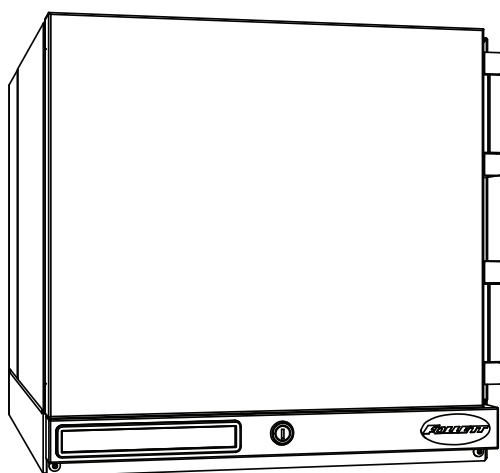




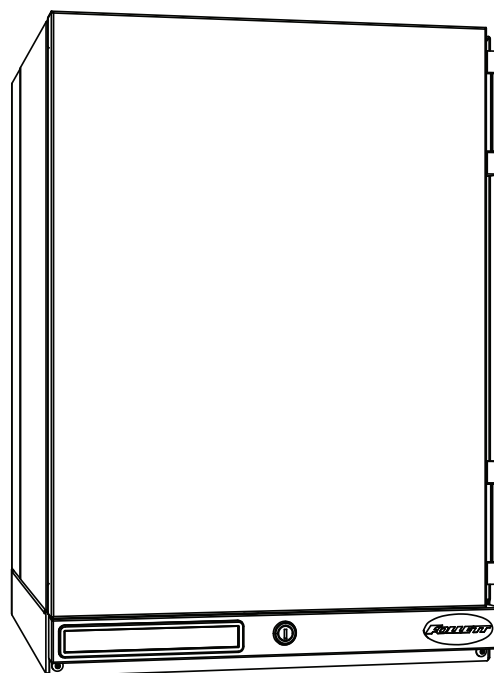
# REF1/REF2

## High-Performance Compact Refrigerators

Installation, Operation and Service Manual  
Before Serial Number H55799



REF1



REF2

**Following installation, please forward this manual  
to the appropriate operations person.**

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## Welcome to Follett

Follett equipment enjoys a well-deserved reputation for excellent performance, long-term reliability and outstanding after-the-sale support. To ensure that this product delivers that same degree of service, we ask that you take a moment to review this manual before beginning the installation. Should you have any questions or require technical help at any point, please call our technical service group at (877) 612-5086 or (610) 252-7301.

### Before you Begin

After uncrating and removing all packing material, inspect the equipment for concealed shipping damage. If damage is found, notify the shipper immediately and contact Follett Corporation so that we can help in the filing of a claim, if necessary.

Check your paperwork to determine which item number you have. Follett item numbers are designed to provide information about the type of refrigerator you are receiving.

## Specifications

### Dimensions

	REF1	REF2
Dimensions (external)	18.6" W x 24" D x 17.75" H (47 cm x 61 cm x 45 cm)	18.6" W x 24" D x 27.75" H (47 cm x 61 cm x 70 cm)
Dimensions (internal)	14.6" W x 11.6" D x 5.72" H (37 cm x 29 cm x 14.6 cm)	14.6" W x 11.6" D x 15.72" H (37 cm x 29 cm x 40 cm)
Shelf Size	13.75 W x 9 D (35 cm x 23 cm)	13.75 W x 9 D (35 cm x 23 cm)
Capacity	1 cu ft (28 L)	1.8 cu ft (51 L)
Weight (uncrated)*	73 lbs (33 kg)	87 lbs (39 kg)

\* Add 22 lbs/10 kg for packaging.

### Electrical Specifications

- 115 V, 60 Hz, 1 phase
- Full load: 1.8A
- Minimum circuit ampacity: 15A
- Maximum size of branch circuit overcurrent device: 15A
- Follett recommends circuit be protected by GFCI.

