

---

# CONTINUOUS FLOW ICE MAKER

500, 700, 1000, 2000 - Series

Installation Manual

Release Date: July 1, 2008

Publication Number: 630460174INS

Revision Date: February 06, 2018

Revision: N

Visit the Cornelius web site at [www.cornelius.com](http://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 Warranty 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 proprietary information and it may not be reproduced in any way without permission from Cornelius.

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.



# TABLE OF CONTENTS

<b>Safety Instructions</b> .....	<b>1</b>
Read And Follow All Safety Instructions .....	1
Safety Overview .....	1
Recognition .....	1
Different Types Of Alerts .....	1
Safety Tips .....	1
Qualified Service Personnel .....	1
Safety Precautions .....	2
Shipping And Storage .....	2
Power Cord .....	2
Sound Level .....	2
Unit Location .....	2
<b>General Information</b> .....	<b>3</b>
General Description .....	3
Specification Chart .....	3
<b>Installation Instructions</b> .....	<b>11</b>
Remove Ice Maker From Carton .....	11
Cabinet Removal Alternate .....	11
Preparation Of Installation Site .....	11
Water Inlet Hook Up .....	12
Drain Connection .....	13
Electrical Supply .....	13
Auger Engagement .....	16
Initial Start Up, Checks And Adjustment Instructions .....	18
For WCC2001QT-R Only: .....	18
<b>Mounting Chunklet Ice Maker On A Cornelius Dispenser</b> .....	<b>19</b>
Description Of Potential Issue: .....	19
Corrective Action: .....	19
Additional Information: .....	19
Compressed Flaked Ice Adjustments .....	19
<b>ED150/175</b> .....	<b>20</b>
<b>ED/DF200</b> .....	<b>20</b>
<b>ED/DF250</b> .....	<b>20</b>

---

<b>ED300</b> .....	<b>21</b>
<b>Flavor Fusion / Flavor Overload / IDC</b> .....	<b>21</b>
Off Cycle Ice Agitation .....	21
Gear Motor .....	23
Bin Control .....	23
Install Bin Control Sensor .....	24
<b>Cornelius Ice/beverage Combo Soft Ice Dispensing Tips</b> .....	<b>25</b>

# 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:

### 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.

## POWER CORD

### CAUTION:

If the power cord is damaged, it must be replaced by a special cord available from the manufacturer or its service agent.

## SOUND LEVEL

### CAUTION:

The A-weighted sound pressure level has been determined to be below 70dBA..

## UNIT LOCATION

### CAUTION:

Appliance is not suitable for installation in an area where a water jet could be used.

### CAUTION:

The appliance must be placed in a horizontal position.

### CAUTION:

This unit is not designed for use in outdoor locations.



# GENERAL INFORMATION

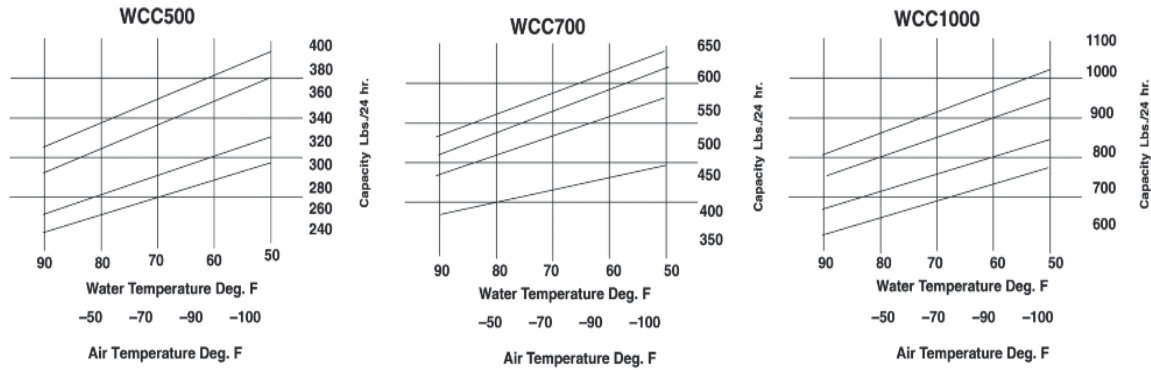
## GENERAL DESCRIPTION

This section gives the Unit description, theory of operation, and design data for continuous flow ice maker series 500, 700, 1000, and 2000.

## SPECIFICATION CHART

Models	Condensing Unit	VAC	HZ	PH	Wire	Comp. RLA	Fan Amps	GRMTR Amps	Refrigerant		Circuit Fuse
									Oz.	Type	
WCC500-A	Air Cooled	115	60	1	2	10.5	1.1	2	20	R404A	20
WCC500-W	Water Cooled	115	60	1	2	10.5	N/A	2	9	R404A	20
WCC502-A	Air Cooled	220/240	50	1	2	5.3	0.5	1.6	24	R404A	20
WCC502-W	Water Cooled	220/240	50	1	2	5.3	N/A	1.6	11	R404A	20
WCF510-A	Air Cooled	115	60	1	2	10.5	1.1	2	20	R404A	20
WCF510-W	Water Cooled	115	60	1	2	10.1	N/A	2	11	R404A	20
WCF512-W	Water Cooled	220/240	50	1	2	5.3	N/A	1.6	11	R404A	20
WCC700-A	Air Cooled	115	60	1	2	16	.96	2	16	R404A	20
WCC700-W	Water Cooled	115	60	1	2	14.6	N/A	2	11	R404A	20
WCC700-R	Air Cooled	115	60	1	2	14.6	1.6	2	79	R404A	10
WCC701-A	Air Cooled	208/230	60	1	2	7.7	1.6	2	24	R404A	20
WCC701-W	Water Cooled	208/230	60	1	2	7.7	N/A	2	13	R404A	20
WCC702-A	Air Cooled	220/240	50	1	2	9.4	0.5	1.6	20	R404A	20
WCC702-W	Water Cooled	220/240	50	1	2	8.2	N/A	1.6	13	R404A	20
WCF710-A	Air Cooled	115	60	1	2	14.6	1.6	2	17.5	R404A	20
WCF710-W	Water Cooled	115	60	1	2	12	N/A	2	13	R404A	20
WCC711-A	Air Cooled	208/230	60	1	2	7.7	1.6	2	24	R404A	20
WCC711-W	Water Cooled	208/230	60	1	2	7.7	N/A	2	13	R404A	20
WCF712-A	Air Cooled	220/240	50	1	2	8.2	0.5	1.6	24	R404A	20
WCF712-W	Water Cooled	220/240	50	1	2	8.2	N/A	1.6	13	R404A	20
WCC1001-A	Air Cooled	208/230	60	1	2	10	1.5	2.1	22	R404A	30
WCC1001-W	Water Cooled	208/230	60	1	2	7.5	N/A	2	17	R404A	20
WCC1002-A	Air Cooled	220/240	50	1	2	8.9	0.85	2	26	R404A	20
WCF1101-A	Air Cooled	208/230	60	1	2	10	1.5	2.1	22	R404A	30
WCF1101-W	Water Cooled	208/230	60	1	2	7.5	N/A	2	17	R404A	20
WCF1102-A	Air Cooled	220/240	50	1	2	8.9	0.85	2	26	R404A	20
WCC1001-R	Remote	220/240	60	1	2	7.5	N/A	2	120	R404A	15
WCF1101-R	Remote	208/230	60	1	2	7.5	N/A	2	120	R404A	15
WCC2001-A	Air-Cooled	208/230	60	1	2	12.9	.85	(2) 2	46	R404A	25
WCC2001-R	Remote	208/230	60	1	2	12.9	1.35	(2) 2	220	R404A	25
WCC2001-W	Water Cooled	208/230	60	1	2	12.9	N/A	(2) 2	28	R404A	25
WCC2002-A	Air Cooled	220/240	50	1	2	11.4	.85	(2) 2	46	R404A	25
WCF2201-A	Air-Cooled	208/230	60	1	2	12.9	.85	(2) 2	46	R404A	25
WCF2201-W	Water Cooled	208/230	60	1	2	12.9	N/A	(2) 2	28	R404A	25
WCF2202-A	Air Cooled	220/240	50	1	2	11.4	.85	(2) 2	46	R404A	25

