SECTION 2

INSTALLATION INFORMATION

PRE-INSTALLATION CONSIDERATIONS

To properly make and store ice, the model 315I requires access to air, potable water, 115 volts AC electricity and a drain. The ice machine must be installed indoors in a controlled environment.

Air

The model 315I uses a fan to take in room air through the front right side of the kickplate/grille and discharge warm air out the left side of the kickplate/grille. (See Figure 2-1) Airflow through the kickplate/grille must never be obstructed. Doing so will cause a decrease in performance and proficiency, and possible damage to the ice machine.

The minimum air temperature the ice machine will operate in is 50°F/10°C, and the maximum air temperature is 100°F/38°C.

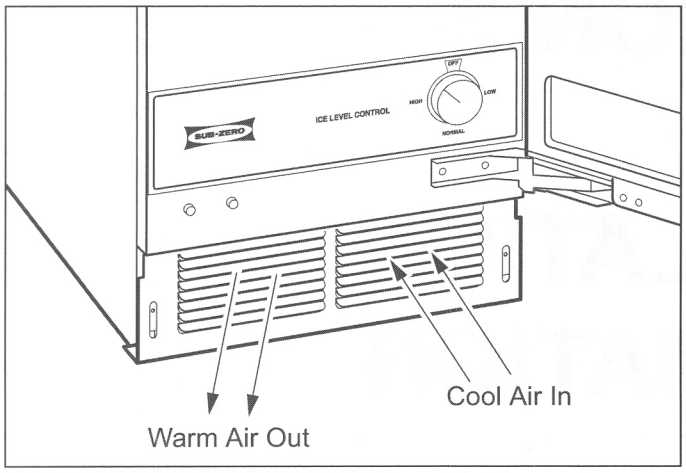


Figure 2-1. Condenser Air Flow

Water Supply

The model 315I requires a continuous supply of potable water at no less than 20 p.s.i.g. of flowing pressure. Static water pressure should not exceed 80 p.s.i.g.

The minimum water temperature that the ice machine will operate with is 40°F/4°C, and the maximum water temperature 100°F/38°C.

The roughed-in water supply line should be a 1/4" O.D. copper tube connected to the house supply. An easily accessible shut-off valve should be placed between the supply and the appliance. The shut-off valve should not be behind the unit.

NOTE: *"Self-piercing" valves should never be used, as they are prone to clogging with minerals and sediment. Regular saddle valves are available from local Sub-Zero distributors/dealers (part #4200880).*

A line filter is required when the water supply has a high mineral content.

NOTE: *All plumbing must meet local codes.*

Water Quality

There is no such thing as "pure" water. All water, including potable water supplied by municipalities, contains some "impurities". Water absorbs impurities from the air as it rains and/or as it flows through the the ground. Some of the impurities are solid particles, referred to as suspended solids, and can be removed from the water with a fine particle water filter. Other impurities are chemically bonded to the water molecules, referred to as dissolved solids, and cannot be filtered out.

Ice made by the model 315I will have a lower mineral content than the water it is made from. What makes this possible is the fact that anything dissolved in water lowers the water's freezing point. Because of this, "purer" water will freeze first in the ice making molds.

Most of the impurities or minerals will wash into the reservoir where they may form hard deposits known as scale. The model 315I dilutes this concentration of minerals by over-filling the reservoir during the harvest cycle (with the excess water flowing down the drain with most of the impurities). Approximately three quarts of water flow into the unit each cycle. Approximately one quart of that rinses the reservoir and goes down the drain carrying the impurities.

Some impurities will inevitably remain, sticking to parts of the ice machine, causing malformed ice cubes. This build up of mineral scale can shorten the life of the unit.

To keep the ice machine operating properly, these impurities or minerals will have to be dissolved regularly with an acid wash ice machine cleaner. (See Ice Making System Cleaning instructions in the Maintenance, Cleaning & Adjustments section of this manual.)

If the local water supply has high levels of impurities or minerals, a water filtering system may be needed. A proper water filter can remove taste and odors as well as particles from the water before it reaches the ice machine.

In-line water filters are the most common. Other methods of water treatment for dissolved solids include reverse osmosis (R.O.) and polyphosphate feeders. If a reverse osmosis system is used it should include post treatment to satisfy the R.O. water's "aggressiveness".

Deionized water is not recommended.

Because water softeners exchange one mineral for another, Sub-Zero does NOT recommend their use for the ice machine. Softened water may result in white, mushy cubes that stick together.

Sub-Zero suggests that if in doubt about the water quality of the local water supply, a local point of use specialist be contacted for recommendations on water filtering or treatment.

Electricity

The model 315I is supplied with a three prong power cord to be plugged into a grounded wall outlet. (See Figure 2-2) The outlet should be on a branch circuit of 115 VAC, 60 Hz, single phase 15 amp, delayed action fuse or circuit breaker. The ice machine should be the only device using that circuit.