### Refrigeration Specifications

Refrigerant	Charge Size (oz)	Maximum Design Pressures (psi)	
		High Side	Low Side
R134A	3.4	240	88

### Heat Rejection

- 190 BTU/hr (56 W) maximum

### Ambient Information



#### CAUTION!

*The REF1 and REF2 are for indoor use only.*

	Optimum	Maximum
Air Temperature	≤80 F (28 C)	100 F (38 C)
Relative Humidity	60% max	

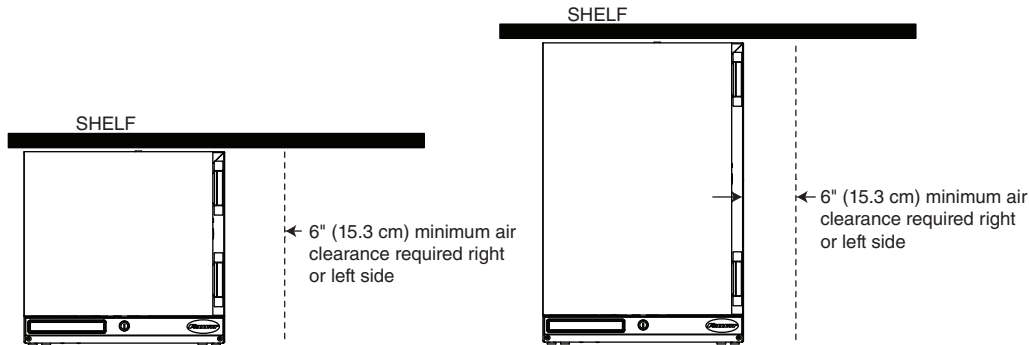
## Installation

### Locating the Refrigerator

Performance of REF1 and REF2 is affected by ambient temperature and location. To ensure proper performance, please refer to the following drawings and confirm that the clearance requirements are met. There is no clearance requirement for the back of the refrigerator so it can be placed against the wall.

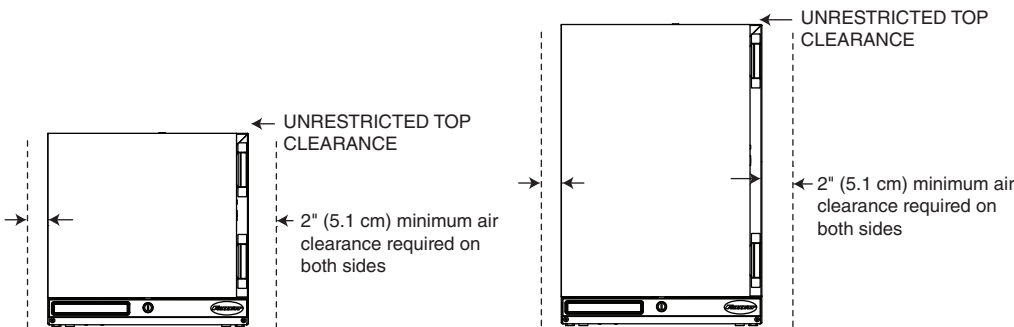
#### 80 F (27 C) and 60% RH – located under overhanging cabinet or shelf with zero top clearance

Requires 6" (15.3 cm) clearance on either right or left side



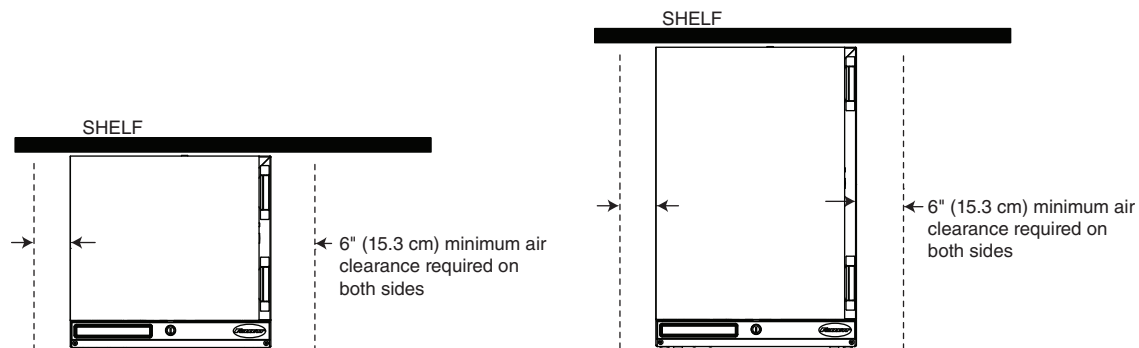
#### 80 F (27 C) and 60% RH – unrestricted top clearance location

Requires 2" (5.1 cm) clearance on both sides and unrestricted top clearance (12" (30.5 cm) min above unit)



#### 100 F (38 C) – maximum temperature location with zero top clearance

Requires 6" (15.3 cm) clearance on both sides



## Installing Foot Pads - Required



### CAUTION!

Use caution when tipping the refrigerator during foot pad installation. DO NOT EXCEED 30° angle. Tipping more than 30° can result in compressor malfunction.

