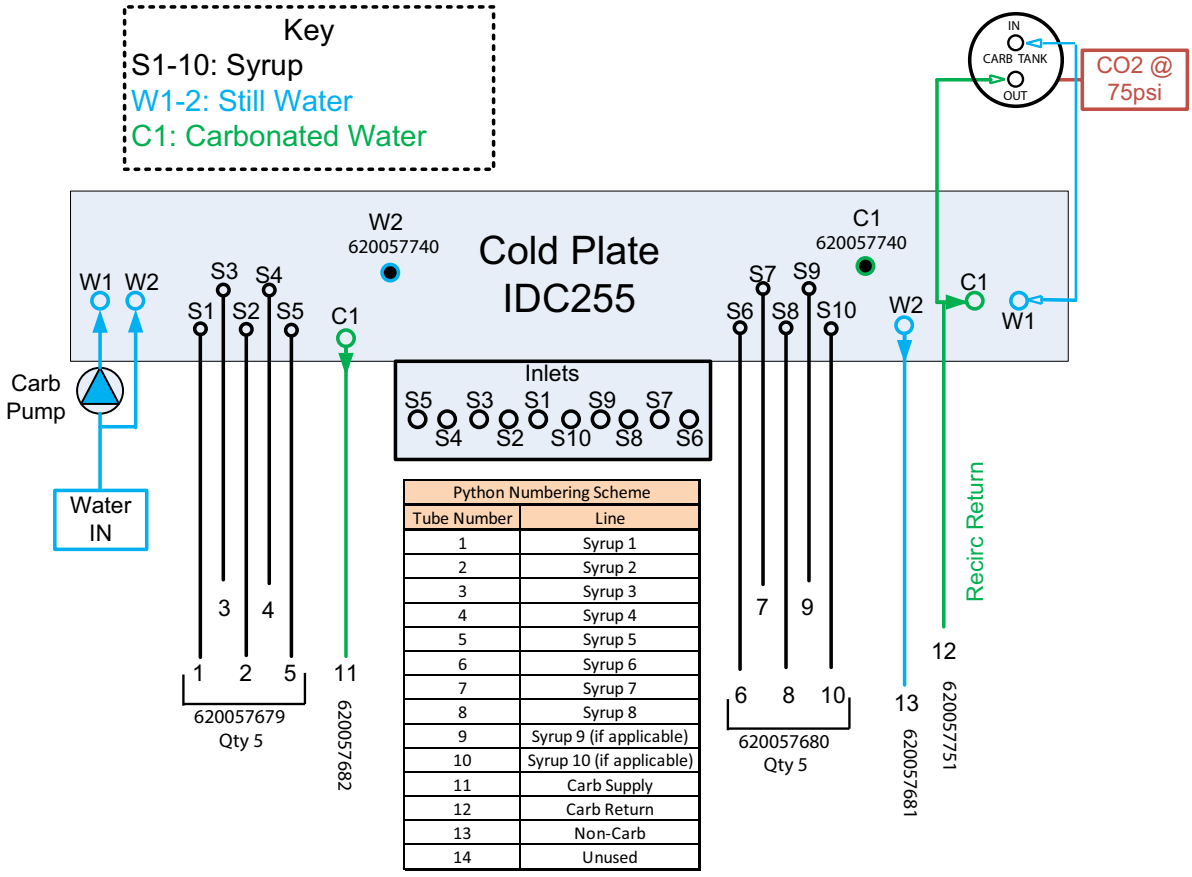


Figure 8. Connections layout

8. Connect Brand Syrup inlets from the BRP.

NOTE: Recording the line number for each brand may be helpful for future service, but it is not necessary because the brands are mapped by the tower during install.



Python Numbering Scheme	
Tube Number	Line
1	Syrup 1
2	Syrup 2
3	Syrup 3
4	Syrup 4
5	Syrup 5
6	Syrup 6
7	Syrup 7
8	Syrup 8
9	Syrup 9 (if applicable)
10	Syrup 10 (if applicable)
11	Carb Supply
12	Carb Return
13	Non-Carb
14	Unused

Figure 9. Connections Layout

9. Install the drip tray drain hose using ¾" plastic fittings, see figure 6 below.
10. Run a bead of silicon between the plastic drip tray sink and the plastic foam cover, to prevent water from dripping into the gap.
11. Install the drip tray on the unit using the supplied clips. The tubes behind the drip tray are a very tight fit, it will require some work to install.

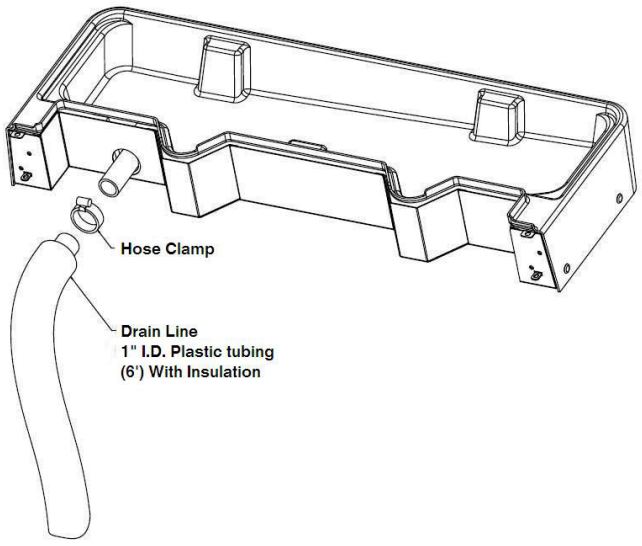


Figure 10. Drip Tray Installation

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Follow the instructions for the correct tower configuration to set up the recirculation bundle.