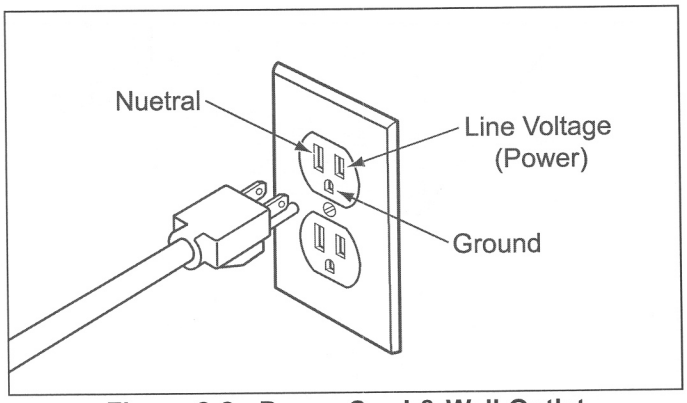


Figure 2-2. Power Cord & Wall Outlet

⚠ WARNING

ELECTRIC SHOCK HAZARD

Plug into grounded 3 prong outlet.

Do not remove ground prong from power cord.

Do not use a two prong adapter.

Do not use an extension cord.

Failure to follow these instructions can result in fire, electrical shock or death.

Drain

There are two 315I models with different drainage configurations, the ***model 315I*** and ***model 315IP***:

The ***model 315I*** is a gravity drain model that requires a drain tube that is pitched down from the outlet at the back of the cabinet directly to the sanitary sewer drain.

NOTE: *All horizontal runs of drain line must have a 1/4" per foot fall. An air gap will likely be required between the ice maker drain tube and the drain/waste receptacle. A stand pipe with a trap below it would be acceptable for the drain/waste receptacle.*

The ***model 315IP*** has a built-in drain pump that will pump water up to a drain point (maximum 10' rise).

NOTE: *Poor drainage with either model will cause a high rate of ice melting in the ice bin.*

NOTE: *All plumbing must meet local codes.*

Possible Need for Unit Removal

Although the model 315I has been designed to be serviced in place, in some cases it may be necessary to pull the unit out for service. For that reason, the area under the ice maker must be at the same level as the surrounding finished floor and any decorative molding at top or bottom must be removable. Also, there must be a minimum of 1/8" clearance on each side of the unit.

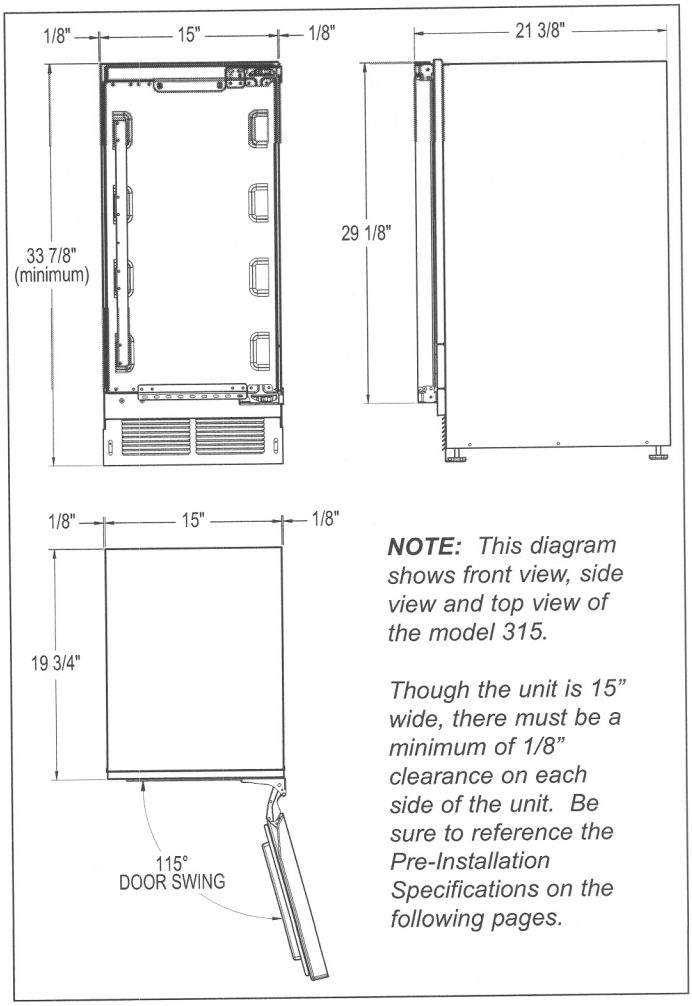
⚠ CAUTION

To avoid damage to the finished floor when the unit is installed, or if the unit needs to be removed for service purposes, the finished floor should be protected with appropriate material.

Moving the Unit

When the unit is moved into the house, or if it needs to be removed from the house for service purposes, it recommended to use a hand truck or dolly. Be sure to position the dolly on the side of the unit and securely tape the door shut so it does not open while transporting the unit.