1. Remove the foot pads (4) from the plastic bag packed inside the refrigerator.
2. Carefully tip the refrigerator back, ensuring that it cannot fall, to expose the four foot pad holes (**Fig. 1**).
3. Position the foot pad over the foot pad hole and press the center of the foot pad until it is fully seated. The foot pads extend 1/8" (3.2 mm) below the base of the refrigerator (**Fig. 1**).

Fig. 1

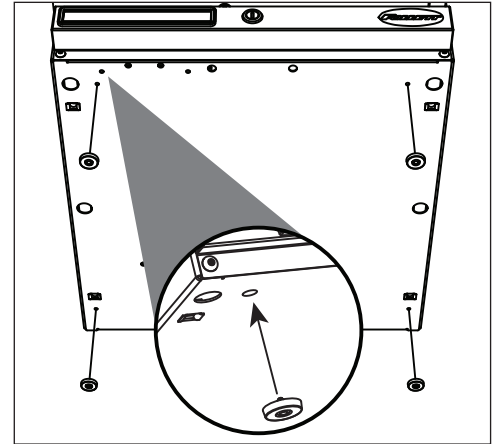
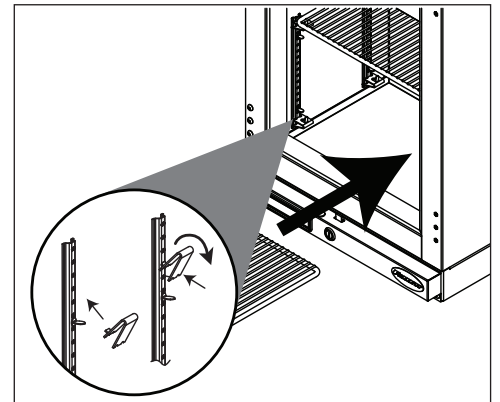


Fig. 2



## Installing Shelves

1. Remove shelves and shelf brackets packed inside refrigerator. (If ordered, find additional shelf accessory in separate box.)
2. Install shelf brackets in pilasters (insert top tab, squeeze and push in lower tab) (**Fig. 2**).

## Installing Glycerine Solution in Product Simulation Bottle

(glycerine not included - P/N00959296)

1. Remove the bottle from the bracket located in the upper left side of the refrigerator (**Fig. 3**).
2. Remove the top and fill the bottle with a 50/50 solution of glycerine and water.
3. Replace the top (and probe).
4. Reinsert bottle into the bracket.

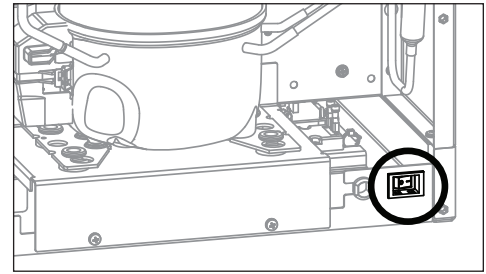
**Note:** If you are using this in a food service application, and installing in accordance with NSF, you must remove the probe from the bottle. NSF requires that air temperature be displayed.

Fig. 3



5. Plug in the refrigerator and return the power switch to ON (Fig. 4).

**Fig. 4**



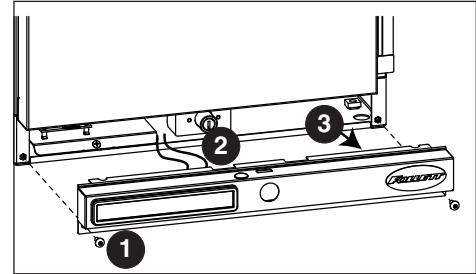
### Battery Backup (KP models only)

1. Provide power to the unit and turn the power switch to the **ON** position.
2. Open the door using the keypad lock and prop the door open so it doesn't close during the battery installation.
3. Turn power switch to the **OFF** position or unplug the unit from the power supply.
4. Remove the two screws (Fig. 5.1) on the front panel at the bottom of the unit.
5. Remove the front panel.