Table 1. Single Tower Installation

Step	Note	Procedure for Single Tower Installation
1	Phantom	Install the phantom unit on the counter and place the recirculation pump in an open location near the phantom unit.
2	Recirc 3/8”	Connect the **Phantom Line #11** to the **Recirc Pump In** using 3/8” (0.95 cm) blueline fitted with individual tubing insulation.
3	Recirc 3/8”	Connect the **Recirc Pump Out** tube to **Tower Line #11** using 3/8” (0.95 cm) blueline. Leave some slack. This will form the center of the python bundle.
4	Recirc 3/8”	Connect **Tower Line #12** with **Phantom Line #12** using 3/8” (0.95 cm) blueline. Route this tube next to the other blueline tube and secure them together with electrical tape. This will form the center of the python bundle.
5	Still Water 3/8”	Connect **Phantom Line #13** to **Tower Line #13** using 3/8” (0.95 cm) blueline. Route the line adjacent to the existing recirculation lines and secure them together with electrical tape at 2 or 3 locations.
6	Syrup 1/4”	Connect **Phantom Line #1** with **any syrup line on the Tower** using 1/4” (0.64 cm) barrier tubing. The flavors will be configured on each Tower UI afterwards, so consistency of numbering is not important. Route the syrup line directly adjacent to the recirc line group. They will be bundled together for maximum heat transfer.
7	Syrup 1/4”	Connect **Phantom lines #2-10** each to a syrup line on the Tower using 1/4” (0.64 cm) barrier tubing, the same as in the previous step. Route all the syrup tubes so they form a tight bundle surrounding the recirc line group. Try to avoid excess tubing that will not fit in the bundle.
8	Leak Check & Sanitize	Fill all lines with sanitizing solution and apply pressure to leak check all connections.
9	Bundle	Once all chilled syrup lines are leak checked, bundle them tightly around the recirc line group using tape. Bundle the tubes as close to the Phantom and Tower connections as possible.
10	Insulate	Slit the thick armaflex insulation and wrap it snugly (but not tightly) around the tubing bundles and secure it with insulation tape. Try to overlap existing insulation from the Phantom and Tower lines. Any place where single lines do not fit into the bundle, such as at the inlet and outlet of the recirc pump, they must be insulated with the smaller armaflex.
11	Water seal	Rewrap the insulation with plastic or duct tape to prevent moisture intrusion into the foam.

Table 2. Dual Same-Side Tower Installation

Step	Note	Procedure for Dual Same-Side Tower Installation
1	Phantom	Install the phantom unit on the counter and place the recirc pump in an open location near the phantom unit.
2	Recirc 3/8”	Connect the **Phantom Line #11** to the **Recirc Pump In** using 3/8” (0.95 cm) blueline fitted with individual tubing insulation.
3	Recirc 3/8”	Connect the **Recirc Pump Out** tube to the **Tower 1 Line #11** using 3/8” (0.95 cm) blueline. Leave some slack in the line. This will form the center of the python bundle.
4	Recirc 3/8”	Connect the **Tower 1 line #12** to **Tower 2 Line #11** using 3/8” (0.95 cm) blueline. Leave some slack. This will form the center of the python bundle.
5	Recirc 3/8”	Connect **Tower 2 Line #12** with **Phantom line #12** using 3/8” (0.95 cm) blueline. If possible route this tube next to the other blueline tube and secure them together with electrical tape. This will form the center of the python bundle.

Table 2. Dual Same-Side Tower Installation

Step	Note	Procedure for Dual Same-Side Tower Installation
6	Still Water 3/8”	Connect **Phantom Line #13** to **Tower 1 and 2 line #13** using 3/8” (0.95 cm) blueline and a T fitting underneath Tower 1. Route the new line adjacent to the existing recirc lines and secure them together with electrical tape at 2 or 3 locations.
7	Syrup 1/4”	Connect **Phantom line #1** with **any syrup line on Tower 1 and 2** using 1/4” (0.64 cm) barrier tubing and a T fitting underneath Tower 1. The flavors will be configured on each Tower UI later, so consistency of numbering is not important. Route the syrup line directly adjacent to the recirc line group. They will be bundled together for maximum heat transfer.
8	Syrup 1/4”	Connect **Phantom Lines #2-10** each to a syrup line on **Tower 1 and 2,** using 1/4” (0.64 cm) barrier tubing and T fittings, the same way as in the previous step. Stagger the T fittings slightly so they do not stack up on one another. Route all the syrup tubes so they can form a tight bundle surrounding the recirc line group. Try to avoid excess tubing that will not fit in the bundle.
9	Leak Check & Sanitize	Fill all lines with sanitizing solution and apply pressure to leak check all connections.
10	Bundle	Once all chilled syrup lines are leak checked, bundle them tightly around the recirc line group using tape. Bundle the tubes as close to the Phantom and Tower connections as possible.
11	Insulate	Slit the thick armaflex insulation and wrap it snugly (but not tightly) around the tubing bundles and secure it with insulation tape. Try to overlap existing insulation from the Phantom and Tower lines. Any place where single lines do not fit into the bundle, such as at the inlet and outlet of the recirc pump, they must be insulated with the smaller armaflex.
12	Water seal	Rewrap insulation with plastic or duct tape to prevent moisture intrusion into the foam.