**NOTE: For units not listed in above chart, refer to nameplate or contact factory service**



Temperature Chart

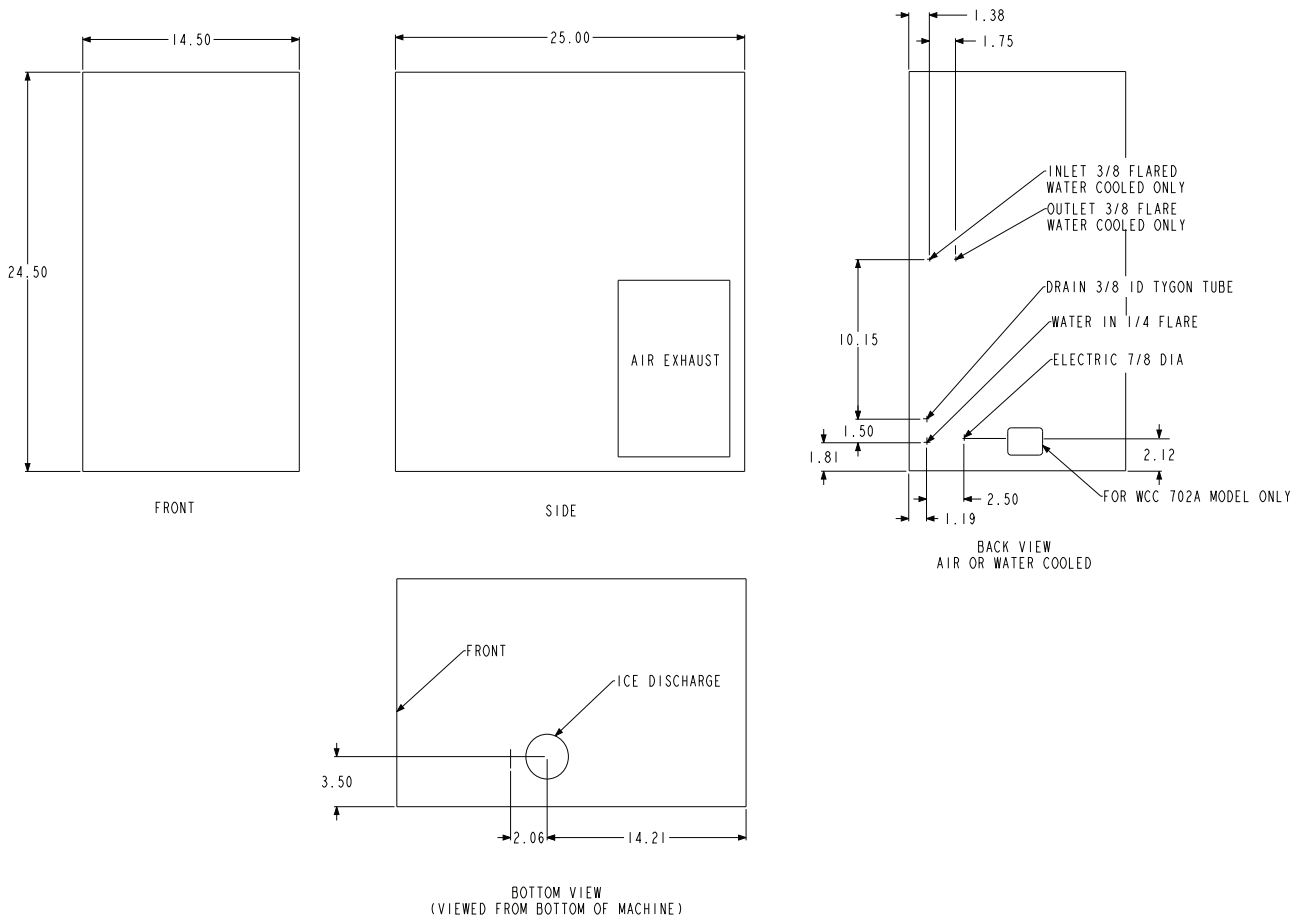
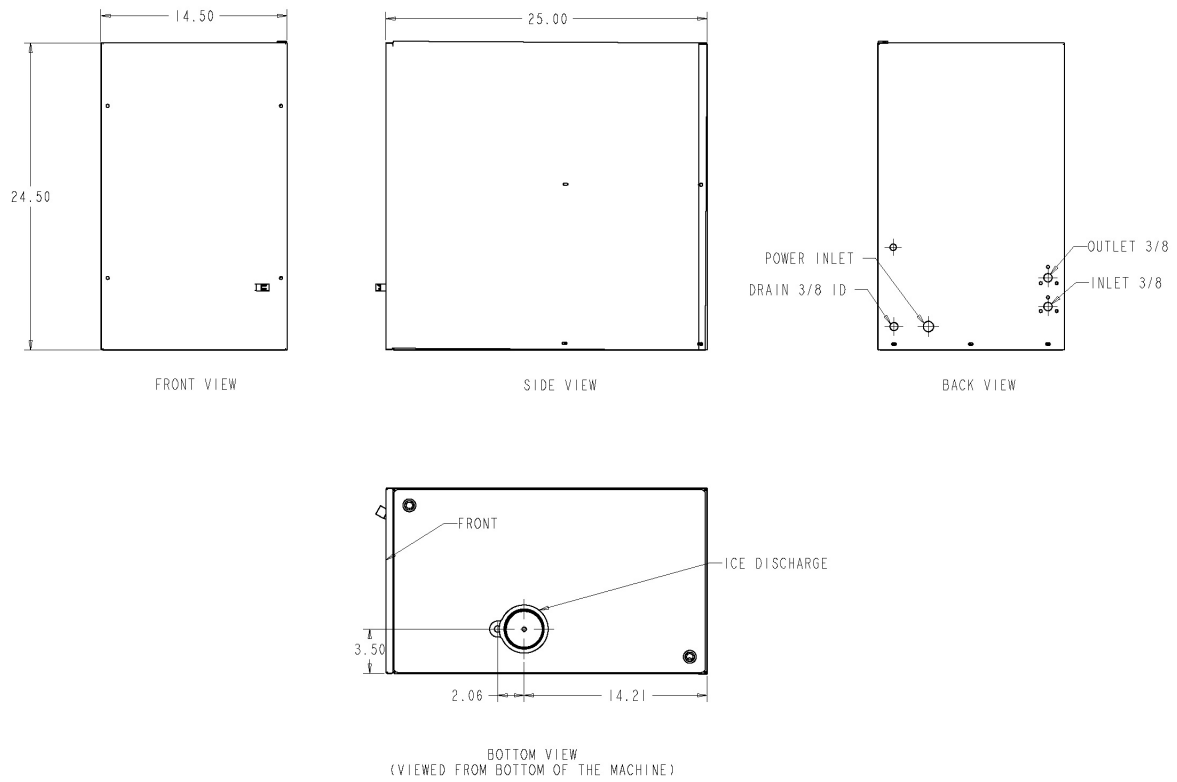


Figure 1. Series 500 & 700 Dimension Drawing (Shipping Wt. 160 Lbs. Approx).





**Figure 1A.WCC700-R, Dimension Drawings**

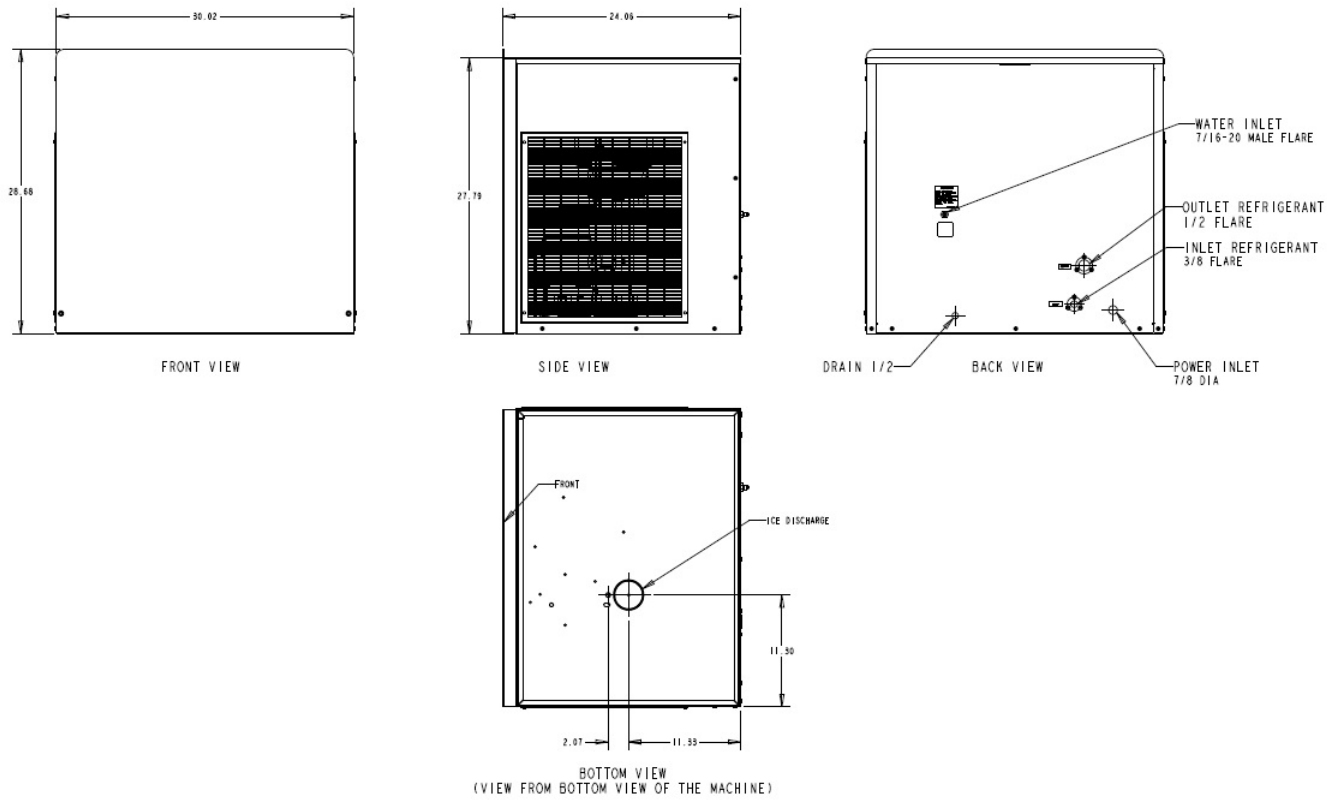
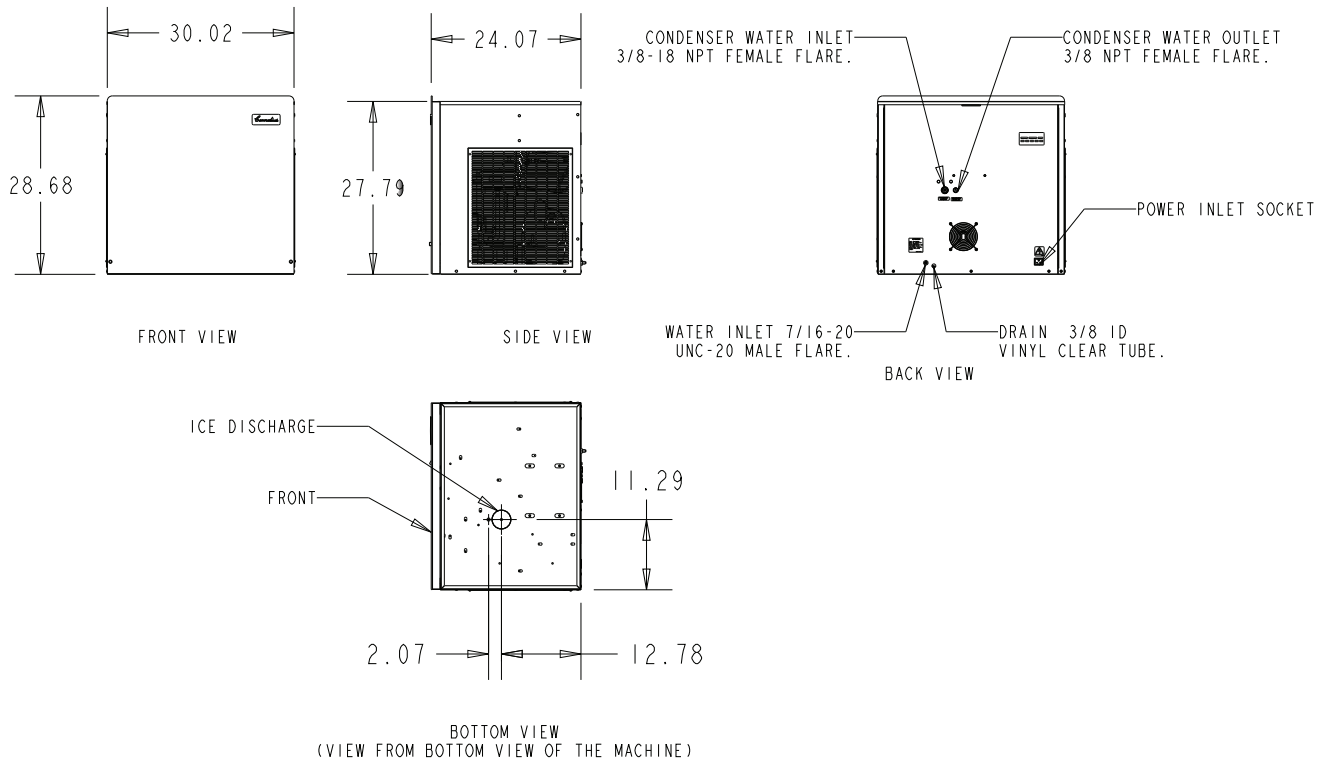