**Note: Take care when removing, some wires are connected to the front panel (Fig. 5.2).**

6. Find the battery pack on the right-hand side of the front panel.
7. Pull the battery pack and the battery connector away from the hook and loop patch on the front panel (Fig. 5.3).
8. Connect the battery connector with the black and red wires to the top of the battery pack.
9. Place the battery pack back in place firmly on the hook and loop patch.
10. Re-install the front panel.
11. Close the door.
12. Test operation of the keypad lock while the power to the unit is **OFF** to confirm back-up battery connection.
13. Turn the power switch **ON** or plug the unit back into the power supply.

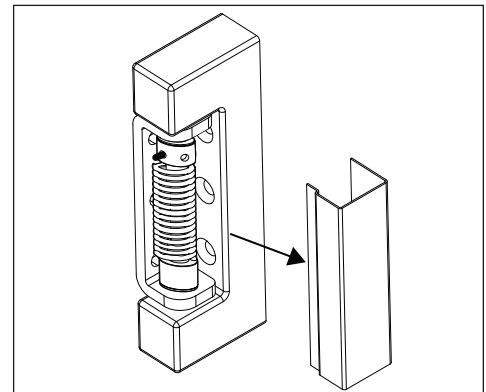
**Fig. 5**



### Reversing the Door Swing – Optional

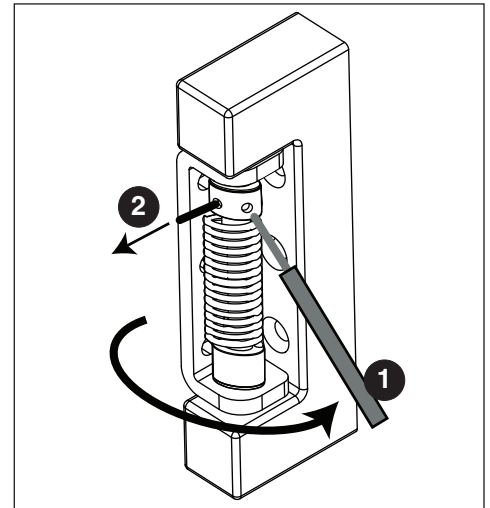
1. Use flat screwdriver to carefully remove hinge covers (Fig. 6).

**Fig. 6**



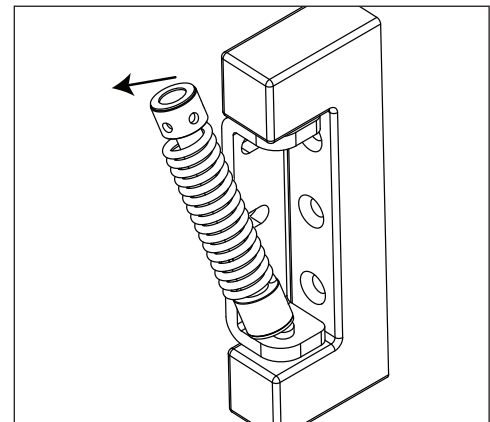
2. Using a small Phillips screwdriver, allen key or drift pin, rotate top of spring assembly (counter-clockwise for right-hand hinged doors) **(Fig. 7.1)** to remove the pin **(Fig. 7.2)**.
3. Relieve torque on the spring.

**Fig. 7**



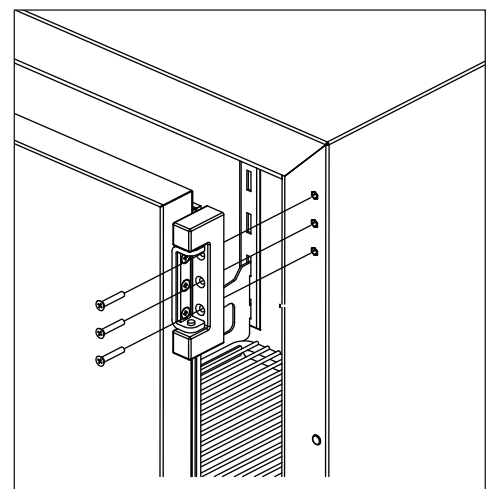
4. With a flat-head screwdriver, simultaneously push down and pry the top of the spring from out of the top of the hinge **(Fig. 8)**.

