# USER GUIDE & SERVICE MANUAL



Model: U-CLR1215B-00A

## Click on any section below to jump directly there

## Table of Contents

Intro

## Safety

Safety and Warning Disposal And Recycling

## Installation

Environmental Requirements Electrical Cutout Dimensions Product Dimensions Side by Side Installation Water Hookup Drain Anti-Tip Bracket General Installation Grille / Plinth Installation Door Swing Door Stop Door Adjust

## Maintenance

Cleaning Cleaning Condenser Extended Non-Use

### **Operating Instructions**

First Use Control Operation Ice Sabbath Mode Airflow and Product Loading

## Service

Troubleshooting Wire Diagram Product Liability Warranty Claims Parts System Diagnosis Guide Compressor Specifications Troubleshooting Extended Control Operation - Service Control Defaults Thermistor Defrost

#### 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<sup>®</sup> 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. U-Line - RIGHT PRODUCT. RIGHT PLACE. RIGHT TEMPERATURE<sup>®</sup>.

#### **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.

#### **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 +1.414.354.0300.
- 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 Email: sales@u-line.com u-line.com

#### **SERVICE & PARTS ASSISTANCE**

Monday - Friday 8:00 am to 4:30 pm CST T: +1.800.779.2547 Service Email: onlineservice@u-line.com Parts Email: onlineparts@u-line.com

#### CONNECT WITH US



Designed, engineered and assembled in WI, USA

## **SAFETY •** INSTALLATION & INTEGRATION • OPERATING INSTRUCTIONS • MAINTENANCE • SERVICE

# 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**

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

# **WARNING**

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.

## **SAFETY •** INSTALLATION & INTEGRATION • OPERATING INSTRUCTIONS • MAINTENANCE • SERVICE

## 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).

## SAFETY • INSTALLATION & INTEGRATION • OPERATING INSTRUCTIONS • MAINTENANCE • SERVICE

## **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

## **WARNING**

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 DIMENSIONS for recommended receptacle location.

## SAFETY • INSTALLATION & INTEGRATION • OPERATING INSTRUCTIONS • MAINTENANCE • SERVICE

## **Cutout Dimensions**

#### PREPARE SITE

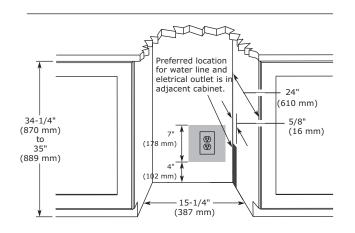
Your U-Line product has been designed for either freestanding or built-in installation. When built-in, your unit does not require additional air space for top, sides, or rear. However, the front grille must NOT be obstructed, and clearance is required for an electrical connection in the rear.



Unit can NOT be installed behind a closed cabinet door.

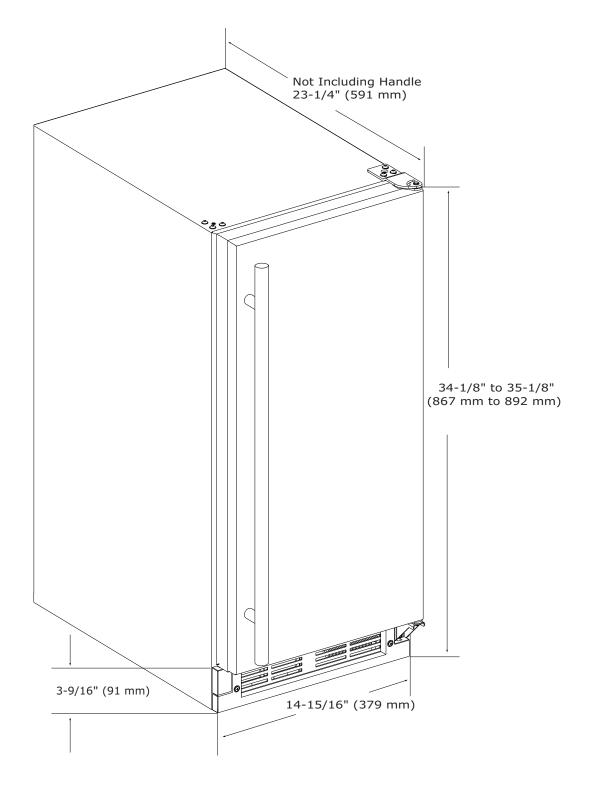
If you would like to align the face of the unit with other adjacent cabinet doors, you may need to alter the wall just behind the drain connection on the unit to accommodate the drain.

#### **CUTOUT DIMENSIONS**



SAFETY • INSTALLATION & INTEGRATION • OPERATING INSTRUCTIONS • MAINTENANCE • SERVICE

## Product Dimensions



# Side-by-Side Installation

Two units may be installed side-by-side.

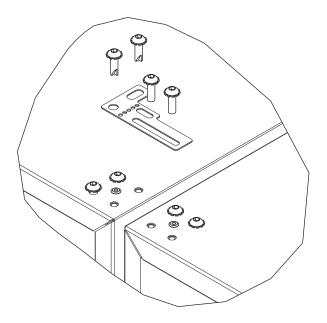
Cutout width for a side-by-side installation is the cutout dimension of a single unit times two.

No trim kit is required. However, 1/4" (6 mm) of space needs to be maintained between the units to ensure unobstructed door swing.

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

#### Side-by-Side Installation with Bracket

- 1. Slide both units out so screws on top of units are easily accessible.
- 2. Remove screws as shown below.



- Place bracket over holes and attach to unit with two screws removed in step 2 using a T-25 Torx driver. Tighten screws fully.
- 4. Gently push units into position. Be careful not to entangle the electrical cord or water line, if applicable.
- Re-check the leveling, 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.

## SAFETY • INSTALLATION & INTEGRATION • OPERATING INSTRUCTIONS • MAINTENANCE • SERVICE

## Water Hookup

#### PREPARE PLUMBING

Please use the braided stainless steel water supply line which comes attached. The water line is fitted with a standard 1/4" (6.35 mm) compression fitting.

## WARNING

Prior to installation, determine if this product contains a gravity style drain or factory installed drain pump. Products without a drain pump may only use a gravity style drain. Failure to connect water supply or drain line connections properly may result in water leakage, personal injury, and/or property damage. Disconnect power and turn off water to the unit before attempting to alter these connections. These connections are the responsibility of the owner and must be connected per local plumbing code. If you are uncertain of how to safely and properly install this product, contact a licensed plumber.

#### Water Supply Connection

# 

Review, obey, and understand the local plumbing codes before you install your unit. Connect to the cold water supply. The water pressure should be between 20 and 120 psi (138 and 827 kPa). The water line <u>MUST</u> have a shutoff valve on the supply line.

# 

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.