Figure 1B .WCC700-R Chunklet Carbon



**Figure 1C WCC 700W Chunklet Carbon**

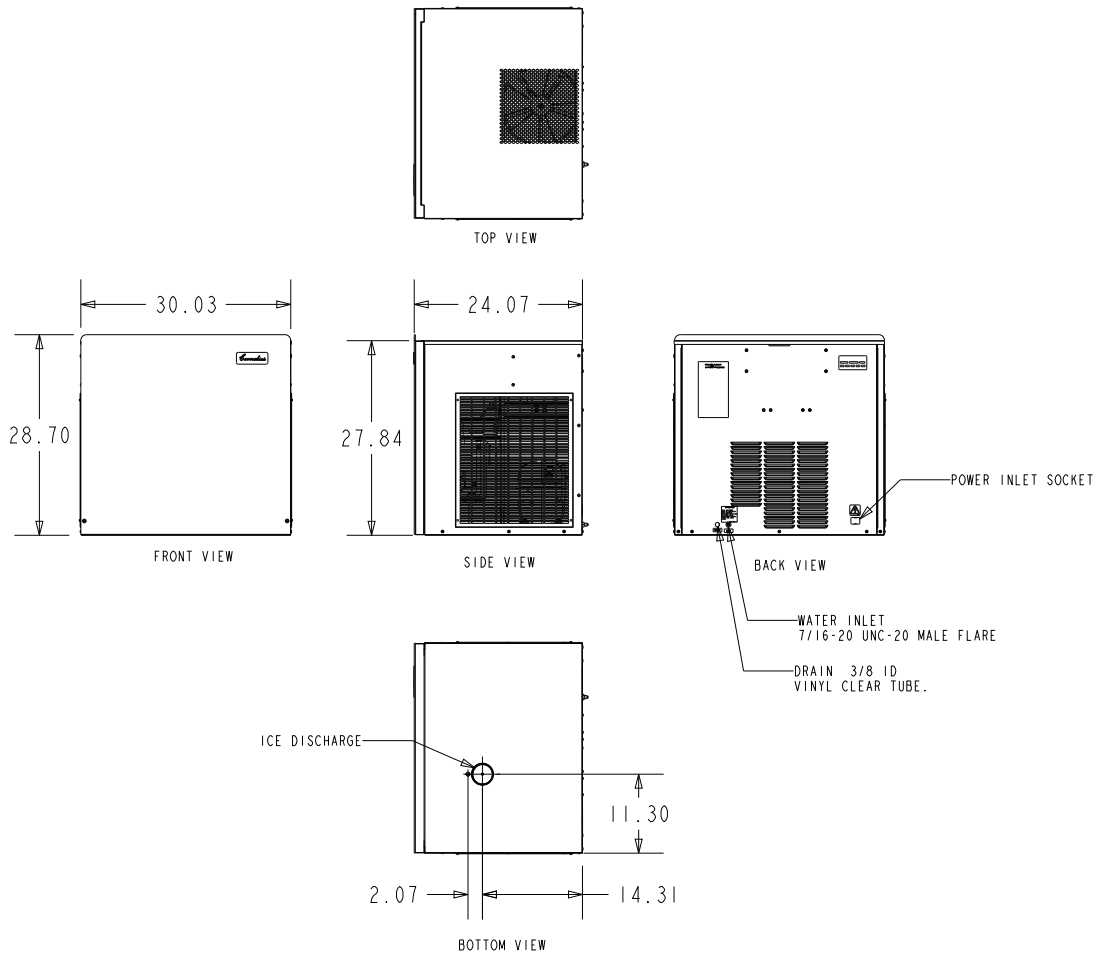


Figure 1D WCC 700A Chunklet Carbon

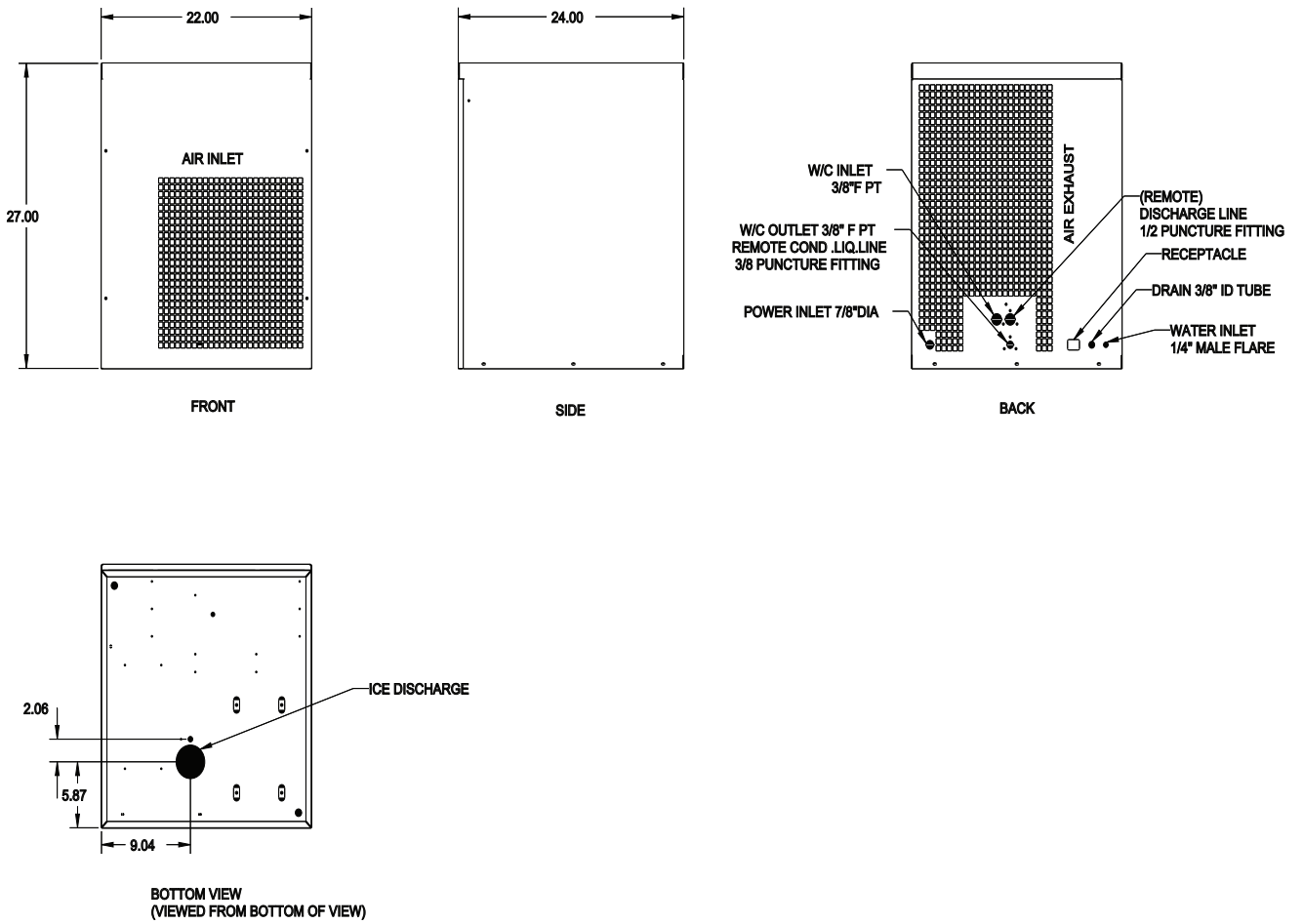


Figure 2. Series 1000 Dimension Drawing (Shipping Wt. 210 Lbs. Approx).