**Fig. 8**



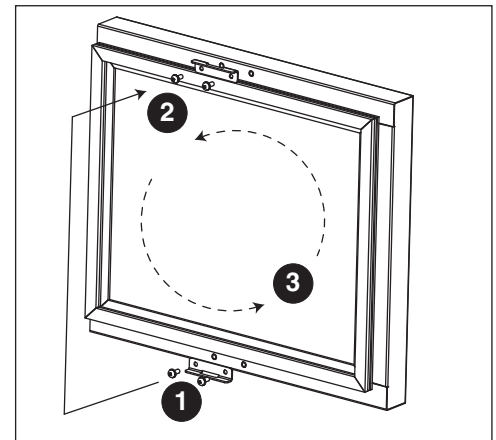
5. Support door and remove screws attaching hinge to refrigerator cabinet and remove the door **(Fig. 9)**.
6. Cover hinge screw holes with screws removed from opposite side of door and door frame.

**Fig. 9**



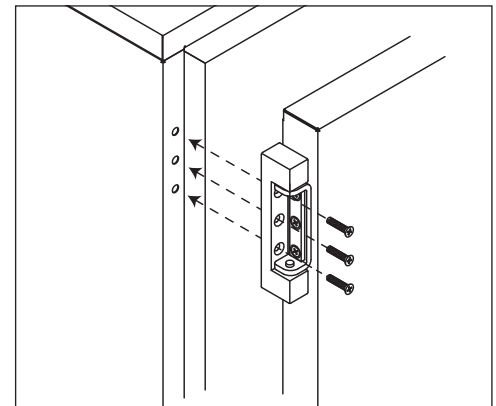
7. Remove screws holding lock strike-bracket at "bottom" inside of door (**Fig. 10.1**).
8. Remove screws from inside of door "top" and install bracket.
9. Plug "bottom" holes with retained screws and install lock strike-bracket to "top" inside of door (**Fig. 10.2**).
10. Reverse door 180° so that lock strike-bracket is on the bottom inside of door (**Fig. 10.3**).

**Fig. 10**



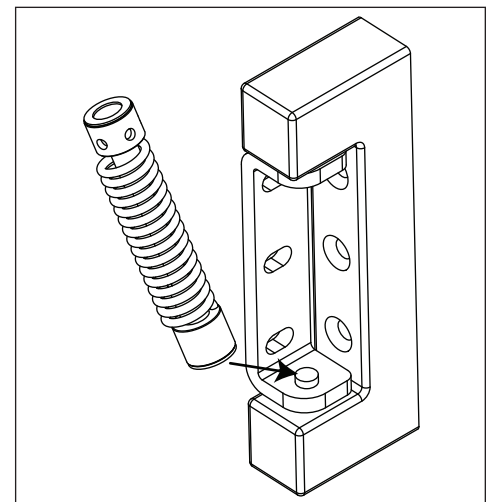
11. Reinstall the door on the opposite side of the doorframe. Adjust if needed.
12. Reinstall screws (torqued to 25 in-lbs) (**Fig. 11**).

