

PBD IDC 255 REF FL

Installation Manual



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Notice

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.

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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.

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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.

SAFETY ALERT SYMBOL



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

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

- Keep safety signs in good condition and replace missing or damaged items.
- Learn how to operate the unit and how to use the controls.
- **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.
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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 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.
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CO₂ (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 .
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Mounting in or on a Counter

 WARNING	While installing the unit in or on a counter top, the counter must be able to support a weight in excess of 1,000 lbs. to insure adequate support for the unit. Failure to comply could result in serious injury, death or equipment damage.
---	--

Unit Location

 CAUTION	<ul style="list-style-type: none"> • This unit is not designed for use in outdoor locations. • The appliance must be placed in a horizontal position. • The appliance is not suitable for installation in an area where a water jet would be used.
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Machine Usage

 CAUTION	<ul style="list-style-type: none"> • 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.
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IDC 255 SYSTEM OVERVIEW

IDC 255 DESCRIPTION

The IDC 255 ice dispenser solves your ice and beverage service needs in a sanitary, space saving, economical way. Designed to be automatically filled with ice from a top mounted ice machine or manually filled with ice from any remote ice-making source, these dispensers will dispense cubes (up to 1-1/4 inch in size), cubelets, and compressed or extruded style ice. The unit is designed to be supplied direct from syrup tanks with no additional cooling required.

In addition, the unit include the following:

- Beverage faucets
- Cold plate
- Internal carbonator tank
- External pump for the carbonator

Figure 1. shows the dimensions of the unit.

IDC 255 SPECIFICATIONS

Model name	IDC 255 (PBD IDC 255 REF FL)
Total unit weight (empty)	Approximately 370 lb. (167.8 kg)
Ice storage	255 lb. (115.7 kg)
CO2 operating pressure	75 psig (0.52 MPa) max Note: CO ₂ pressure is regulated down to 75 psi by a supplied preset regulator.
Ambient operational temperature	65 to 95° F (18 to 35° C)
Maximum number of brands/flavors available	8/4
Electrical	20 V/1-phase/60 Hz 220 - 240 V/1-phase/50 Hz 15 A dedicated, protected circuit
Dimensions	30"L x 33"D x 40"H
Noise Level	The unit emits acoustical noise with an A-weighted sound pressure level no greater than 75 dB, as measured in accordance with EN 60335-2-75

IDC 255 PHYSICAL DIMENSIONS

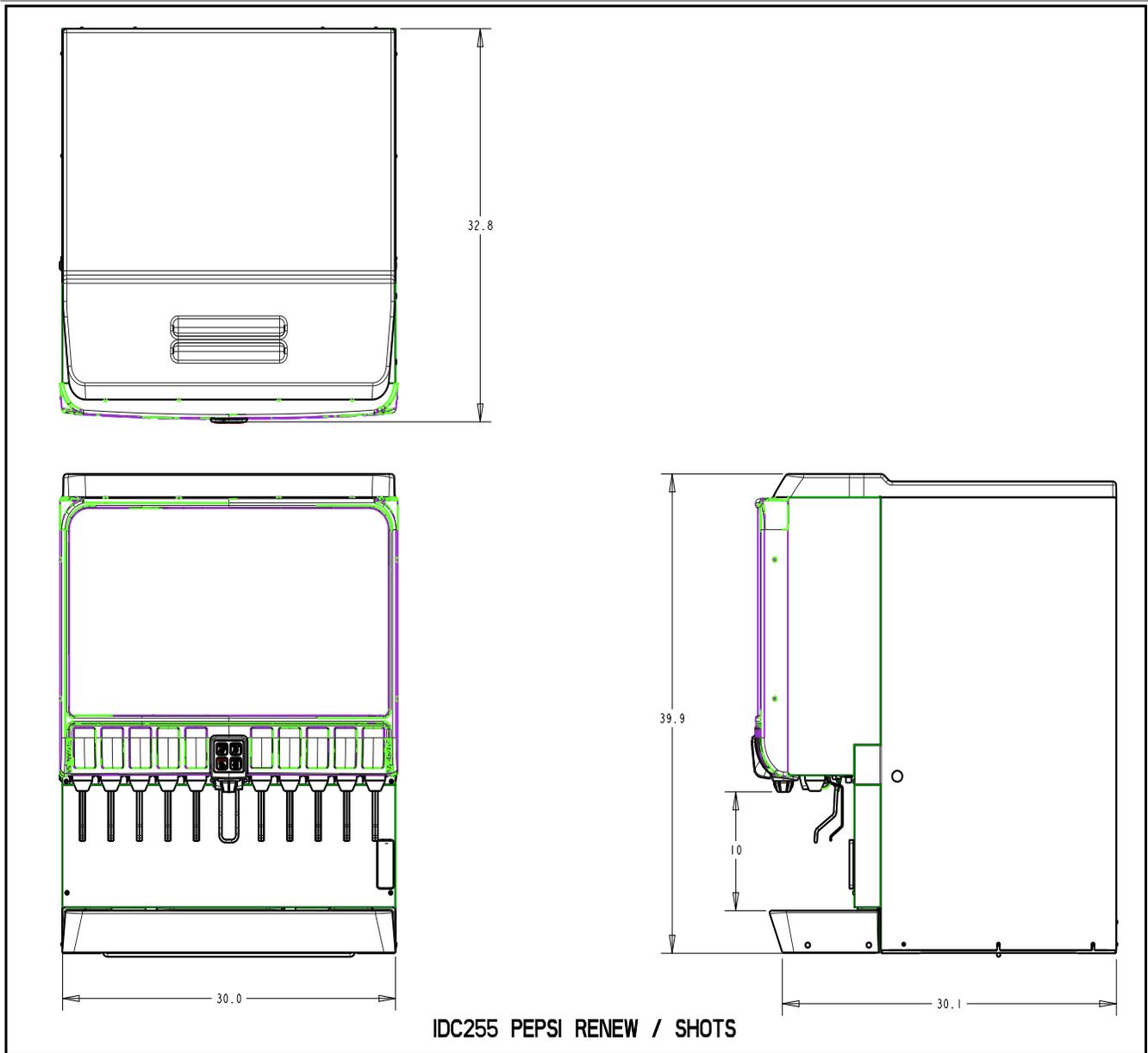


Figure 1. IDC 255 Physical Dimensions

DELIVERY, INSPECTION & UNPACKING

 WARNING	<p>It is the responsibility of the installer to ensure that the water supply to the dispensing equipment is provided with protection back flow by an air gap as defined in ANSI A 112.1.2-1979; or an approved vacuum breaker or other such method as proved effective by test and must comply with all federal, state and local codes.</p> <p>Failure to comply could result in serious injury, death or damage to the equipment.</p> <p>Water pipe connections and fixtures directly connected to a potable water supply shall be sized, installed and maintained according to Federal, State and Local laws.</p>
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DELIVERY AND INSPECTION

NOTE: Cornelius is not responsible for damaged freight. If damage is found, you must save all packaging material and contact the freight carrier. Failure to contact the carrier within 48 hours of receipt may void your claim.

Moving the Unit

The box containing the unit should be moved using a manual forklift.