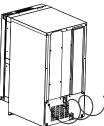
Do not use tape or joint compound when attaching a braided flexible water supply line that includes a rubber gasket. The gasket provides an adequate seal – other materials could cause blockage of the valve.

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

# 

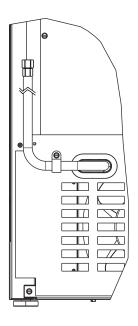
Turn off water supply and disconnect electrical supply to unit prior to installation.

- 1. Turn off water supply and disconnect electrical supply to product prior to attempting installation.
- 2. Locate the desired cold water supply location.
- Locate braided stainless steel water supply line and connect to your cold water supply. The water line should be looped into 2 coils. This will allow the unit to be removed for cleaning and servicing. However, make certain that the tubing is not pinched or damaged during installation.



### SAFETY • INSTALLATION & INTEGRATION • OPERATING INSTRUCTIONS • MAINTENANCE • SERVICE

- 4. Turn on water and check for leaks.
- 5. Route water supply line in cable clamp and secure with screw.



## SAFETY • INSTALLATION & INTEGRATION • OPERATING INSTRUCTIONS • MAINTENANCE • SERVICE

# Drain

Model numbers including "-00" or "-07" do not include a factory installed drain pump.

Model numbers including "-40" or "-47" 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.

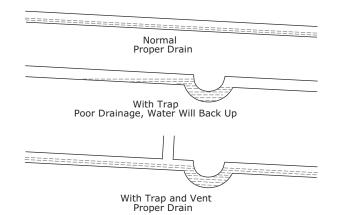
#### NOTICE

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.

#### **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).

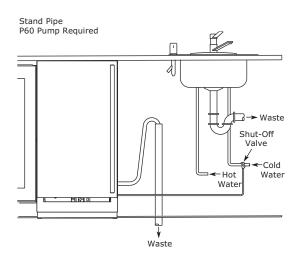
## SAFETY • INSTALLATION & INTEGRATION • OPERATING INSTRUCTIONS • MAINTENANCE • SERVICE

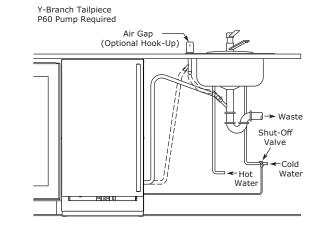
#### FACTORY INSTALLED DRAIN PUMP

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.

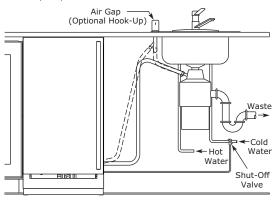




#### NOTICE

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.

Disposal Assembly P60 Pump Required

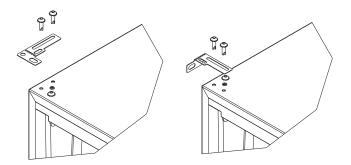


## SAFETY • INSTALLATION & INTEGRATION • OPERATING INSTRUCTIONS • MAINTENANCE • SERVICE

# Anti-Tip Bracket

- 1. Slide unit out so screws on top of unit are easily accessible.
- 2. Remove the two screws from the opposite side of the hinge assembly using a T-25 Torx driver (see below).

NOTE: 1224 models shown with four screw. 1215 models only have three screws, but same screws are used in both applications.



- Place bracket (part #14154) over holes and attach to unit with two screws removed in step 2 using a T-25 Torx driver. Tighten screws fully.
- 4. Gently push unit into position. Be careful not to entangle the electrical cord or water line, if applicable.
- 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 into adjoining surface.

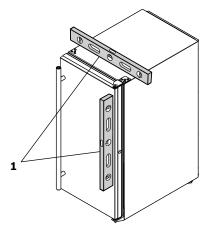
## SAFETY • INSTALLATION & INTEGRATION • OPERATING INSTRUCTIONS • MAINTENANCE • SERVICE

## General Installation

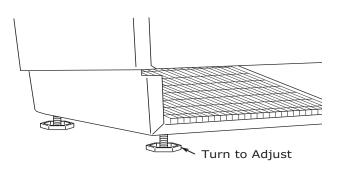
### LEVELING INFORMATION

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 until the unit is level.

### 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 1/8" (3 mm) less than the 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.
- Re-check the leveling, 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.
- 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.

## SAFETY • INSTALLATION & INTEGRATION • OPERATING INSTRUCTIONS • MAINTENANCE • SERVICE

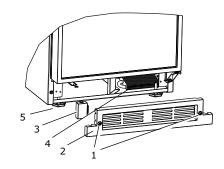
Grille - Plinth Installation

### **REMOVING AND INSTALLING GRILLE**



Disconnect electric power to the unit before removing the grille.

When using the unit, the grille (plinth strip/base fascia) must be installed.



**WARNING** 

DO NOT touch the condenser fins (4). The condenser fins are SHARP and can be easily damaged.

#### **Removing the grille**

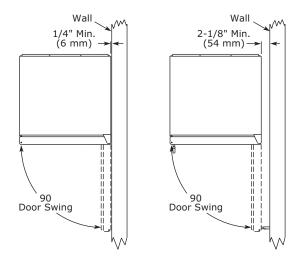
- 1. Disconnect power to the unit.
- 2. Loosen the two screws (1).
- 3. Remove grille (2) and grille cap (3) from unit.

#### Installing the grille

- Make sure grille cap (3) is behind grille in slots (2) provided in grille before attaching grille to unit.
- 2. Align cabinet and grille holes and secure, but do not over tighten grille screws (1).
- 3. Reconnect power to the unit.

### SAFETY • INSTALLATION & INTEGRATION • OPERATING INSTRUCTIONS • MAINTENANCE • SERVICE

# Door Swing



Units have a zero clearance for the door to open  $90^\circ,$  when installed adjacent to cabinets.

Stainless Steel and black and white models require 2-1/8" (54 mm) door clearance to accommodate the handle if installed next to a wall.

Integrated models require 1/4" (6 mm) clearance if installed next to a wall. Allow for additional space for any knobs or pulls installed on the integrated panel/frame.

## SAFETY • INSTALLATION & INTEGRATION • OPERATING INSTRUCTIONS • MAINTENANCE • SERVICE

# Door Stop

Your U-Line unit was shipped to you with the optional 90° pin(s). (Models that are 15" wide include 1 pin. Models that are 24" wide include 2 pins.) The unit's door will open freely without a fixed opening angle limitation. If you would like the door stop at 90° follow these instructions.

### NOTICE

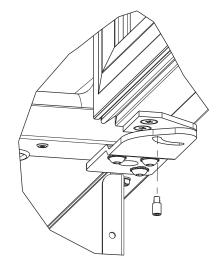
The pin is designed to stop the door at 90° under normal operating conditions. It is not designed for excessive force. Do not use the door to move the unit in/out of the cutout during installation.