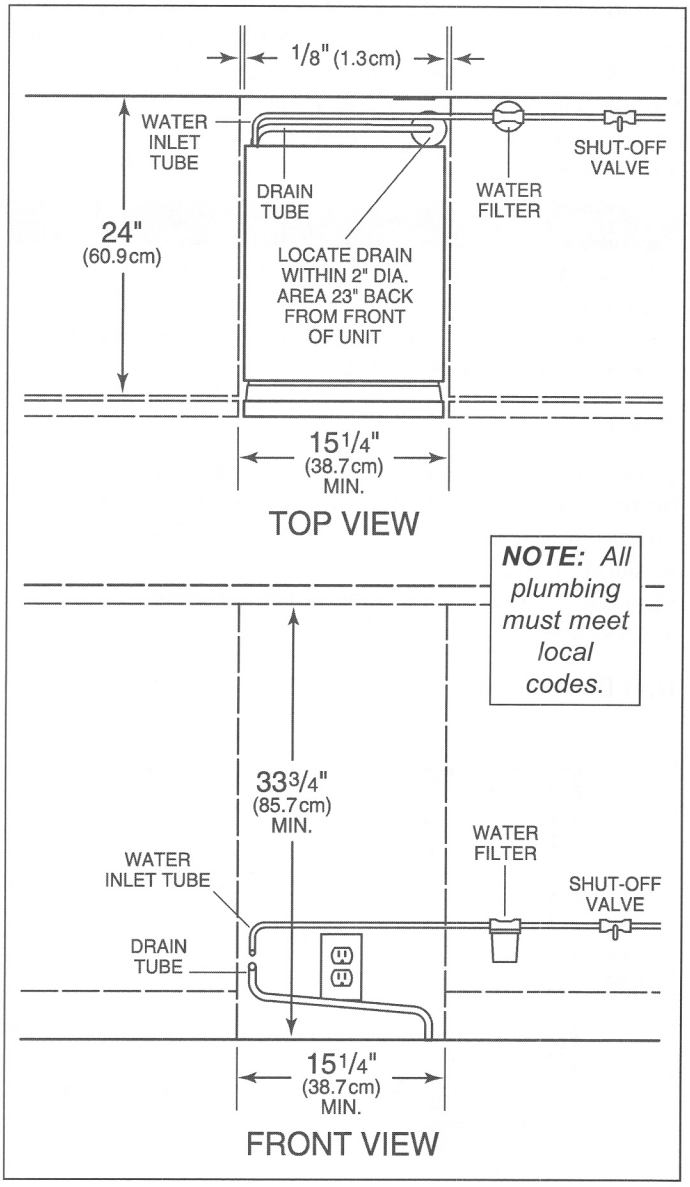
Unit Dimensions



NOTE: *This diagram shows front view, side view and top view of the model 315.*

Though the unit is 15" wide, there must be a minimum of 1/8" clearance on each side of the unit. Be sure to reference the Pre-Installation Specifications on the following pages.

PRE-INSTALLATION SPECIFICATIONS
(Model 315I - Gravity Drain Model)



INSTALLATION

Leveling (Model 315I & 315IP)

Note: *The unit must be leveled prior to installation.*

There are four leveler legs on a model 315I, one at each corner. To level the unit, turn the leveler legs counterclockwise to raise the unit or clockwise to lower it. (See Figure 2-3)

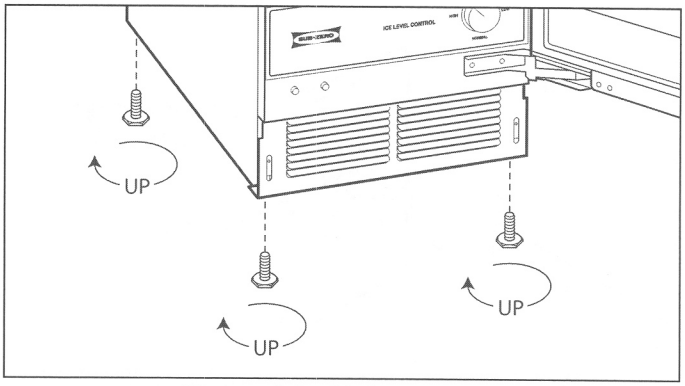


Figure 2-3. Unit Leveling

Installation Instructions
(Model 315I - Gravity Drain Model)

1. Place ice maker in front of installation location. Level unit as described above.
2. Remove door with hinges, kickplate, lower stainless steel face plate, control knob and control panel.
3. Route inlet water line through back of compressor area to front of unit, keeping tubing towards left side.
4. Route drain tube from drain/waste receptacle, through back of compressor area to front of unit, keeping tubing towards left side.