Unpacking the Unit Carton

Note the following when unpacking the carton:

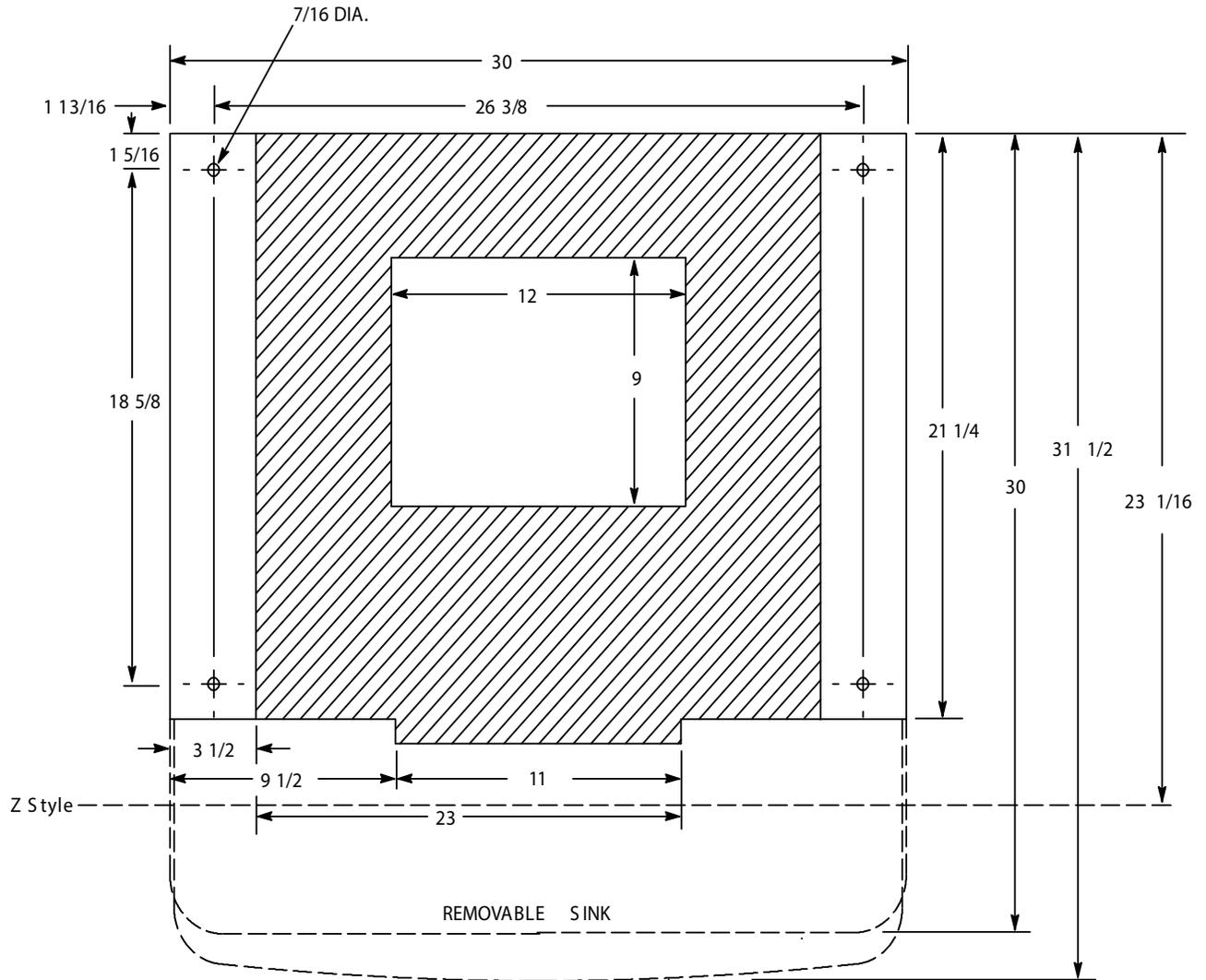
1. Check for damage, even if it appears minor. If the carton is damaged, write "exterior carton damage-concealed damage possible" on the consignee copy of the freight invoice and contact the freight company immediately.
2. Remove and inspect the motor assembly from the top compartment of the carton.
3. Inspect the unit and determine if there is any internal shipping damage.
If yes, report immediately to the carrier.

PREPARING THE COUNTER

To place the unit on a counter, the counter must be prepared by cutting a slot in the counter to accommodate the syrup lines and power cord connection to the unit.

MARKING AND CUTTING THE COUNTER

To mark and cut the counter, refer Figure 2.



RECOMMENDED COUNTER OPENING SIZE
 9 X 12 FOR UTILITIES AND BEVERAGE
 TUBING. OPENING CAN BE LOCATED
 ANYWHERE WITHIN SHADED AREA.

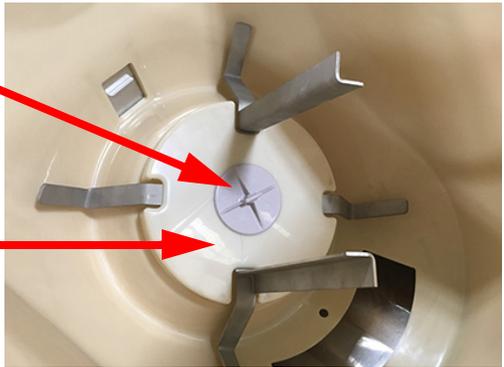
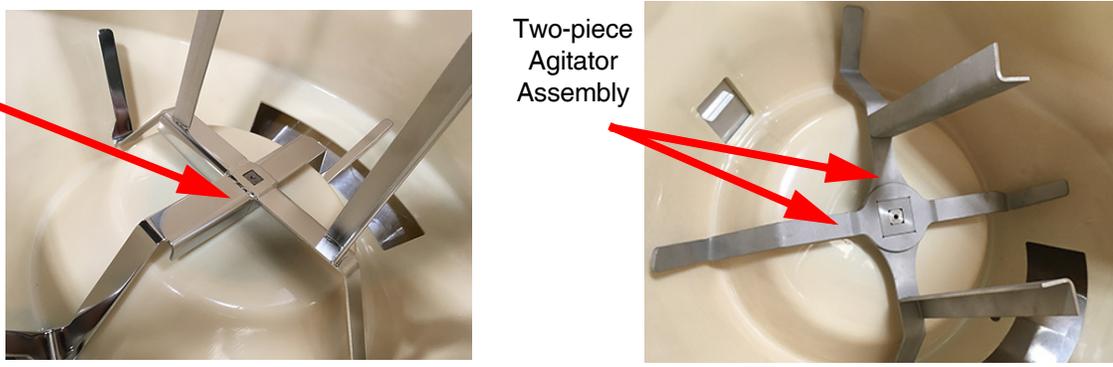
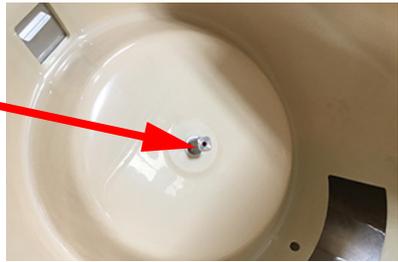
Figure 2.

SANITIZING THE ICE BIN

While It is easier to sanitize the ice bin before placing the unit on the counter. i

 CAUTION	<p>While pouring liquid into the ice bin, do not exceed the rate of 1/2 gallon per minute. Pouring more liquid into the bin could result in an overflow situation that may result in personal injury or damage to the equipment.</p>
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Perform the following steps to sanitize the ice bin.