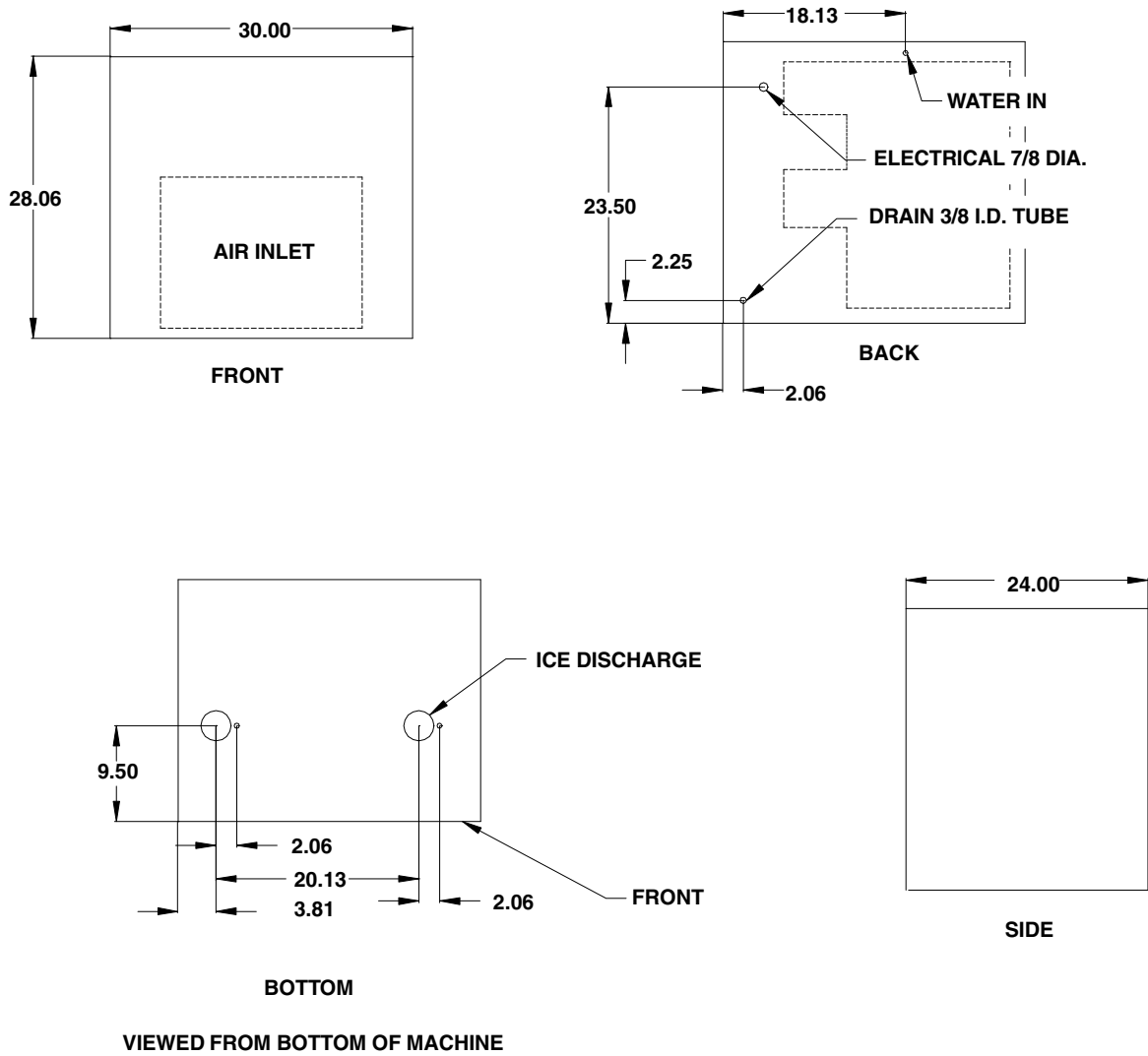


Figure 3. Series WCC2001-A and WCF2201-A Dimension Drawings

# INSTALLATION INSTRUCTIONS

This manual covers unpacking and inspection, selecting location, installing unit, and preparing for operation.

## REMOVE ICE MAKER FROM CARTON

Keep unit in the upright position, remove carton and pallet from unit and inspect unit for damage. **Upon inspection of unit, if any damage is found, file a claim with carrier immediately.**

## CABINET REMOVAL

1. **Front Panel** - Remove 4 screws and pull forward.
2. **Top Panel** - Remove screws and lift upward. 4 screws 500/700, 6 screws 1000.
3. **Side Panel** - Remove 4 screws and pull forward.
4. **Back Panel** - Should not be removed.

## CABINET REMOVAL ALTERNATE

This Section Pertains to all 700-Series icemakers that contains the carbon front panel.

1. **Front Panel** - Remove 2 screws along bottom edge of front panel. Lift panel up and pull forward.
2. **Top Panel** - There are no screws located on the top panel, but it cannot be removed until the front panel has been removed.
3. **Side Panel** - Remove all screws and pull forward.
4. **Back Panel** - Should not be removed.

## PREPARATION OF INSTALLATION SITE

The refrigeration system on air cooled units requires airflow, so a well ventilated area should be chosen.

1. A minimum of 12 inches must be maintained, free of any obstructions, for air intake. A minimum of 4 inches clearance is required for air exhaust.
2. For WCC500A units, maintain minimum clearances of 18 inches on top and 6 inches on sides as well as in the rear for sufficient air flow.
3. For WCC1001A units, maintain minimum clearances of 6 inches on top and 4 inches on rear for sufficient airflow.
4. The unit can be installed either on an ice storage bin or ice dispenser using the proper adapter kits. (Refer to sales literature for information.) The install is kit provided with each ice maker and adapter kits will supply everything to locate unit correctly. In all cases the ice maker should be sealed all around the base with an NSF listed sealant. (63804815B)

## WATER INLET HOOK UP

1. **Water Inlet** - fitting is a 1/4 SAE male flare located at the rear of the unit. Connect water supply with a 1/4 SAE flare nut and 1/4" copper or flexible tubing or larger.
2. **Water Pressure** - Unless otherwise specified, the unit is designed to operate on water pressures between 137.9 kpa and 620.5kpa (NOTE: for pressures above 90 P.S.I. a regulator must be installed.)
3. **Condenser Inlet Connections** - Use a separate 3/8" copper line or larger water line. Connect to 3/8 FPT fitting on water modulating valve.
4. Filter/Conditioners are recommended on supply lines to ice makers. Never run the water supply to water cooled condenser through filter/conditioner, it uses up the cartridge unnecessarily and a saturated cartridge can starve the ice maker causing premature component damage. Separate water supplies are recommended.



## DRAIN CONNECTION

1. **Overflow Line** - is a 3/8" I.D. flexible tube located at the rear of the unit. Extend this line to proper drain.
2. **Condenser Outlet** - is a 3/8" FPT located on the rear panel.

## ELECTRICAL SUPPLY

1. **Power Access** - is provided with a 7/8" diameter, knockout hole in the rear panel. Route incoming power in conduit, through rear panel to ice maker electrical control box. Make connections to wires provided in the control box and ground lug/screw.

For WCC700A, WCC702A and WCC1001A units, 8 ft. 2 inch long (2.4 m) power cord with 3-prong plug attached to the unit.



### 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

2. **Fused Line** - should be checked and sized according to electrical rating shown on unit nameplate.

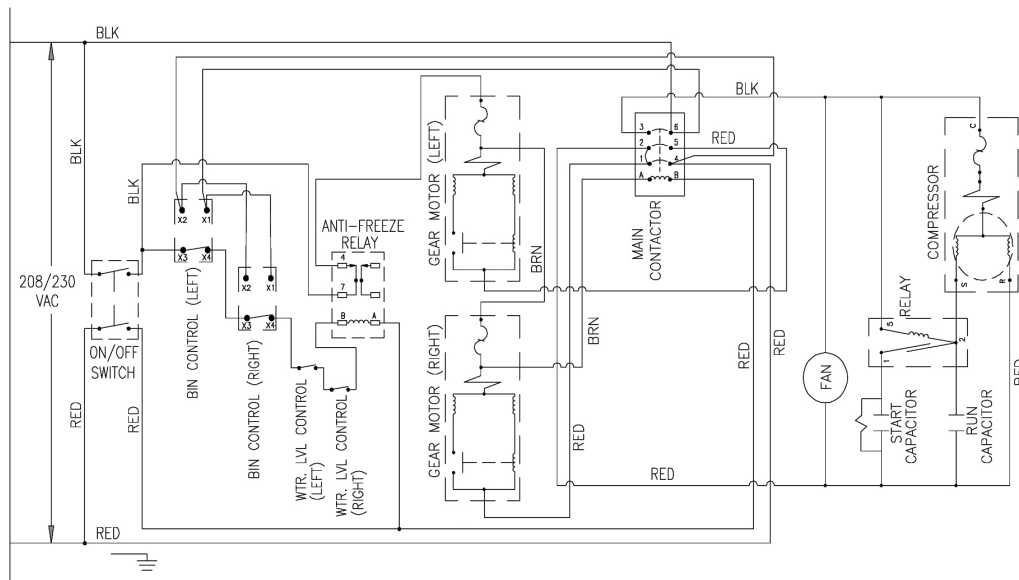


Figure 4. Schematic and Wiring Diagram WCC2001-A and WCF2201-A

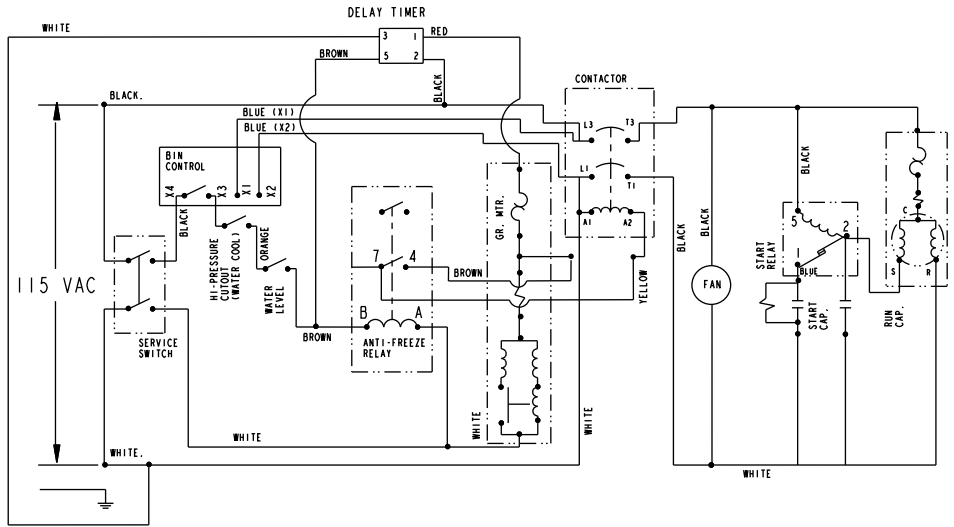


Figure 5. Schematic and Wiring Diagram WCC500-A,WCC700-A,WCC700-W,WCF510-A,WCF710-A,&WCF710-W&WCC500-W,WCF510W