Table 3. Dual Split Tower Installation

Step	Note	Procedure for Dual Split Tower Installation
1	Phantom	Install the phantom unit on the counter and place the recirc pump in an open location near the phantom unit.
2	Recirc 3/8”	Connect the **Phantom line #11** to the **Recirc Pump In** using 3/8” (0.95 cm) blueline fitted with individual tubing insulation.
3	Recirc 3/8”	Connect the **Recirc Pump Out** tube to the **Tower 1 Line #11** using 3/8” (0.95 cm) blueline. Leave some slack in the line. This will form the center of the python bundle.
4	Recirc 3/8”	Connect the **Tower 1 line #12** to **Tower 2 Line #11** using 3/8” (0.95 cm) blueline. If possible, route this tube next to the other blueline tube and secure them together with electrical tape. This will form the center of the python bundle.
5	Recirc 3/8”	Connect **Tower 2 Line #12** with **Phantom line #12** using 3/8” (0.95 cm) blueline. If possible route this tube next to the other blueline tube and secure them together with electrical tape. This will form the center of the python bundle.
6	Still Water 3/8”	Connect **Phantom Line #13** to **Tower 1 and 2 line #13** using a T fitting and 3/8” (0.95 cm) blueline. Route the line adjacent to the existing recirc lines and secure them together with electrical tape at 2 or 3 locations.
7	Syrup 1/4”	Connect **Phantom line #1** with **any syrup line on Tower 1 and 2** using 1/4” (0.64 cm) barrier tubing and a T fitting. The flavors will be configured on each Tower UI afterwards, so consistency of numbering is not important. Route the syrup line directly adjacent to the recirc line group as much as possible for maximum heat transfer.

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Table 3. Dual Split Tower Installation

Step	Note	Procedure for Dual Split Tower Installation
8	Syrup 1/4”	Connect **Phantom lines #2-10** each to a syrup line on Tower 1 and 2 using 1/4” (0.64 cm) barrier tubing and T fittings, the same way as in the previous step. Stagger the T fittings slightly so they do not stack up on one another. Route all the syrup tubes so they can form a tight bundle surrounding the recirc line group. Try to avoid excess tubing that will not fit in the bundle.
9	Leak Check & Sanitize	Fill all lines with sanitizing solution and apply pressure to leak check all connections.
10	Bundle	Once all chilled syrup lines are leak checked, bundle them tightly around the recirc line group using tape. Bundle the tubes as close to the Phantom and Tower connections as possible.
11	Insulate	Slit the thick armaflex insulation and wrap it snugly (but not tightly) around the tubing bundles and secure it with insulation tape. Try to overlap existing insulation from the Phantom and Tower lines. Any place where single lines do not fit into the bundle, such as at the inlet and outlet of the recirc pump, they must be insulated with the smaller armaflex.
12	Water seal	Rewrap the insulation with plastic or duct tape to prevent moisture intrusion into the foam.

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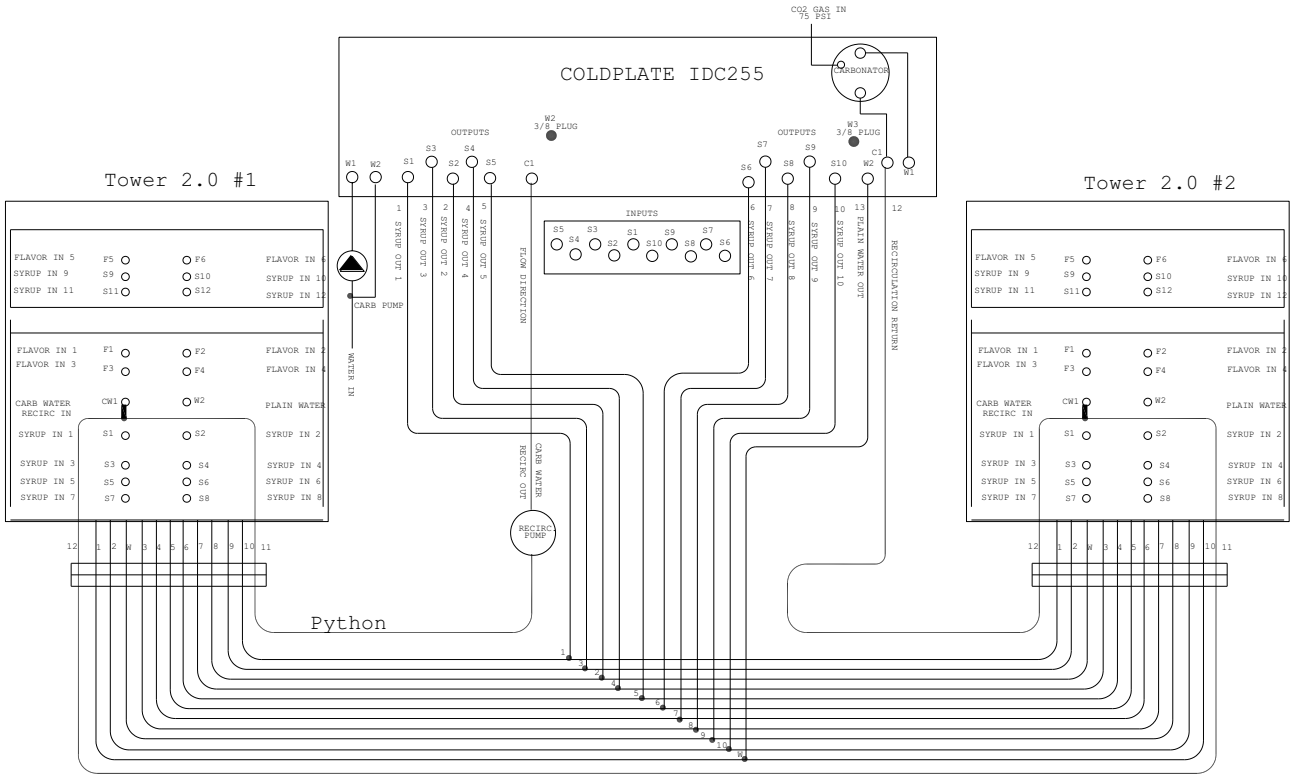

