

# USER GUIDE & SERVICE MANUAL



1 Class • UHNB115 / UHNP115 • 15" Nugget Ice Machine

**Tip:** Click on any section below to jump directly there

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## WELCOME TO U-LINE

Congratulations on your U-Line purchase. Your product comes from a company with over five decades of premium modular ice making, refrigeration, and wine preservation experience. U-Line creates products focused on functionality, style, and inspired innovations — paying close attention to even the smallest details. Applications include residential, outdoor, ADA height compliant, marine, and commercial. Complete product categories include Beverage Centers, Wine Refrigerators, Ice Machines, Refrigerators, Freezers, and Dispensers.

Our advanced refrigeration systems, large and flexible capacities, and Built-In to Stand Out® clean integrated look allow you to preserve the right product, in the right place, at the right temperature. Since 2014, U-Line has been part of the Middleby family of brands. All products are designed, engineered, and assembled in Milwaukee, Wisconsin, USA, and select products are available worldwide.

## PRODUCT INFORMATION

Looking for additional information on your product? User Guides, Spec Sheets, CAD Drawings, Compliance Documentation, and Product Warranty information are all available for reference and download at [u-line.com](http://u-line.com).

## PROPERTY DAMAGE / INJURY CONCERNS

In the unlikely event property damage or personal injury is suspected related to a U-Line product, please take the following steps:

1. U-Line Customer Care must be contacted immediately at +1.800.779.2547.
2. Service or repairs performed on the unit without prior written approval from U-Line is not permitted. If the unit has been altered or repaired in the field without prior written approval from U-Line, claims will not be eligible.

## GENERAL INQUIRIES

U-Line Corporation  
8900 N. 55th Street  
Milwaukee, Wisconsin 53223 USA  
Monday - Friday 8:00 am to 4:30 pm CST  
T: +1.414.354.0300  
F: +1.414.354.7905  
Email: [sales@u-line.com](mailto:sales@u-line.com)  
[u-line.com](http://u-line.com)

## SERVICE & PARTS ASSISTANCE

Monday - Friday 8:00 am to 4:30 pm CST  
T: +1.800.779.2547  
F: +1.414.354.5696  
Service Email: [onlineservice@u-line.com](mailto:onlineservice@u-line.com)  
Parts Email: [onlineparts@u-line.com](mailto:onlineparts@u-line.com)

## CONNECT WITH US



Designed, engineered and assembled in WI, USA

## Safety and Warning

### NOTICE

**Please read all instructions before installing, operating, or servicing the appliance.**

Use this appliance for its intended purpose only and follow these general precautions with those listed throughout this guide:

### SAFETY ALERT DEFINITIONS

Throughout this guide are safety items labeled with a Danger, Warning, or Caution based on the risk type:



**Danger means that failure to follow this safety statement will result in severe personal injury or death.**



**Warning means that failure to follow this safety statement could result in serious personal injury or death.**



**Caution means that failure to follow this safety statement may result in minor or moderate personal injury, property, or equipment damage.**



**This unit contains R600a (Isobutane) which is a flammable hydrocarbon. It is safe for regular use. Do not use sharp objects to expedite defrosting. Do not service without consulting the “R600a specifications” section included in the User Guide. Do not damage the refrigerant circuit.**



**Service must be done by factory authorized service personnel. Any parts shall be replaced with like components. Failure to comply could increase the risk of possible ignition due to incorrect parts or improper service.**

### CALIFORNIA PROPOSITION 65

**This product contains chemicals known to the state of California to cause cancer and birth defects or other reproductive harm.**

[www.P65warnings.CA.gov](http://www.P65warnings.CA.gov)



**This equipment is to be installed with adequate backflow protection to comply with applicable federal, state and local codes.**

## Disposal and Recycling

 **DANGER**

**RISK OF CHILD ENTRAPMENT. Before you throw away your old refrigerator or freezer, take off the doors and leave shelves in place so children may not easily climb inside.**

If the unit is being removed from service for disposal, check and obey all federal, state, and local regulations regarding the disposal and recycling of refrigeration appliances, and follow these steps completely:

1. Remove all consumable contents from the unit.
2. Unplug the electrical cord from its socket.
3. Remove the door(s)/drawer(s).

## Environmental Requirements

This model is intended for indoor/interior applications only and is not to be used in installations that are open/exposed to natural elements.

This unit is designed to operate between 50°F (10°C) and 100°F (38°C). Higher ambient temperatures may reduce the unit's ability to reach low temperatures and/or reduce ice production on applicable models.

For best performance, keep the unit out of direct sunlight and away from heat generating equipment.

In climates where high humidity and dew points are present, condensation may appear on outside surfaces. This is considered normal. The condensation will evaporate when the humidity drops.



**Damages caused by ambient temperatures of 40°F (4°C) or below are not covered by the warranty.**

## Electrical



**SHOCK HAZARD — Electrical Grounding Required. Never attempt to repair or perform maintenance on the unit until the electricity has been disconnected.**

**Never remove the round grounding prong from the plug and never use a two-prong grounding adapter.**

**Altering, cutting or removing power cord, removing power plug, or direct wiring can cause serious injury, fire, loss of property and/or life, and will void the warranty.**

**Never use an extension cord to connect power to the unit.**

**Always keep your working area dry.**

### NOTICE

**Electrical installation must observe all state and local codes. This unit requires connection to a grounded (three-prong), polarized receptacle that has been placed by a qualified electrician.**

The unit requires a grounded and polarized 115 VAC, 60 Hz, 15A power supply (normal household current). An individual, properly grounded branch circuit or circuit breaker is recommended. A GFCI (ground fault circuit interrupter) is usually not required for fixed location appliances and is not recommended for your unit because it could be prone to nuisance tripping. However, be sure to consult your local codes.

See CUTOUT & PRODUCT DIMENSIONS for recommended receptacle location.

## Cutout & Product Dimensions

### PREPARE SITE

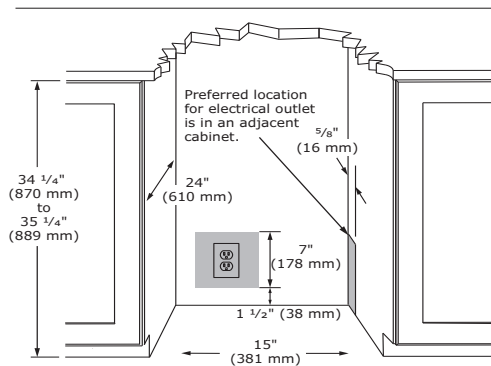
Your U-Line product has been designed for either free-standing or built-in installation. When built-in, your unit does not require additional air space for top, sides, or rear. However, the front grille must NOT be obstructed, and clearance is required for an electrical connection in the rear.



**Unit can NOT be installed behind a closed cabinet door.**

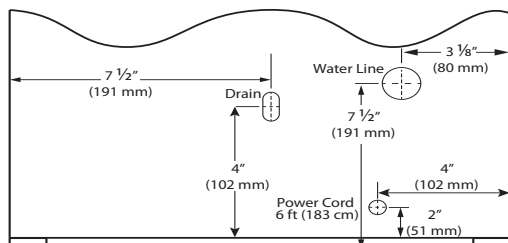
**If you would like to align the face of the unit with other adjacent cabinet doors, you may need to alter the wall just behind the drain connection on the unit to accommodate the drain.**

### CUTOUT DIMENSIONS

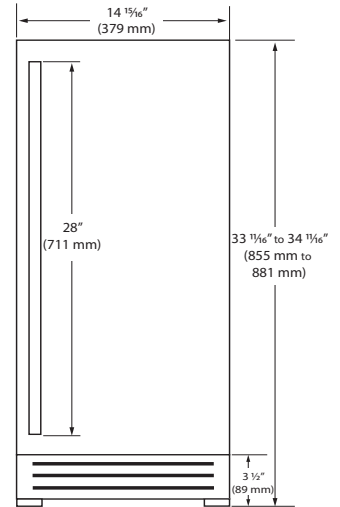


### PRODUCT DIMENSIONS

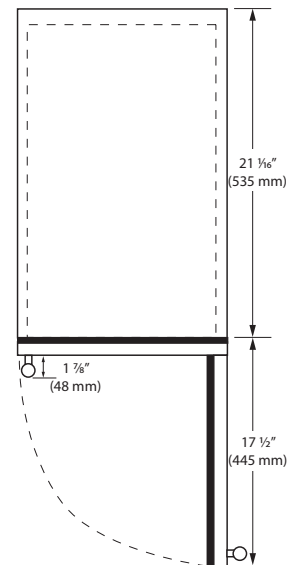
#### REAR



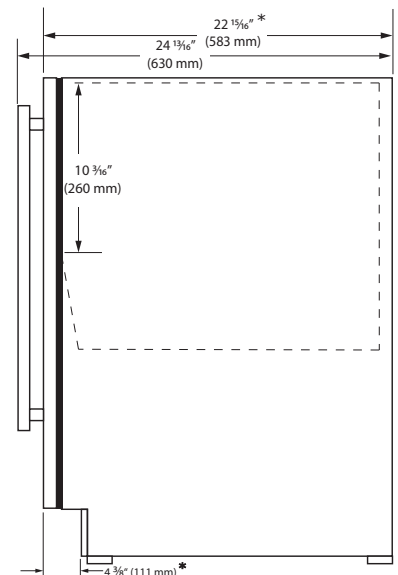
#### FRONT



#### TOP



#### SIDE



\*Add 1/2" for integrated models with 3/4" panel installed.



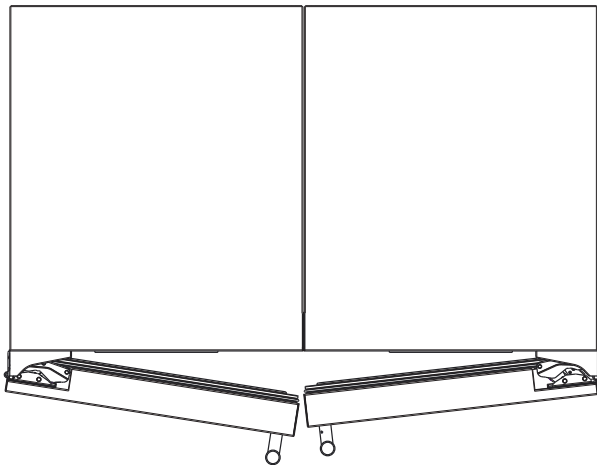
## Side-by-Side Installation

### OTHER SITE REQUIREMENTS

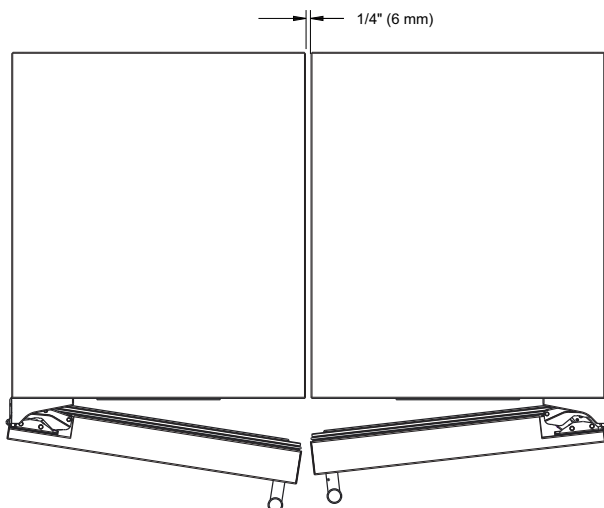
#### Side-by-Side Installation

Units must operate from separate, properly grounded electrical receptacles placed according to each unit's electrical specifications requirements.

Cutout width for a side-by-side installation is the total of the widths listed under Cutout Dimensions in each unit's Installation Guide. Each door can be opened individually (one at a time) without interference.

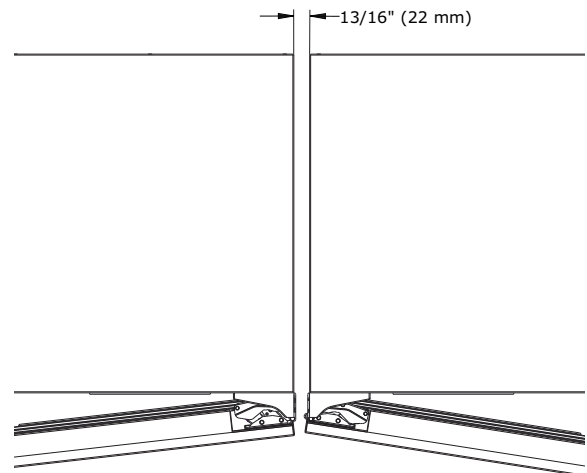


However, to ensure unobstructed door swing (opening both doors at the same time), 1/4" (6.4 mm) of space needs to be maintained between the units.

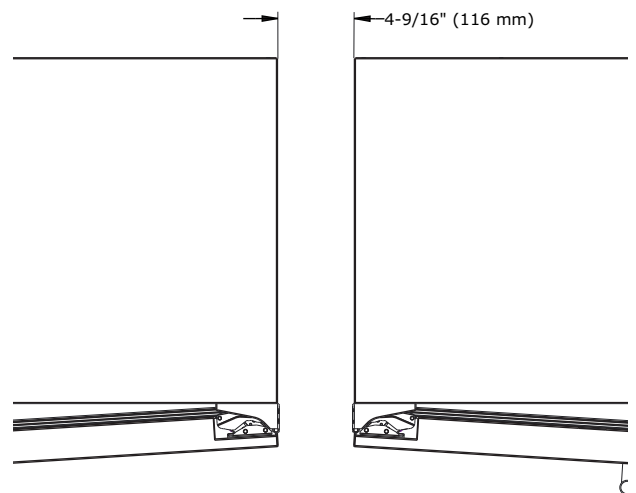


### Hinge-by-Hinge Installation (Mullion)

When installing two units hinge-by-hinge, 13/16" (22 mm) is required for integrated models. Additional space may be needed for any knobs, pulls or handles installed.