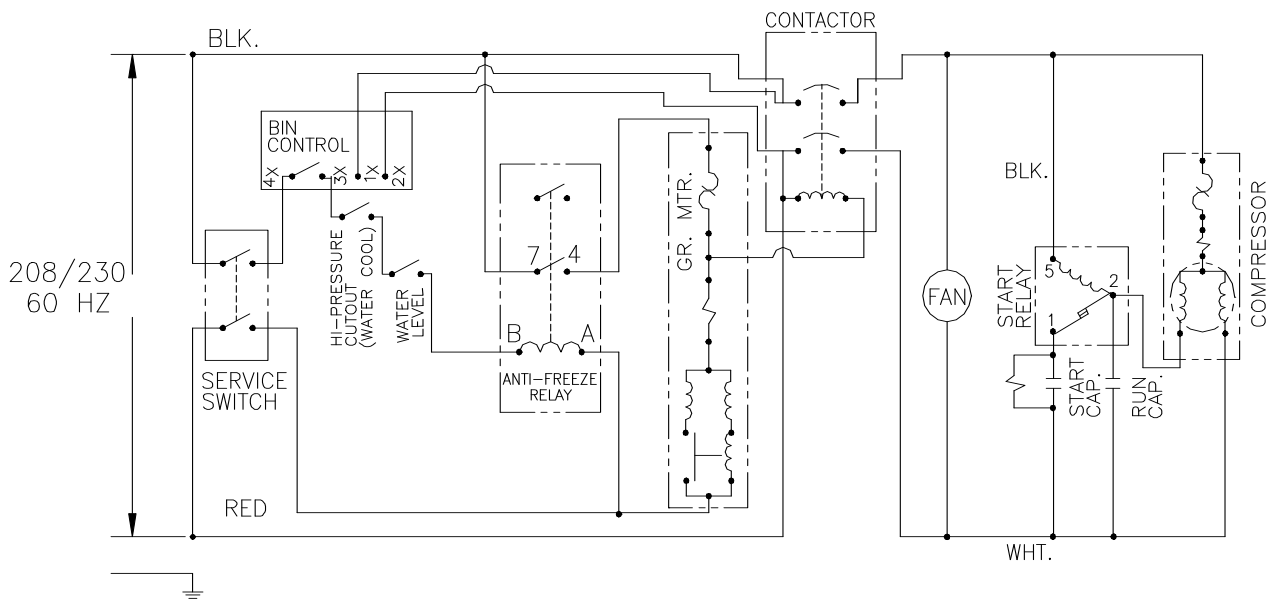


Figure 6. Schematic and Wiring Diagram WCC701-A,WCC701-W, WCC1001-A, WCC1001-W, WCF711-W, WCF1101-A, & WCF1101-W

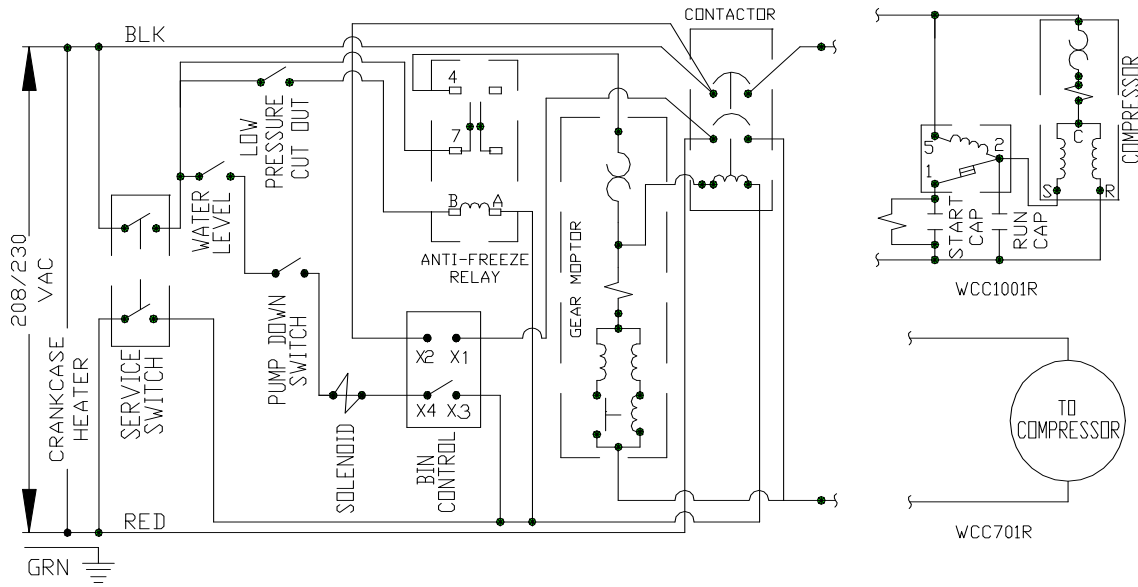


Figure 7. Schematic and Wiring Diagram WCF1101R, WCC1001R, WCF1102R, & WCC1102R

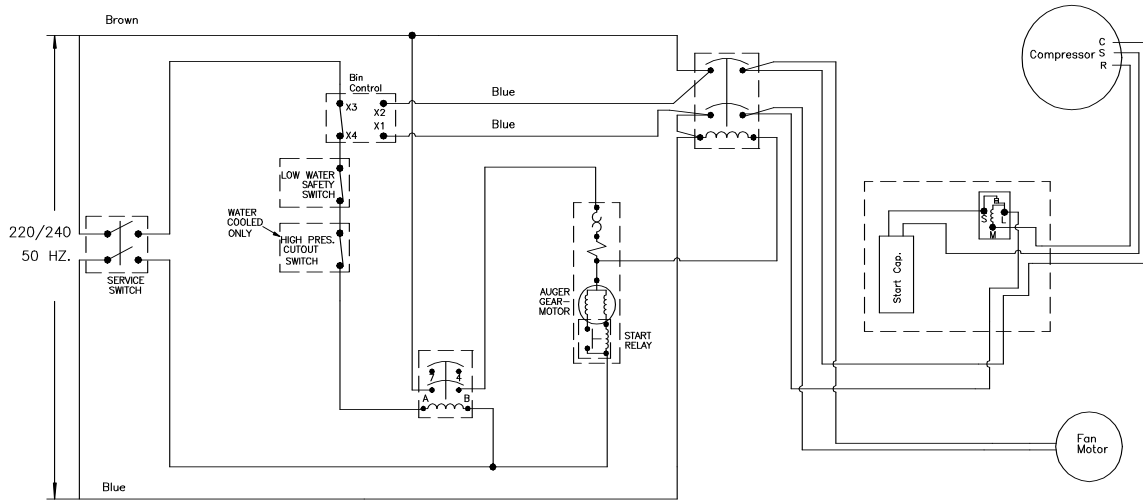


Figure 8. Schematic and Wiring Diagram WCC502, WCC702, WCC1002, WCF512, WCF712, & WCF1102

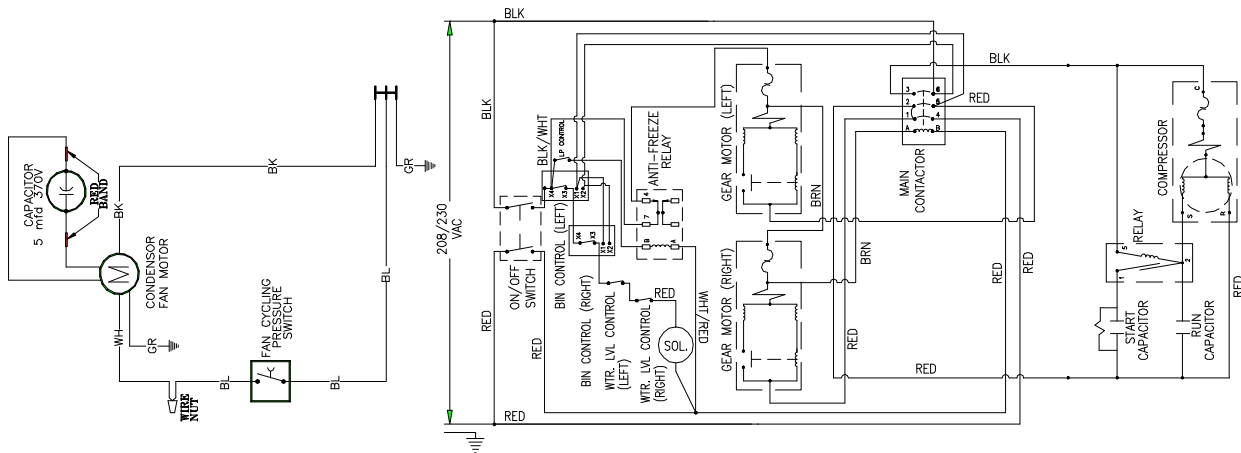


Figure 9. Schematic and Wiring Diagram WCC2001-R and WCF2201-R

## AUGER ENGAGEMENT

Be certain that auger is fully engaged to lower drive and extruder head is fully engaged into evaporator. Perform the following procedure to engage the auger properly.