NOTE: *If using a long horizontal run (more than 5 feet), the drain should be vented at back of unit.*

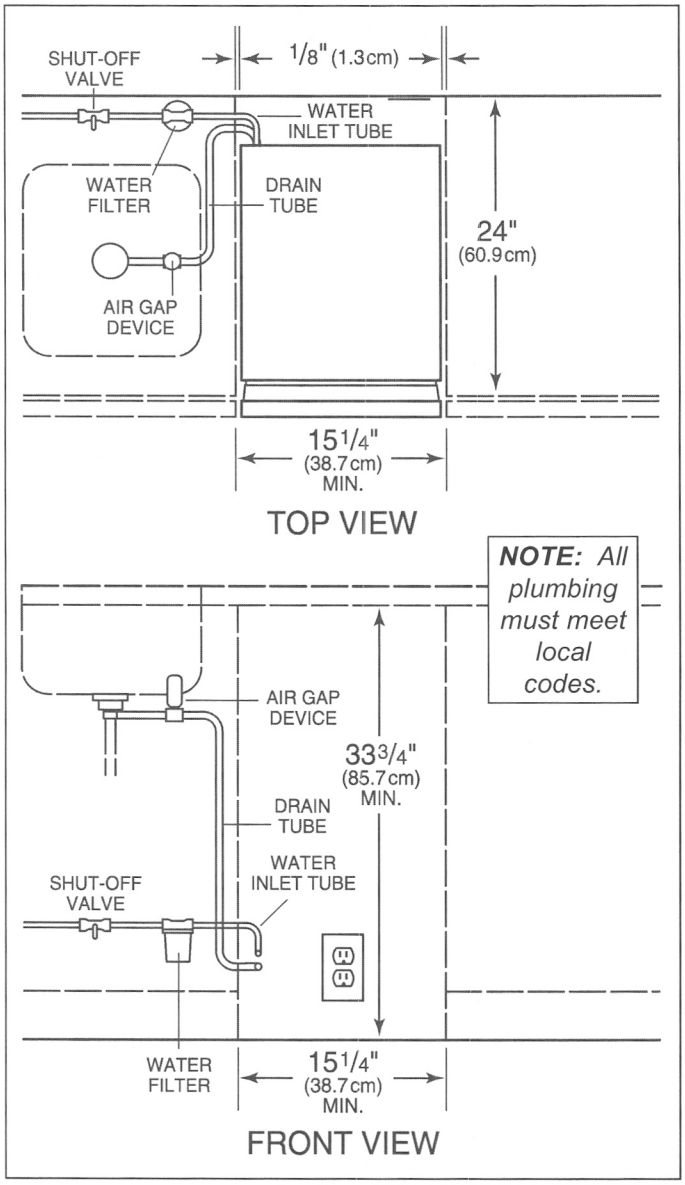
5. Plug power cord into wall outlet.
6. Push ice maker into installation position.
7. Cut inlet water line to required length.

NOTE: *It is recommended to flush the inlet water line at this time by turning water supply on and letting the water drain into a bucket.*

8. Place flare nut onto inlet water line, then flare end of tube.
9. Attach flare nut to water valve inlet.
10. Cut drain tube to required length.
11. Connect drain tube to bin drain fitting and secure it with a hose clamp.
12. Turn water supply on and check for leaks.
13. Replace all parts removed in step 2.

PRE-INSTALLATION SPECIFICATIONS

(Model 315IP - Drain Pump Model)



INSTALLATION

Installation Instructions (Model 315IP - Drain Pump Model)

1. Place ice maker in front of installation location. Level unit as described on previous page.
2. Remove door with hinges, kickplate, lower stainless steel face plate, control knob and control panel.
3. Route inlet water line through back of compressor area to front of unit, keeping tubing towards left side.
4. Locate coil of 3/8" I.D. plastic drain tubing secured to back of unit.
5. Route plastic drain tube to drain connection point.

NOTE: *Often an air gap is required by local codes between the ice maker drain tube and the drain receptacle.*

6. Plug power cord into wall outlet.
7. Push ice maker into installation position.
8. Cut inlet water line to required length.

NOTE: *It is recommended to flush the inlet water line at this time by turning water supply on and letting the water drain into a bucket.*

9. Place flare nut onto inlet water line, then flare end of tube.
10. Attach flare nut to water valve inlet.
11. Turn water supply on and check for leaks.
12. Switch unit on and pour a couple of quarts of water into ice storage bin. The pump should start up and pump water out. Check for leaks.
13. Replace all parts removed in step 2.