Stainless steel models which include the standard stainless handle will require 4-9/16" (116 mm) to allow both doors to open to 90° at the same time.



## Water Hookup

### PREPARE PLUMBING

The water valve uses a standard 1/4" (6.35 mm) compression fitting. U-Line recommends using accessory water hook up kit – part # 80-54674-00. The kit includes a 10' (3 m) braided flexible water supply line and a brass hose fitting.

### CAUTION

**Plumbing installation must observe all state and local codes. All water and drain connections MUST BE made by a licensed/qualified plumbing contractor. Failure to follow recommendations and instructions may result in damage and/or harm.**

### Water Supply Connection

When connecting the water supply, please note the following:

- Before installing the unit and connecting to the cold water supply, review the local plumbing codes.
- The water pressure should be between 20 and 120 psi (138 and 827 kPa).
- Water has less than 400 mg/L (ppm) total dissolved solids and hardness level below 200 mg/L (ppm) — i.e., below 12 grains per gallon. Check by using TDS meter or consulting with local water company.
- TDS and/or water hardness above these limits should be treated with a reverse osmosis system or other filtration system.
- Softened water is not recommended as it may result in softer ice than desired.
- The water line MUST have a shut-off valve in the supply line.
- The water line should be looped into 2 coils. This will allow the unit to be removed for cleaning and servicing. Make certain that the tubing is not pinched or damaged during installation.

### CAUTION

**Do not use any plastic water supply line. The line is under pressure at all times. Plastic may crack or rupture with age and cause damage to your home.**

**Do not use tape or joint compound when attaching a braided flexible water supply line that includes a rubber gasket. The gasket provides an adequate seal – other materials could cause blockage of the valve.**

**Failure to follow recommendations and instructions may result in damage and/or harm, flooding or void the product warranty.**

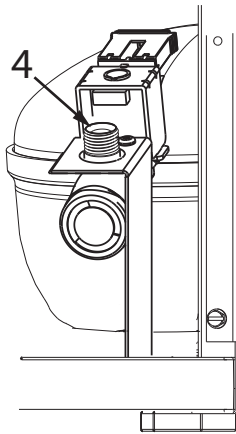
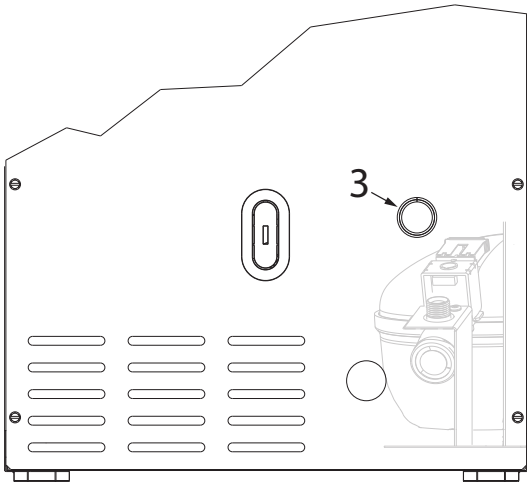
**Use new hose set. Do not reuse old hose set.**

### CAUTION

**Turn off water supply and disconnect electrical supply to unit prior to installation.**

**Use caution when handling back panel. The edges could be sharp.**

1. Turn off water supply and disconnect electrical supply to product prior to attempting installation.
2. Remove the back panel.
3. Thread water line through back panel hole (with bushing).
4. Locate water valve inlet and connect to valve.



5. Turn on water supply and check for leaks.
6. Reinstall back panel.

## Drain

Model numbers including "CL" or "NB" do not include a factory installed drain pump.

Model numbers including "CP" or "NP" include a factory installed drain pump.

### DRAIN CONNECTION



**If your U-Line unit did not come with a factory installed drain pump you must use a gravity style drain connection. For assistance in determining if your unit has a pump please contact U-Line. The floor drain must be large enough to accommodate drainage from all attached drains. Follow these guidelines when installing drain lines to prevent water from flowing back into the ice maker storage bin and/or potentially flowing onto the floor, which may result in personal injury or property damage**

### NOTICE

**Drain can NOT be located directly below the unit. Unit has a solid base that will not allow the unit to drain below itself.**

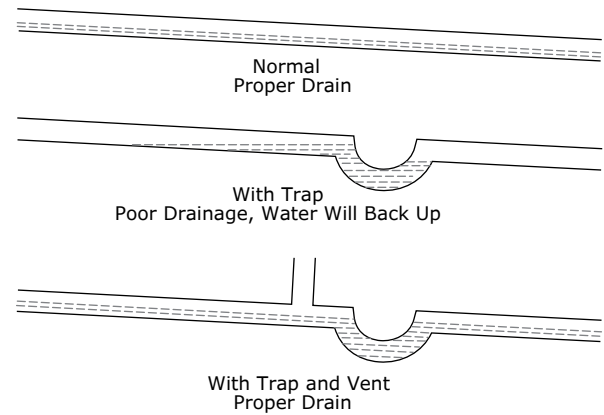
**There is a possibility that hose connections may have loosened during shipment.**

**Verify all connections and fittings are free from leaks.**



**This equipment is to be installed with adequate backflow protection to comply with applicable federal, state and local codes**

### GRAVITY DRAIN



### A gravity drain may be used if:

Drain line has at least a 1" drop per 48" (approximately 2 cm drop per 100 cm) of run.

Drain line does not create traps and is vented per local code.

1. Cut the pre-installed drain tube to length.
2. Connect to your local plumbing per the local code.
3. If necessary, insulate drain line to prevent condensation.



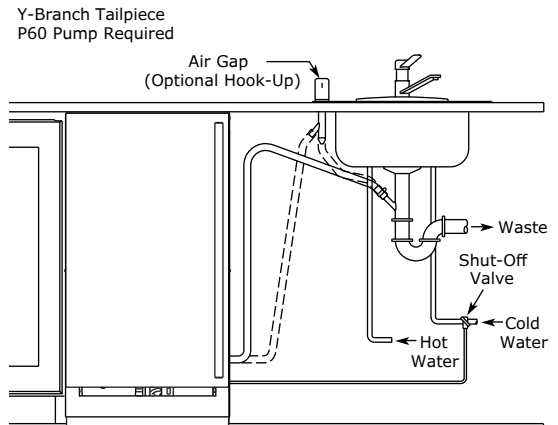
**Failure to connect water supply or drain line connections properly can result in personal injury and property damage. Gravity drain connections must be routed downward from the rest of the unit at the rate of 1/4" per foot (1 cm per 50 cm).**

## FACTORY INSTALLED DRAIN PUMP

If your drain line will run up to a stand pipe, disposal or spigot assembly, or does not otherwise meet the requirements for a gravity drain, you may have ordered a pre-installed U-Line P60 drain pump.

If you need to install a P60 drain pump into your unit, see DRAIN PUMP section in the User Manual.

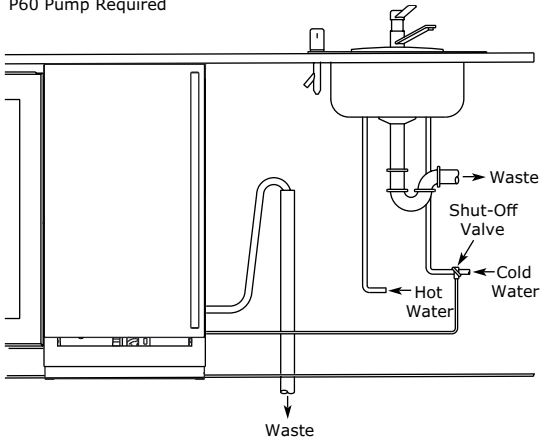
See below for typical installations requiring a drain pump.



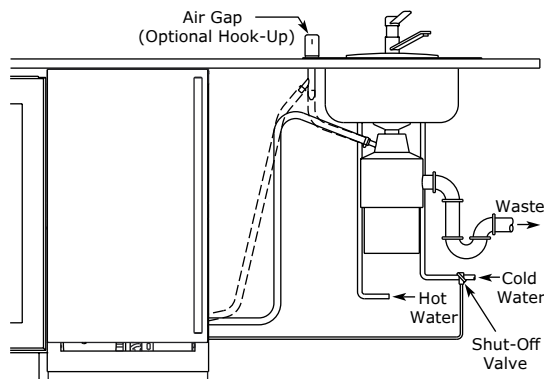
## NOTICE

**The maximum lift for the P60 drain pump is 10 feet. This must be done as close to the rear of the unit as possible.**

Stand Pipe  
P60 Pump Required



Disposal Assembly  
P60 Pump Required



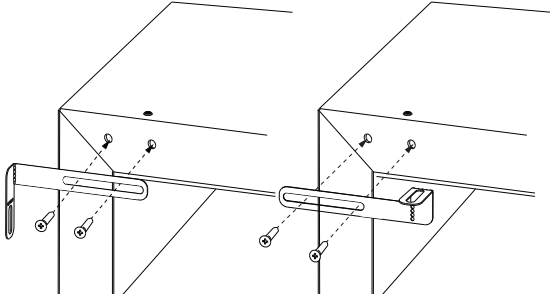
## Anti-Tip Bracket

Use one of the methods below to secure the unit

### CABINET/COUNTER ANTI-TIP INSTALLATION

(For built-in applications)

1. Slide unit out so screws on front of unit are easily accessible.
2. Remove the two screws from the front of the unit.

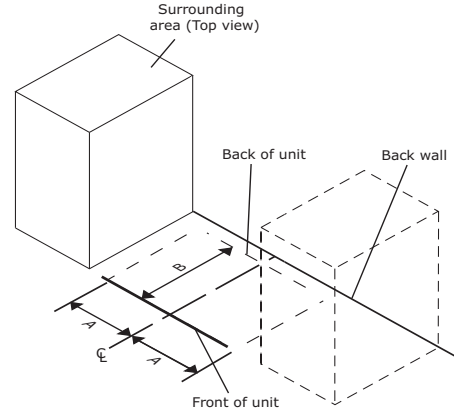


3. Bend bracket along one of the perforations to allow attachment to the desired adjoining surface.
4. Gently push unit into position. Be careful not to entangle the electrical cord or water line, if applicable.
5. Check to be sure the unit is level from front to back and side to side. Make any necessary adjustments. The unit's top surface should be approximately 1/8" (3 mm) below the countertop.
6. Secure bracket to adjoining surface.

### FLOOR MOUNTED ANTI-TIP INSTALLATION

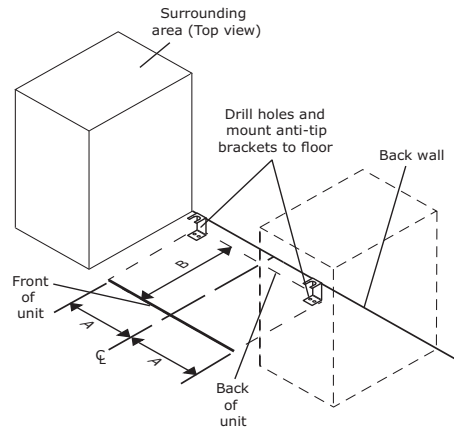
(For free-standing applications)

1. Locate two anti-tip brackets included with the kit.
2. Place the unit into the area where it will be installed. Check the door, sides, and top for a proper fit. Also test to make sure the door opens and closes freely.
3. Remove grille and place a mark on the floor at the front of the unit. Also place a mark on the floor in the center of the unit.
4. Remove the unit. Using a square, extend center line "B" (see chart below). This line serves as the back edge for the anti-tip brackets. From the center line, measure "A" to the left and right. This line is the outer edge of each bracket.



	<b>515</b>	<b>518</b>	<b>524</b>
<b>A</b>	7 5/8"	9"	11 15/16"
<b>B</b>	22"	22"	22"

5. Place the anti-tip brackets on the floor against the line drawn for the outer edge. Mark spots for the screw holes.

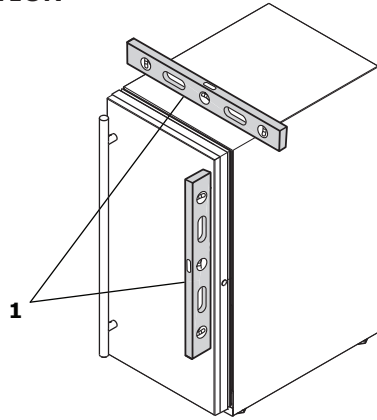


6. Use a 1/8" drill to make two starter holes and fasten the anti-tip brackets to the floor using the screws provided.
7. Place the unit back into position, making sure the feet engage the anti-tip brackets properly. Check the alignment of the lines made on the floor in step 3 with the position of the front feet to ensure proper positioning.