1. Install the extruder head on top of the evaporator, as shown in Figure 10.

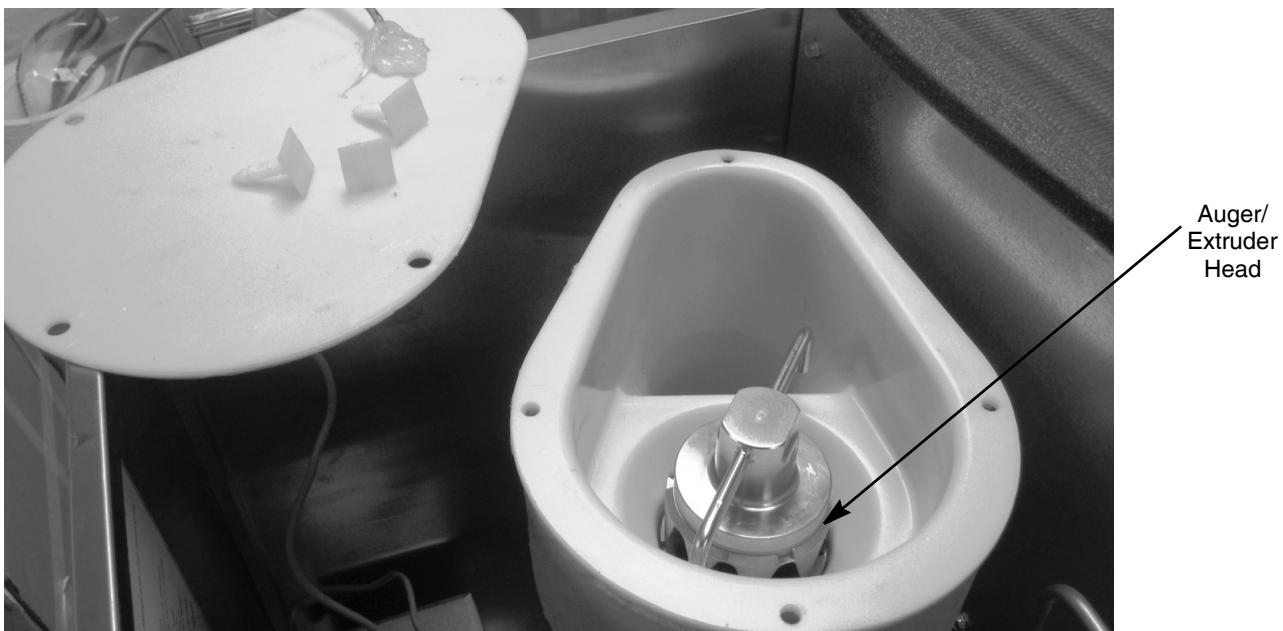


Figure 10. .

2. When the auger is lowered into the evaporator, rotate the auger to engage the motor drive shaft, as shown in Figure 11.

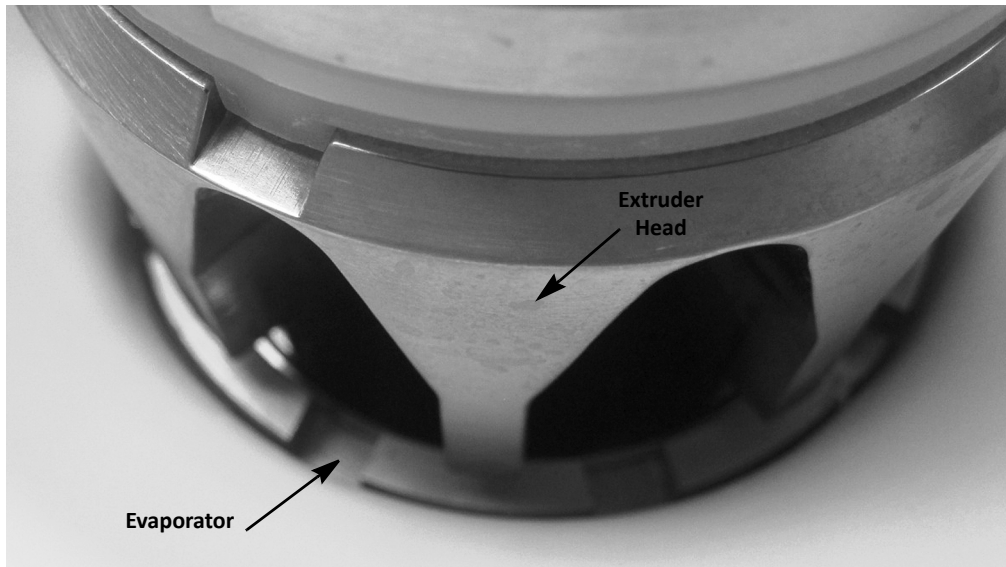


Figure 11. .

- Carefully rotate the extruder head until the tabs on the extruder head drop into the slots on the evaporator plate, as shown in Figure 12.. When the auger/extruder head assembly is rotated to the proper position, it will drop about 1/4 inch to more fully engage the motor drive shaft.

**NOTE: Not all the tabs are the same width. Therefore, you must rotate the auger until all the tabs are properly aligned with the evaporator slots. This may require almost a complete rotation of the extruder head to complete.**

**⚠ CAUTION:**

Keep hands out of the way when rotating the extruder head. When the auger is aligned, it drops down quickly and a finger may be pinched due to the weight of the auger/extruder head assembly.

Failure to lock the extruder head tabs into the evaporator slots causes the auger to be out of proper alignment with the evaporator. This may cause excessive loads on the auger that can potentially result in excessive noise and tripping the drive motor overload.

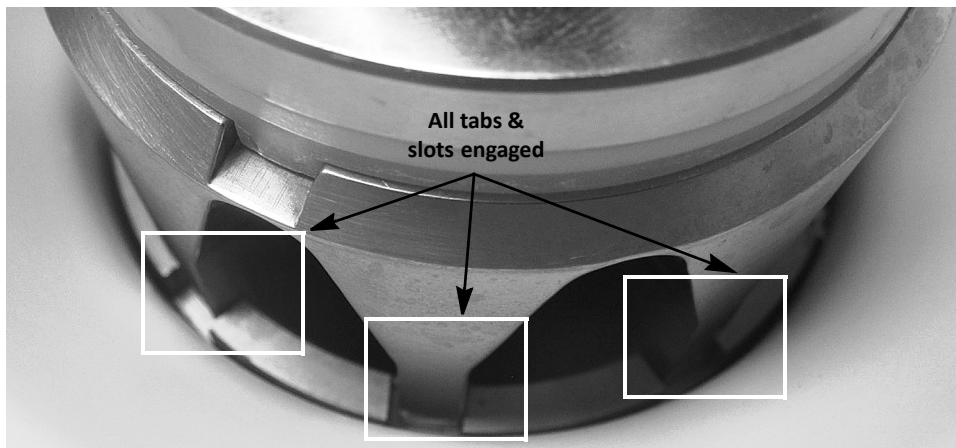


Figure 12. .

## INITIAL START UP, CHECKS AND ADJUSTMENT INSTRUCTIONS

**NOTE: Do not start unit before completing installation steps on the previous page.**

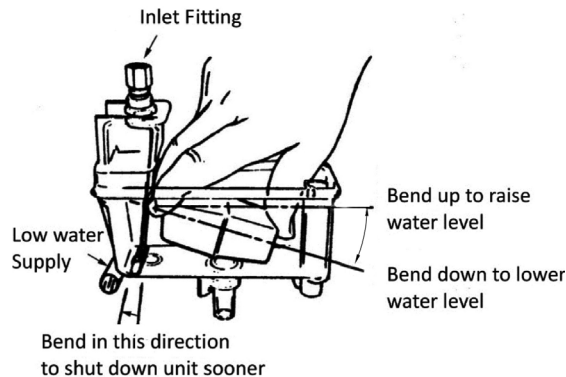
Turn on water supply (if unit is water cooled turn water on to condenser also) turn on main power switch (located on top of electrical box), and make the following system checks:

**NOTE: If unit will not start be sure water reservoir is full. Low water safety control must be properly adjusted to start and shut down unit. If water level drops below bottom of reservoir, unit must shut down. Adjustment is made by moving magnet up or down.**

**Water Level** - If necessary adjust float by bending float arm up or down as needed, push float assembly down until unit stops running. Release float and unit will restart. Keep water in reservoir at level line while unit is in operation.

**Low Water Safety Control** - Adjust magnet by bending magnet arm as needed to shut unit down if water level drops below bottom of reservoir.

**Bin Control** - Place ice around probe, unit should shut down in one minute. Remove ice from around probe, unit should start in two minutes.



**Figure 13. . Ice maker Float Assembly**

**Water modulating valve (water cooled units only)** - Opening point of condenser water modulating valve should be set to maintain proper operating pressure in the refrigeration system high side. Closing point of valve should be set low enough to close valve during compressor stand by periods. To raise, turn counterclockwise, to lower turn clockwise.

**NOTE: If any of these checks or adjustments cannot be achieved, refer to Service Manual or call for factory assistance at 1-800-238-3600.**

### For WCC2001QT-R Only:

1. The WCC2001QT-R is equipped with a compressor start delay. The auger motors will run before compressor start for approximately two minutes. This is to clear out the evaporators and is normal.
2. The WCC2001QT-R is equipped with an auger motor run delay. The auger motors will run after compressor shut down for approximately two minutes. This is to clear out the evaporators and is normal.

# MOUNTING CHUNKLET ICE MAKER ON A CORNELIUS DISPENSER

## DESCRIPTION OF POTENTIAL ISSUE:

There may be multiple issues that will affect this continuous run situation. The WCC700R is factory equipped with a mechanical thermostat and an electronic thermostat that must be set up according to the bin application instructions. Both thermostats must be set up per factory guidelines (see WCC Installation manual P/N 630460174INS).

## Corrective Action:

Ensure that the mechanical and electronic thermostats are set up properly, with the mechanical thermostat acting as the primary control. Please refer to our WCC Installation Manual for proper set up of both of the thermostat controls.

## Additional Information:

**NOTE: Proper dispensing of chunklet, cube let, or nugget ice from a Cornelius Ice/Bev Combo dispenser is dependent on proper set-up of the Beverage Dispenser, and proper set-up of the Chunklet ice maker. Please refer to Cornelius Soft Ice Dispensing Tips for specific set up instructions.**

If your ice maker comes with both an electronic control and a mechanical control:

- The mechanical control should be set up as the primary control.
- The mechanical control should be positioned 4-6" below the top of the ice bin.
- The electronic control should be set up as the secondary control.
- The electronic control should be positioned 2" above the mechanical control.