Figure 11. Dual Split Tower Tubing Diagram

Phantom Numbering Scheme	
Tube Number	Line
1	Syrup 1
2	Syrup 2
3	Syrup 3
4	Syrup 4
5	Syrup 5
6	Syrup 6
7	Syrup 7
8	Syrup 8
9	Syrup 9 (if applicable)
10	Syrup 10 (if applicable)
11	Carb Supply
12	Carb Return
13	Non-Carb

Figure 12. Tubing Numbers

Hopper Agitation Frequency Adjustment

Due to the recirculation system, the agitation frequency has been increased from the standard ice drink settings to ensure the cold plate remains full of ice. The Phantom unit factory setting is 4 sec ON time, 15-20 min OFF time as shown in Figure 13.

If multiple consecutive drinks are warm after an idle period, the ON time may be further increased to 5 seconds, or the OFF time may be further decreased to 15 or 10 min, or both.

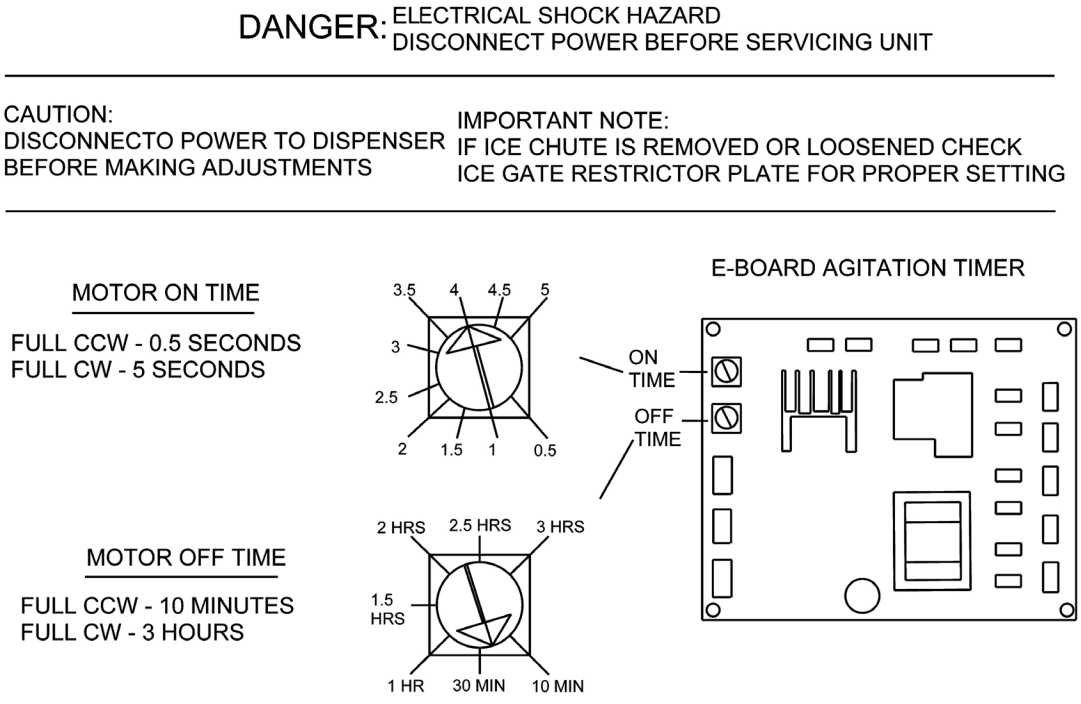

Figure 13. Hopper Agitation Frequency Adjustment

System Startup

1. Verify that the incoming water pressure is under 60 PSI (4.1 bar).
2. Turn on the water supply and check all the connections for leaks.
3. Fill the hopper with ice. Place a pitcher under the ice chute and activate the ice hopper agitator by dispensing ice for 10 seconds. The cold plate should be ready in approximately a 1/2 hour.
4. Plug the dispenser into a 115 V, 60 Hz, single phase outlet. (If towers are in a separate outlet, power them up).
5. Dispense water from both towers to purge air out of the lines.
6. Pull the pressure relief valve (located behind the splash panel on the left side of the cold plate) on the carbonator until all the air is purged. (See Figure 14.)

Figure 14.

7. Plug in the recirculation pump and the carbonation pump into a 115 V, 60 Hz, single phase 3-wire grounded receptacle. Power line should have a minimum 15A. breaker, (20 A. recommended).
8. Dispense syrup and water out of both towers to stabilize carbonation and purge air from the syrup lines.
9. Reinstall the splash panel.
10. Allow the system to stabilize for 1 hour to obtain proper drink temperatures.

NOTE: If warm drinks or ice bridging is experienced, increase the frequency of the hopper agitation by adjusting the potentiometer on the control board in the E-box.