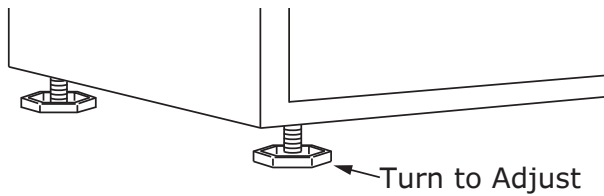
## General Installation

### LEVELING INFORMATION

1. Use a level to confirm the unit is level. Level should be placed along top edge and side edge as shown.



2. If the unit is not level, adjust the legs on the corners of the unit as necessary.



3. Confirm the unit is level after each adjustment and repeat the previous steps as needed.

### INSTALLATION TIP

If the room floor is higher than the floor in the cutout opening, adjust the rear legs to achieve a total unit rear height of  $\frac{1}{8}$ " (3 mm) less than opening's rear height. Shorten the unit height in the front by adjusting the front legs. This allows the unit to be gently tipped into the opening. Readjust the front legs to level the unit after it is correctly positioned in the opening.

### INSTALLATION

1. Plug in the power/electrical cord.
2. Gently push the unit into position. Be careful not to entangle the cord or water and drain lines, if applicable.
3. Re-check the leveling, from front to back and side to side. Make any necessary adjustments. The unit's top surface should be approximately  $\frac{1}{8}$ " (3 mm) below the countertop.
4. Install the anti-tip bracket.
5. Remove interior packing material and wipe out the inside of the unit with a clean, water-dampened cloth.

## Integrated Panel Dimensions

Metric measurements rounded and optimized.

### INTEGRATED PANEL

#### NOTICE

**Due to differences in surrounding cabinetry the panel may not perfectly align with door. The procedure below is designed to provide a finished integrated panel that seamlessly integrates with surrounding cabinetry.**

#### Panel Preparation

A full integrated door panel completely covers the door frame and provides a built-in appearance.

#### NOTICE

**The door panel must not weigh more than 20 lbs (10 kg).**

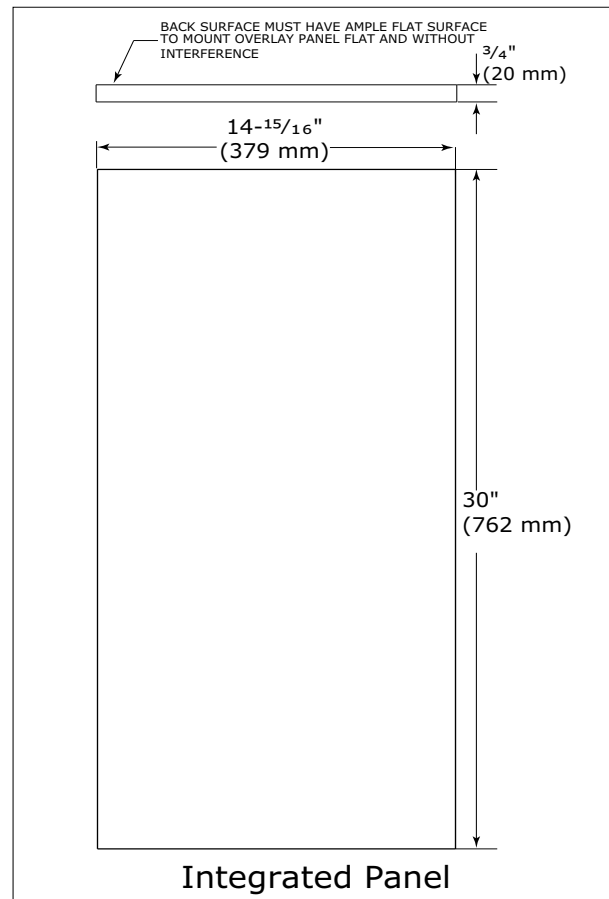
**It is important to ensure that all drilled holes are drilled to the correct depth in order to avoid splits in the wood when hardware is installed.**

1. Cut the panels to the dimensions listed in the diagram below.
2. Optional: Stain or finish panel to desired stain or color. Be sure to closely follow the instructions provided by the manufacturer.
3. Optional: Install handles and hardware.

#### NOTICE

**When applying an integrated panel to a unit, ensure that both sides are finished in order to prevent warping. In some panel installations, the panel may be visible through the glass while the door is open.**

## Integrated Panel Dimensions





## HANDLELESS INTEGRATED DOOR PANEL

The following procedure is designed to provide a finished, handleless solid panel for an 15" (381 mm) door that seamlessly integrates with its surrounding cabinetry.

NOTE: Many cabinet manufacturers provide a ready solution for a handleless, integrated design that can be easily applied to your model. Consult your cabinet manufacturer for applicable design and installation details. The cabinet manufacturer's solution to this design and integration detail will often result in an integrated panel solution wherein the size of the panel may result in a height dimension taller than what we specify. This can be achieved provided the additional height is positioned above the appliance door.

### NOTICE

**The integrated panel aligns with the surrounding cabinetry and, due to differences in cabinetry, may not align perfectly with the door.**

**The appliance will need up to 34-1/2" (876 mm) to the underside of the counter to leave room for leveling adjustments.**

**A single prepared panel with insert must not weigh more than 20 lbs (10 kg).**

### Integrated Panel Preparation

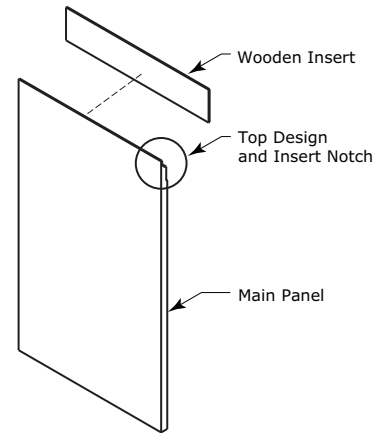
1. Cut the main panel to the dimensions below. For details, see the drawings on the next page.

Main panel width	Main panel height
14-15/16" (379 mm)	28-13/16" (732 mm)

2. Create the top design for the handleless feature and the 1/8" (3 mm) notch for the insert(s) indicated on the Top Detail drawing, on the next page.

3. Prepare the insert(s) that will back up the handleless design. **Wooden Insert** – Cut 1/8" (3 mm) thick wooden insert(s) to the dimensions below.

Wooden insert width	Wooden insert height
14-15/16" (379 mm)	3-1/2" (89 mm)



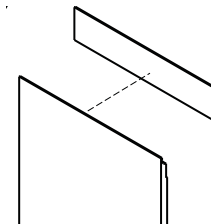
Integrated Panel

4. Optional: Stain or finish panel and wooden insert to desired stain or color. Be sure to closely follow the instructions provided by the manufacturer.

### NOTICE

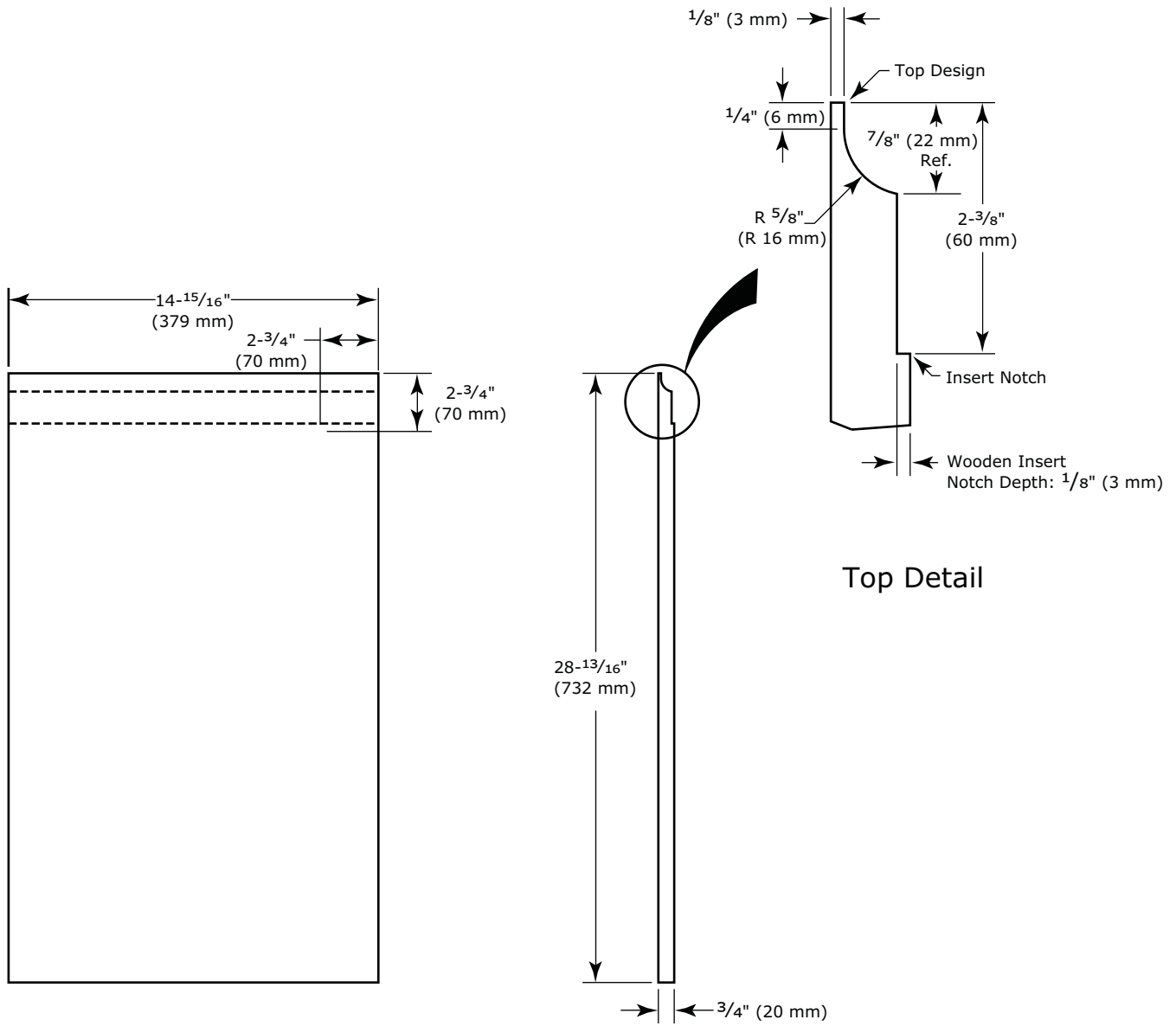
**If finishing panel or wooden insert, all sides must be finished to prevent warping.**

5. Attach the insert to the panel. Wood glue or equivalent adhesive should be used to attach insert to panel.

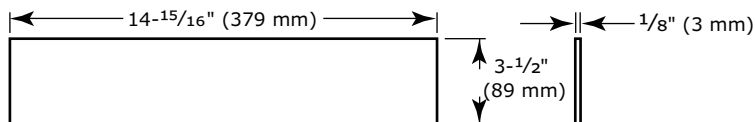


Attach Wooden Insert

**Handleless Integrated Panel Dimensions**



**Wooden Insert Dimensions**



**EXTENDED INTEGRATED PANEL**

**NOTICE**

**Due to differences in surrounding cabinetry the panel may not perfectly align with door. The procedure below is designed to provide a finished panel that seamlessly integrates with surrounding cabinetry.**

**Panel Preparation**

An extended integrated panel can be used to maintain alignment with an adjacent extended cabinet height or a reduced toe-kick/grille application.

1. Cut the panels to the dimensions listed in the appropriate diagram on the next page.
2. Optional: Stain or finish panel to desired stain or color. Be sure to closely follow the instructions provided by the manufacturer.

3. Optional: Install handles and hardware

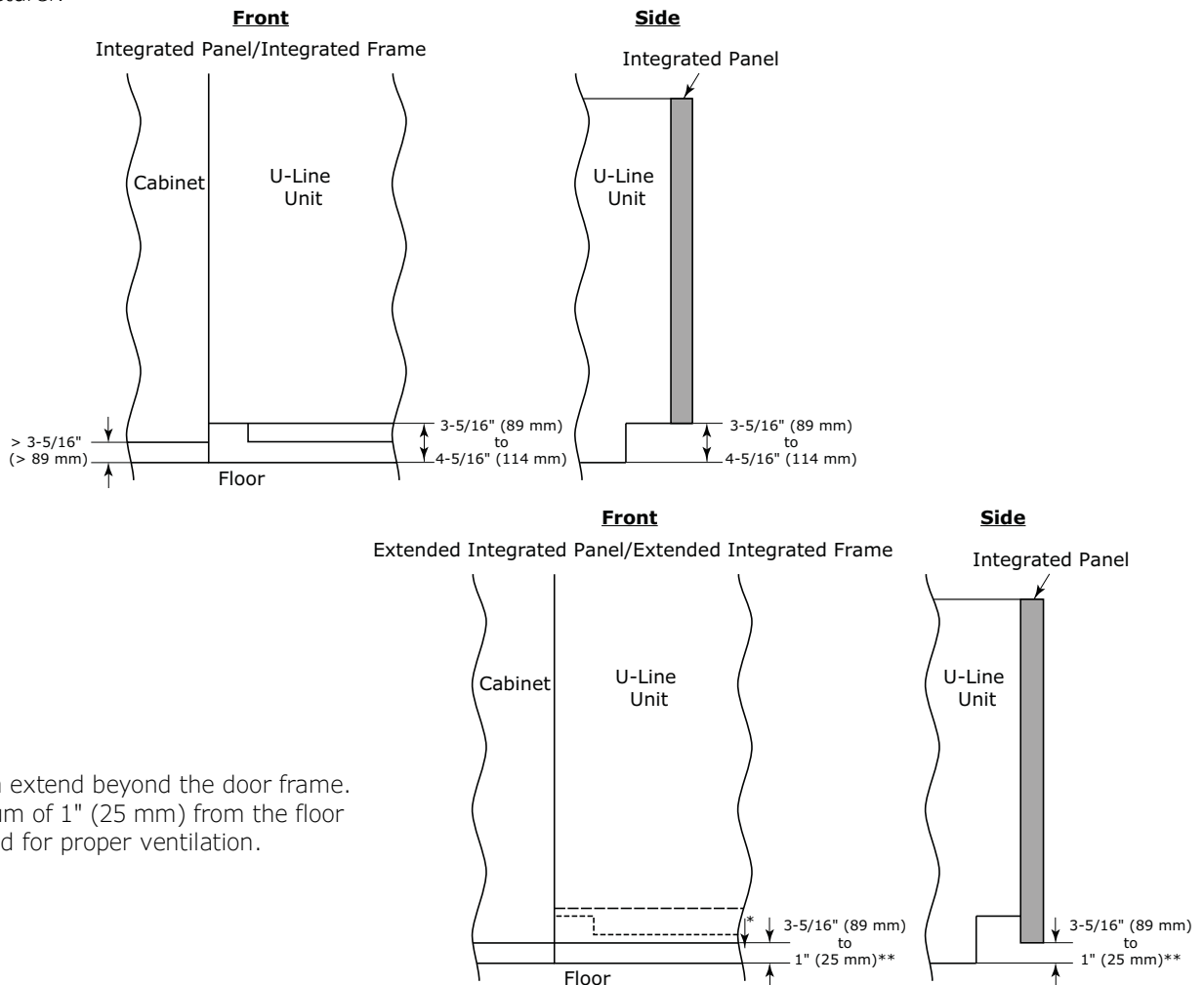
**NOTICE**

**The door panel must not weigh more than 20 lbs (10 kg).**

**It is important to ensure that all drilled holes are drilled to the correct depth in order to avoid splits in the wood when hardware is installed.**