<p>1. Remove the cover from the ice bin. Avoid damage to the ice bin cover by putting it in a safe place.</p>	
<p>2. Remove the agitator retaining screw and agitator cover. Note: Be careful not to drop the agitator retaining screw into the cold plate opening. To do this, turn the agitator retaining screw counterclockwise, then lift the agitator cover off the agitator.</p>	 <p>Figure 3</p>
<p>3. Remove the agitator from the bin. One-piece Agitator (see Figure 4, left): Lift the agitator from the bin. Two-piece Agitator Assembly (see Figure 4, right): Lift the top piece of the agitator assembly from the bin, then lift the second, bottom piece out of the bin. Result: The bin is ready for cleaning. Go to Step 4 and see Figure 5.</p>	
<p>4. With the agitator removed from the bin, clean the interior of the bin, the agitator cover and the agitator component(s). Note: Use a soap solution with a nylon bristle brush, sponge or cloth to clean the interior of the bin, agitator cover and agitator component(s). Then, thoroughly rinse the bin, cover and agitator surfaces with clean potable water.</p>	 <p>Figure 4</p>
	 <p>Figure 5</p>

- Replace the clean agitator into the clean bin by properly seating the agitator onto the spindle.
 - One-piece Agitator:** Place the agitator over the spindle. Make sure the agitator is seated properly (see Figure 5 and Figure 6).
 - Two-piece Agitator Assembly:** Place the bottom agitator component over the spindle, then, place the top agitator component in place over the bottom agitator. Make sure the agitator assembly is seated properly (see Figure 5 and Figure 7).

One-piece agitator properly seated over the spindle

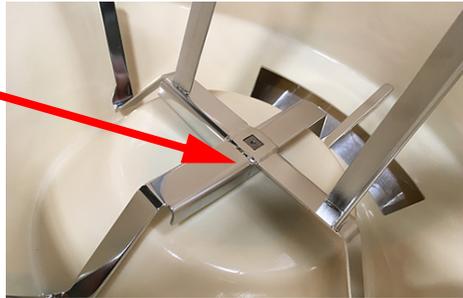
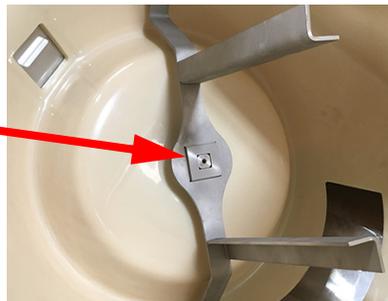


Figure 6 - One-piece Agitator

Bottom agitator component seated properly over the spindle



Top & Bottom agitator components seated properly over the spindle

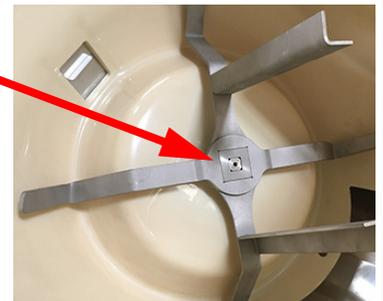


Figure 7 - Two-piece Agitator Assembly

- With the agitator seated properly, place the agitator cover over the agitator and secure it with the agitator retaining screw. Make sure that the agitator retaining screw is tight as shown in Figure 8.

Agitator Cover
Agitator Retaining Screw

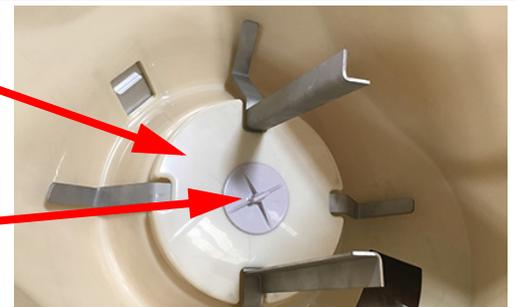


Figure 8

- Clean the exposed cold plate surface by extending the brush through the opening in the bottom of the ice bin.

IMPORTANT: Make sure you do not scratch or damage the cold plate.

Cold plate opening

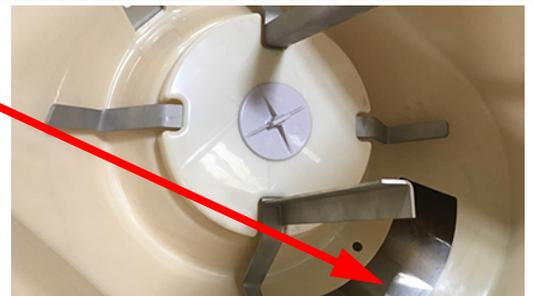


Figure 9

- Using a mechanical spray bottle filled with sanitizing solution, spray the entire interior and agitator assembly and allow it to air dry.
- Open the display door and remove the ice chute cover from the unit.



10. With a nylon bristle brush or sponge, clean the inside of the ice chute, gasket and cover with soap solution and rinse them thoroughly to remove all traces of detergent.

11. Reassemble the ice chute assembly.

12. Using a mechanical spray bottle filled with sanitizing solution, spray the inside of the ice chute. Allow the ice chute to air dry.

POSITIONING THE IDC 255 DISPENSER ON THE COUNTER

 WARNING	<p>The unit is very heavy and extreme care should be taken when moving or lifting the unit. Do not attempt to lift the unit manually.</p> <p>Failure to comply could result in serious injury, death or damage to the equipment.</p>
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Review all information here first, then perform the following steps to place the unit in position on the counter:

<p>1. Locate the indoor placement of the dispenser. The dispenser can be placed directly on the counter top or it can be placed on the counter top using four (4) legs (sold separately). Note the following:</p> <p>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.</p> <p>Counter Mounting: For direct mounting of the dispenser to a level counter top (without legs), openings must be cut into the counter. To do this, locate the desired position for the unit, then mark openings on the counter using dimensions provided in Figure 2 or use the counter-top template supplied by PepsiCo as part of their site survey. Note that after direct counter top mounting, the unit must be sealed to the counter.</p> <p>Apply a continuous bead of NSF International (NSF) silicone sealant (Dow 732 or equal) approximately 1/4-inch around the outside of the unit. All excess sealant must be wiped away immediately.</p> <p>Counter Mounting with Optional Legs: For placing the unit on a counter using optional legs. To do this, unpack the four (4) legs and install them into the threaded holes provided in the bottom of the unit. Then, locate the desired position for the dispenser. The dispenser MUST be placed in a horizontal, level position and product and supply lines must be flexible enough to permit shifting the position of the dispenser (when cleaning the area beneath the dispenser, etc...).</p> <p>IMPORTANT: Before taking the unit off the pallet or whenever moving the unit, gather all electrical cables and tubing from under the unit and position them appropriately to protect them from damage when moving the unit.</p>
<p>2. Move the fountain lift with the unit to the front edge of the counter where it will be installed.</p>
<p>3. Carefully jack up the fountain lift so that the bottom of the unit is flush or slightly above the level of the counter.</p>
<p>4. Carefully slide the unit off of the fountain lift and onto the counter.</p> <p>NOTE: Make sure the unit is securely placed on the counter, but leave open space in the counter cut-out for routing cables and tubing through the counter top.</p>
<p>5. Gather cables and tubing from the unit that will require under-counter connections and route them through an open space in the counter-top.</p>
<p>6. Finally, position the unit so that the drip tray sub-base is lined up in front of the cut-out and is centered appropriately over the cutout in the counter to ensure it is stable.</p>

ICE MAKER CONSIDERATIONS - IDC 255

For proper ice maker and dispenser function, review the following before mounting an ice maker.