If your ice maker comes with just an electronic control:

- The electronic control should be positioned according to the instructions included with the extended drop tube kit.
- Please reference the Soft Ice Dispensing Tips for specific drop tube extension kits needed for various models of Cornelius dispensers.

## Compressed Flaked Ice Adjustments

- Off Cycle Agitation
- Ice Diverter
- Restrictor Plate
- Ice Slide
- Ice Bin Level Setting
- Water Quality Water Filtration

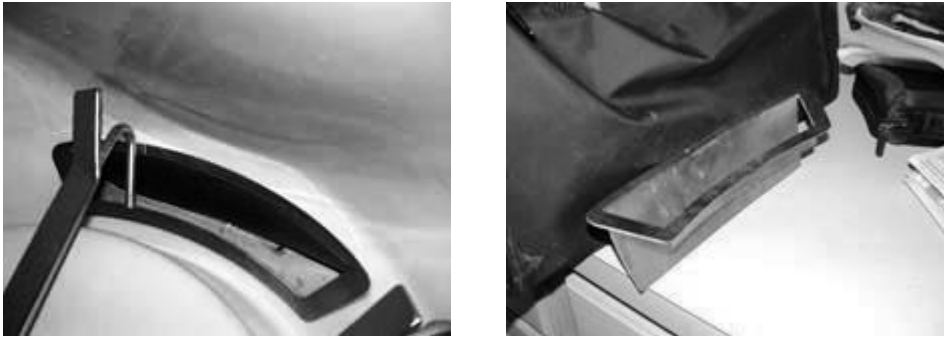


Figure 14. ED/DF2XX and Flavor Fusion Ice Slides

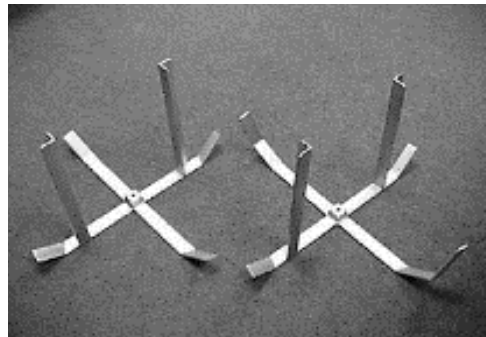


Figure 15. ED150/175 & 300 Agitators



Figure 16. Ice Diverter for ED/DF models

All Cornelius models can be retrofitted to dispense soft ice by adding a soft ice kit.

**ED150/175**

- Part #629088514, 3Wire #1037865, Coke #106379
- Consists of a ice diverter and a agitator

**ED/DF200**

- Part #629088508, 3Wire #1037885, Coke #106710
- Consists of a ice diverter and a ice slide

**ED/DF250**

- Part #629088507, 3Wire #1037924, Coke #105750



- Consists of a ice diverter and a ice slide

**ED300**

- Part #629088644, 3Wire #1041388, Coke #110742
- Consists of two ice diverters and two agitators

**Flavor Fusion / Flavor Overload / IDC**

- Part #620920419, 3Wire # 1057795
- Consists of a ice slide

**Off Cycle Ice Agitation**

- Fully adjustable
- Prevents ice from bridging
- Ensures ice on Cold Plate
- Allows ice bin to be filled when top mounting an ice maker
- Prevents over agitating the ice
- For soft ice adjust to run for ½ - 1 second every 3 hours

<p><b>DANGER:</b> ELECTRIC SHOCK HAZARD. DISCONNECT POWER BEFORE SERVICING UNIT.</p>		<p><b>ATTENTION:</b> RISQUE DE CHOC ELECTRIQUE COUPER L'ALIMENTATION AVANT LE DEPANNAGE.</p>																					
<p><b>CAUTION:</b> DISCONNECT POWER TO DISPENSER BEFORE MAKING ADJUSTMENTS.</p>		<p><b>IMPORTANT NOTE:</b> IF ICE CHUTE IS REMOVED OR LOOSENED, CHECK ICE GATE RESTRICTOR FOR PROPER SETTING.</p>																					
<p><b>AGITATION TIMER</b></p> <p>620919369 REV B</p>		<p><b>MOTOR ON TIME</b></p> <p>FULL CCW - .5 SECOND FULL CW - 5 SECONDS</p> <p><b>OFF TIME</b></p> <p>FULL CCW - 10 MINUTES FULL CW - 3 HOURS</p>																					
		<table border="1"> <thead> <tr> <th>MODEL</th> <th>ICE FILL/ ICE TYPE</th> <th>MOTOR ON TIME (SECONDS)</th> <th>OFF TIME</th> </tr> </thead> <tbody> <tr> <td>150, 200 &amp; 250, 300, B, BC</td> <td>MANUAL/ HARD ICE (CUBE)</td> <td>4</td> <td>1 HOUR</td> </tr> <tr> <td>150, 200 &amp; 250, 300, B &amp; BC</td> <td>AUTOMATIC (TOP-MOUNT ICE-MAKER)/ HARD ICE (CUBE)</td> <td>2</td> <td>20 MINUTES</td> </tr> <tr> <td>150 &amp; 200, 250 B &amp; BC</td> <td>MANUAL &amp; AUTOMATIC/ SCOTSMAN COMPRESSED ICE</td> <td>2</td> <td>3 HOURS</td> </tr> <tr> <td>150 &amp; 200, 250 B &amp; BC</td> <td>MANUAL &amp; AUTOMATIC/ WILSHIRE &amp; HOSHIZAKI COMPRESSED ICE</td> <td>2</td> <td>3 HOURS</td> </tr> </tbody> </table> <p>B - BEVERAGE C - COLDPLATE</p>		MODEL	ICE FILL/ ICE TYPE	MOTOR ON TIME (SECONDS)	OFF TIME	150, 200 & 250, 300, B, BC	MANUAL/ HARD ICE (CUBE)	4	1 HOUR	150, 200 & 250, 300, B & BC	AUTOMATIC (TOP-MOUNT ICE-MAKER)/ HARD ICE (CUBE)	2	20 MINUTES	150 & 200, 250 B & BC	MANUAL & AUTOMATIC/ SCOTSMAN COMPRESSED ICE	2	3 HOURS	150 & 200, 250 B & BC	MANUAL & AUTOMATIC/ WILSHIRE & HOSHIZAKI COMPRESSED ICE	2	3 HOURS
MODEL	ICE FILL/ ICE TYPE	MOTOR ON TIME (SECONDS)	OFF TIME																				
150, 200 & 250, 300, B, BC	MANUAL/ HARD ICE (CUBE)	4	1 HOUR																				
150, 200 & 250, 300, B & BC	AUTOMATIC (TOP-MOUNT ICE-MAKER)/ HARD ICE (CUBE)	2	20 MINUTES																				
150 & 200, 250 B & BC	MANUAL & AUTOMATIC/ SCOTSMAN COMPRESSED ICE	2	3 HOURS																				
150 & 200, 250 B & BC	MANUAL & AUTOMATIC/ WILSHIRE & HOSHIZAKI COMPRESSED ICE	2	3 HOURS																				

Figure 17.

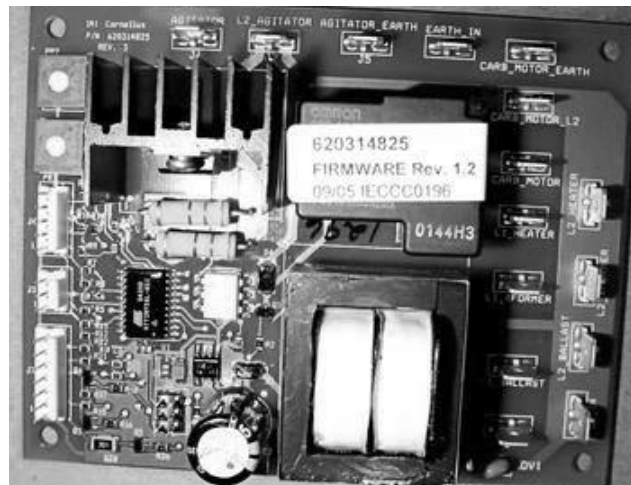


Figure 18.

The purpose of the ice diverter is to help divert the ice from the bin into the ice chute.

All ED models use diverter p# 02394. The ED300 uses a second diverter for the right side chute, part # 620029002

For IDC/FF/FO models the diverter is molded into the bin and if necessary a optional diverter is available, part # 629097086

The ice slide allows the ice to move from the bin onto the cold plate. It is required for all 30" wide dispensers.

Install the ice slide into the ice drop zone inside the bin

- Allows ice to move freely from the bin to the cold plate
- Prevents the ice from compressing at the drop zone

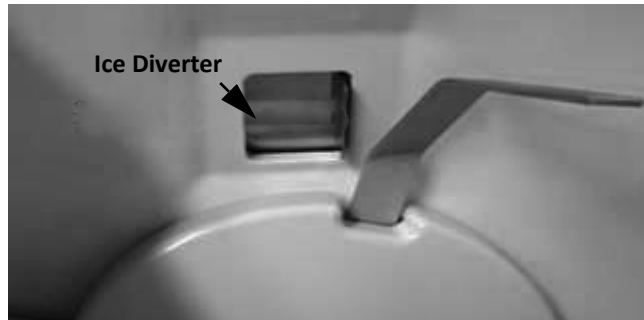


Figure 19.

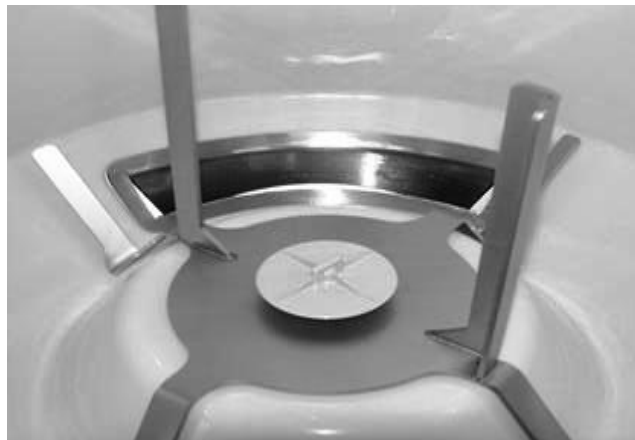


Figure 20.