If your unit is already undercounter, it might need to be moved out/forward to access the hinge.

- 1. Locate the threaded pin.
- With the door between 0° (closed) and 90° and using a 3/32" hex driver, install the threaded pin through the hinge.

3. On 24" models, a second pin is included for the bottom hinge. Repeat steps above for second hinge.

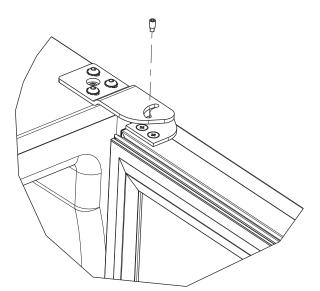
NOTE: Threaded pin will be inserted from the bottom.



4. Carefully slide your unit back in place.

## NOTICE

The pin can be removed to return the door swing back to its original state by unscrewing the threaded pin.



## SAFETY • INSTALLATION & INTEGRATION • OPERATING INSTRUCTIONS • MAINTENANCE • SERVICE

## Door Adjustments

#### DOOR ALIGNMENT AND ADJUSTMENT

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

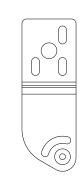
#### To align and adjust the door:

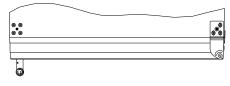
- 1. Loosen (do not remove) top and bottom hinge screws.
- 2. Align door squarely with cabinet.
- 3. Make sure gasket is firmly in contact with cabinet all the way around the door (no gaps).
- 4. Tighten bottom hinge screws.
- 5. Tighten top hinge screws.

#### **REVERSING THE DOOR**

Location of the unit may make it desirable to mount the door on the opposite side of the cabinet.

Locate top hinge supplied in literature package. The hinge hardware and bottom hinge will be removed and reinstalled on the opposite side of the cabinet.





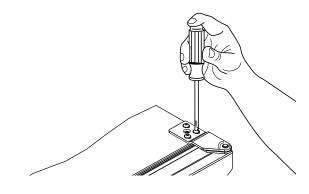
#### TO REVERSE THE DOOR

#### **Remove grille:**

Remove the grille (see GRILLE-PLINTH INSTALLATION section of this guide).

#### Remove top hinge and door:

- 1. Hold door to keep it from falling.
- 2. Remove top hinge from cabinet by removing three screws. Set aside and save for possible furture use.

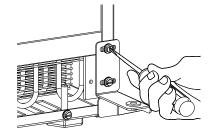


- Remove door by tilting forward and lifting door off bottom hinge. Retain shoulder washer; it will be reused.
- Remove four screws from hinge holes on the opposite side. Reinstall into holes where the hinge was removed. Take care not to scratch cabinet.

### SAFETY • INSTALLATION & INTEGRATION • OPERATING INSTRUCTIONS • MAINTENANCE • SERVICE

#### **Remove bottom hinge:**

1. Remove bottom hinge from cabinet.



2. Remove corresponding screws on opposite side of cabinet. On some models there may be a nut behind one or both screws on either side.

#### Install bottom hinge:

Install two or three screws, depending on model. Replace nuts if used.

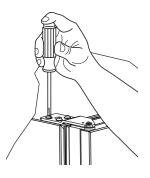


#### Prepare door for reinstallation:

- 1. Rotate door 180° to reverse.
- 2. Remove gasket center strip and apply in-line with new opening (approximately 2" lower).

#### Install top hinge and door:

1. Use alternate hinge supplied with unit and reinstall the screws.



- 2. Hold door to keep it from falling.
- 3. Lift the door on to the bottom hinge.
- 4. Align flat edge of the hinge with the outer edge of the unit.
- 5. Tighten three screws.

#### Align and adjust the door:

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

#### Install grille:

Install the grille.

# First Use

All U-Line controls are preset at the factory. Initial startup requires no adjustments. See CONTROL OPERATION section for more details.

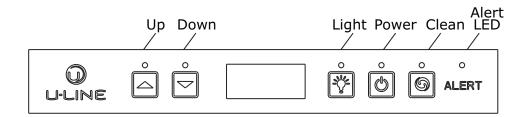
### NOTICE

U-Line recommends discarding the ice produced during the first two to three hours of operation to avoid possible dirt or scale that may dislodge from the water line.

When plugged in, the unit will begin operating under the factory default settings. If the unit was turned off during installation, simply press and the unit will immediately switch on. To turn the unit off, press and release.

SAFETY • INSTALLATION & INTEGRATION • **OPERATING INSTRUCTIONS** • MAINTENANCE • SERVICE

# Control Operation



#### CONTROL FUNCTION GUIDE

FUNCTION	COMMAND	DISPLAY/OPTIONS
ON/OFF	Press 🕑 and release	Unit will immediately turn ON or OFF.
Adjust ice thickness	See "Ice" section	
Sabbath Mode	See "Sabbath Mode" section	
Silent Mode (ice production suspended for 3 hours)	Hold 🔄 and 🕑	Display will show " <b>OF</b> F".
Clean Mode	Hold 🜀 for five seconds	

### SAFETY • INSTALLATION & INTEGRATION • OPERATING INSTRUCTIONS • MAINTENANCE • SERVICE

## Ice

#### ICE CUBE THICKNESS ADJUSTMENT

#### NOTICE

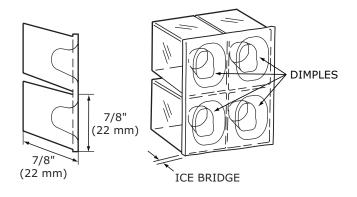
Ice thickness adjustment should only be made one increment at a time. Allow ice maker production to stabilize for 24 hours before rechecking ice thickness.

Ice is produced in layers resulting in a clear cube. Ice in bin may develop surface frost which disappears when cube is placed in liquid.

Ice cubes in any given batch will vary, so it is necessary to choose cubes from the sample area for comparison when making adjustments.

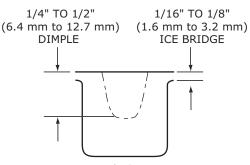
The ice cube thickness is factory set for best overall performance. The factory setting is designed to maintain an ice bridge of approximately 1/16" to 1/8" (1.6 mm to 3.2 mm) under normal conditions, resulting in a dimple of approximately 1/4" to 1/2" (6.4 mm to 12.7 mm) in depth. A fuller cube with less of a dimple results in a thicker ice bridge. As the ice bridge becomes thicker, the tendency for the cubes to stay together as a slab increases. A bridge thicker than 1/8" (3.2 mm) may cause cubes to overfill the ice bucket.

32 ice cubes are formed on a 4 x 8 slab during each cycle. Each cycle takes approximately 15-20 minutes at the default cube thickness (0).