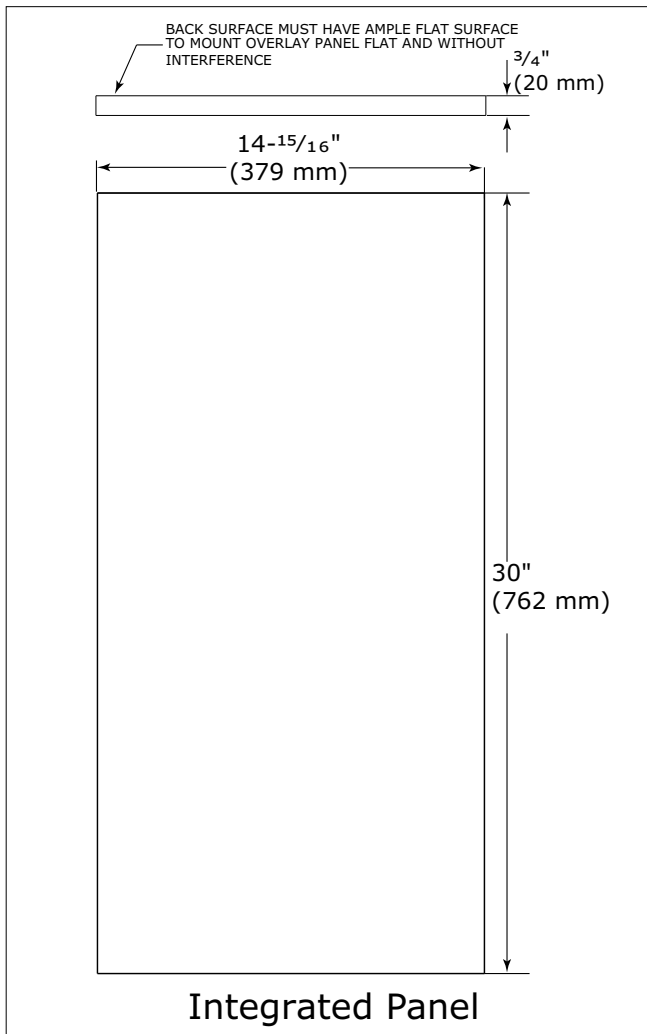
**Appliance will need up to 34-1/2" (876 mm) to the underside of the counter to leave room for leveling adjustments.**

**When applying an integrated panel to a unit, ensure that both sides are finished in order to prevent warping. In some installations, the panel may be visible through the glass while the door is open.**



\* Panel can extend beyond the door frame.  
 \*\* A minimum of 1" (25 mm) from the floor is required for proper ventilation.

**Extended Integrated Panel Dimensions**



\* A minimum of 1" (25 mm) is required from the floor to the bottom of the extended integrated panel/frame for proper ventilation.

**Integrated Grille**

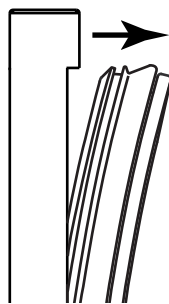
If you would like to cover the grille with an integrated panel, purchase U-Line's adjustable grille accessories.

15" - Sales Accessory: ULAGRILLE15

Complete instructions, including dimensions of the integrated grille panel, are included with the accessory.

## Integrated Panel Installation

1. Fully open door.
2. Starting at corner, pull gasket away from door.
3. Continue to pull gasket free from gasket channel.

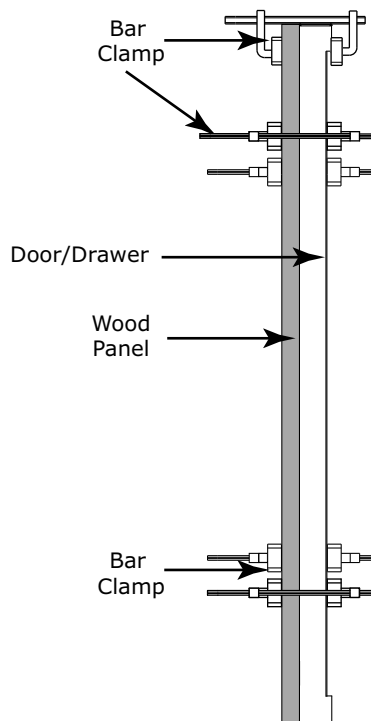


4. Upon removal, lay gasket down on a flat surface.
5. Align top of panel with top edge of door. Center panel on door.

### NOTICE

**Due to differences in floor construction or surrounding cabinetry, the panel may not sit flush with the top of the door.**

6. Secure integrated panel to door using clamps. A robust tape may also be used. U-Line recommends the use of bar clamps to secure the panel to the door. If using tape, be certain the tape will not damage panel finish upon removal.

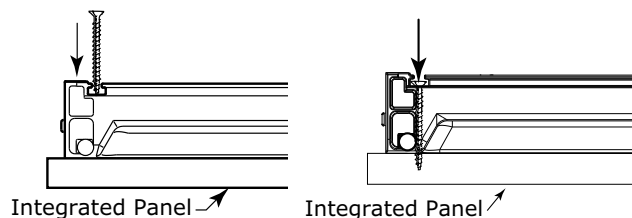


7. Using a 7/64" (3 mm) drill bit, drill 6 pilot holes into the wood panel 1/2" (12 mm) deep using the holes in the door frame as a guide.

### NOTICE

**It is important to ensure that all drilled holes are drilled to the correct depth in order to avoid splits in the wood when hardwood is installed.**

8. Locate 6 of the #6x 1-1/2" (38 mm) screws provided with your unit.
9. Using a Phillips screwdriver, place one screw into each of the 6 pilot holes and screw down. Do not overtighten screws.
10. Ensure the screws sit flush against the bottom of the channel.



11. Remove clamps from door.

### NOTICE

**If panel requires additional adjustment after removing clamps, slightly loosen each screw and adjust panel as necessary. Tighten screws upon completion.**

12. Starting at the corners, re-install the gasket into the gasket channel in the frame. Make sure the gasket is fully seated.

## Grille Installation

### REMOVING AND INSTALLING GRILLE



**Disconnect electric power to the unit before removing the grille.**

**When using the unit, the grille must be installed.**



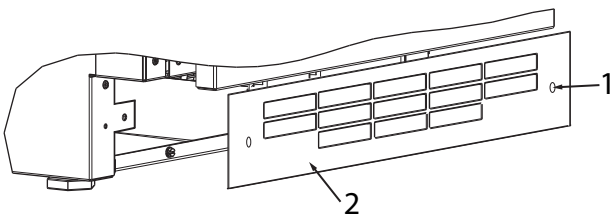
**DO NOT touch the condenser fins. The condenser fins are SHARP and can be easily damaged.**

#### Removing the grille

1. Disconnect power to the unit.
2. Loosen the two screws (1).
3. Remove grille (2) from unit.

#### Installing the grille

1. Align cabinet and grille holes and secure, but do not over tighten grille screws (1).
2. Reconnect power to the unit.

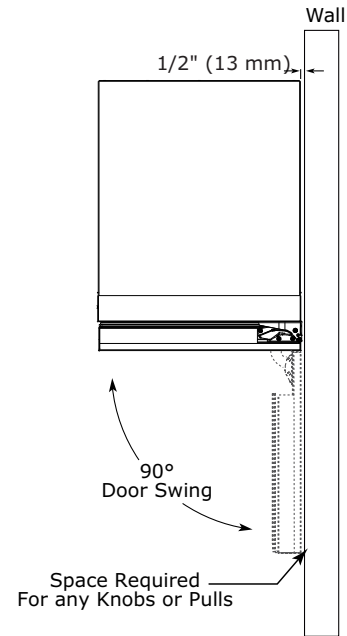


## Door Swing

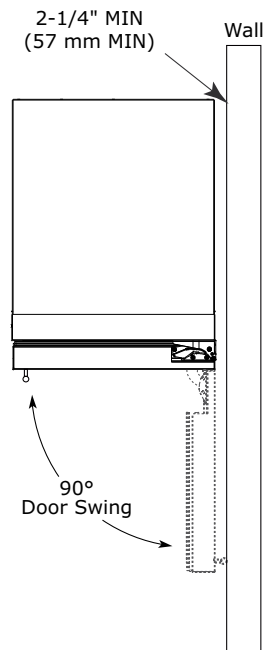
For Integrated models that are installed adjacent to a wall, 1/2" (13 mm) clearance is recommended from wall on hinge side to allow the door to open 90°. Allow for additional space for any knobs or pulls installed on the integrated panel/frame.

Stainless Steel models that are installed adjacent to a wall require 2-1/4" (57 mm) door clearance on hinge side to allow for door handle.

Units have a zero clearance when installed adjacent to cabinets.



**Integrated**



**Stainless**

## Door Adjustments

### DOOR ALIGNMENT AND ADJUSTMENT

Align and adjust the door if it is not level or not sealing properly. If the door is not sealed, the unit may not cool properly, or excessive frost or condensation may form in the interior.

#### NOTICE

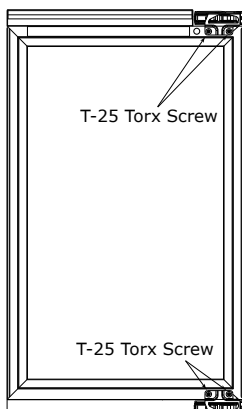
**Properly aligned, the door's gasket should be firmly in contact with the cabinet all the way around the door (no gaps). Carefully examine the door's gasket to ensure that it is firmly in contact with the cabinet. Also make sure the door gasket is not pinched on the hinge side of the door.**



**Do not attempt to use the door to raise or pivot your unit. This would put excessive stress on the hinge system.**

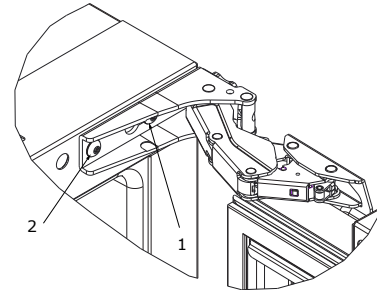
#### Alignment and Adjustment Procedure

1. Open door and remove gasket near the hinges.
2. Using a T-25 Torx bit, loosen each pair of Torx head screws both the upper and lower hinge plates.
3. Square and align door as necessary.
4. Tighten Torx head screws on hinge.
5. Reinstall gasket into the channel starting at the corner.



### REVERSING THE DOOR

1. Open door.
2. Using T-25 Torx bit loosen screw #1 and remove screw #2 on top and bottom hinge. Slide and remove the door from the unit.



**Note: One hinge includes a metal spacer. Spacer must be used with that hinge when reversing the door.**

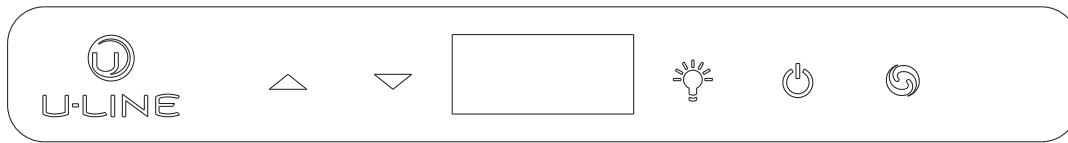
3. Remove caps from screw heads on opposite side (2 on top and 2 on bottom). Using #2 Phillips bit, remove the 4 underlying screws. Reinstall the screws and caps on the opposite side.
4. Partially install screw #1 in the outer most holes on top and bottom. Rotate door 180o, align hinge over screw #1 and slide/seat into position. Reinstall screw #2 on top and bottom. Tighten both screws and install hinge cover.

#### Align and adjust the door:






Align and adjust the door (see DOOR ALIGNMENT AND ADJUSTMENT).