- If using the optional Ice Maker Adapter Kit, refer to installation instructions for the kit.
- An Ice level sensor (bin stat) should be installed at least 2" below hopper top. (Refer to the ice maker instructions).
- Ice bridge thickness is adjusted per Ice Maker manufacturer's specification. (Refer to the ice maker instructions).
- Make sure agitator board off-cycle timer settings are set properly for the ice type. (See "Off-Cycle Agitator Settings" on page 20).
- Make sure the Ice flow rate from the dispenser ice chute is sufficient for ice type. (See "Ice Chute Restrictor Adjustment" on page 21.).
- Note that if chew-able ice is used, additional parts and components must be ordered from Cornelius.

CONNECTING THE UNIT

INSTALLING WATER, CO₂ AND SYRUP LINES

Once the unit is located in its final position on the counter, the unit must be plumbed by connecting the supply lines (water, CO₂ and syrup lines). Perform the procedure below to plumb the unit:

1. Locate the water and syrup input tubes.

Note: The lines are marked as follows:

- S# for Syrups
- CW for carbonated water
- W for Plain water
- F# for Flavor Shot lines

Note: If lines are to be cut, mark the line numbers above the cut with a marker. Make sure that syrup lines and flavor lines are not mixed.



CAUTION

- Do not install water pressure regulator on the plain water inlet between the back room package and the unit.
- Check the minimum flow rate and the maximum pressure of the plain water inlet supply line. Minimum flow rate must be at least 125 Gal/Hr (0.47 cubic m/hr). If flow rate is less than 125 Gal/Hr (0.47 cubic m/hr), starving of the carbonator water pump can cause the carbonator water pump to overheat and be damaged.
- The maximum water pressure can be no more than 65 psi (0.45 MPa), etc.]. If necessary, add a 65 psi regulator to the soda water line. Water over pressure (higher than CO₂) can cause carbonator flooding, malfunction, and leakage through the carbonator relief valve. Do not add a regulator to the still water supply.
- Incoming plain water inlet supply line pressure to the pump **MUST** remain a minimum of 10 psi (0.07 MPa) **BELOW** the carbonated CO₂ operating pressure. [Example: Carbonator CO₂ operating pressure is 75 psi (0.52 MPa).



IMPORTANT

- Make sure the unit is not plugged into the AC power source.
- If water exceeds maximum pressure specifications, a water pressure regulator kit must be installed in the plain water inlet supply line.

2. Connect the beverage system product line tubes to the python coming from the back room package, depending on the unit being installed.

See the applicable flow diagram in "Diagrams" on page 18.

3. **Turn the carbonator pump power switch to the OFF position.** The power switch for the carbonator pump is usually located on an electrical junction box as part of the carbonator pump deck assembly.

4. Connect the inlet water line to the carbonator pump and connect the outlet port on the carbonator pump to the dispenser unit using 3/8" (0.95 cm) food-grade tubing.

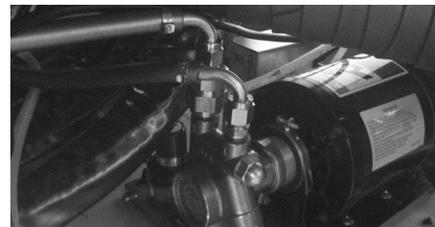


Figure 10

5. Route the power cord (used for providing power to the carbonator pump) through the large opening in the bottom of the unit to the carbonator pump deck assembly.

6. With the **carbonator pump power switch in the OFF position**, connect the power cord from the dispenser to a receptacle on the power junction box that supplies power to the carbonator pump. **Leave the power switch OFF.**

INSTALLING THE DRAIN

After installing the syrup, water and CO₂ lines, the drain lines must be installed. For an assembly view, see “Drip Tray Drain Assembly” on page 22.

Perform the following to install the drain line:

1. Connect the drain tray to a drain tube.
2. Route the drain tube to an open drain with the end of the tube above the “flood” level of the drain. Use the tubing, fittings, clamps, and insulation provided with the dispenser to assemble the drain. The completed drain line must pitch continuously downward and contain no “traps” or improper drainage will result.
IMPORTANT: Make sure the drain tube is fully insulated to prevent condensation and connect the drain tube to the drain tray with a hose clamp but DO NOT over-tighten the clamp. Tighten to maximum of approximately 16 in/lbs torque.
NOTE: After the ice bin has been sanitized, and after the supply lines and drain line is installed, it is recommended that the ice bin be filled with ice. This is because the cold plate must be chilled for a minimum of 30 minutes before brixing is performed. See “Filling the Ice Bin (Manual)” on page 14.
NOTE: Cornelius Inc. recommends that a water shutoff valve and water filter be installed in the plain water inlet supply line. A Cornelius Water Filter (P/N 313860000) and Quick Disconnect Set (P/N 313867000) are recommended.

FILLING THE ICE BIN (MANUAL)

For an Ice Maker equipped unit, refer to the ice maker manufacturer's manual to begin filling the ice hopper with ice.

 CAUTION	The dispenser cannot be used with crushed or flaked ice. Use of bagged ice which has frozen into large chunks can void warranty. The dispenser agitator is not designed to be an ice crusher. Use of large chunks of ice which jam up inside the bin will cause failure of the agitator motor and damage to the bin. If bagged ice is used, it must be carefully and completely broken into small, cube-sized pieces and left to “temper” or warm up for a minimum of 20 minutes at room temperature before loading it into the ice bin.
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Perform the following steps to fill the ice bin.

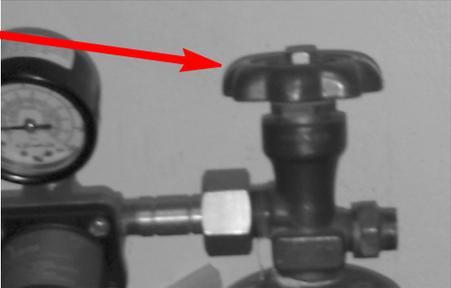
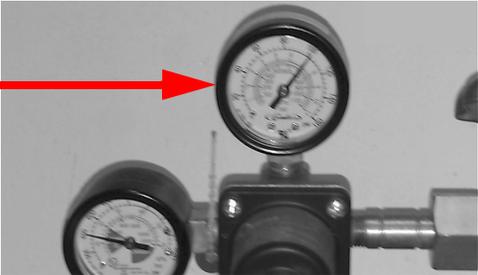
1. Remove the cover from the ice bin.
2. Fill the bin with ice. (255 lb. MAX).
 Important: Do not over-fill the ice bin.
3. Replace the ice bin cover.

WATER SUPPLY AND CO₂ REGULATOR SETUP

Review all information in this section first, before performing initial setup activities.

 CAUTION	<ul style="list-style-type: none"> • Before connecting the CO₂ regulator assembly to a CO₂ cylinder, turn the regulator adjusting screw to the left (counterclockwise) until all tension is relieved from the adjusting screw spring. • Never operate the carbonator pump with the water inlet supply line shutoff (valve closed). “Dry running” the water pump will burn out the pump. A pump damaged in this manner is not covered by warranty.
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Perform the following steps to setup the water supply and the CO₂ supplied to the unit.