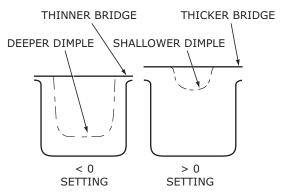


Your clear ice machine is pre-set to produce ice between the optimal dimensions illustrated below:









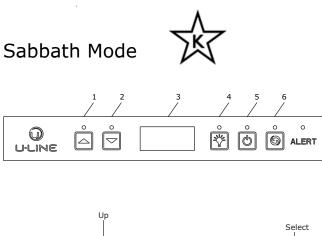
Ice thickness adjustments are made using the control panel as follows:

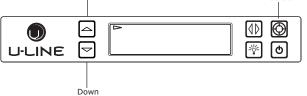
- 1. To enter the thickness adjustment mode:
  - Press and hold ☐ for 5 seconds.
  - The display will switch to "0" to confirm the thickness adjustment mode has been selected.

The factory setting is "0". Use  $\square$  to raise the setting and thicken the ice bridge, or  $\square$  to lower the setting to thin the ice bridge.

Ice cubes in any given batch will vary, so it is necessary to choose cubes from the sample area for comparison when making adjustments.

SAFETY • INSTALLATION & INTEGRATION • OPERATING INSTRUCTIONS • MAINTENANCE • SERVICE





U-Line Clear Ice Machine models are Star-K certified and can be used during the Sabbath. View a full list of Star-K certified U-Line units at www.star-k.org.

To prepare the unit for the Sabbath:

- 1. Press () and hold the until the unit turns off.
- No new ice will form when the unit is off, but previously made ice will still be accessible/present for over 24 hours. Pump equipped models will continue to remove water as needed even if the unit is off.

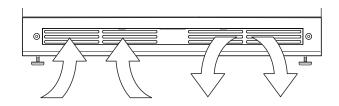
Sabbath Mode remains active until is pressed again and the unit turns on.

SAFETY • INSTALLATION & INTEGRATION • OPERATING INSTRUCTIONS • MAINTENANCE • SERVICE

## 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.



### SAFETY • INSTALLATION & INTEGRATION • OPERATING INSTRUCTIONS • MAINTENANCE • SERVICE

# 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<sup>®</sup> 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 surfaces (this includes glass, tile and counter cleaners).

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

Using abrasive pads such as ScotchBrite<sup>™</sup> 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.

#### **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 water 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.

### CLEAR ICE MACHINE CLEANING CYCLE

Your U-Line clear ice machine has an automatic clean alert function. Cleaning cycles should be run as notified. Otherwise, to maintain operational efficiency the unit should be cleaned every three months. Depending on water conditions, more frequent cleaning may be necessary. If the ice machine requires more frequent cleaning, consult a plumber to test the water quality and recommend appropriate treatment.

# 

Wear rubber gloves and safety goggles and/or face shield when handling Ice Machine Cleaner.

### SAFETY • INSTALLATION & INTEGRATION • OPERATING INSTRUCTIONS • MAINTENANCE • SERVICE

#### NOTICE

Use only U-Line Clear Ice Machine Cleaner (80-55667-00), available for purchase from *u-line.com* or your dealer. It is a violation of federal law to use this solution in a manner inconsistent with its labeling. Use of any other cleaner can ruin the finish of the evaporator and will void the warranty. Read and understand all labels printed on the package before use.

U-Line Clear Ice Machine Cleaner is used to remove lime scale and other mineral deposits. Refer to the following steps to initiate the self-cleaning cycle.

# 

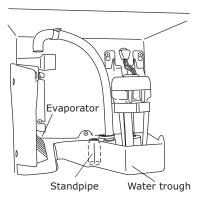
### Never use anything to force ice from the evaporator. Damage may result.

 Turn the ice machine off and allow any ice to melt off of the evaporator.

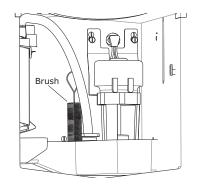


- 2. Remove all ice from the storage bin.
- 3. Remove evaporator cover.
- Remove the standpipe by lifting it up while using a slight back and forth motion to loosen it from the drain hole. The water in the reservoir will flow down the drain.

5. Re-install the standpipe into the water trough.



- 6. Clean the Interior Bin as follows:
  - Dilute 1-2 oz. of Clear Ice Machine Cleaner into two quarts of water.
  - Using a sponge or cloth, clean interior of ice bin, tubing and door. This cleaner will remove all mineral deposits and other contaminants from the surfaces.
  - Using a bottle brush, clean out the trough drain tube and pump tubing where needed.



- 7. Turn unit on by pressing  $\bigcirc$ .
- Place the unit into CLEAN mode by holding for 5 seconds.

### SAFETY • INSTALLATION & INTEGRATION • OPERATING INSTRUCTIONS • MAINTENANCE • SERVICE

- When water begins flowing over the evaporator (approximately 3 minutes), pour 1-2 oz. of Clear Ice Machine Cleaner into the water trough. The cleaning process will last approximately 45 minutes.
- 10.Dilute 1 tablespoon bleach in 1 gallon of warm water. Apply this solution to the entire inside of the storage area. Then rinse thoroughly with water.

The unit will resume operation approximately 15 minutes after the automated cleaning process is completed. The water fill valve will energize, fill the water reservoir, and shut-off after three minutes. The compressor begins to operate and water flows over the evaporator assembly (ice mold). Initially, the water flow may not be uniform, causing uneven sized cubes or water to spill into the ice storage bin. This is a normal situation that will correct itself within the first 24 hours of operation.

#### NOTICE

Discard all ice produced in the first harvest.

Should power to the unit be interrupted during the self-clean cycle, it will be necessary to repeat the complete cleaning cycle after power is restored.

### **REFRESH KIT**

Due to variations in water quality or inadequate maintenance your unit may become excessively coated in lime scale or calcium. U-Line offers a cost effective refresh kit which replaces many interior components and will return your unit to like new condition. Refresh kits may be ordered from your local distributor and installed by your local service company. For information on your local distributor or service company please visit www.u-line.com.

## SAFETY • INSTALLATION & INTEGRATION • OPERATING INSTRUCTIONS • MAINTENANCE • SERVICE

# **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.

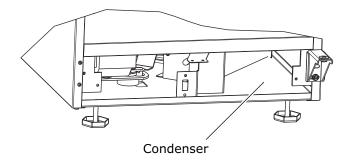
## **WARNING**

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-PLINTH INSTALLATION).
- 2. Clean the condenser coil using a soft brush or vacuum cleaner.
- 3. Install the grille.