## Control Operation




### CONTROL FUNCTION GUIDE

FUNCTION	COMMAND	NOTES
ON/OFF	Press  and release	Unit will immediately turn On or OFF
Adjust ice density	See "Ice" section	
Enable Sabbath Mode	Press  and hold for 5 seconds and release	The °F / °C symbol will flash briefly after 5 seconds. Interior light and display will go dark and remain so until user resets mode - unit continues to operate
Disable Sabbath Mode	Press  and release	Display and interior light return to normal operation
Clean Mode	See "Cleaning" section	
Showroom Mode	Hold  and  for 5 seconds	The °F / °C symbol will flash. Display will be lit and interior light will function. Unit will not cool. Repeat command to return to normal operation

This unit is Star-K certified. See [www.star-k.org](http://www.star-k.org) for more details.

### DOOR ALERT NOTIFICATION

When the door is left open for more than 30 minutes:

- Ice production will cease
- A tone will sound for several seconds every minute
-  will appear in display

Close door to silence alert and reset (Ice production will resume if bin sensor is not satisfied)





## Ice

The Nugget Ice Machine produces cylindrical bits of compressed ice approximately  $\frac{3}{4}$ " x  $\frac{1}{2}$ ".

Ice is produced until the machine senses the bin is full. As ice slowly melts in the bin, the level of ice drops and ice production resumes. This ensures a constant supply of fresh ice is always available.

The factory default ice setting is 0, which produces a firm and compact ice nugget. U-Line's exclusive U-Choose™ ice adjustability feature allows you five levels of adjustment from 0 to -5. At -5 the ice is soft and chewable.

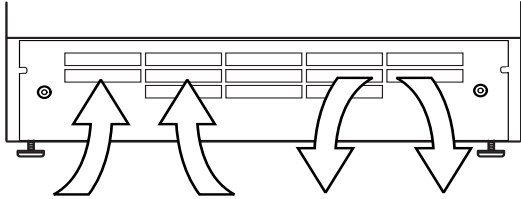
To adjust the ice density:

1. Hold  for 5 seconds - display will flash current ice setting
2. Adjust using  or 
3. Confirm setting by pressing 

## Airflow and Product Loading

### NOTICE

**The unit requires proper airflow to perform at its highest efficiency. Do not block the front grille at any time, or the unit will not perform as expected. Do not install the unit behind a door.**



## Cleaning

### EXTERIOR CLEANING

#### Vinyl Clad (Black or White) Models

Clean surfaces with a mild detergent and warm water solution. Do not use solvent-based or abrasive cleaners. Use a soft sponge and rinse with clean water. Wipe with a soft, clean towel to prevent water spotting.

Clean any glass surfaces with a non-chlorine glass cleaner.

#### Stainless Models

Stainless door panels, handles and frames can discolor when exposed to chlorine gas, pool chemicals, saltwater or cleaners with bleach.

Keep your stainless unit looking new by cleaning with a good quality all-in-one stainless steel cleaner and polish monthly. For best results use Claire® Stainless Steel Polish and Cleaner. Comparable products are acceptable. Frequent cleaning will remove surface contamination that could lead to rust. Some installations may require cleaning weekly.

**Do not clean with steel wool pads.**

**Do not use stainless steel cleaners or polishes on any glass surfaces.**

Clean any glass surfaces with a non-chlorine glass cleaner.

**Do not use cleaners not specifically intended for stainless steel on stainless steel surfaces (this includes glass, tile, and counter cleaners).**

If any surface discoloring or rusting appears, clean it quickly with Bon-Ami® or Barkeepers Friend Cleanser® and a nonabrasive cloth. Always clean with the grain. Always finish with Claire® Stainless Steel Polish and Cleaner or comparable product to prevent further problems.

**Using abrasive pads such as ScotchBrite™ will cause the graining in the stainless steel to become blurred.**

**Rust not cleaned up promptly can penetrate the surface of the stainless steel and complete removal of the rust may not be possible.**

For information on Keg and Tap Towers, please reference the Single and Double Tap Tower Kits User Guide on u-line.com.

### Integrated Models

To clean integrated panels, use household cleaner per the cabinet manufacturer's recommendations.

### INTERIOR CLEANING

Disconnect power to the unit.

Clean the interior and all removed components using a mild nonabrasive detergent and warm solution applied with a soft sponge or non-abrasive cloth.

Rinse the interior using a soft sponge and clean water.

**Do not use any solvent-based or abrasive cleaners.** These types of cleaners may transfer taste and/or odor to the interior products and damage or discolor the interior.

### NUGGET ICE MACHINE CLEANING CYCLE

This ice machine has an automatic clean alert function. The control will indicate **CL** in the display, approximately every six months with normal use, reminding you to clean your unit. When **CL** is displayed, ice production will continue. Depending on water conditions, more frequent cleaning may be necessary: see chart below. Cleaning removes lime scale, other mineral deposits, and sanitizes the machine. Poor ice quality and reduced ice output are signs that cleaning is necessary.

TDS (Total Dissolved Solids) Level mg/L (ppm)	Cleaning Interval
5 - 150	6 months
150 - 250	4 months
250 - 400	3 months (or sooner)
Hardness Level mg/L (ppm)	Cleaning Interval
0 - 66	6 months
67 - 133	4 months
134 - 200	3 months (or sooner)

**Under normal conditions cleaning should be done when the display shows  $\square L$ . You may initiate a cleaning cycle at any time by pressing and holding the clean button for 10 seconds.  $\square I$  will appear in the display indicating the start of the cleaning process.**

You may override  $\square L$  in the display without cleaning by pressing and holding the up, down, & light button for 10 seconds.  $\square E$  will scroll in the display and the cleaning reminder ( $\square L$ ) will be reset for another approximate six month cycle. Failure to clean may reduce the quality and quantity of ice produced. Once the clean cycle begins, it can be canceled by pressing  $\square$  three times. Press  $\square$  once more to start making ice. The clean cycle will automatically cancel if user fails to activate control at steps 2, 3b, and 5b within 2 hours.

### Required for cleaning:

- Hose and funnel - provided with unit
- Bucket and cleaning sponge
- Clean potable water
- SafeCLEAN Plus™ Cleaner (Part No. ULANUGGETCLEAN) 1-8oz. bottle included with unit
- 1 Water filter (if required)

**Need more cleaner? Visit [u-line.com](http://u-line.com)**

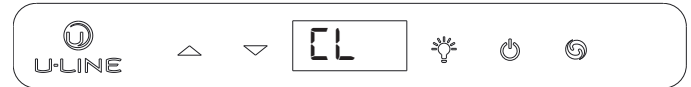
## CAUTION

**Use only SafeCLEAN Plus™ Cleaner. Use of any other cleaner may damage the finish of the evaporator and will void the warranty.**

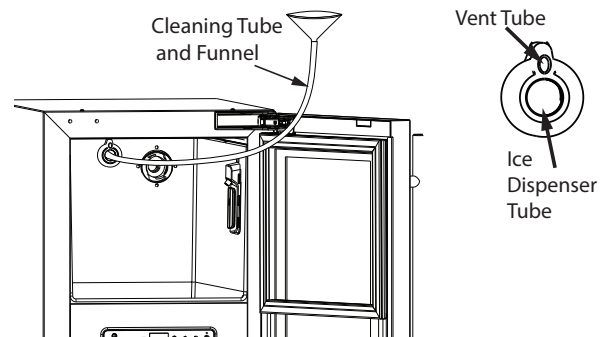
**Follow safety and handling instructions printed on the SafeCLEAN Plus™ bottle.**

### Notice:

**Select models include a water filter. The filter must remain in place when using and cleaning the machine. The filter is designed to filter out scale, sediment, particles and cloudiness as well as reduce chlorine and other off tastes and odors. U-Line recommends replacing the filter (Part No. ULANUGGETFILTER) when you clean your machine. The filter is available at [u-line.com](http://u-line.com).**

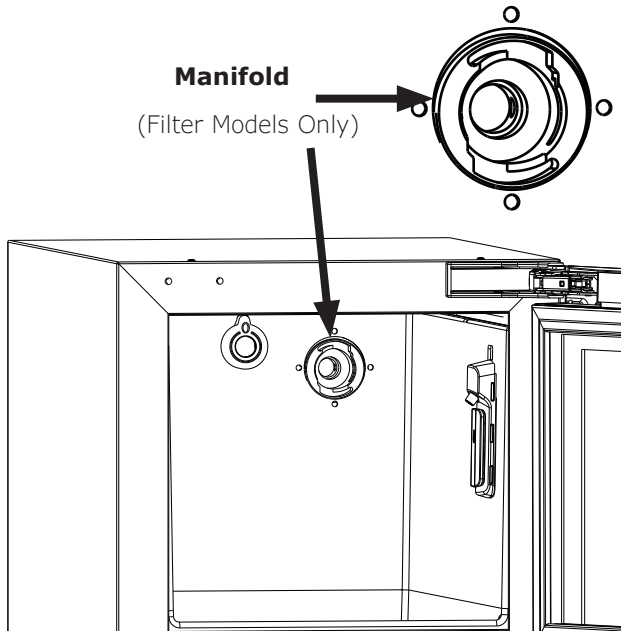



1. Press and Hold  $\square$  for 10 seconds
  - a.  $\square I$  will appear in the display
  - b. Remove access shield
  - c. Remove all ice in bin
  - d. Remove any ice protruding from the ice dispenser tube.
2. Insert the end of the cleaning tube into the ice dispenser; slowly pour in approximately 1 quart of hot (min. 100° F) potable water. This will melt ice inside the dispenser tube. It is normal for some water to flow from the ice dispenser tube and exit from the vent tube while pouring. Omit this step if no ice is in the ice dispenser tube.



3. Press and release  $\square$ 
  - a.  $\square 2$  will appear in the display
  - b. Mix 4 ounces of SafeCLEAN Plus™ with 2 quarts of potable water.
4. Wait until  $\square 3$  appears in the display
  - a. Using the funnel and cleaning tube, slowly pour  $\frac{3}{4}$  of the cleaning solution into the dispenser tube. Air and some water will exit the vent tube. Remove cleaning tube. (Optional - for deeper cleaning, allow solution to soak for 60 minutes)
  - b. Press and release  $\square$
5.  $\square 4$  will appear in the display
  - a. The machine will circulate the solution, cleaning and sanitizing the internal components, for approximately 20 minutes.
  - b. While the machine is circulating the cleaning solution, use  $\frac{1}{2}$  of the remaining cleaning solution and a sponge to wipe down the inside of the ice bin and scoop. Rinse with clean potable water.

6. When **05** appears in the display, 3 soft tones will sound, indicating the cleaning phase is complete
  - a. Remove and discard water filter if applicable by rotating  $\frac{1}{4}$  turn counterclockwise.
  - b. Use the remaining cleaning solution to wipe the manifold and surrounding area. Rinse with clean potable water.



- c. Using the hose and funnel, slowly pour 1.5 quarts (48 oz.) of clean potable water into the ice dispenser tube. Air and some water will exit the vent tube.
  - d. Install new water filter. Press and rotate  $\frac{1}{4}$  turn clockwise
  - e. Press and release 
7. **06** will appear in the display
  - a. Reinstall shield and close door.
  - b. The machine will circulate water and perform a series of final rinses for approximately 15 minutes.
  - c. The unit will resume making ice - indicated by 3 soft tones and **ICE** scrolling in the display.
  - d. Discard first 10 minutes of ice production.

## Cleaning Condenser

### **INTERVAL - EVERY SIX MONTHS**

To maintain operational efficiency, keep the front grille free of dust and lint, and clean the condenser when necessary. Depending on environmental conditions, more or less frequent cleaning may be necessary.

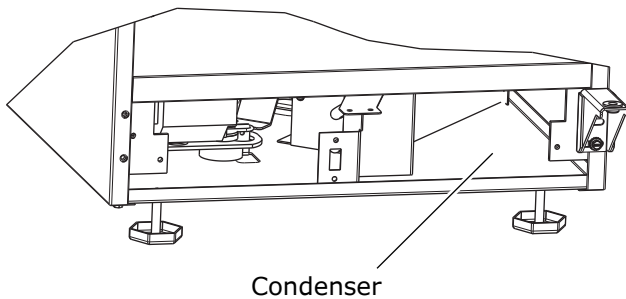
 **WARNING**

**Disconnect electric power to the unit before cleaning the condenser.**

### **NOTICE**

**DO NOT use any type of cleaner on the condenser unit. Condenser may be cleaned using a vacuum, soft brush, or compressed air.**

1. Remove the grille. See GRILLE INSTALLATION).
2. Clean the condenser coil using a soft brush or vacuum cleaner.
3. Install the grille.



## Extended Non-Use

### VACATION/HOLIDAY, PROLONGED SHUTDOWN

The following steps are recommended for periods of extended non-use:

1. Remove all consumable content from the unit.
2. Disconnect the power cord from its outlet/socket and leave it disconnected until the unit is returned to service.
3. Turn off the water supply.
4. If ice is on the evaporator, allow ice to thaw naturally.
5. Clean and dry the interior of the cabinet. Ensure all water has been removed from the unit.
6. Disconnect the water and drain line (if applicable) making sure all water is removed from the lines.
7. The door must remain open to prevent formation of mold and mildew. Open door a minimum of 2" (50 mm) to provide the necessary ventilation.

### WINTERIZATION

If the unit will be exposed to temperatures of 40°F (5°C) or less, the steps above must be followed. In addition, P60 drain pumps in clear ice machines must be drained according to the following procedure:

1. Remove the drain pump from the ice machine.
2. Drain the water in the pump's reservoir by turning the pump upside down and allowing the water to drain through the pump's inlet and vent tube fittings.
3. After water is drained, reinstall the drain pump and reattach all connections.