<p>1. Turn on the main water supply valve to flood the unit.</p>	
<p>2. To displace air from the carbonator tank, open the carbonator tank relief valve until water flows into the drip tray. Once water flows into the drip tray and air in the tank is displaced, push on the relief valve to close the valve.</p>	
<p>3. Locate the CO₂ supply and turn (counterclockwise) the CO₂ cylinder valve slightly-open to allow the lines to slowly fill with CO₂ gas, then gradually turn the valve open to fully to back-seat the valve.</p> <p>Note: Back-seating the valve prevents leakage around the valve shaft). The carbonator CO₂ regulator is fixed at a normal 75 psi.</p>	 <p>Figure 11</p>
<p>4. Verify that the pressure gauge on the cylinder reads over 110 PSI.</p>	 <p>Figure 12</p>

START AND ADJUST SYRUP FLOW

Start the syrup pumps and adjust syrup flow to the following pressures:

Note: Allow 30 minutes for the cold plate to chill syrups to the proper operating temperature.

- Sugar Syrups: 65-75 psi (depending on syrup viscosity)
- Diet Syrups: 45 psi (depending on syrup viscosity)
- Flavor Shots: 35 psi

PLUG-IN AND OPERATE THE UNIT

Perform the following steps to plug-in and operate unit.

 WARNING	<p>The unit must be electrically grounded to avoid possible fatal electrical shock or serious injury to the operator. The unit power cord is equipped with a three-prong plug. If a three-hole (grounded) electrical outlet is not available, use an approved method to ground the unit.</p> <p>Failure to comply could result in serious injury, death or damage to the equipment.</p>
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1. Plug the unit into an AC power source. This supplies power to the unit.
 NOTE: After AC power is supplied to the unit, power is also supplied to the carbonator pump deck assembly as long as the dedicated power cord from the dispenser unit was routed and connected to the electrical junction box or other connection established to provide power to the pump.
2. Once power is supplied to the carbonator pump, turn the **carbonator pump power switch** to the **ON** position and check for leaks in the system.
 Note: The switch is located on the junction box of the carbonator pump.
 When the pump is switched “on”, the pump will start to fill the carbonator tank with carbonated water. The water pump will stop when the carbonator tank is full and the carbonator pump will now cycle on whenever a drink is dispensed and the liquid level in the carbonator tank drops below the low level probe (approximately 22 oz).
3. Dispense a drink until the carbonator pump cycles on. The refill time should be about 5 - 7 seconds.
 Note: If the carbonator pump appears to be short-cycling where the refill time is 1 - 2 seconds, refer to the Troubleshooting section.

OFF-CYCLE AGITATOR SETTINGS

It is important to correctly set the ON/OFF times for off-cycle ice agitation to prevent ice dispense and storage issues. The default factory timer settings are set at 4 seconds ON / 1 hour OFF. It may be necessary to adjust these times based on ice type and quality used with this dispenser.

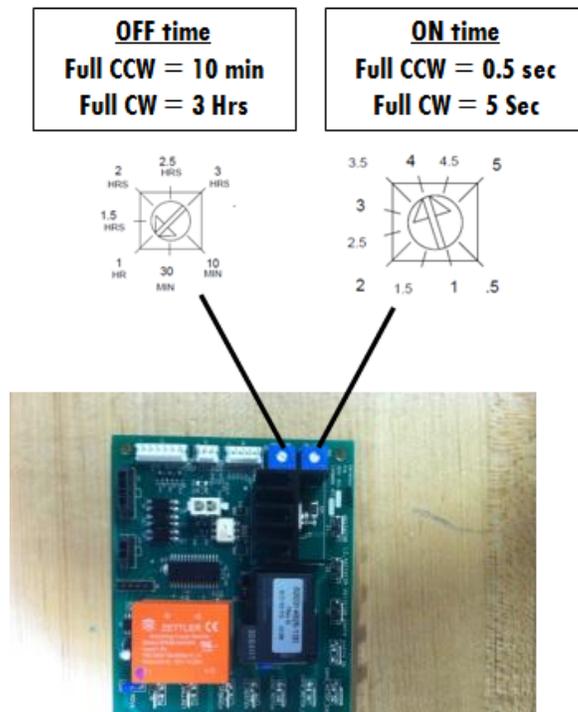


Figure 13

ICE CHUTE RESTRICTOR ADJUSTMENT

The rate at which ice is dispensed can be adjusted by varying the opening of the gate restrictor plate on the ice chute as shown in Figure 14. Reducing the dispense rate of ice is especially desirable when using glasses or other containers with small openings.

Perform the following to make adjustments:

- Remove the Ice Chute cover.
- Loosen the (4) nuts that hold the ice chute assembly to the bin so that the restrictor plate can be moved up or down.

Note: When the restrictor plate is fully up, the ice gate opening is 2-1/2" in height, and the maximum rate of ice dispense is available (approximately 3 oz/sec). The default factory ice opening is 1.5".

- After making adjustments to set the desired restrictor plate opening, re-tighten the (4) nuts in a criss-cross pattern to a torque of approx. 32 in/Lbs.

Note: Softer ice types should require the restrictor to be opened completely to prevent ice storage or 'balling' issues and it may be necessary to order a soft ice slide kit for use of soft/chunk-let ice. Contact your local Cornelius Sales Representative or Customer Service for more details.

Note: For the assembly view, see "Gate Restrictor Plate and Adjustment" on page 21.

 IMPORTANT	<p>Failure to torque nuts properly may result in a poor gasket seal/ water leakage. Be sure to torque nuts properly.</p>
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Four (4) Hex Nuts Adjust the Ice Chute

Two (2) hex nuts on top

Two (2) hex nuts on the bottom
(not shown)