### SAFETY • INSTALLATION & INTEGRATION • OPERATING INSTRUCTIONS • MAINTENANCE • SERVICE

# 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.
- 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.

### MACHINES WITH BUILT-IN DRAIN PUMPS

If your machine is equipped with a P60 drain pump, it 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 414.354.0300.



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

Do not put anti-freeze in your unit.

## SAFETY • INSTALLATION & INTEGRATION • OPERATING INSTRUCTIONS • MAINTENANCE • SERVICE

# 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 +1.414.354.0300.

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.
- Running Water: As your unit continues to produce ice you will hear water flowing into the collection chambers and running over the evaporator.

#### **TROUBLESHOOTING GUIDE**

## 

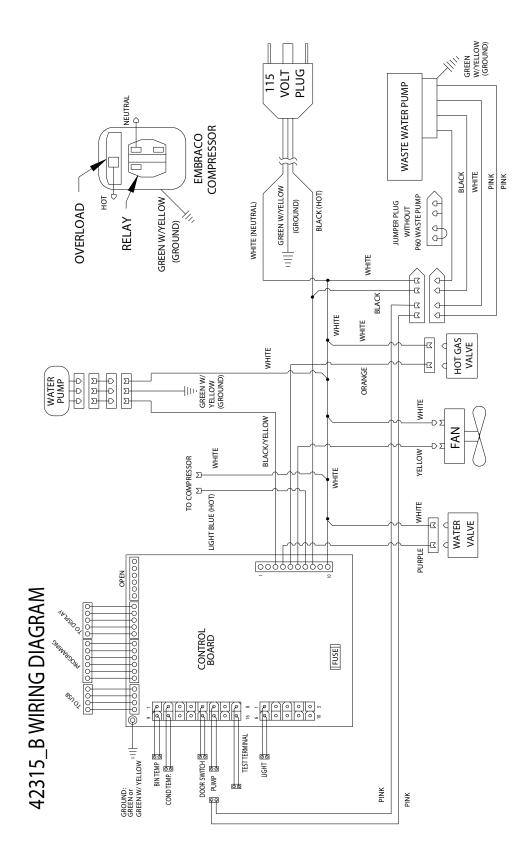
### ELECTROCUTION HAZARD. Never attempt to repair or perform maintenance on the unit before disconnecting the main electrical power.

Troubleshooting - What to check when problems occur:

Problem	Possible Cause and Remedy	
Unit Does Not Operate. Electronic Display Blank.	No electrical supply. Plug unit in or check circuit breaker.	
Display Showing Error Code.	If display shows error 10E or ER, check to make sure door is sealing correctly. Make sure to close door completely. If sealing the door does not clear the error, contact U-Line service for more information.	
Unit Develops Condensation on External Surfaces.	The unit is exposed to excessive humidity. Moisture will dissipate as humidity levels decrease.	
Poor Ice Quality.	Unit may not be level. Check if unit is level. Ice maker system may be dirty. Clean the ice maker.	
No Ice Production.	Ensure water is being supplied to the unit. Verify the ice making unit is turned on.	
Not Enough Ice.	Ensure the condenser coil is clean and free of any dirt or lint build-up.	
Water in Ice Bin.	Drain may be restricted, ensure drain is free of foreign debris.	

SAFETY • INSTALLATION & INTEGRATION • OPERATING INSTRUCTIONS • MAINTENANCE • SERVICE

# Wire Diagram



## SAFETY • INSTALLATION & INTEGRATION • OPERATING INSTRUCTIONS • MAINTENANCE • SERVICE

# **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: +1.414.354.354.5696 Website: <u>www.u-line.com</u>

#### Right product. Right place. Right temperature Since 1962.

## SAFETY • INSTALLATION & INTEGRATION • OPERATING INSTRUCTIONS • MAINTENANCE • SERVICE

# Warranty Claims

The following information defines the parameters for filing a warranty claim:

- Valid serial number needed
- Valid model number needed
- Narda (or equivalent) form or submitted online at <u>www.u-line.com</u>
- 60 day submittal deadline from date of completed service
- Only one repair or unit per warranty claim
- Refrigerant should be labeled and included on the labor submittal
- Door and water level adjustments are covered 30 days from install date.

Serial Number Requirements:



A typical serial number is shown above. The first two digits of the first segment, 14, represents the production year. The number between the dashes, 12, represents the production month. In most cases, warranty status can be verified by the production date information within the serial number.

• Alternatively, a Proof of Purchase (or equivalent) may submitted with the warranty claim to document

warranty status. We also accept the following information to verify warranty status:

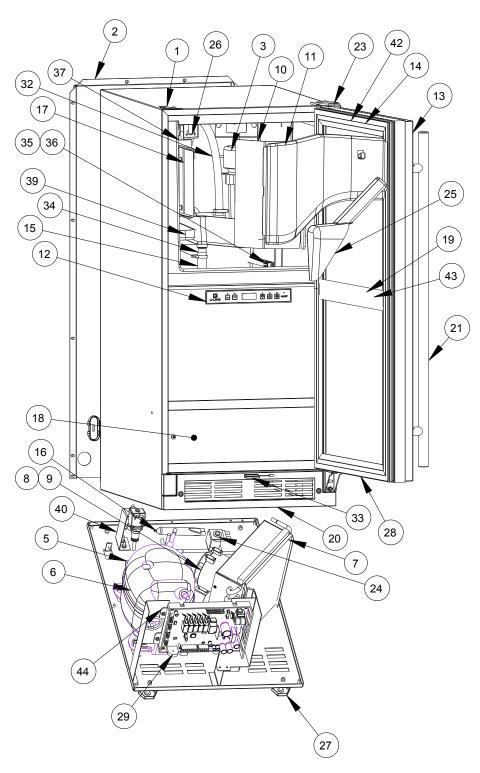
- New Construction Occupancy Documents
- Closing Paperwork
- Final Billing Remodel

Noting all of the following on the warranty claim will be considered proof of purchase, hard copy will not be required:

- Name of the selling Dealer
- Date of purchase/installation
- Order or Invoice number (if available)
- Description of document reviewed (i.e. store receipt, closing paperwork, etc)

Parts and labor claims are paid separately. Indicate part numbers and description for parts used in the warranty repair. Include the purchase invoice and name of the parts supplier used to procure the parts. SAFETY • INSTALLATION & INTEGRATION • OPERATING INSTRUCTIONS • MAINTENANCE • SERVICE