**Fig. 11**



13. Insert bottom of spring kit onto bottom hinge pin (**Fig. 12**).

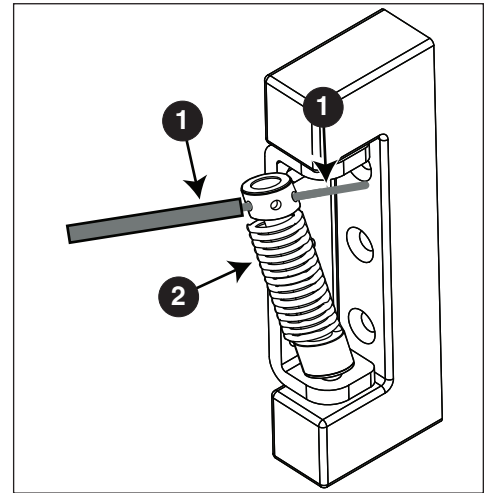
**Fig. 12**



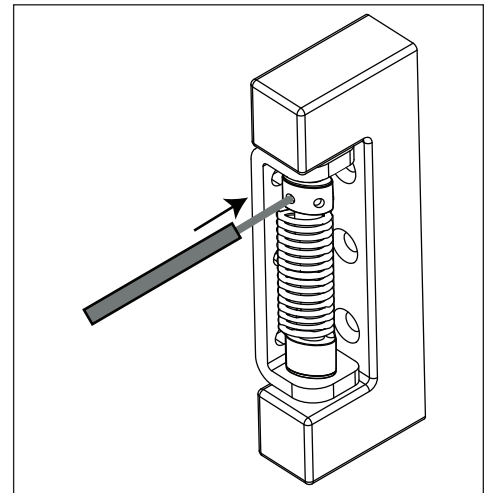


14. Insert tool as shown and press down on both sides of tool (**Fig. 13.1**) to compress spring kit, then insert top of spring kit onto top hinge pin (**Fig. 13.2**).

**Fig. 13**

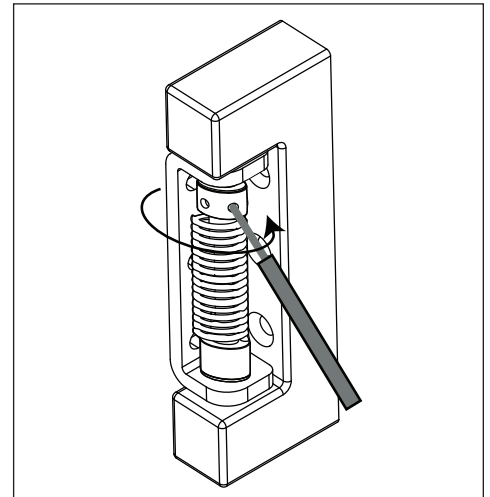


**Fig. 14**



1. Remove the tool and insert it (Phillips screwdriver, Allen key, drift pin) into hole nearest the hinge bracket (**Fig. 14**).

**Fig. 15**



2. Rotate top of spring counter-clockwise to increase the spring torque (**Fig. 15**).

3. Insert pin into an open hole nearest the hinge bracket (**Fig. 16.1**), and remove the tool used to torque the spring (**Fig. 16.2**).
4. Repeat Steps 2 and 3 until desired closure force is achieved.

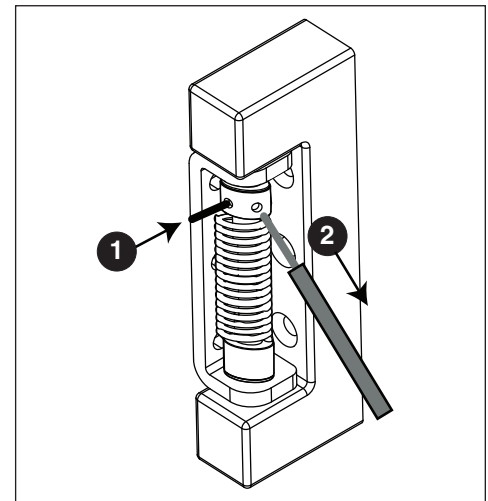


**CAUTION!**

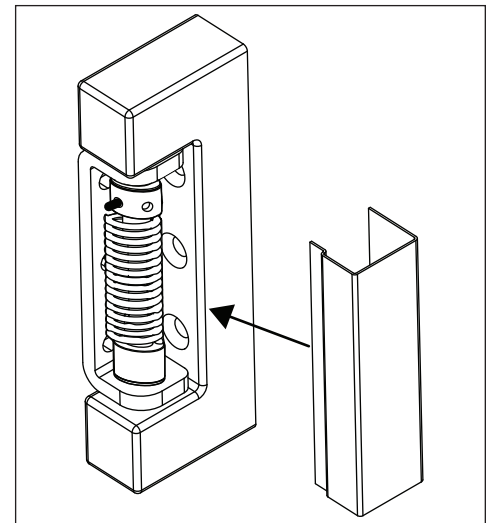
*Do not overtorque the spring unnecessarily. Minimum closure force should close door when door is opened 1" (2.5 cm).*