**For questions regarding winterization, please call U-Line at 800.779.2547.**



**Damage caused by freezing temperatures is not covered by the warranty.**

**Do not put anti-freeze in your unit.**



## Troubleshooting

### BEFORE CALLING FOR SERVICE

If you think your U-Line product is malfunctioning, read the CONTROL OPERATION section to clearly understand the function of the control.

If the problem persists, read the NORMAL OPERATING SOUNDS and TROUBLESHOOTING GUIDE sections below to help you quickly identify common problems and possible causes and remedies. Most often, this will resolve the problem without the need to call for service.

### IF SERVICE IS REQUIRED

If you do not understand a troubleshooting remedy, or your product needs service, contact U-Line Corporation directly at +1.800.779.2547.

When you call, you will need your product Model and Serial Numbers. This information appears on the Model and Serial number plate located on the upper right or rear wall of the interior of your product.

### NORMAL OPERATING SOUNDS

All models incorporate rigid foam insulated cabinets to provide high thermal efficiency and maximum sound reduction for its internal working components. Despite this technology, your model may make sounds that are unfamiliar.

Normal operating sounds may be more noticeable because of the unit's environment. Hard surfaces such as cabinets, wood, vinyl or tiled floors and paneled walls have a tendency to reflect normal appliance operating noises.

Listed below are common refrigeration components with a brief description of the normal operating sounds they make. NOTE: Your product may not contain all the components listed.

- Compressor: The compressor makes a hum or pulsing sound that may be heard when it operates.

- Evaporator: Refrigerant flowing through an evaporator may sound like boiling liquid.
- Condenser Fan: Air moving through a condenser may be heard.
- Automatic Defrost Drain Pan: Water may be heard dripping or running into the drain pan when the unit is in the defrost cycle.

### TROUBLESHOOTING GUIDE

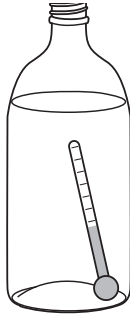


**ELECTROCUTION HAZARD. Never attempt to repair or perform maintenance on the unit before disconnecting the main electrical power.**

Troubleshooting - What to check when problems occur:

Problem	Possible Cause and Remedy
Interior Light Does Not Illuminate	If the unit is cooling, it may be in Sabbath mode.
Light Remains on When Door Is Closed.	Turn off light switch if equipped. Adjust light actuator bracket on bottom of door.
Unit Develops Frost on Internal Surfaces.	Ensure the door is closing and sealing properly.
Unit Develops Condensation on External Surfaces.	The unit is exposed to excessive humidity. Moisture will dissipate as humidity levels decrease.
Product is Not Cold Enough	Air temperature does not indicate product temperature. See CHECKING PRODUCT TEMPERATURE below. Adjust the temperature to a cooler set point. Ensure unit is not located in excessive ambient temperatures or in direct sunlight. Ensure the door is closing and sealing properly. Ensure the interior light has not remained on too long. Ensure nothing is blocking the front grille, found at the bottom of the unit. Ensure the condenser coil is clean and free of any dirt or lint build-up.

## CHECKING PRODUCT TEMPERATURE



### To check the actual product temperature in the unit:

1. Partially fill a plastic (nonbreakable) bottle with water.
2. Insert an accurate thermometer.
3. Tighten the bottle cap securely.
4. Place the bottle in the desired area for 24 hours.
5. Avoid opening the unit during the testing period.
6. After 24 hours, check the temperature of the water.  
If required, adjust the temperature control in a small increment (see CONTROL OPERATION).

### Causes which affect the internal temperatures of the cabinet include:

- Temperature setting.
- Ambient temperature where installed.
- Installation in direct sunlight or near a heat source.
- The number of door openings and the time the door is open.
- The time the internal light is illuminated. (This mainly affects product on the top rack or shelf.)
- Obstruction of front grille or condenser.

## Product Liability

Field service technicians are authorized to make an initial assessment in the event of reported damages. If there are any questions about the process involved, the technician should call U-Line for further explanation.

While inspecting for defects or installation issues, photos should be taken to document any damages or issues found.

During the assessment, if the service technician is able to find the source of the damage and it can be resolved by replacement of a part, the servicer is authorized to replace the part in question. The part that caused the damage must be returned to U-Line in its entirety. The part must be clearly labeled with the serial number of the unit it was removed from, the date, and the servicer who removed the part.

If the service technician determines the damage is the result of installation issues (water connection/drain, etc.), the consumer would be notified and the issues shall be resolved at the direction of the consumer.

If damage is evident and the service technician is unable to find the source, U-Line must be contacted at 1.800.799.2547 for further direction.

8900 N. 55th Street • Milwaukee, WI 53223  
T: +1.414.354.0300 • F: +1.414.354.5696  
Website: [www.u-line.com](http://www.u-line.com)

**Right product. Right place.  
Right temperature Since 1962.**



## Ordering Replacement Parts

**Parts may be ordered online at [www.U-Line.com](http://www.U-Line.com)**

See our contact information below:

[www.U-LineService.com](http://www.U-LineService.com) (with service login)

Phone Number: +1.800.779.2547

### **NOTICE**

**Use only genuine U-Line replacement parts. The use of non-U-Line parts can reduce speed of ice production, cause water to overflow from ice maker mold, damage the unit, and void the warranty.**

Warranty parts will be shipped at no charge after U-Line confirms warranty status. Please provide the model, serial number, part number and part description. Some parts will require color or voltage information.

If U-Line requires the return of original parts, we will inform you when the parts order is taken. This requirement will be noted on your packing list. A prepaid shipping label will be emailed to you. Please enclose a copy of the parts packing list and be sure the model and serial numbers are legible on the paperwork. Tag the part with the reported defect.

Customers and non-authorized servicers may order non-warranty parts at [www.u-line.com](http://www.u-line.com). Authorized servicers with a servicer login may order non-warranty parts at [www.u-lineservice.com](http://www.u-lineservice.com).

## R-600A Specifications

For R-600a refrigerant service tips and more videos, go to: [www.u-line.com/videos](http://www.u-line.com/videos).



**Flammability warnings for a pure-iso-butane refrigerant.**



**Gloves and Eye Protection must be used.**



**R-600a is considered non-toxic, but is flammable when mixed with air.**

**Keep a dry powder type fire extinguisher in the work area.**



**R-600a is heavier than air, do not allow any leakage/migration to low areas such as basements and stairs.**

**Never use a torch on a fully charged refrigeration system.**

**Never substitute U-Line OEM replacement parts or methods of construction.**

**R-600a must be stored and transported in approved containers.**

**⚠ WARNING**

**Only skilled and well trained service technicians permitted to service R-600a equipped products.**

**All tools and equipment must be approved for use with R-600a refrigerant.**

**Local, state and federal laws, standards must be observed along with proper certification and licensing.**

**Ventilation is required during servicing.**

**No conversions to R-600a from any other refrigerants. OEM R-600a equipped unit only.**

**Service area must be free of ignition sources.**

**No smoking is allowed in the service area.**

**All replacement electrical components must be OEM and installed properly (sealed and covered).**

**If the evaporator is cold prior to service, it must be thawed prior to service.**

**When using a vacuum pump, start pump before opening refrigeration system.**

**Vacuum pump and recovery equipment should be at least 10 feet from the work area.**

**It is recommended that a simple LPG gas detector is on site during service.**

**Ensure that all R-600a is removed from the system prior to brazing any part of the sealed system.**

**Only a clean, dry leak free system should be charged with R-600a.**

**R-600A SPECIFICATIONS/LABELING**

R-600a equipped products are labeled (both the unit and the compressor).

R-600a is colorless and odorless.

R-600a is considered non-toxic, but is flammable when mixed with air.

Do not remove or alter any R-600a labeling on the product.

Use only a refrigerant grade R-600a from a properly labeled container.

**RECOVERING/RECLAIMING R-600A**

(R-600a has been exempted from recovery/reclaiming requirements by the US EPA)

Recovery/Reclaiming equipment must be approved for use with R-600a.

Ensure the evaporator is at room temperature prior to recovery/reclaiming R-600a.

Use a common piercing pliers or piercing valve to remove R-600a from the compressor process tube. (Note: Piercing devices must not be left on the system and must be replaced with a Schrader type valve.)

Evacuate/reclaim via the piecing pliers to ensure the system is empty of R-600a before any system work is performed.



The recovery cylinder must be evacuated (no air inside) prior to accepting R-600a.

The recovery cylinder must not be filled more than 45% safe fill level and refrigerants must not be mixed.

The recovery cylinder must be clearly marked with R-600a and Flammable Warning labels.

Ensure proper ventilation during recovery/reclaiming of R-600a.

Start vacuum pump/recovery pump prior to piercing the compressor process tube.

Follow recovery/reclaim OEM instructions for the specific equipment used.

## SYSTEM REPAIR

Ensure no residual R-600a refrigerant is left within the system prior to repair (simple venting is not sufficient).

Evacuate and charge with dry nitrogen for leak checks.

Repair leaks or replace system parts as required.

When re-brazing, the system must be purged with dry nitrogen and at least one access point open to the atmosphere.

When re-brazing, proper ventilation is required along with constant monitoring for the presence of R600a refrigerant.

The filter dryer must be replaced any time the sealed system is serviced.

No system should be open to the atmosphere for longer than 15 minutes to avoid moisture migration into the system components.

## LEAK DETECTION

After removal of the R-600a, the unit can be charged with dry nitrogen or helium.

Electronic leak detection or soap solution can be used to check for nitrogen/helium leaks.



Never use a halide torch or lighted match to check the system for leaks at any time.

The high side of the refrigeration system (compressor discharge to outlet of drier) must be leak tested with the compressor running.



The low side of the refrigeration system (evaporator, compressor and suction line) must be leak tested with the compressor off (equalized pressure).

## **RECHARGING**

No air is ever to be allowed inside the refrigeration system (R-600a refrigerant or dry nitrogen only).

Never use a torch on a fully charged refrigeration system.

Install a Schrader Type access port on the compressor process stub.



Evacuate the system to 100 microns prior to charging.

Weigh in the R-600a charge using a refrigerant scale. (run compressor an extra two minutes to clear the charging hoses).

Seal the Schrader Type access port, a proper cap and seal must be used to close the system.



## **SUMMARY**

Safely handling R-600a requires proper procedures and training.

R-600a approved service tools must be used.

R-600a labeling must not be removed or altered.

Proper ventilation during service is required.

Never apply a torch to a charged R-600a refrigeration system.

Use OEM replacement service parts and do not alter the construction of the unit.

## System Diagnosis Guide

### REGRIGERATION SYSTEM DIAGNOSIS GUIDE

<b>System Condition</b>	<b>Suction Pressure</b>	<b>Suction Line</b>	<b>Compressor Discharge</b>	<b>Condenser</b>	<b>Capillary Tube</b>	<b>Evaporator</b>	<b>Wattage</b>
<b>Normal</b>	Normal	Slightly below room temperature	Very hot	Very hot	Warm	Cold	Normal
<b>Overcharge</b>	Higher than normal	Very cold may frost heavily	Slightly warm to hot	Hot to warm	Cool	Cold	Higher than normal
<b>Undercharge</b>	Lower than normal	Warm-near room temperature	Hot	Warm	Warm	Extremely cold near inlet - Outlet below room temperature	Lower than normal
<b>Partial Restriction</b>	Somewhat lower than normal vacuum	Warm-near room temperature	Very hot	Top passes warm - Lower passes cool (near room temperature) due to liquid	Room temperature (cool) or colder	Extremely cold near inlet - Outlet below room temperature backing up	Lower than normal
<b>Complete Restriction</b>	In deep vacuum	Room temperature (cool)	Room temperature (cool)	Room temperature (cool)	Room temperature (cool)	No refrigeration	Lower than normal
<b>No Gas</b>	0 PSIG to 25"	Room temperature (cool)	Cool to hot	Room temperature (cool)	Room temperature (cool)	No refrigeration	Lower than normal

## Compressor Specifications



**Electrocution can cause death or serious injury. Burns from hot or cold surfaces can cause serious injury. Take precautions when servicing this unit.**

**Disconnect the power source.**

**Do not stand in standing water when working around electrical appliances.**

**Make sure the surfaces you touch are not hot or frozen.**

**Do not touch a bare circuit board unless you are wearing an anti-static wrist strap that is grounded to an electrical ground or grounded water pipe.**

**Handle circuit boards carefully and avoid touching components.**

	<b>FMXA9C</b>
REFRIGERANT	R600A
VOLTAGE	230 VAC
FREQUENCY	43-134 Hz
START WINDING	20 Ohm at 77° F
RUN WINDING	20 Ohm at 77° F
RUN TO START	20 Ohm at 77° F
LRA	1.7 A
FLA	1.7 A
STARTING DEVICE	Inverter CF02C05
OVERLOAD	Inverter CF02C05

\*All resistance readings are ± 10%

## Troubleshooting - Extended

### **SPECIFIC ERRORS AND ISSUES**

The advanced diagnostic capabilities of the electronic controls utilized on the 1, 3, and 5 Class units allow for easy and thorough troubleshooting.

Navigation of the control is the key and is explained in the CONTROL OPERATION section of the manual, along with control button layout, control function descriptions, a service mode menu and service menu selection explanations.

Verification of temperature and thermistor performance can be identified by directly viewing thermistor readings in the service mode.