Parts



U-CLR1215B-00A			
Item		U-Line P/N	
1	Anti tip brackets w/screws	80-54239-00	
2	Back panel	80-54335-00	
3	Circulation pump	80-54137-00	
4	Cleaner	80-54081-00	
5	Compressor electricals only	80-54141-00	
6	Compressor w/electricals	80-54140-00	
7	Condenser assembly	80-54079-00	
8	Condenser fan motor	80-54138-00	
9	Condenser fan blade	80-54066-00	
10	Cover pump, white	80-54333-00	
11	Cover w/ hook, white	80-54332-00	
12	Display module	80-54493-00	
13	Door assembly w/hinges	80-54350-00	
14	Gasket, door	80-54511-00	
15	Drain tube, clr	80-54074-00	
16	Drier	80-54055-00	
17	Evaporator assembly	80-54349-00	
18	Front panel w/screws	80-54344-00	
19	Gasket, Horizontal	80-54562-00	
20	Grille w/ screws	80-54230-00	
21	Handle w/logo	80-54214-00	
22	Hi temp thermistor	80-54070-00	
23	Hinges	80-54488-00	
24	Hot gas valve and coil	80-54169-00	
25	Ice scoop, clr	80-54080-00	
26	LED light strip and cover assy	80-54000-00	
27	Leg Levelers (4)	80-54201-00	
28	Magnet w/bkt and screws (2)	80-54250-00	
29	Main board w/ inst sheet	80-54297-00	
30	Packaging	80-54238-00	
31	Power cord	80-54341-00	
32	Preformed dispersion tube	80-54343-00	
33	Reed switch	80-54134-00	
34	Stand pipe	80-54077-00	
35	Thermistor (1 pc)	80-54006-00	
36	Thermistor cover and pin	80-54237-00	
37	Water dispersing receptacle	80-54078-00	
38	Water line assembly	80-54068-00	
39	Water trough, white	80-54334-00	
40	Water valve assembly	80-54139-00	
41	Wire harness, board	80-54567-00	
42	Gasket	80-54235-00	
43	Gasket, Horizontal	80-54391-00	
44		80-54569-00	
42 43	Gasket	80-54235 80-54397	

# System Diagnosis Guide

#### **REFRIGERATION SYSTEM DIAGNOSIS GUIDE**

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

## SAFETY • INSTALLATION & INTEGRATION • OPERATING INSTRUCTIONS • MAINTENANCE • SERVICE

# **Compressor Specifications**

# **DANGER**

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.

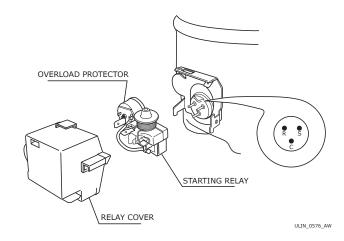
Handle circuit boards carefully and avoid touching components.

To measure the start winding resistance, measure across the C and S pins.

To measure the run winding resistance, measure across the C and R pins.

Also check S to R and you should get the sum of the run and start windings.

To ensure the windings are not shorted, check the S and R to ground.



	EMU30HSC
Refrigerant	R134a
Voltage	115 VAC
Frequency	60 Hz
Run Cap	12µF/180 VAC
Start Winding	7.0 Ohm at 77°F
Run Winding	8.4 Ohm at 77°F
LRA	5.5 A
FLA	1.0 A
Starting Device	8EA14C
Overload	4TM197NFBYY-53

\* All resistance readings are  $\pm 10\%$ 

## SAFETY • INSTALLATION & INTEGRATION • OPERATING INSTRUCTIONS • MAINTENANCE • SERVICE

# Troubleshooting - Extended

### SPECIFIC ERRORS AND ISSUES

The technically advanced diagnostic capabilities of the electronic controls utilized on the 1200 and 2200 series units allows 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 #19, "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 +1.414.354.0300 for assistance.

#### TROUBLESHOOTING GUIDE.

Concern	Potential Causes	Suggested Remedy				
No Display or Interior Lights	Unit may be in Sabbath mode	Hold ₩ for 5 seconds to turn off Sabbath mode, test the door switch circuit				
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 temperature and humidity levels fall. Keep exterior of unit well polished to protect surface.				
No Ice Production	Is unit level, is the unit getting water, is circulation pump working?	Monitor freeze cycle to assure proper water distribution over evaporator. Go to component testing and turn off fill valve, level unit needed.				
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.				
Ice Does Not Fall Off During Harvest	Dirty evaporator, unit not level, faulty hot gas valve	Clean the evaporator if needed, level unit if needed, test function of hot gas bypass valve using relay toggle in service mode.				
Error Message in Digital Display	Check error log	View errors in service mode, review error and take corrective action to resolve.				
Ice is Too Thick/ Thin	Dirty evaporator, water starvation, faulty hot gas valve	Clean 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	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.				
Poor Ice Quality	Is unit level, is the evaporator dirty?	Monitor freeze mode to watch water distribution over evaporator, level unit if needed, clean evaporator if needed.				

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

#### **REFRIGERATION SYSTEM DIAGNOSIS GUIDE**

#### ERRORS

\*All errors are logged in memory.

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

\*For clear ice models, pump error is displayed via alert light with no audible alerts.

E1:Thermistor 1 open.

E2:Thermistor 2 open.

E3:Thermistor 3 open (Does not apply to this model).

**E4:**Thermistor 4 open (Does not apply to this model).

**E5:**Thermistor 1 shorted.

**E6:**Thermistor 2 shorted.

**E7:**Thermistor 3 shorted (Does not apply to this model).

**E8:**Thermistor 4 shorted (Does not apply to this model).

E9:Door open error.

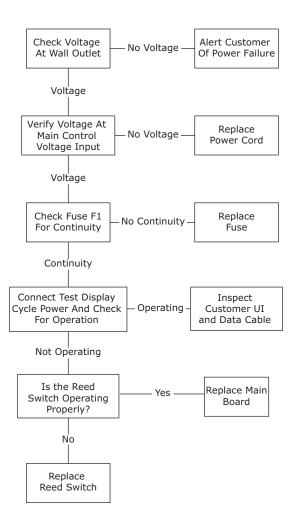
Pi:Pump Circuit open.

#### 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.



#### **Testing The Main Control**

If the main control is suspected of being faulty, the following procedure should be performed to verify main control for functionality.

#### **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.

 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. Configuration errors can be cleared by restoring the unit to its factory default setting. Factory defaults may be restored through 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.

#### THERMISTORS

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. In an ice water bath (32°F) resistance should measure 16.1 kilohms.

5K OHMS @ 77° 16.1K OHMS - 32°F ambient

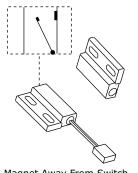
## SAFETY • INSTALLATION & INTEGRATION • OPERATING INSTRUCTIONS • MAINTENANCE • SERVICE

#### THERMISTOR FAILURE

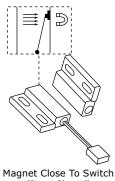
Always assure that all thermistor connections are clean and dry. Whenever opening a thermistor connection be sure to apply a fresh dab of die electric grease.