Securing the Unit (Model 315I & 315IP)

Once the icemaker is installed, secure the unit to the cabinet by inserting two #8 x 1/2" flat head screws (supplied with the unit) through the holes in the flange of each hinge. (See Figure 2-4)

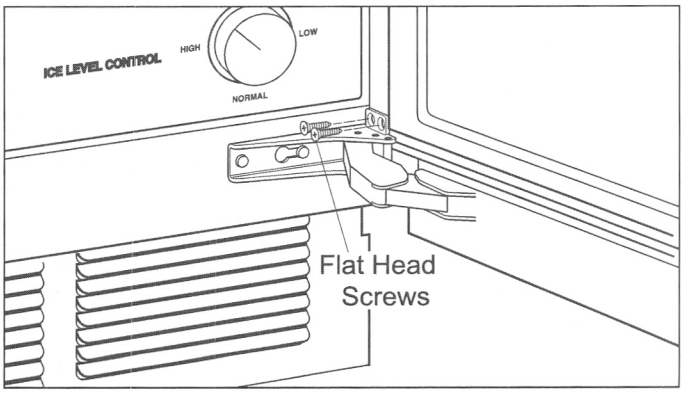


Figure 2-4. Securing Unit to Cabinet

Kickplate/Grille Adjustment

The Kickplate/Grille can be adjusted up or down to complete the built-in design. To adjust the grille, loosen the two mounting screws and move the kickplate/grille up or down to the desired location, then retighten the screws. (See Figure 2-5)

⚠ CAUTION

Airflow through the kickplate/grille must never be obstructed. Doing so could cause damage to the ice machine.

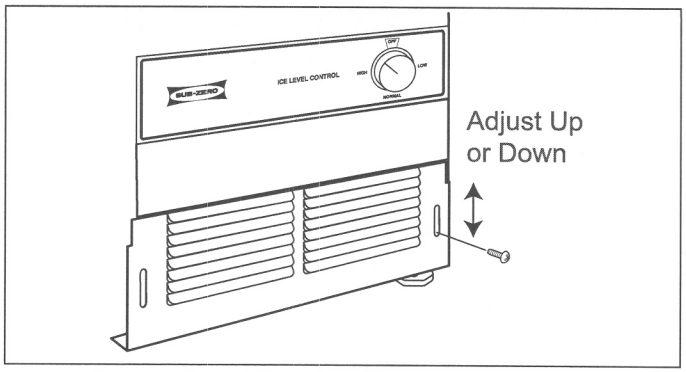


Figure 2-6. Kickplate/Grille Adjustment

Reversing Door Swing

All model 315I units are manufactured with the hinges on the right side of the door. The door and hinges are designed to be reversible, so that the hinges can be moved to the left side of the door. To reverse the door swing from right to left, follow the instructions below:

1. Remove door panel (if previously installed).
2. Remove door/hinge cover (top hinge-RH) from top of door by extracting the two mounting screws from face of door. (See Figure 2-7)
3. Remove door from hinges by extracting the four door mounting screws, two at bottom hinge, two at top hinge. (See Figure 2-7)
4. Remove hinges from cabinet by extracting the four hinge mounting screws, two each hinge.
5. Extract the four filler screws from opposite (left) hinge mounting holes in cabinet (See Figure 2-7) and insert them into right-hand hinge mounting holes of cabinet.
6. Move bottom right hinge to top left hinge mounting holes and insert two hinge mounting screws through hinge into mounting holes and tighten. Then, move top right hinge to bottom left hinge mounting holes and insert two hinge mounting screws through hinge into mounting holes and tighten.
7. Attach door to hinges with door mounting screws, utilizing left-hand door mounting holes.

NOTE: *Do not flip door.*

8. Extract two screws which secure upper door panel mount bracket to top right of door, then reattach bracket to top left of door utilizing left-hand mounting holes. (See Figure 2-7)
9. Attach new hinge cover (top hinge-LH) to top of door using the two mounting screws removed in step 2 above.
10. Open and close door to check for proper operation.

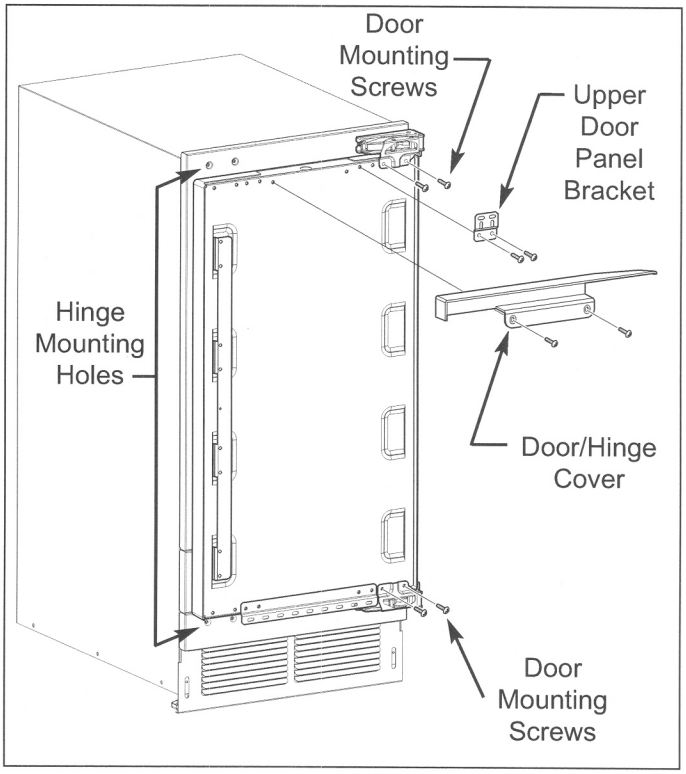


Figure 2-7.
Component Removal for Door Swing Reversal

Stainless Steel Door Panels

Stainless steel door panels are available from local Sub-Zero distributors/dealers. There are two sizes:

- *15" W x 30-3/8" H x 3/4" T - (part #FP315SS)*
- *17-3/4" W x 30-3/8" H x 3/4" T - (part #FP315SS-18)*

These panels can be installed as left-hand or right-hand swing and are equipped with stainless steel handles.