Gate Restrictor Plate Adjustment

The ice dispensing rate can be adjusted by varying the opening of the gate restrictor plate as illustrated in Figure 15. Reducing the ice dispensing rate is especially desirable when using glasses or other containers with small openings. To adjust the gate restrict or plate, loosen the (4) nuts that hold the ice chute assembly to the bin. The restrictor plate can now be moved up or down. When the restrictor plate is fully up, the ice gate opening is 2-1/2” (6.4 cm) in height, and the maximum rate of ice dispense is available [approximately 3 oz/sec (88.7 ml/sec)]. Retighten the (4) nuts to set the desired restrictor plate opening. DO NOT EXCEED 50 In.-lb. (5.6 newton-m) of torque.

NOTE: Tighten four (4) nuts for fastening lower ice chute in place to 50 in-lbs (5.6 newton-m) (max). Draw all four nuts tight uniformly.

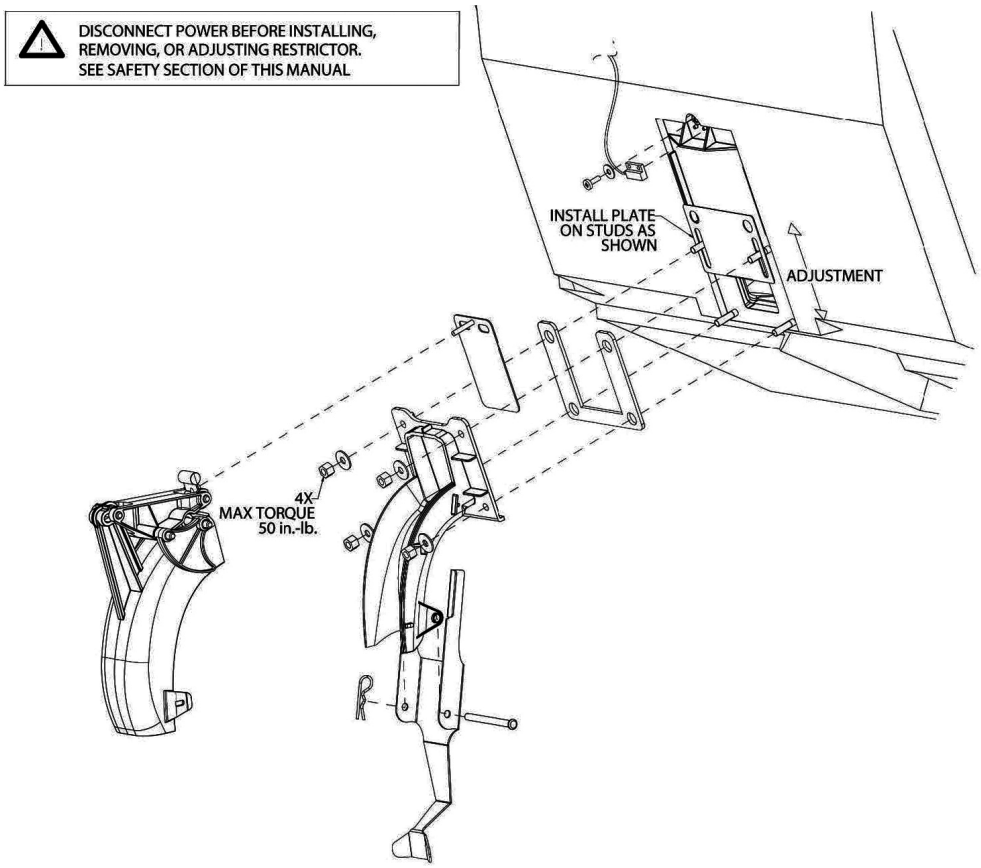

Figure 15. Gater Restrictor Plate

RECOMMENDED TOWER LOCATIONS

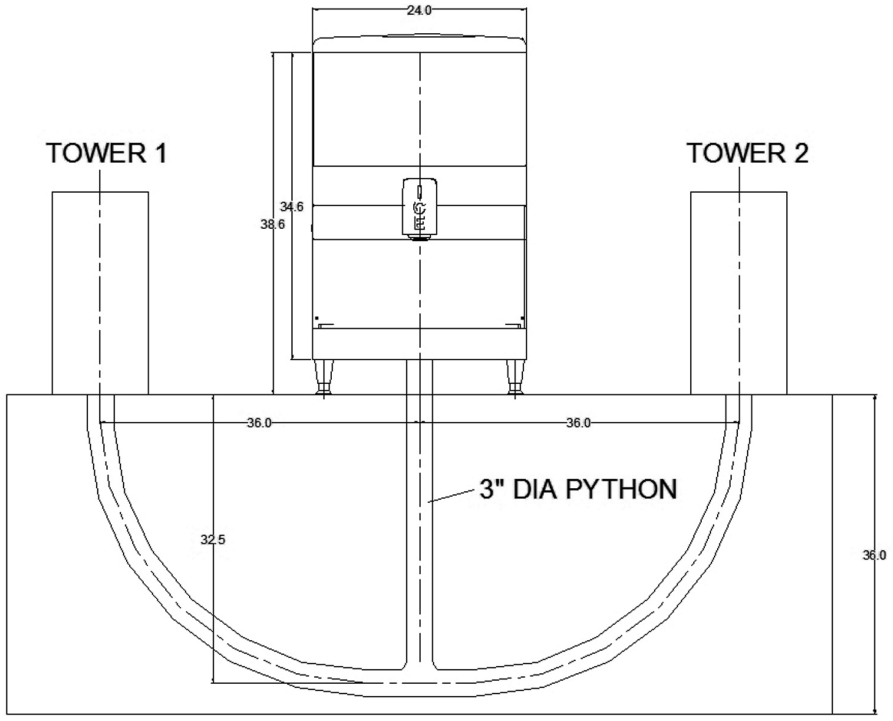

Figure 16. Tower Locations

DIAGRAMS

WIRING SCHEMATIC

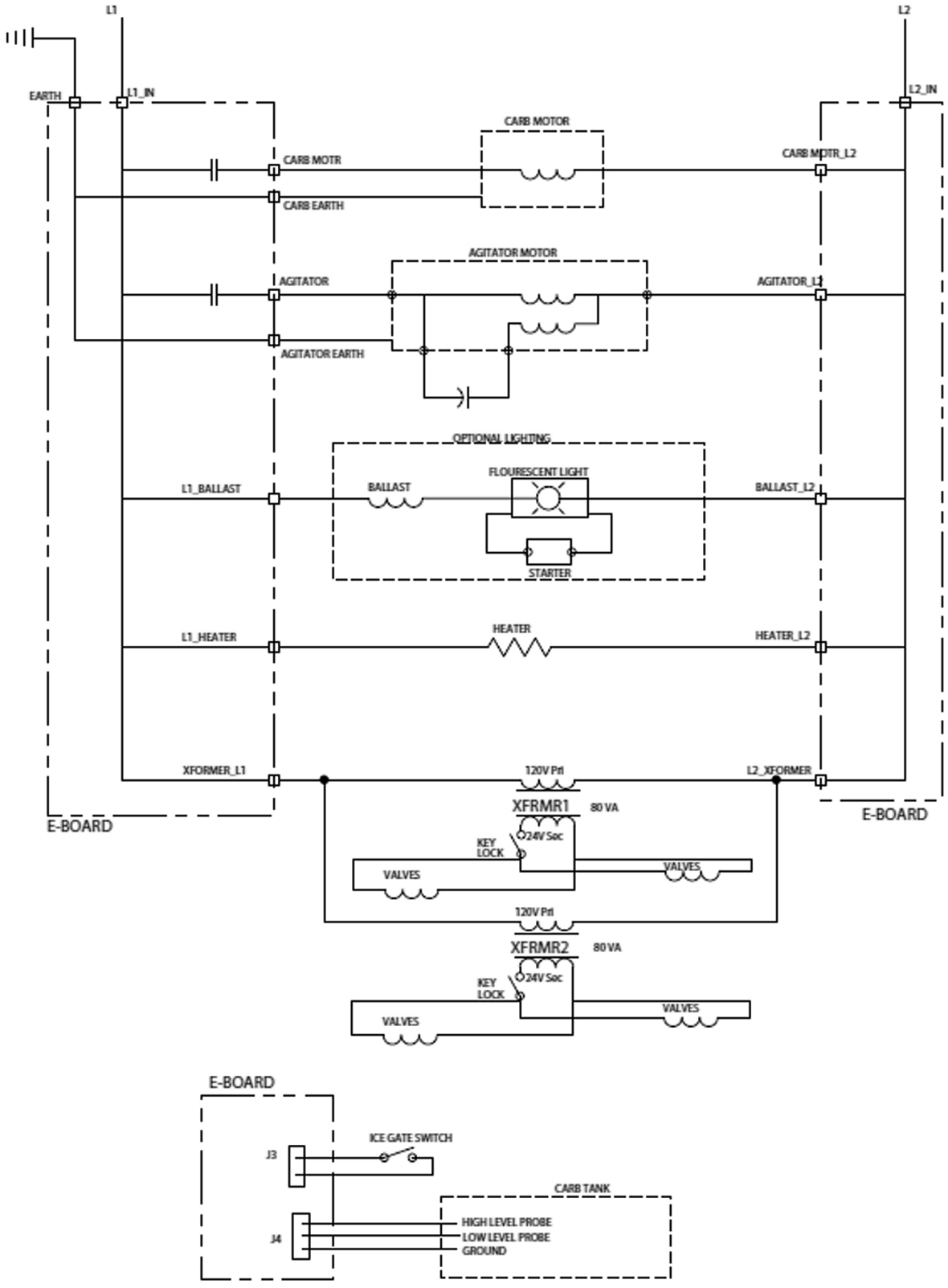

Figure 17. Wiring Schematic

CLEANING AND MAINTENANCE INSTRUCTIONS

These instructions are used on all Cornelius ice drink dispensers. Some models may have additional cleaning requirements. Those models will have addition procedures listed later in the manual.

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

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

CAUTION:
Do not use metal scrapers, sharp objects or abrasives on the ice storage hopper, top cover, agitator disc or exterior surfaces as damage to the unit may result. Do not use solvents or other cleaning agents as they may attack the material resulting in damage to the unit.

Soap solution – Use a mixture of mild detergent and warm (100° F) potable water.

Sanitizing Solution – Use Stera Sheen Green Label: Dissolve 1 packet [2 oz (59.0ml)] of Stera Sheen Green Label into 2 gallons of tap water [75-95F (23.9-35C)] to achieve 100 ppm of chlorine. Or,

Use Kay-5 Sanitizer/cleaner: Dissolve 1 packet [1 oz (29.6ml)] of Kay-5 Sanitizer/cleaner into 2.5 gallons of tap water [75-95F (23.9-35C)] to achieve 100 ppm of chlorine.