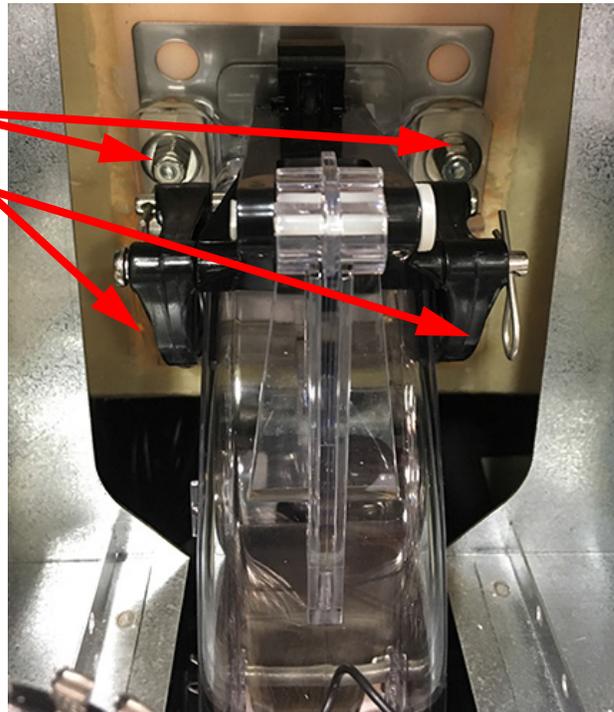


Figure 14

DIAGRAMS

FLOW DIAGRAM - EIGHT FAVOR UNIT WITH TOTAL FLEX - II PLUMBING

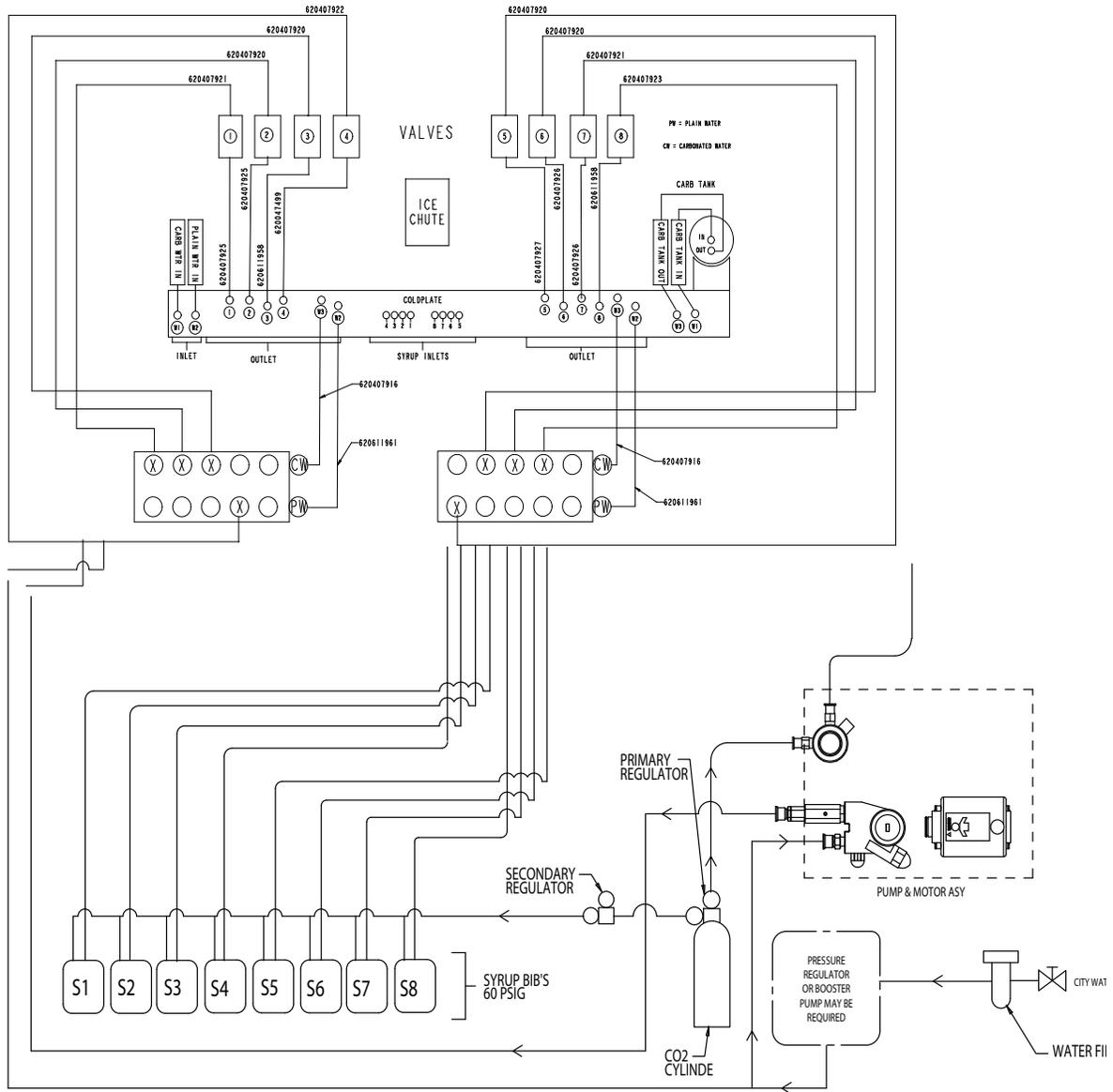


Figure 15

WIRING DIAGRAM

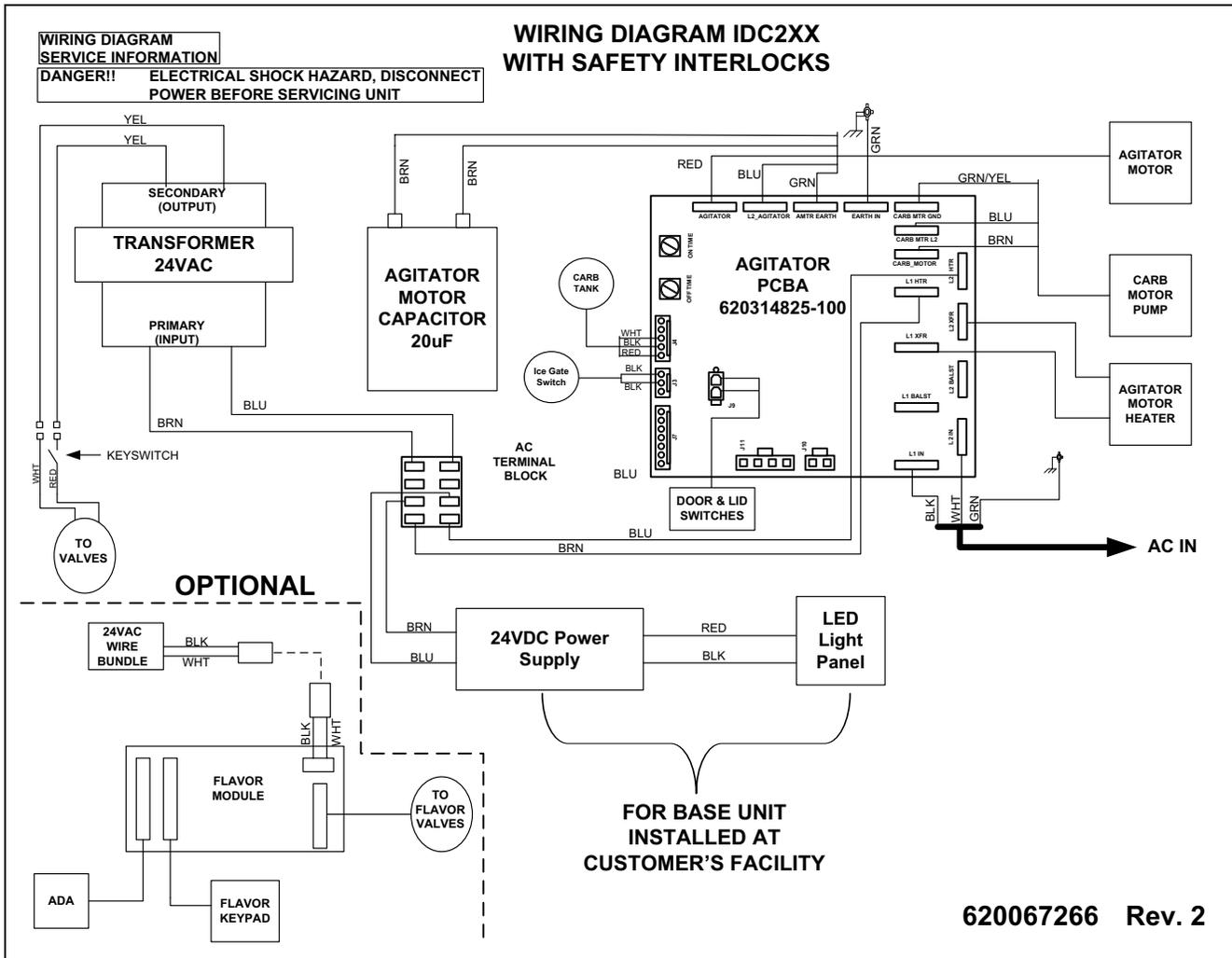


Figure 17

GATE RESTRICTOR PLATE AND ADJUSTMENT

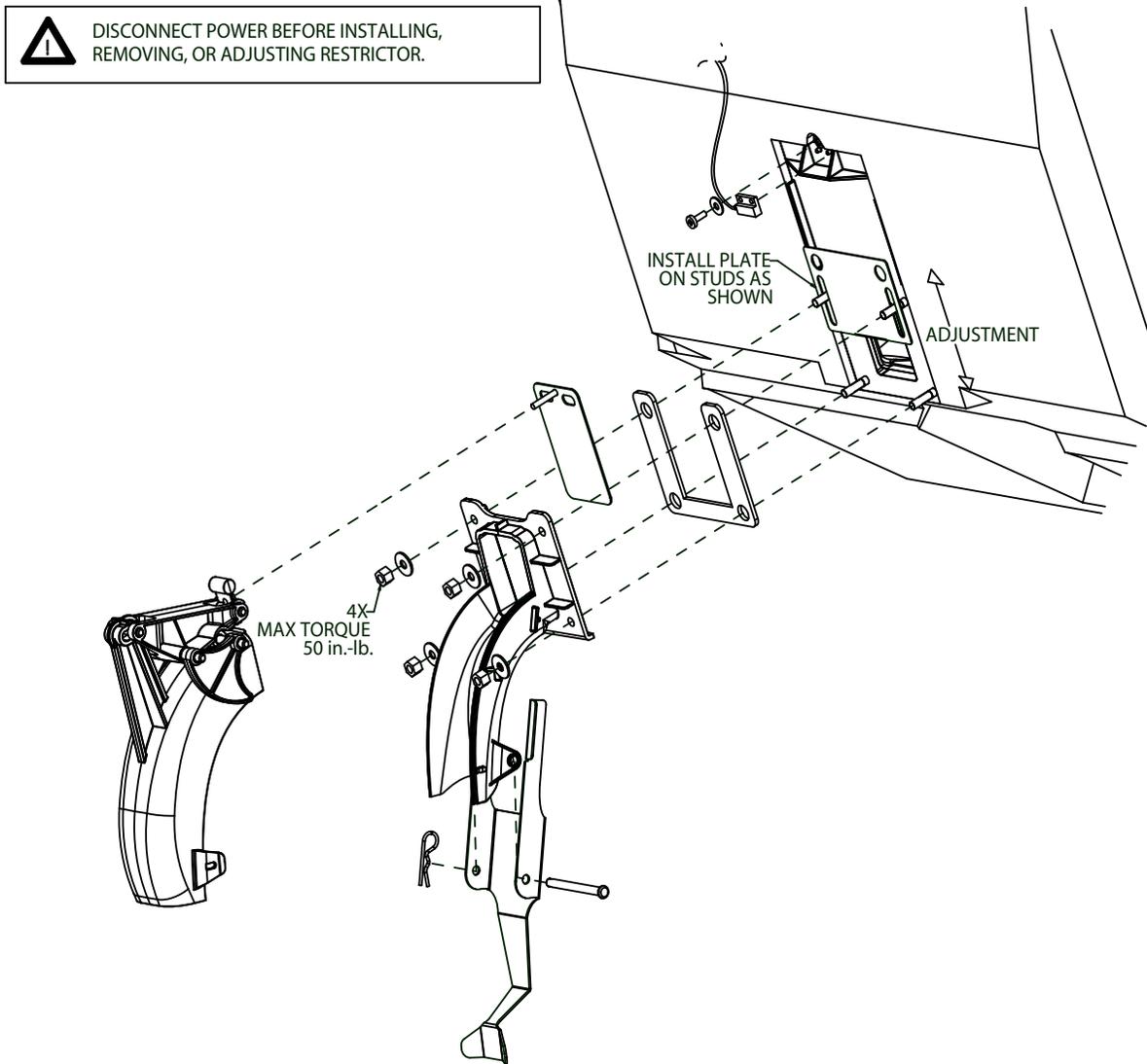


Figure 18

DRIP TRAY DRAIN ASSEMBLY

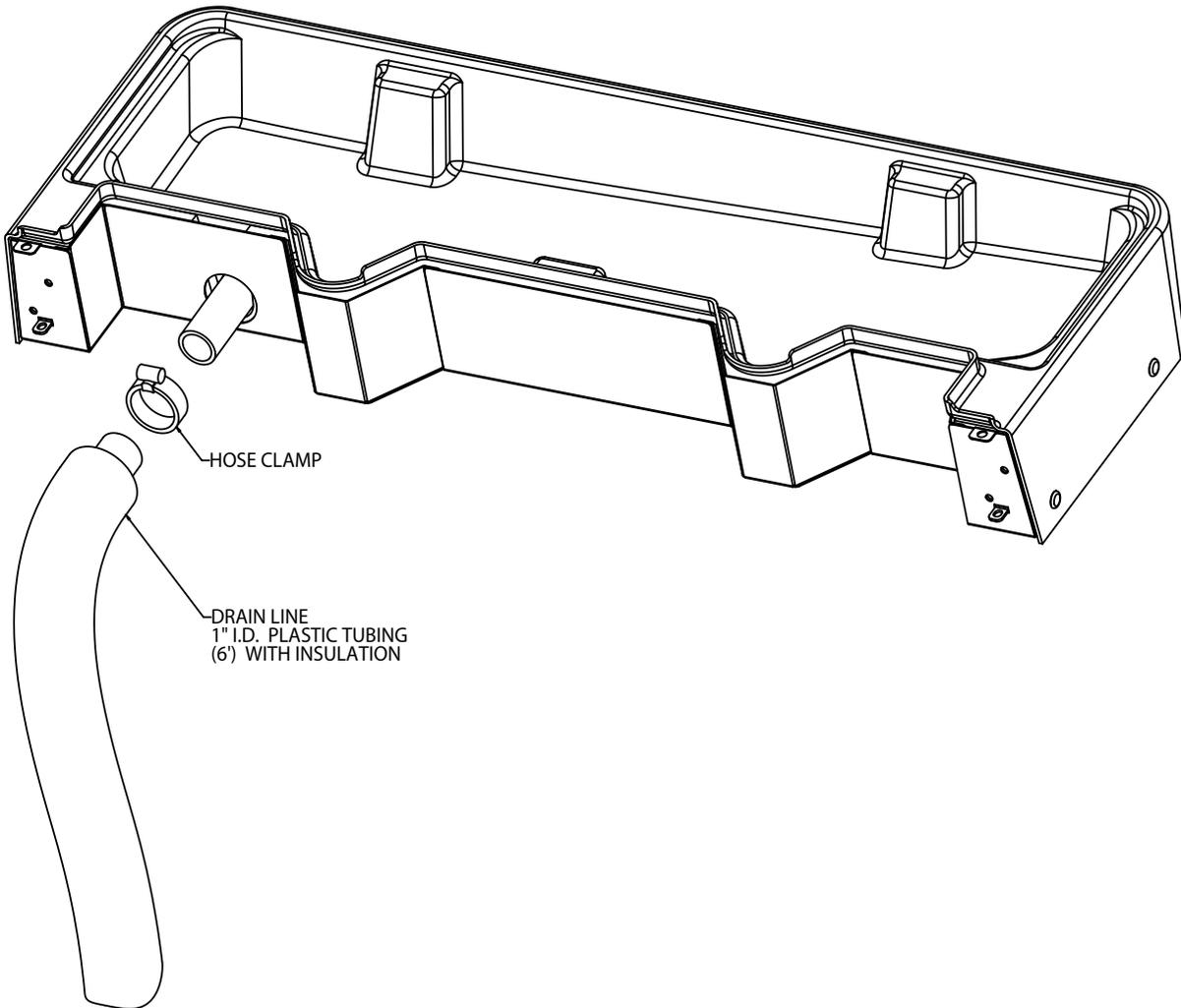


Figure 19

TROUBLESHOOTING

NOTE: Refer to the electrical and flow diagrams located inside of the E-Box cover for troubleshooting.



CAUTION:

Only qualified personnel should service internal components or electrical wiring.



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 CO₂ system, stop dispensing, shut off the CO₂ 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 your unit fail to operate properly, check that there is power to the unit and that the bin 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 switches	Replace defective 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 or replace 2-wire harness
	Bad connection at main control board, J3, pins 2 &3	Repair connection or replace 2-wire harness
	Manual fill lid improperly seated.	Check to make sure lid is properly installed.
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 bin	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
Beverage does not dispense	No 24V DC to valves	Restore 24V DC to valves
	No CO ₂ pressure	Restore CO ₂ pressure



Beverage is too sweet	Valve brix requires adjustment	Adjust valve brix
	Carbonator is not operating	Repair carbonator
	No CO ₂ in carbonator	Restore CO ₂ pressure in carbonator
	City water pressure supply low or inconsistent	Booster pump must be used if dynamic water pressure drops below 40 psig.
Unit will not dispense carbonated drinks. Dispenses syrup only.	CO ₂ pressure in carbonator tank is too high.	Check CO ₂ pressure regulator setting. 75 psig recommended. Relieve pressure from carbonator tank.
	Water valve will not open	Check electrical connection to water valve. Check resistance of coil (should be 9 ohms). Check for voltage at coil when brand button is depressed.
Unit will not dispense carbonated drinks. Spurts CO ₂ and syrup only.	Carbonator tank is empty, because tank was emptied while power was applied to unit. 5 minute time-out of carbonator pump/motor occurred, and carbonator pump is locked off.	Unplug the unit and reconnect the unit. Main control board will reset, ice agitation will occur, and carbonator tank will refill to normal level.