#### **REED SWITCH**

A reed switch is used to monitor door state. When the door is closed magnetic force pulls the reed to its contact and closes the circuit which turns the light and display off. When the door is open the reed pulls away from the contact 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.







(Door Closed) (Switch Closed)

## SAFETY • INSTALLATION & INTEGRATION • OPERATING INSTRUCTIONS • MAINTENANCE • SERVICE

# Control Operation - Service

## **UI BUTTON LAYOUT**



### 1. Hidden Button

-Accesses Service Menu -No LED

### 2. Up Button

-Increases temperature -Navigates through service menu

### 3. Down Button

-Decreases temperature

-Navigates through service menu

-LED activated with button activation

#### 4. Light Button

-Activates light for 3 hours on select models -Used to select items in service menu -LED activated with button activation

#### 5. Power Button

-Turns unit off/on -LED activated with button activation (only turning unit off)

#### 6. Clean Button

-Activates Clean Cycle on CLR models -LED activated with button activation

#### 7. Alert LED

-No button -Illuminates with Hidden Button -Illuminates with required displayed alerts

#### CONTROL QUICK GUIDE

#### **CONTROL FUNCTION GUIDE**

FUNCTION	COMMAND	DISPLAY/OPTIONS
ON/OFF	Push and release the power key to power the unit ON or OFF	
View bin thermistor set point	Push and release the UP and DOWN icons, the bin thermistor set point will display	
Toggle display, F/C	Push and hold the UP and DOWN icons for 5 seconds. Repeat to change back.	
Turn on showroom mode	Hold light and power key for 5 seconds to turn on showroom mode. To exit showroom mode, interrupt power to the unit.	
Service mode	Push and hold the hidden icon for ten seconds, use the arrow icons to scroll through the service menu	
Silent mode	Hold the power and down arrow icon for 5 seconds, the unit will shut down for 3 hours. Repeat the prompt to exit.	
Clean cycle	Push and hold the clean icon for 5 seconds	
Ice thickness adjust	Hold the up arrow icon for 5 seconds	

#### **ELECTRONIC CONTROL DESCRIPTIONS**

Except as noted, these functions are available on all models.

#### 1. ON/OFF

The ON/OFF mode allows the unit to be turned on and off via the keypad. Push/release power key to toggle ON/OFF. Internal lights will go off with power.

#### NOTICE

This does not apply to ADA24R glass door units. The light and display are always off when the glass door is closed.

#### 2. VIEWING BIN THERMISTOR SET POINT

To view the set point temperature at which the bin thermistor will stop ice production, push and release the up and down arrow icons. Adjustments to this can be made in the service mode.

# 3. CHANGING FROM FAHRENHEIT TO CELSIUS

To change the displayed temperature from °F to °C,

hold the up and down arrows for 5 seconds. Repeat to change back.

#### 4. 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 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. To exit this mode, interrupt power to the unit.

#### 5. SERVICE MODE

This mode has 28 different 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 enter a 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.

### SAFETY • INSTALLATION & INTEGRATION • OPERATING INSTRUCTIONS • MAINTENANCE • SERVICE

#### 6. SILENT MODE

In some cases it may be requested for the unit to be shut down for short periods during meetings for example. To do this hold the down arrow and press the up arrow three times. The unit will beep once and show OFF on the display. This mode can be canceled by removing power from the unit or turning it on via the display. The mode will automatically be changed back to ON after three hours. Only available on CLR2160 and CLRCO2175.

#### 7. CLEAN CYCLE

To enter the self-cleaning cycle hold down the clean button for five seconds. The unit will beep once and the display will show CL. Follow the cleaning instructions. At the conclusion of this mode (1 hour) the display will revert to Ice/ice production and the unit will resume normal operation. To cancel this mode turn the unit off via the keypad. Only available on CLR2160 AND 3018CLR.

#### 8. ICE THICKNESS ADJUST

This will allow addition or subtraction of up to five minutes from the ice-making cycle. To enter this mode hold the up arrow for five seconds. The unit will beep once and display the current ice thickness. To adjust up or down use the arrows. Press LIGHT key when completed. Please refer to the ice thickness section of the manual to view proper cube sizes and recommendations.

# Service Mode Quick Guide

Number	Service Mode Menu Item	To Navigate/Access			
1	View thermistor #1 cabinet temp no offsets	Use up/down to access and light bulb key to view			
2	View thermistor #2 evaporator no offsets	Use up/down to access and light bulb key to view			
3	View thermistor #3 freezer no offsets	Does not apply to this model			
4	View thermistor #4 ice maker no offsets	Does not apply to this model			
5	Adjust thermistor #1 offset	Call tech line for assistance 800 779 2547			
6	Adjust thermistor #2 offset	Call tech line for assistance 800 779 2547			
7	Adjust thermistor #3 offset	Does not apply to this model			
8	Adjust thermistor #4 offset	Does not apply to this model			
9	View thermistor #2 set point no offsets	Use up/down to access and light bulb key to view			
10	View thermistor #3 set point no offsets	Does not apply to this model			
11	View thermistor #4 set point no offsets	Does not apply to this model			
12	Adjust defrost interval 3 to 12 hours	Does not apply to this model			
13	Adjust defrost duration 0 to 99 minutes	Does not apply to this model			
14	Display error log	Use up/down to access and light bulb key to view			
15	Clear error log	Use up/down to access and light bulb key to clear			
16	View thermistor #1 differential	Do not make any changes to this			
17	Fan on delay (start of cooling cycle)	Does not apply to this model			
18	Fan off delay (after cooling cycle stops)	Does not apply to this model			
19	Component testing (see service mode)	Use up/down to access, light bulb icon to toggle on/off			
20	Display programmed model number	Use up/down to access, light bulb icon to display			
21	Light all LED segments of display (test)	Use up/down to access and light bulb key to view			
22	Display defrost cycles in last 24 hours	Does not apply to this model			
23	Displays last/current compressor run time	Use up/down to access and light bulb key to view			
24	Activate harvest cycle	Use up/down to access and light bulb key to start			
25	Restore factory defaults	Use up/down to access and light bulb key to restore			
26	Display control board software version	Use up/down to access and light bulb key to view			
27	Display user interface software version	Use up/down to access and light bulb key to view			
28	Monitor unit function through laptop/PC	Call tech line for assistance 800 779 2547			
0	To exit service mode	Use up/down to scroll and light bulb icon to exit			

## SAFETY • INSTALLATION & INTEGRATION • OPERATING INSTRUCTIONS • MAINTENANCE • SERVICE

### SERVICE MODE QUICK GUIDE

### 1. THERMISTOR 1 — TEMPERATURE

This will show the pure thermistor reading with no offsets taken into account. When placed in ice water this thermistor should read 32°F in this menu option.

## 2. THERMISTOR 2

View thermistor #2 temperature minus the offset.