Daily Cleaning:

1. Wipe down the exterior of the unit with warm soapy water, rinse with clean water and allow to air dry.
2. Clean the interior of the ice chute using the brush provided with the unit with warm soapy water, rinse with clean water and allow to air dry.
3. Spray the ice chute inside and out with sanitizer and allow to air dry.
4. Pour warm soapy water down the drains to keep them clean and flowing smoothly.

Daily Maintenance:

1. Check the temperature, smell and taste of the product.
2. Check the water pressure coming to the unit using the pressure gauges on the back room package.
3. Check carbonation of the drink
4. Check level of CO_2 supply to the system.
5. Check the date on all of the BIB's (bags in boxes).

Weekly Cleaning: (In addition to daily procedures)

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Remove the ice chute cover and clean it along with the back half with warm soapy using the brush provided with the unit. Rinse with clean water and reinstall on the unit. Spray the ice chute assembly with approved sanitizer allowing it to air dry.

1. Lift edge of ice chute cover to un-clip clasp

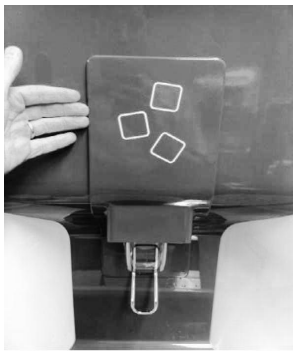

Figure 18

2. Remove ice chute cover

Figure 19

3. Grasp bottom of ice chute and spread tabs outwards to undo clasp

Figure 20

4. Carefully remove ice chute from unit

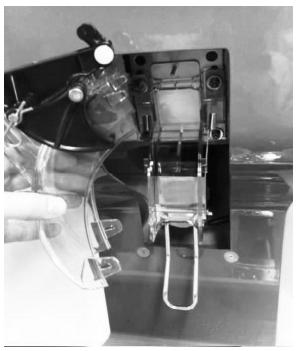

Figure 21

5. Wash, rinse, and sanitize the ice chute in a sink. Air dry.

Figure 22

6. Wipe down base of Ice Chute

Figure 23

7. Wipe down ice dispense lever with sanitizer and air dry

Figure 24

8. Wipe down splash panel with sanitizer and air dry

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9. When Ice chute is dry, reinstall the chute back in place. Be sure to engage the pin at the top of the chute.

Figure 26

10. Replace chute cover panel and clean it with sanitizer. Refer to Installing Ice Chute Cover in page 6.

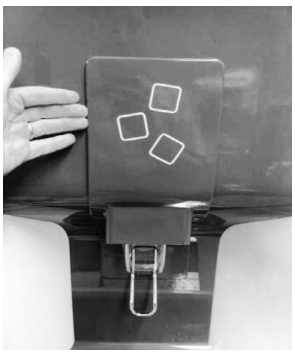

Figure 27

Monthly Cleaning: (In addition to daily and weekly procedures)

1. Flush and sanitize all syrup lines as well as all of the syrup connectors. (See the sanitize syrup lines section shown later in this manual).
2. Remove ice from hopper and clean and sanitize the hopper. (See the Cleaning the interior surfaces section shown later in this manual).
3. While cleaning the hopper use the brush provided with the unit to clean the cold plate surface. To accomplish this, the brush needs to be extended through the opening in the bottom of the hopper.

Yearly Maintenance:

- Have the water pump and check valve inspected and cleaned by a qualified service technician.
- Have the CO_2 gas check valve inspected and cleaned by a qualified service technician.
- Remove the unit's splash and cold plate cover to clean and sanitize the cold plate surface. (See the cleaning the cold plate section shown later in this manual).

Cleaning Interior Surfaces (Monthly Cleaning)

CAUTION:
When pouring liquid into the hopper, do not exceed the rate of 1/2 gallon per minute. Pouring more liquid into the hopper could result in an overflow situation may result in injury or damage to the equipment.

1. Remove agitator assembly.
2. Using a nylon bristle brush or sponge, clean the interior of the hopper, top cover and agitator assembly with soap solution. Thoroughly rinse the hopper, cover and agitator surfaces with clean potable water.
3. Reassemble agitator assembly. Take special care to ensure that the thumbscrew is tight.
4. Using a mechanical spray bottle filled with sanitizing solution, spray the entire interior and agitator assembly. Allow to air dry.

5. Remove merchandiser and ice chute cover from unit.
6. With a nylon bristle brush or sponge, clean the inside of the ice chute, gasket, and cover with soap solution and rinse thoroughly to remove all traces of detergent.
7. Reassemble ice chute assembly.
8. Using a mechanical spray bottle filled with sanitizing solution, spray the inside of the ice chute. Allow to air dry.
9. Reinstall merchandiser.

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Cold Plate (Yearly Maintenance)

1. Remove Ice chute cover and front cladding.
2. Remove or move the plastic cold plate cover to expose the cold plate.
3. Locate and remove any debris from the drain trough. Check that the drain holes are not clogged.
4. Pour small amount of soap solution through cold plate openings in hopper.
5. Using a cloth, wash down the surfaces of the cold plate and plastic cover with soap solution.
6. Install and properly position the access covers on the cold plate.
7. Install the cladding panel in the reverse order it was removed.
8. Rinse cold plate surface by pouring potable water through hopper openings.

Product Tubing (Monthly Cleaning)

IMPORTANT: Only trained and qualified persons should perform these cleaning and sanitizing procedures.