	Note that this can occur while the water filter system is serviced or water supply is shutoff. If drinks are drawn from the dispenser while water pressure is shutoff, the carbonator pump starts and runs continuously, then shuts off on the 5 minute timeout.	1) low water pressure switch deactivates carbonator pump, 2) after 5 minutes reset and retry carbonator pump. If water supply is restored, the 5 minute timeout will not occur. Repeat reset a second time, but on a third time, then lockout carbonator pump, which will generate a service call.
Carbonated drinks are flat (low on carbonation)	CO ₂ is out	Replace CO ₂
	Carbonator tank is 100% filled because the city water pressure exceeds the carbonator tank CO ₂ pressure regulator setting.	CO ₂ setting for the carbonator tank is 75 psig, max water pressure is 60 psig. If necessary, install a water pressure regulating valve.
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
No Syrup or Watered down drink dispensed	Syrup supply is empty	Replace BIB
	BIB pump not working	Replace BIB pump
	No CO ₂ or compressed air supply to BIB pump, or not enough pressure	Check CO ₂ pressure regulator setting. 65 psig recommended. Replace CO ₂ tank or fix compressor.
Carbonator Troubleshooting		
Symptom	Cause	Remedy
Carbonator pump does not start to fill tank	Power cord for the carbonator pump motor is not connected.	Carbonator pump is powered off the main control board inside the electrical box of the unit. Check that the umbilical cord is connected from the unit to the pump motor terminal box.
Power cord is connected but carbonator pump does not run.	Carbonator pump motor is disabled.	Check the enable/disable switch on the carbonator pump terminal box and enable it, if necessary.
	Probes were dry, unit was powered up, water was not turned on, and carbonator did not fill.	This results in a 5 minute timeout. Unplugging the unit and plugging it in will reset the unit and start the carbonator pump.
	Water service was interrupted for more than 5 minutes.	Unplugging the unit and plugging it in will reset the unit and start the carbonator pump.
Carbonator pump is short cycling with every drink drawn	Lower liquid level probe reads "dry" while upper probe reads "wet"	Check color of leads going to probes. Black should go to bottom probe and white to top probe. Reverse if incorrect.