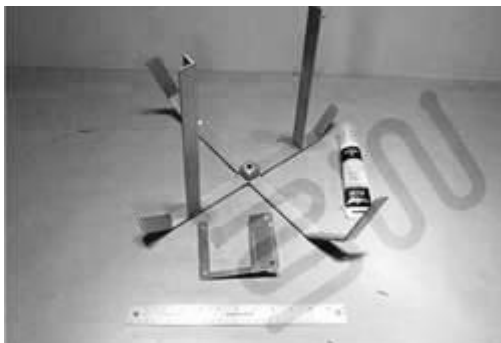


Figure 21. For 22" and 44" wide units special agitators are used in place of the diverter.

## GEAR MOTOR

The gear motor is equipped with a start relay and a manual reset overload.

When current is applied, the relay energizes and completes the circuit to the start winding. The motor reaches a predetermined speed and the relay drops out, disconnecting the start winding. The run winding remains in the circuit as long as current is applied.

The purpose of the overload is to automatically shut off the motor in the event of a mechanical bind of the transmission, an overload condition within the evaporator or an electrical malfunction. It does this by sensing amperage draw. If the motor stalls the start relay would energize and stay energized. The amperage would surge 5 to 6 times greater than the normal draw. In this event the overload would shut off the transmission in 4 to 8 seconds.

If the motor is subjected to an abnormal load, but does not reach a stall condition, the overload will react, but over a greater period of time. The reaction time depends upon the amperage to which it is subjected.

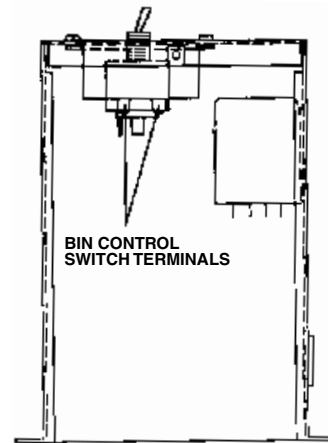
The overload, through the safety circuit, also shuts off the compressor.

## BIN CONTROL

The type of bin control used on all WCC & WCF Models is an electronic control. The control is supplied with power to terminals X1 and X2. Terminals X3 and X4 are a normally closed switch which open when the thermostat sensor bulb senses ice.

The sensing element is located in a 5/16" stainless steel tube which hangs from the dispense tray cover down through the center of the drop tube.

To test switch, start the icemaker and block the outlet tube. When the ice fills the drop tube about 1/2 full the icemaker should shut off. When tube is cleared the ice maker should restart within 5 min.



**Figure 22. Bin Control Switch**

The Bin control is in electrical series with coil on antifreeze relay along with the low water safety. If unit is water cooled, the condenser high pressure cut out is also in series.

The Control Switch is held in place inside electrical box by 2 screws. The Control bulb is in the drop tube. It can be removed by pulling the cable located on the top of the dispense tray cover. When replacing the sensor make sure the bulb is inserted to the bottom of the thermostat well.

## Install Bin control sensor

When shipping the sensing tube is on the base of the ice maker.

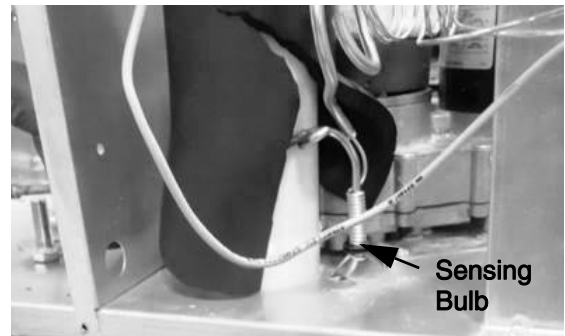


Figure 23.

Slide the bulb through the larger hole in front of the drop tube and secure the mounting bracket with supplied screw.

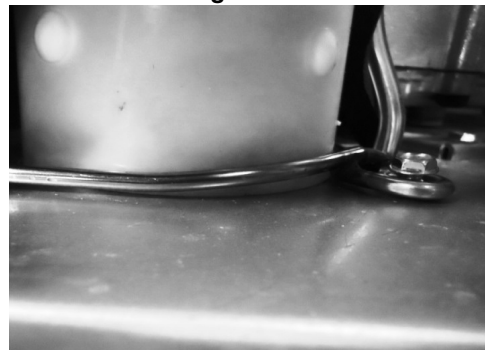


Figure 24.

The sensing bulb should be directly under the drop tube.



Figure 25.



# CORNELIUS ICE/BEVERAGE COMBO SOFT ICE DISPENSING TIPS

This is a generic checklist to help troubleshoot possible 'soft ice' dispensing/beverage quality problems for all Cornelius Above Counter Ice/Beverage dispensers. It is strongly recommended that this checklist is followed to avoid any dispensing or beverage quality issues.

Soft ice is defined as any ice that has a lower ice to water ratio. Some typical characteristics are small, very wet ice pieces, easily chewable and cloudy in appearance.

This would include such ice type names as nugget, pellet, chunklet etc. Cornelius recommends the use of Cornelius chunklet ice makers for optimal dispensing and beverage performance from your Cornelius Ice/Beverage Combo dispenser.

<b>'X' indicates dispenser is AFFECTED by Issue and Solution</b>												
<b>Blank box indicates dispenser is NOT AFFECTED by Issue or Solution</b>												
Question or Issue	ED/DF 150	ED/DF 175	ED/DF 200	ED/DF 250	ED/DF 300	IDC 175	IDC 215	IDC 255	IDC 300	NGF 255	Flavor Fusion	Solution
Is the icemaker sized correctly for the dispenser size?	X	X	X	X	X	X	X	X	X	X	X	If no, failure to meet this criteria can result in ice makers that short cycle which will increase the amount of wet ice being introduced into the system and greatly affect ice dispense. Dispenser hopper capacity and amount of daily ice usage are key factors that need to be taken in account when sizing an icemaker to a dispenser. Under sizing an icemaker can cause ice shortage and over sizing can cause short cycling as mentioned above. Contact Cornelius Sales for icemaker to dispenser sizing details.
Does the icemaker produce 'flaked' ice?	X	X	X	X	X	X	X	X	X	X	X	Cornelius does NOT recommend the use of 'flaked' ice for dispensing and such icemakers should not be used
Is the correct icemaker adapter kit installed?	X	X	X	X	X	X	X	X	X	X	X	If no, the approved adapter kit must be installed with it's approved icemaker. Failure to do so may result in undesirable hopper fill and ice dispensing issues. Contact Cornelius Sales for approved adapter/icemaker combinations
Is the icemaker positioned properly on the adapter kit?	X	X	X	X	X	X	X	X	X	X	X	Most adapter kits are approved for front facing icemakers ONLY unless otherwise specified in the adapter kit instructions OR if kit was designed for alternate icemaker positions. Contact Cornelius Sales for adapter/icemaker application questions
Is the hopper ice slide installed?			X	X			X	X		X	X	If no, install the appropriate ice slide for that unit. ED/DF 200 - kit 629088508 (includes diverter) ED/DF 250 - kit 629088507 (includes diverter) IDC / NGF / FF - ice slide is included in the appropriate adapter kit. Contact Cornelius Sales for adapter kit information.
Are the soft ice agitator's installed?	X	X			X							If no, install agitator(s). Please note there is a right and left hand agitator for the ED/DF300's ED/DF 150,175 - kit 629088514 (includes diverter) ED/DF 300 - kit 629088644 (includes diverter) IDC/NGF/CF/FP - kit 629097086



Question or Issue	ED/DF 150	ED/DF 175	ED/DF 200	ED/DF 250	ED/DF 300	IDC 175	IDC 215	IDC 255	IDC 300	NGF 255	Flavor Fusion	Solution
Is the ice diverter kit installed?	X	X	X	X	X		X	X		X	X	If no, install the appropriate ice diverter kit. Diverter is included in kit part numbers listed above or call Cornelius Sales for diverter kit ordering information
Is the ice restrictor open completely?	X	X	X	X	X	X	X	X	X	X	X	If no, open completely the ice restrictor. Some factors may include customer ice flow requirements and how well the ice dispenses (Be sure restrictor is installed properly!). This should be evaluated on a case by case basis.
Is the dispenser agitator off-cycle timer changed to 3 hours OFF, 2 seconds ON?	X	X	X	X	X	X	X	X	X	X	X	If no, adjust settings. (Don't forget to adjust BOTH timer boards on the 300 size units). Consult Dispenser Service Manual or call Technical Support for instructions on how to adjust settings.
Is there an icemaker bin thermostat installed?	X	X	X	X	X	X	X	X	X	X	X	If no, install an appropriate bin thermostat per the icemaker's manufacturing recommendations. Contact the icemaker manufacturer for bin thermostat ordering information.
Is the icemaker's bin stat installed at least 4" below hopper level	X	X	X	X	X	X	X	X	X	X	X	If no, adjust bin stat location (Depending on ice quality or wetness, it may be necessary to adjust deeper into hopper. Be sure bin stat does NOT interfere with agitator rotation Order ONE of kit 1611110006843 if you are using a Cornelius WCC700 icemaker. Order TWO of kit 1611110006843 if you are using a Cornelius WCC1400 icemaker.
Is dispenser and/or icemaker water supply attached to a water softener or phosphate feeder?	X	X	X	X	X	X	X	X	X	X	X	If yes, Cornelius does NOT recommend the use of a water softener/phosphate feeders and must be completely avoided
Is a water filter system installed on the icemaker?	X	X	X	X	X	X	X	X	X	X	X	Poor water quality will greatly affect icemaker/dispenser performance. The selection of the correct filter system must be handled on an individual basis as the water quality and impurities vary greatly in different parts of the country as well as in different cities.
Is the dispense count less than 30 per day?	X	X	X	X		X	X	X		X	X	Install extended bin stat kit 629096848 for WCC700 and WCC1000 or 629096849 for WCC 500. Install 2 pcs extended bin stat kit 629096848 for WCC1400 and WCC2000.



**Cornelius Inc.**  
**[www.cornelius.com](http://www.cornelius.com)**