Component failure issues can be identified through service mode menu #20, "Component Testing." Individual components can be switched on and off to check for both proper function of a specific component and also delivery of supply voltage to the components through the relays and DC outputs located on the relay/power board.

Included in this section are some diagnostic tips and of course, if additional help is required, please contact the U-Line Corp, "Customer Care Facility" at +1.800.779.2547 for assistance.

### **NORMAL OPERATING SOUNDS**

All models incorporate rigid foam insulated cabinets to provide high thermal efficiency and maximum sound reduction for its internal working components. Despite this technology, your model may make sounds that are unfamiliar.

Normal operating sounds may be more noticeable because of the unit's environment. Hard surfaces such as cabinets, wood, vinyl or tiled floors and paneled walls have a tendency to reflect normal appliance operating noises.

Listed below are common refrigeration components with a brief description of the normal sounds they make. NOTE: Your product may not contain all the components listed.

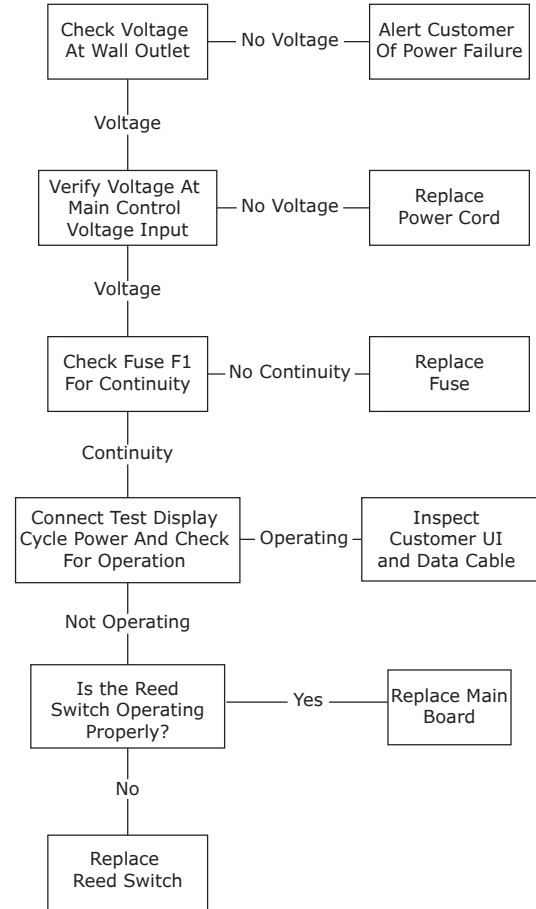
- Compressor: The compressor makes a hum or pulsing sound that may be heard when it operates.
- Evaporator: Refrigerant flowing through an evaporator may sound like boiling liquid.
- Condenser Fan: Air moving through a condenser may be heard.
- Water Valve: Running water and clicking as valve opens and closes.
- Ice Dropping: Ice falling into the bin makes a dull thud sound. The sound decreases as the bin fills with ice.
- Solenoid Valves: An occasional clicking sound may be heard as solenoid valves are operated.

## MAIN CONTROL


The main control board is very robust and is rarely the cause of system issues. It is important to fully diagnose the board for any suspected failures before attempting to remove the board for replacement or service. Follow the guidelines below to fully test and diagnose the main control.

### Power Fault

If the unit does not (or seems to not) power on, follow the flow chart below to help diagnose the issue. Before beginning it is important to first verify the unit is not simply set to sabbath mode.



## TROUBLESHOOTING GUIDE

Concern	Potential Causes	Action
No Display or Interior Lights	Unit may be in Sabbath mode	<ul style="list-style-type: none"> <li>Tap  to turn off Sabbath mode, test the door switch circuit</li> <li>Unplug unit, wait 5 seconds, plug back in. If main board does not beep, check for 120V at black and white cables on power cord.</li> </ul>
No Interior Light	Light may be set to OFF Check LED strip for power Defective door switch	Use component testing in service mode and test light circuit, manually test door switch
Condensation on exterior of unit	Is unit exposed to high humidity or high ambient temps?	Moisture will dissipate as ambient temp. and humidity levels fall. Keep exterior of unit well polished to protect surface.
No Ice Production	Is the unit getting water?	Go to component testing and turn on fill valve and verify 120V at the valve.
Low Ice Production	Dirty evaporator, dirty condenser, faulty bin thermistor	Clean the evaporator using U-Line cleaner, clean the condenser coil if needed, check bin thermistor reading in service mode.
Alert light flashing	Check error log	View errors in service mode, review error and take corrective action to resolve
Ice is too dense/ not dense enough	Dirty evaporator, water starvation	Clean the evaporator if needed, check water supply, test harvest mode, adjust ice thickness
Standing Water in Ice Bin	Drain hose is restricted, debris in bin drain hole, failed drain pump failed dump valve	Make sure drain hose run is as straight as possible. Remove any kinks or tight bends, pour 1/2 gallon of water into bin to test drain.

## Relay & DC Outputs

One of the primary functions of the main control is to operate the multiple relay and DC outputs during each cycle. Verify proper operation of these relays using the following procedure.

1. Enter "Relay Toggle" through the service menu.

### NOTICE

**Frequently toggling the compressor relay could force the compressor into overload. The compressor will automatically deactivate during an overload and will remain deactivated until the overload switch cools. This could take some time. It is important to allow the compressor at least 5 minutes off time between relay cycles.**

2. Toggle the relay. Its related component should activate / deactivate with the switching of the relay. If it does not, test component.

### Other Suspected Main Control Faults

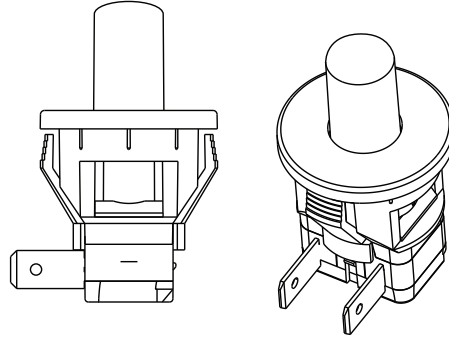
If other components have been ruled out as being faulty, but the unit continues to have operating issues, it is most likely due to a configuration error. Some configuration errors can be cleared by restoring the unit to its factory default setting. Factory defaults may be restored through the service menu. If that does not work, check that the board is programmed to the correct model in the service menu.



**Precautions must be taken while working with live electrical equipment. Be sure to follow proper safety procedures while performing tests on live systems.**

## PLUNGER SWITCH

A plunger switch is used to monitor door state. When the door is closed it comes into contact with the plunger which closes a circuit which turns the light and display off. When the door is open the plunger moves outward and opens the circuit. If the door is left open for longer than 5 minutes the switch will trigger an error code and set an audible warning.



## ERROR CODES

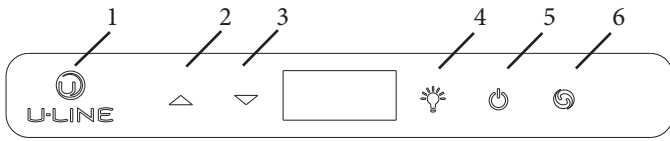
\*All errors are logged in memory.

\*Only door error is displayed on the display and has an audible signal.

- E1: Thermistor 1 open.
- E2: Thermistor 2 open.
- E3: Thermistor 3 open.
- E4: Thermistor 4 open.
- E5: Thermistor 1 shorted.
- E6: Thermistor 2 shorted.
- E7: Thermistor 3 shorted.
- E8: Thermistor 4 shorted.
- E9: Door 1 open error.
- E10: (displayed as 10): Door 2 open
- E11: (displayed as 11): Water level (tray or reservoir) high.
- E12: (displayed as 12): Water level low.
- E13: Auger error
- P1: Pump circuit open




## Control Operation-Service

### UI BUTTON LAYOUT






1. **Hidden Button**  
 -Access Service Menu  
 -No LED directly above. All LEDs turn on with button
  
2. **Up Button**  
 -Increases temperature  
 -Navigates through service menu
  
3. **Down Button**  
 -Decreases temperature  
 -Navigates through service menu
  
4. **Light Button**  
 -Activates light for 3 hours on select models  
 -Used to select items in service menu
  
5. **Power Button**  
 -Turns unit off/on
  
6. **Clean Button**  
 -Activates Clean Cycle on select models

### CONTROL FUNCTION GUIDE

FUNCTION	COMMAND	DISPLAY/OPTIONS
ON/OFF	Press  and release	Unit will immediately turn ON or OFF
Sabbath Mode	See "Sabbath Mode" section	
Silent Mode (ice production suspended for 3 hours)	Hold  and 	Display will show "3H"
Clean Mode	See "Cleaning" section	

#### SILENT MODE

In some cases it may be requested for the unit to be shut down temporarily - during meetings for example. To do this, hold the  and  for three seconds. The unit will "beep" once and show 3H on the display. This mode can be canceled by pressing and releasing . The mode will automatically be changed back to ON after three hours.

#### SHOWROOM MODE

This mode is designed to show units in a display environment. When in this mode the only functions will be the control and cabinet lights. The compressor, fans, etc. will not operate. To enter/exit this mode hold the light key and the power key for 5 seconds. The display will flash once and beep and the degree symbol will begin to flash. When the degree symbol is flashing the unit will allow the use of the control for demonstrations. The unit can be left in this mode indefinitely.

#### SERVICE MODE

This mode has options available for service diagnostics. To enter the mode hold the hidden key for 10 seconds. The display will show "0." When in this mode use the up and down arrows to select the desired option. The LIGHT key is the ENTER key and will initiate the function. If changing a setting, you must press the LIGHT key again to retain the changed setting. To exit the service mode scroll to option "0" and press the LIGHT key. After five minutes of not touching any keys the mode will also exit automatically.

## SERVICE MODE GUIDE


0. Exit
1. Thermistor 1 temperature not including offsets.
2. Thermistor 2 temperature not including offsets.
3. Thermistor 3 temperature not including offsets.
4. Thermistor 4 temperature not including offsets.
5. Thermistor 1 offset. (+/- 10)
6. Thermistor 2 offset. (+/- 10)
7. Thermistor 3 offset. (+/- 10)
8. Thermistor 4 offset. (+/- 10)
9. Thermistor 2 set point
10. Thermistor 3 set point.
11. Thermistor 4 set point.
12. Defrost Interval (0 to 99 hr)
13. Defrost duration (0 to 99 min)
14. Error Log (See Appx D)
15. Clear error log (hold light key until cleared)
16. Thermistor 1 differential (+5)
17. Thermistor 3 differential (+5)
18. Evaporator fan on delay (0 to 99 sec)
19. Evaporator fan off delay (0 to 99 sec)
20. Individual component toggle
  - Option #0 - Exit
  - Option #1 - Relay 1
  - Option #2 - Relay 2
  - Option #3 - Relay 3
  - Option #4 - Relay 4
  - Option #5 - Relay 5
  - Option #6 - Relay 6
  - Option #7 - DC Output 1
  - Option #8 - DC Output 2
  - Option #9 - DC Output 3
  - Option #10 - DC Output 4
  - Option #11 - DC Output 5
  - Option #12 - Serial output (Compressor)
21. Model number
22. Light All Segments
23. Activate Defrost/Harvest- press and hold for 3 seconds to activate defrost/harvest
24. Defaults- press and hold for 3 seconds to restore all values to factory defaults.
25. Main Software (Display only)
26. Live Log Period (frequency that data is output to diagnostics port)
27. Factory test mode (0=Off, 1=On)
28. Compressor RPM
29. Freeze time adjust (Model 54 only)
30. Harvest time adjust (Model 54 only)
31. Low temp alarm limit (Model 55 only)
32. High temp alarm limit (Model 55 only)

## SERVICE MODE GUIDE

1. **THERMISTOR 1 - BIN**  
This shows the pure thermistor reading with no offsets taken into account.
2. Does not apply to this model
3. Does not apply to this model
4. Does not apply to this model
5. **THERMISTOR 1 - OFFSET**  
Offset controls the amount of ice in bin  
Range: -10 to +10 Higher value = more ice
6. **THERMISTOR 2 - OFFSET**  
This shows the pure thermistor reading with no offsets taken into account.
7. Does not apply to this model
8. Does not apply to this model
9. Does not apply to this model
10. Does not apply to this model
11. Does not apply to this model
12. Does not apply to this model
13. Does not apply to this model
14. **VIEW ERROR LOG**  
E1: Thermistor 1 open.  
E2: Thermistor 2 open.  
E3: Thermistor 3 open.  
E4: Thermistor 4 open.  
E5: Thermistor 1 shorted.  
E6: Thermistor 2 shorted.  
E7: Thermistor 3 shorted.  
E8: Thermistor 4 shorted.  
E9: Door 1 open error.  
E10: (displayed as 10): Door 2 open  
E11: (displayed as 11): Water level (tray or reservoir) high. Generates service notice in app (Not producing enough ice to empty the reservoir)  
E12: (displayed as 12): Water level low. Generates service notice in app (Not getting enough water into the reservoir)  
E13: Auger error  
P1: Pump Circuit open Generates service notice in app (restricted drain line or failed drain pump)



15. **CLEAR ERROR LOG**

To clear errors, press and hold  (5 seconds) when CLR is flashing.