Custom Door Panel Specifications

The door panel specifications listed below are for units installed in a standard 15-1/4" Wide x 33-3/4" High rough opening. A minimum of 1/8" reveal should be allowed around the edge of the panel along with a 4" toe space.

- *Door Panel Width ..... 15"*
- *Door Panel Height ..... 30-3/8"*
- *Door Panel Thickness ..... 5/8" Minimum*
- *Door Panel Weight ..... 15 lbs. Maximum*

Door Panel Installation

NOTE: *For stainless steel panel, skip to step #4*

1. Place door panel face down on a protected surface, making sure to not damage front of panel.
2. Position plastic drilling template (provided with unit) on back of door panel, flush with upper edge and side of door panel. (See Figure 2-8)

NOTE: *The size of the panel shown in Figure 2-8 is just large enough to cover the door. Actual door panel sizes may vary depending on design/installation variations.*

3. Once proper position for mounting hardware has been located, mark hole locations, remove drilling template from door panel and drill pilot holes for mounting hardware.

NOTE: *The location of the door handle should also be determined at this time. It is recommended that the position of the door handle be centered top to bottom and towards the side of the panel opposite the hinges. It may be necessary to countersink the handle mounting holes so the screw heads do not interfere with the panel fitting flush with the door.*

4. Remove handle-side door panel mounting bracket from face of door and attach it to door panel with #8 x 1/2" screws, provided with unit. (See Figure 2-9)
5. Install door panel on door by engaging tabs of handle-side bracket with slots in face of door.
6. Insert the #8 x 1/2" screws, provided with unit, through top and bottom panel mounting brackets into panel, then snug but do not tighten screws.
7. Close door and align door panel with surrounding cabinetry, then open door and tighten panel mounting screws.

⚠ CAUTION

When the reveal on the hinge side of the door panel is less than 1/4", use caution when closing the door as severe finger pinching may occur.