Carbonator tank overfills, overflows through relief valve, and pump shuts off after 5 minutes.	Poor electrical connections between carbonator tank and main control board	Check connections at carbonator tank and at connector J4 on the main control board.
	Broken wires between carbonator tank and main control board	Replace wire harness
	Defective liquid level probe	Replace liquid level probe

Contact your local syrup or beverage equipment distributor for additional information and troubleshooting of beverage system.

DIAGNOSTICS GUIDE FOR MAIN CONTROL (AGITATOR TIMER) BOARD

State	Observed State of Red LED	Sensor Input	Control Response	Service Remedy
0	Flash rate 3 seconds	Both probes read "wet"	Standby mode. Pump = OFF	No service required
1	Flash rate 1/2 second	Pump is OFF and HIGH probe reads "dry" and LOW probe reads "wet"	Waiting for level to drop below LOW probe. Pump = OFF	No service required
2	Flash rate 1/2 second	Both HIGH and LOW probes read "dry"	Normal mode. Pump = ON	No service required
3	Flash rate 1/2 second	Entered when HIGH probe does not detect liquid, and LOW probe does detect liquid, and pump is ON	Normal mode. Pump = ON	No service required
4	Flash rate 1 second	Entered when HIGH probe reads "wet" and LOW probe reads "dry"	This is an error condition.	<ul style="list-style-type: none"> - Check electrical connections at the carbonator tank, and at connector J4 on the main control board - Black wire should be connected to the LOW probe and also to Pin 4 of Connector J4 - Reverse the connections if incorrect - Replace harness if necessary
5	ON continuously, but "flickers" every 3 seconds	Poor signal connection to the carbonator tank. May result in short cycling of the carbonator pump.	Able to continue to function but carbonator pump short-cycles. Pump will come on each time a drink is drawn. This situation should be corrected.	Check the harness connections of the red signal wire at both ends: <ul style="list-style-type: none"> 1) at the carbonator ring terminal and 2) at Pin 5 of the J4 connector at the main control board
6	ON continuously	Entered when pump has run continuously for 5 minutes	This is an error condition.	Unplug the unit and plug it back in. This will reset the unit's main control board and restart the carbonator pump.

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