16. **THERMISTOR - 1 DIFFERENTIAL**

This number should not be adjusted

17. Does not apply to this model

18. Does not apply to this model

19. Does not apply to this model

20. **INDIVIDUAL COMPONENT TOGGLE**

Display #	Relay / Output
-----------	----------------

- Option #0 - Exit
- Option #1 - Relay 1
- Option #2 - Relay 2
- Option #3 - Relay 3
- Option #4 - Relay 4
- Option #5 - Relay 5
- Option #6 - Relay 6
- Option #7 - DC Output 1
- Option #8 - DC Output 2
- Option #9 - DC Output 3
- Option #10 - DC Output 4
- Option #11 - DC Output 5
- Option #12 - Serial output (Compressor)

**SEE RELAY / OUTPUT CHART**

21. **MODEL NUMBER INDICATOR**

Displays the two-digit model number of the specific unit. See Model list table.

22. **LIGHT ALL LED SEGMENTS**

This will illuminate all the LEDs on the display to ensure they work properly

23. **ACTIVATE DEFROST /HARVEST**

-Press and hold for 3 seconds to activate

24. **FACTORY DEFAULTS**

-Press and hold for 3 seconds to restore all values to factory defaults

25. **MAIN SOFTWARE**

26. Does not apply to this model

27. **FACTORY TEST MODEL**

0 = Off, 1 = On

28. **COMPRESSOR RPM**

29. **FREEZE TIME ADJUST (MODEL 54 ONLY)**

30. **HARVEST TIME ADJUST (MODEL 54 ONLY)**





31. **LOW TEMP ALARM LIMIT (MODEL 55 ONLY)**

32. **HIGH TEMP ALARM LIMIT (MODEL 55 ONLY)**

**MODEL LIST**

Model #	Model
1	*HBV315-***1A
2	*HBV315-***2A
3	*HBV318-***1A
4	*HBV324-***1A
5	*HBV324-***2A
6	*HBV336-***1A
7	*HBV515-***1A
8	*HBV515-***2A
9	*HBV524-***1A
10	*HBV524-***2A
11	*HCL315-***1A
12	*HCL315-***2A
13	*HDR324-***1A
14	*HDR324-***2A
15	*HFZ324-***1A
16	*HFZ324-***2A
17	*HRE315-***1A
18	*HRE315-***2A
19	*HRE318-***1A
20	*HRE324-***1A
21	*HRE324-***2A
22	*HRE336-***1A
23	*HRE515-***1A
24	*HRE515-***2A
25	*HRE524-***1A
26	*HRE524-***2A
27	*HRE324-***1A
28	*HRE324-***2A
29	*HKR524-***1A
30	*HKR524-***2A
31	*HWC315-***2A
32	*HWC315-***1A
33	*HWC318-***1A
34	*HWC324-***2A
35	*HWC324-***1A
36	*HWC515-***2A
37	*HWC515-***1A
38	*HWC524-***1A
39	*HWC524-***2A
40	*HWC336-***1A
41	*HBD324-***1A
42	*HBD324-***2A
43	*HBD524-***1A
44	*HBD524-***2A
45	*HWD324-***2A
46	*HWD324-***1A
47	*HWD524-***2A
48	*HWD524-***1A
49	*HRF124-***2A
50	*HRF124-***1A
51	*HRI124-***2A
52	*HRI124-***1A
53	Nugget 1 Class
54	Grid Ice
55	Medical Refrigerator
56	Full size
57	Nugget 3 Class

**PROGRAMMING THE UNIT TO CORRECT MODEL NUMBER**

1. Disconnect the unit from power source. 
2. Push and hold the U-Line button.
3. While still holding the U-Line button, plug the unit into the appropriate power source.
4. When the flashing digits appear (3-5 seconds), use the up and down arrow buttons to select the appropriate model number\*.  or   
\*(See Above "Model List")
5. Press the light bulb button once. 
6. The display will blink, and then will appear as the programmed display.

**Relay / Output Chart**

Program	Model	Relay 1	Relay 2	Relay 3	Relay 4	Relay 5	Relay 6	DC1	DC2	DC3	DC4	DC5
53	Nugget Ice, 1 Class	Comp/Fan	-	Dump Valve	Reservoir Fill	Auger	Water Main	Light 1	Light 2	-	-	Cond Fan
57	Nugget Ice, 3 Class	Water Main	Water Dis-pense	Dump Valve	Reservoir Fill	Auger	Cond Fan	Light 1	Light 2	-	-	Cond Fan
11	Clear Ice, 3 Class	Compressor	Water Dis-pense	Circ Pump	Water Inlet	Hot Gas Valve	Cond Fan	Light 1	Light 2	-	-	Cond Fan
01	**BV315-***1A	Compressor	-	-	-	-	-	Light 1	Light 2	Evap Fan	-	Cond Fan
03	**BV318-***1A	Compressor	-	-	-	-	-	Light 1	Light 2	Evap Fan	-	Cond Fan
04	**BV324-***1A	Compressor	-	-	-	-	-	Light 1	Light 2	Evap Fan	-	Cond Fan
06	**BV336-***1A	Compressor	Top/Left Valve	Bot/Right Valve	-	-	-	Light 1	Light 2	Evap Fan	Evap Fan 2	Cond Fan
07	**BV515-***1A	Compressor	-	-	-	-	-	Light 1	Light 2	Evap Fan	-	Cond Fan
09	**BV524-***1A	Compressor	-	-	-	-	-	Light 1	Light 2	Evap Fan	-	Cond Fan
13	**DR324-***1A	Compressor	Mullion Heater	-	-	-	-	Light 1	Light 2	Evap Fan	Evap Fan 2	Cond Fan
15	**FZ324-***1A	Compressor	-	-	-	Heater	Cond Fan	Light 1	Light 2	Evap Fan	-	Cond Fan
17	**RE315-***1A	Compressor	-	-	-	-	-	Light 1	Light 2	Evap Fan	-	Cond Fan
19	**RE318-***1A	Compressor	-	-	-	-	-	Light 1	Light 2	Evap Fan	-	Cond Fan
20	**RE324-***1A	Compressor	-	-	-	-	-	Light 1	Light 2	Evap Fan	-	Cond Fan
22	**RE336-***1A	Compressor	Top/Left Valve	Bot/Right Valve	-	-	-	Light 1	Light 2	Evap Fan	Evap Fan 2	Cond Fan
23	**RE515-***1A	Compressor	-	-	-	-	-	Light 1	Light 2	Evap Fan	-	Cond Fan
25	**RE524-***1A	Compressor	-	-	-	-	-	Light 1	Light 2	Evap Fan	-	Cond Fan
27	**RE324-***1A	Compressor	-	-	-	-	-	Light 1	Light 2	Evap Fan	-	Cond Fan
29	**KR524-***1A	Compressor	-	-	-	-	-	Light 1	Light 2	Evap Fan	-	Cond Fan
32	**WC315-***1A	Compressor	-	-	-	-	-	Light 1	Light 2	Evap Fan	-	Cond Fan
33	**WC318-***1A	Compressor	-	-	-	-	-	Light 1	Light 2	Evap Fan	-	Cond Fan
35	**WC324-***1A	Compressor	-	-	-	-	-	Light 1	Light 2	Evap Fan	-	Cond Fan
37	**WC515-***1A	Compressor	-	-	-	-	-	Light 1	Light 2	Evap Fan	-	Cond Fan
38	**WC524-***1A	Compressor	-	-	-	-	-	Light 1	Light 2	Evap Fan	-	Cond Fan
40	**WC336-***1A	Compressor	Top/Left Valve	Bot/Right Valve	-	-	-	Light 1	Light 2	Evap Fan	Evap Fan 2	Cond Fan
41	**BD324-***1A	Compressor	Top/Left Valve	Bot/Right Valve	-	-	-	Light 1	Light 2	Evap Fan	Evap Fan 2	Cond Fan
43	**BD524-***1A	Compressor	Top/Left Valve	Bot/Right Valve	-	-	-	Light 1	Light 2	Evap Fan	Evap Fan 2	Cond Fan
46	**WD324-***1A	Compressor	Top/Left Valve	Bot/Right Valve	-	-	-	Light 1	Light 2	Evap Fan	Evap Fan 2	Cond Fan
48	**WD524-***1A	Compressor	Top/Left Valve	Bot/Right Valve	-	-	-	Light 1	Light 2	Evap Fan	Evap Fan 2	Cond Fan
50	**RF124-***1A	Compressor	-	-	Pan	Defrost Heater	Cond Fan	Light 1	Light 2	Evap Fan	-	Cond Fan
52	**RI124-***1A	Compressor	Ice maker 2	Ice maker 1	Pan	Defrost Heater	Cond Fan	Light 1	Light 2	Evap Fan	-	Cond Fan

## Thermistor

Thermistors are used for various temperature readings. Thermistors provide reliable temperature readings using a resistance which varies based on surrounding temperatures. If a faulty thermistor is suspected, it may be tested using an accurate ohmmeter.

Thermistor connections must be kept clean. A thermistor connection that has become corroded can cause resistance values from the thermistor to change as they pass through a dirty connection to the board.

It is for that reason that we apply dielectric grease to all of our thermistor connections. Dielectric grease will help to keep thermistor connections clean and dry.

If you change a thermistor in the unit, please re-apply dielectric grease to the connection. If you encounter a dirty thermistor connection, you should replace the thermistor and the thermistor harness.

This unit has one thermistor located along the right hand sidewall of the ice bin. It is used to maintain the ice level in the bin.

Thermistor Resistance Data

Temp (F)	Temp (C)	Nominal Resistance (OHMS)*
-40	-40	169157
-31	-35	121795
-22	-30	88766
-13	-25	65333
-4	-20	48614
5	-15	36503
14	-10	27681
23	-5	2116
32	0	16330
41	5	12696
50	10	9951
59	15	7855
68	20	6246
77	25	5000
86	30	4029
95	35	3266
104	40	2665
113	45	2186
122	50	1803
131	55	1495
140	60	1247
149	65	1044
158	70	879
167	75	743
176	80	631

\* (+/- 5%)

# U-Line Corporation (U-Line) Limited Warranty

## One Year Limited Warranty

For one year from the date of original purchase, this warranty covers all parts and labor to repair or replace any part of the product that proves to be defective in materials or workmanship. For products installed and used for normal residential use, material cosmetic defects are included in this warranty, with coverage limited to 60 days from the date of original purchase. All service provided by U-Line under the above warranty must be performed by a U-Line factory authorized servicer, unless otherwise specified by U-Line. Service provided during normal business hours.

## Two Year Limited Warranty (5 Class Product)

For two years from the date of original purchase, this warranty covers all parts and labor to repair or replace any part of the product that proves to be defective in materials or workmanship. For products installed and used for normal residential use, material cosmetic defects are included in this warranty, with coverage limited to 60 days from the date of original purchase. All service provided by U-Line under the above warranty must be performed by a U-Line factory authorized servicer, unless otherwise specified by U-Line. Service provided during normal business hours.

## Available Second & Third Year Limited Warranty

In addition to the standard one and two year warranties outlined above, U-Line offers a one year extension of the warranties from the date of purchase, free of charge. To take advantage of this extension, you must register your product with U-Line within 60 days from the date of purchase at [u-line.com](http://u-line.com) and provide proof of purchase.

## Five Year Sealed System Limited Warranty

For five years from the date of original purchase, U-Line will repair or replace the following parts, labor not included, that prove to be defective in materials or workmanship: compressor, condenser, evaporator, drier, and all connecting tubing. All service provided by U-Line under the above warranty must be performed by a U-Line factory authorized servicer, unless otherwise specified by U-Line. Service provided during normal business hours.

## Terms

These warranties apply only to products installed in any one of the fifty states of the United States, the District of Columbia, or the ten provinces of Canada. The warranties do not cover any parts or labor to correct any defect caused by negligence, accident or improper use, maintenance, installation, service, repair, acts of God, fire, flood or other natural disasters. The product must be installed, operated, and maintained in accordance with your product's User Guide.

The remedies described above for each warranty are the only ones that U-Line will provide, either under these warranties or under any warranty arising by operation of law. U-Line will not be responsible for any consequential or incidental damages arising from the breach of these warranties or any other warranty, whether express, implied, or statutory. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. These warranties give you specific legal rights, and you may also have other rights which vary from state to state.

Any warranty that may be implied in connection with your purchase or use of the product, including any warranty of *merchantability* or any warranty *fit for a particular purpose* is limited to the duration of these warranties, and only extends to five years in duration for the parts described in the section related to the five year limited warranty above. Some states do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you.

- The warranties only apply to the original purchaser and are non-transferable.
- The second, third, and five year warranties cover products installed and used for normal residential or designated marine use only.
- The warranties apply to units operated outside only if designed for outdoor use by model and serial number.
- U-Line Commercial products are covered by the one year and 5 year limited warranties and are not eligible for the second and third year limited warranties.
- Replacement water filters, light bulbs, and other consumable parts are not covered by these warranties.
- The start of U-Line's obligation is limited to four years after the shipment date from U-Line.
- In-home instruction on how to use your product is not covered by these warranties.
- Food, beverage, and medicine loss are not covered by these warranties.
- If the product is located in an area where U-Line factory authorized service is not available, you may be responsible for a trip charge or you may be required to bring the product to a U-Line factory authorized service location at your own cost and expense.
- Units purchased after use as floor displays, and/or certified reconditioned units, are covered by the limited one year warranty only and no coverage is provided for cosmetic defects.
- Signal issues related to Wi-Fi connectivity are not covered by these warranties.

For parts and service assistance, or to find U-Line factory authorized service near you, contact U-Line:  
8900 N. 55<sup>th</sup> Street, Milwaukee, WI 53223 • [u-line.com](http://u-line.com) • [onlineservice@u-line.com](mailto:onlineservice@u-line.com) • +1.800.779.2547