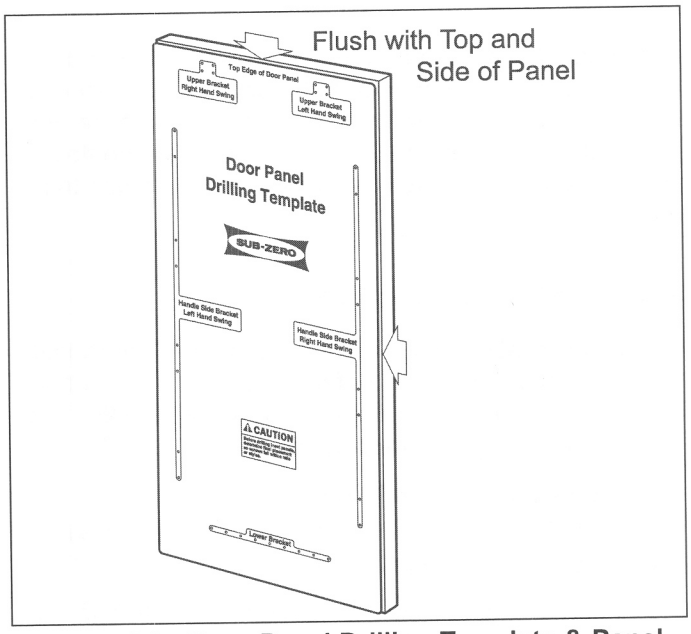


Figure 2-8. Door Panel Drilling Template & Panel

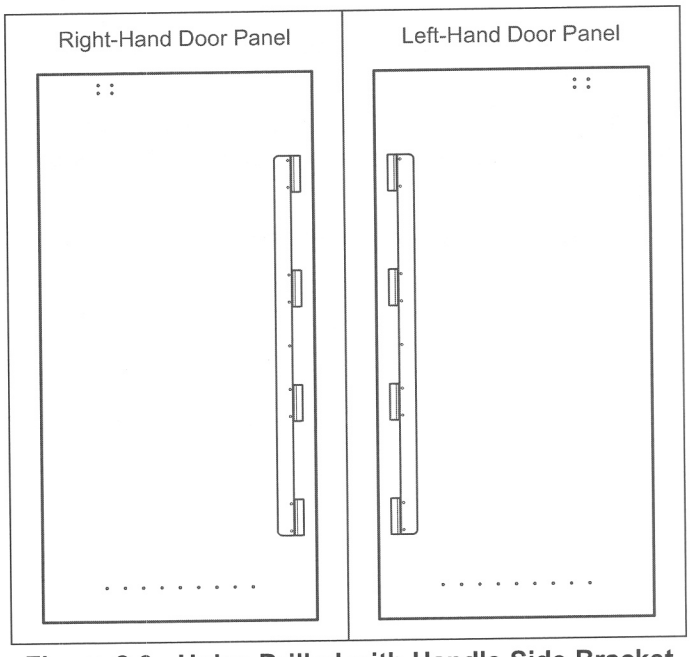


Figure 2-9. Holes Drilled with Handle Side Bracket

Side Panels

Side panels for a model 315I must be securely fastened to adjacent cabinets or to the floor and wall.

NOTE: *Side panels should never be attached to the appliance.*

If side panels are fastened to the floor or wall, the use of "L" brackets is recommended (hardware not included with the unit). For installation and possible service purposes, the area that an "L" bracket will sit on the floor should be routed out so the bracket sits flush with the floor.

90 Degree Door Stop Installation

Certain installations may require the door of the model 315I to stop at 90° instead of the full 115°. A 90° door stop pin is supplied with the unit. To install the 90° door stop pin, follow the instructions below:

1. Open door to approximately 80°.
2. Insert 90° stop pin down through holes in bottom hinge bracket. (See Figure 2-10)

NOTE: *The stop pin must be driven down through the hole until the head of the pin makes contact with the bracket.*

3. Insert 90° stop pin up through holes in top hinge bracket.

NOTE: *The stop pin must be driven up through the hole until the head of the pin makes contact with the bracket.*

4. Check for proper door operation.

Hinge Cover Installation

Adhesive and magnetic hinge covers are supplied with the unit. It is very important to read the notes below before proceeding to the hinge cover installation instructions.

NOTES:

- *DO NOT attempt to install the hinge covers before the 90° door stop pins are installed (if used).*
- *If the 90° stop pins are installed, it will be necessary to remove the knock-outs from the hinge cover opposite the head of the pin. (See Figure 2-11)*
- *Hinges must be free of dirt and grease before attempting to install the hinge covers.*

1. Remove backing paper from adhesive pads of upper and lower hinge covers, then adhere covers to top and bottom of each hinge bracket as shown in Figure 2-11.
2. The center hinge covers are magnetic. Install them to center of each hinge bracket as shown in Figure 2-11.

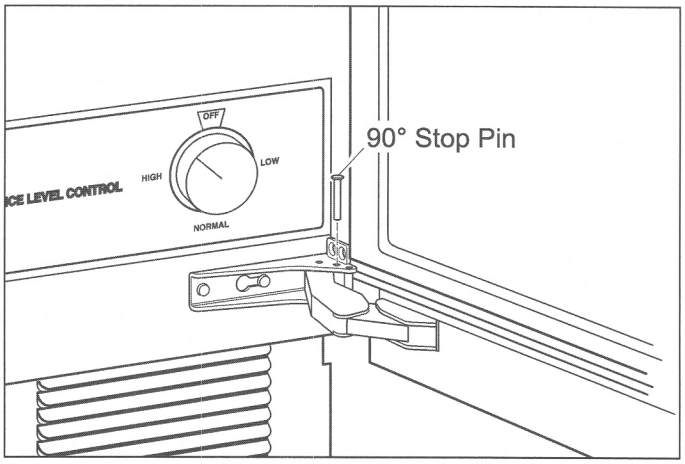


Figure 2-10. 90° Door Stop Pin at Bottom Hinge

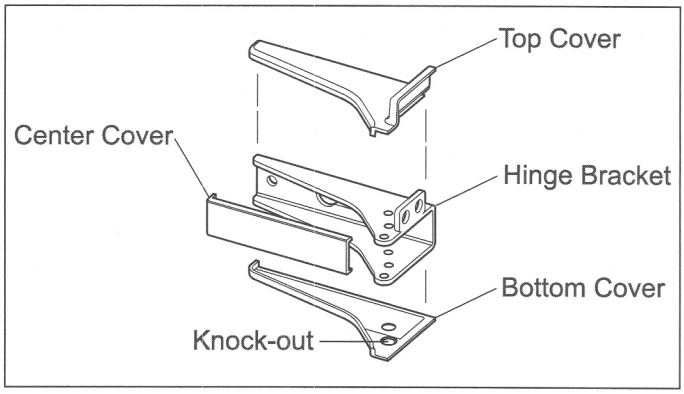


Figure 2-11. Hinge Cover Installation

Initial Start-Up

When the installation is complete and all electrical and water hook-ups have been checked, be sure to remove all tape and packing materials before initial start-up.