- 3. Does not apply to this model.
- 4. Does not apply to this model.

## 5. ADJUST THERMISTOR 1 OFFSET

This calibration is only to be used if actual temperature at thermistor #1 is off from set point.

By adjusting the offset higher we can force the unit to drive the temperature down below the set point. (example: adjusting from 0 to +2 will drop the unit temperature 2 degrees)

DO NOT MAKE AN ADJUSTMENT TO THIS WITHOUT CONTACTING TECH LINE.

## 6. ADJUST THERMISTOR 2 OFFSET

Call tech line before adjusting.

- 7. Does not apply to this model.
- 8. Does not apply to this model.

## 9. VIEW THERMISTOR 2 SET POINT MINUS OFFSET

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. ERROR LOG

A list of the errors in the order they occurred will scroll once on the display. Repeat if desired. Once viewed, perform option 15, to clear the errors from memory.

### 15. CLEAR ERROR LOG

Perform this operation after checking the errors.

### **16.ADJUST THERMISTOR 1 DIFFERENTIAL**

This number should not be adjusted.

17. Does not apply to this model.

18. Does not apply to this model.

19. INDIVIDUAL COMPONENT TOGGLE Relay #2....

**Relay #3.** Will start the ice maker module and forward it through a full harvest cycle

Relay #4. Will send voltage to the water valve.

**Relay #5.** Will send voltage to the hot gas valve, where applicable.

**Relay #6.** Will send voltage to the 120 volt condenser fan (clr ice only).

**Relay #7.** Will send voltage to the compressor.

**DC OUTPUT #1.** Will energize the light circuit.

**DC OUTPUT #2.** Will energize the evaporator fan circuit, where applicable.

**DC OUTPUT #3.** Will energize the condenser fan circuit (all but CLR ice).

**DC OUTPUT #4.** Secondary cabinet light, where applicable.

#### 20. MODEL NUMBER DISPLAYED

Displays the two-digit model number of the specific unit.

#### 21. LIGHT ALL LED SEGMENTS

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

### SAFETY • INSTALLATION & INTEGRATION • OPERATING INSTRUCTIONS • MAINTENANCE • SERVICE

22. Does not apply to this model.

## 23.COMPRESSOR RUNTIME BASED ON LAST CYCLE

This will show the number of minutes the compressor has run in the prior cycle (or current cycle if the compressor was running when service mode was entered).

#### 24. ACTIVATE DEFROST

Turns on the hot gas bypass valve allowing hot gas to circulate through the evaporator causing frost to melt.

#### 25. RESTORE FACTORY DEFAULTS

Will restore all adjustable functions to their factory settings.

#### 26. MAIN SOFTWARE

Displays software version of the main control board.

#### 27. USER INTERFACE SOFTWARE

Displays the software version of the user interface.

#### MODEL LIST

1000	MODEL #	2000 (120V)	MODEL #		2000 (230V)	MODEL #
1215R	07	2218R	05		2245R	55
1215WC	12	2218RG	04		2245DC	54
1224BEV	13	2218WC	06		2245WC	56
1224DWR	08	2224BEV	00		2260DC	50
1224R	14	2224FZR	11		2260FZR	57
1224RF	09	2224R	02		2260R	52
1224RSOD	10	2224RG	01		2260RDC	51
1224WC	15	2224WC	03		2260WC	53
CLR1215	18*	2224ZWC	59		2260ZWC	58
CO1224F	19	ADA24R	17	1		

\* UNITS 2020 AND NEWER USE #11

#### PROGRAMMING THE UNIT TO CORRECT MODEL NUMBER

- Unplug unit and install new board
- Push and hold the hidden icon
- Plug the unit in
- Release the hidden icon

28. LIVE LOG PERIOD

Can be utilized with a laptop or PC to display control functions while unit is running.

#### ERRORS

\*All errors are logged in memory.

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

\*For 68118 models, pump error is displayed via alert light with no audible alerts.

E1: Thermistor 1 open.

- E2:Thermistor 2 open.
- **E3:**Thermistor 3 open (Does not apply to this model).
- **E4:**Thermistor 4 open (Does not apply to this model).
- **E5:**Thermistor 1 shorted.
- **E6:**Thermistor 2 shorted.
- **E7:**Thermistor 3 shorted (Does not apply to this model).
- **E8:**Thermistor 4 shorted (Does not apply to this model).
- E9:Door open error.
- **P1:**Pump Circuit open.

- Use the up/down arrows to scroll to correct model number from chart
- Push and release the light icon
- Unit flashes OFF/ON up or down then locks in model.

SAFETY • INSTALLATION & INTEGRATION • OPERATING INSTRUCTIONS • MAINTENANCE • SERVICE

# Control Defaults

Default	Va	lue	
Fahrenheit/Celsius*	°F	°C	
Defrost Duration Minutes		0	
Next Defrost Hours		0	
Thermistor Four OFFSET**	0	_	
Thermistor Three OFFSET**	0	_	
Thermistor Two OFFSET**	-4	_	
Thermistor One OFFSET**	0	_	
Thermistor One Differential Up**	0	_	
Thermistor One Differential Down**	0	_	
Thermistor Four Set Point	0	-18	
Thermistor Three Set Point	0	-18	
Thermistor Two Set Point	_	_	
Refrigeration Set Point	34	1	
Light Key	0		
Has Ice		0	
Maximum Ice Set Point	_	—	
Minimum Ice Set Point	_	—	
Maximum Set Point	45	7	
Minimum Set Point	34	1	

\* 115V models default to Fahrenheit. 220-240V models default to Celsius.

\*\* Offset and Differential always expressed in °F.

### SAFETY • INSTALLATION & INTEGRATION • OPERATING INSTRUCTIONS • MAINTENANCE • SERVICE

# Thermistors

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.

This unit has two thermistors. One type one thermistor and one type two thermistor.

The type one thermistor is located along the right hand side wall of the ice bin and is used to regulate the level of ice in the storage bin.

The type two thermistor is located on the liquid line between the condenser and the filter dryer. It is used to control the length of the freeze cycle during ice production.

A type one thermistor should OHM out at 16.1k OHMS in an ice bath or 5k OHMS at 77°F +/-5%.

A type two thermistor should OHM out at 10k OHMS at 77°F +/-5%.

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 die electric grease to all of our thermistor connections. Die electric grease will help to keep thermistor connections clean and dry.

If you change a thermistor in the unit please re-apply die electric grease to the connection. If you encounter a dirty thermistor connection, you should replace the thermistor and the thermistor harness. 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	21166		
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%)

# SAFETY • INSTALLATION & INTEGRATION • OPERATING INSTRUCTIONS • MAINTENANCE • SERVICE

# Defrost

These models have no defrost options.