Sanitize Pre-Mix And Post–Mix Tank System

1. Remove all the quick disconnects from all the tanks. Fill a suitable pail or bucket with soap solution.
2. Submerge all disconnects (gas and liquid) in the soap solution and then clean them using a nylon bristle brush. **(Do not use a wire brush)**. Rinse with clean water.
3. Prepare sanitizing solution and using a mechanical spray bottle, spray the disconnects. Allow to air dry.
4. Using a clean, empty tank, prepare five (5) gallons of the sanitizing solution. Rinse the tank disconnects with approximately 9 oz. of the sanitizing solution. Close the tank.
5. Prepare cleaning tank by filling clean five (5) gallon tank with a mixture of mild detergent and potable water (120^{o}F).
6. Connect a gas disconnect to the tank and then apply one of the product tubes to the cleaning tank. Operate the appropriate valve until liquid dispensed is free of any syrup.
7. Disconnect cleaning tank and hook up sanitizing tank to syrup line and CO_2 system.
8. Energize beverage faucet until chlorine sanitizing solution is dispensed through the faucet. Flush at least two (2) cups of liquid to ensure that the sanitizing solution has filled the entire length of the syrup tubing.
9. Allow sanitizer to remain in lines for fifteen (15) minutes.
10. Repeat the step above, applying a different product tube each time until all tubes are filled with the sanitizing solution.
11. Remove the nozzle and syrup diffuser and clean them in a mild soap solution. Rinse with clean water and reassemble the nozzle and syrup diffuser on the valve.
12. Rinse the parts in clean water, reassemble the valve and reconnect it to the dispenser.
13. Discard the tank of sanitizing solution and reconnect the product syrup tanks. Operate the valves until all sanitizer has been flushed from the system and only product syrup is flowing.

Sanitize syrup lines, B-I-B Systems

1. Remove all the quick disconnects from all the B-I-B containers.
2. Fill a suitable pail or bucket with soap solution.
3. Submerge all disconnects (gas and liquid) in the soap solution and then clean them using a nylon bristle brush. **(Do not use a wire brush)**. Rinse with clean water.
4. Using a plastic pail, prepare approximately five (5) gallons of sanitizing solution.
5. Rinse the B-I-B disconnects in the sanitizing solution.

6. Sanitizing fittings must be attached to each B-I-B disconnect. If these fittings are not available, the fittings from empty B-I-B bags can be cut from the bags and used. These fittings open the disconnect so the sanitizing solution can be drawn through the disconnect.
7. Place all the B-I-B disconnects into the pail of sanitizing solution. Operate all the valves until the sanitizing solution is flowing from the valve. Allow sanitizer to remain in lines for fifteen (15) minutes.
8. Remove the nozzle and syrup diffuser from each valve and clean them in a soap solution. Rinse with clean water and reassemble the nozzle and syrup diffuser to the valve.
9. Remove the sanitizing fittings from the B-I-B disconnects and connect the disconnects to the appropriate B-I-B container. Operate the valves until all sanitizer has been flushed from the system and syrup is flowing freely.

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TROUBLESHOOTING

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.

WARNING:
If repairs are to be made to a product system, remove quick disconnects from the applicable product tank, then relieve the system pressure before proceeding. If repairs are to be made to the CO_2 system, stop dispensing, shut off the CO_2 supply, then relieve the system pressure before proceeding. If repairs are to be made to the refrigeration system, make sure electrical power is disconnected from the unit.

Should the unit fail to operate properly, check that there is power to the unit and that the hopper contains ice. If the unit does not dispense, check the following chart under the appropriate symptoms to aid in locating the defect.

Dispenser Troubleshooting		
Symptom	**Cause**	**Remedy**
Blown fuse or circuit breaker	Short circuit in electrical wiring	Repair Wiring
	Inoperable agitator motor (shorted motor)	Replace gear motor
Agitator does not turn	No power	Restore power or plug in unit
	Improperly installed upper ice chute assembly (Reed switch is not being activated)	Check the upper ice chute assembly for proper assembly and operation
	Inoperable reed switch	Replace reed switch
	Electrical board driver circuit is defective	Replace main control board
	Gear motor has open circuit	Replace gear motor
	Reed switch is not activated Improper assembly of upper ice chute to lower chute.	Check to make sure tongue of upper chute engages into the back of the lower chute, ensure upper chute engages outside the lower chute, and snap front of chute into place.
	Broken wire in the 2-wire harness leading to the reed switch	Repair of replace 2-wire harness
	Bad connection at main control board, J3, pins 2 &3	Repair connection or replace 2-wire harness
Ice dispenses continuously	Ice gate mechanism is stuck in open position	Inspect gasket for proper position. Examine gate plate to see if it slides freely behind the lower ice chute.
	Stuck or bent ice lever (does not allow gate to close and open reed switch)	Examine ice dispense lever to see if it is bent.
Slushy ice or water in hopper	Blocked drains in cold plate	Remove access covers in cold plate cover & inspect/clean drains
	Poor ice quality due to water quality or ice maker problems	Correct water quality or repair ice maker

Low water pressure	Could be caused by excessively long runs (over 40 ft.) of 3/8” water supply line.	Increase line size to 1/2”
	Low water pressure	Add water pressure booster pump
	Plugged water filter.	Change water filter
	Water booster bladder has burst	Replace water booster tank/bladder
Low carb volumes	Air trapped in carbonator	Open carb tank relied valve to purge out all air from system.
	Water pressure too high at carb pump inlet	Ensure a 65 PSI regulator is installed upstream of carbonator pump.
	NOTE:Connect the regulator to the water line going to the carb pump only. Installing it upstream of the non carb water inlet will limit non carb water flow rate.	

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Cornelius Inc.
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