Follow the instructions below for initial start-up:

1. Pull the control knob from the ice machine control shaft. (See Figure 2-12)
2. Remove the control face plate by pulling the top forward to disengage the velcro strips, then lift up. (See Figure 2-12)
3. Remove the inner control access panel by extracting the three screws, then lower the panel slightly and pull forward. (See Figure 2-12)
4. Locate the cycle timer and rotate the shaft clockwise until the cam is in the harvest cycle position (switch button out). (See Figure 2-13)
5. Turn the water supply ON.
6. Make sure there is power to the unit, then place the ice machine control knob on the control shaft and turn the ice machine control knob to the *"NORMAL"* position (pointing straight down). (See Figure 2-14)
7. Allow the unit to run for approximately one hour, then check the size of the ice cubes.

NOTE: *To confirm proper cube size, see "Cube Size Control Adjustment" in the Maintenance, Cleaning & Adjustment section of this manual. If cube size is incorrect, follow the Cube Size Control Adjustment procedures on that page.*

8. After adjusting the cube size control and/or confirming cubes are the correct size, replace the inner control access panel, the control face plate and the control knob.

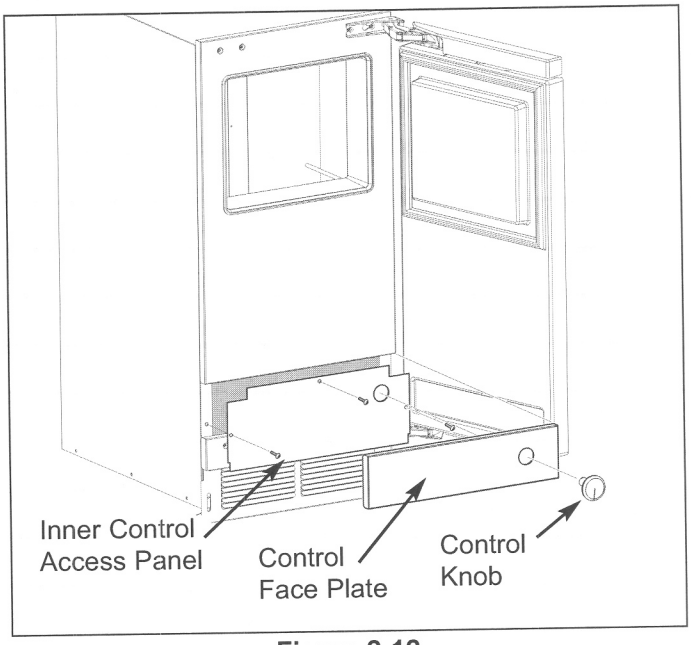


Figure 2-12. Remove Control Knob, Face Plate & Access Panel

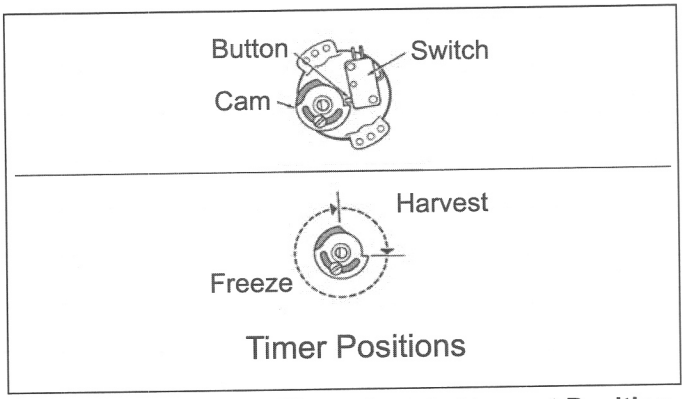


Figure 2-13. Rotate Timer Cam to Harvest Position

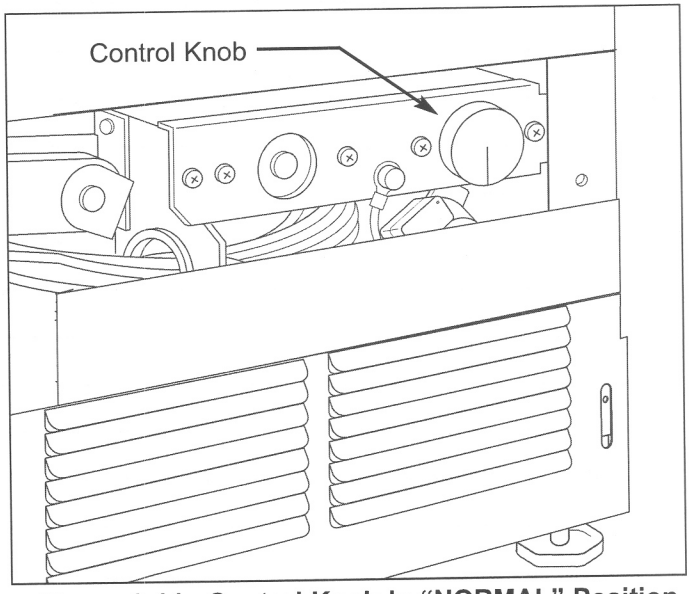


Figure 2-14. Control Knob in "NORMAL" Position