5. Reinstall hinge cover (**Fig. 17**).

**Fig. 16**



**Fig. 17**

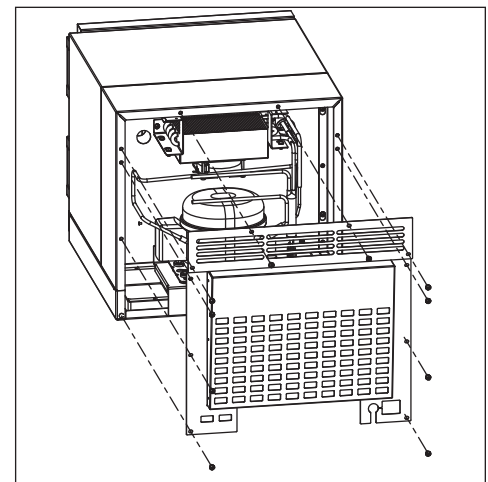


## Installing Third-party Temperature Probe

Facilities using a third-party alarming and/or temperature monitoring system need to install the third-party probe in the refrigerator. Follett recommends removing any stored product before performing this procedure.

1. Move the power switch on lower rear panel to OFF and unplug the refrigerator.
2. Remove the rear panel of the refrigerator (**Fig. 18**).
3. Open front door of refrigerator and remove shelf/shelves, if installed, for better access.

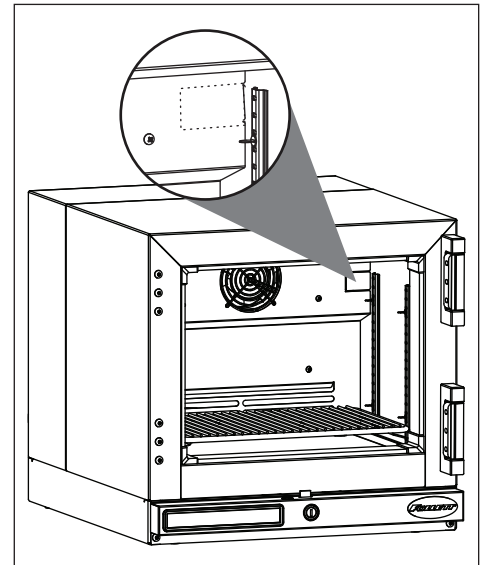
**Fig. 18**



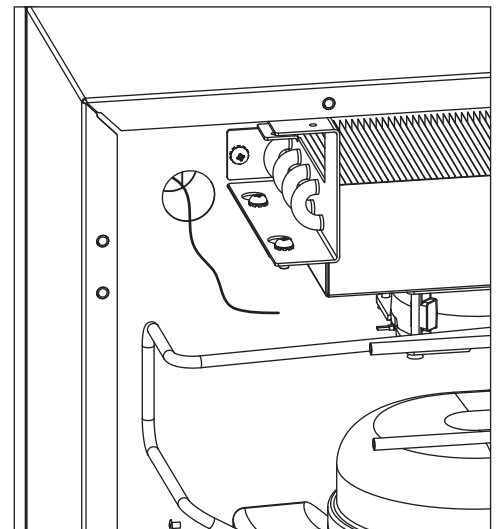
4. From inside the refrigerator, push and fold the perforated cut out located on the inside, upper-right hand corner (**Fig. 19**).
5. Use a long screwdriver or drill to create a hole (up to 1" (25.4 mm) diameter) through the exposed foam insulation.
6. From inside the refrigerator, feed non-probe end of wire through opening (**Fig. 20**).
7. Secure probe to interior cabinet wall to avoid product interference.
8. Gently pull on non-probe end of wire to remove slack from inside of refrigerator.
9. Use Permagem\* or equivalent sealant to replace foam insulation (removed in Step 5) to ensure proper performance of refrigerator.
10. Remove any debris that may have fallen into the drain pan or condensor area.
11. Route non-probe end of wire through appropriate ventilation hole in refrigerator rear panel.
12. Reinstall the rear panel.
13. Connect non-probe end of wiring to monitoring device.
14. Plug in the refrigerator and return the power switch to ON.

\* Permagem is a registered trademark of the Presstite Engineering Company.

**Fig. 19**



**Fig. 20**



## Cleaning



### CAUTION!

Use only non-chlorine-based cleaners. Use of cleaners containing chlorine can cause staining and pitting of the stainless steel

#### Interior

Using a sponge or soft cloth, clean unit with a non-abrasive, non-chlorinated, all-purpose detergent.

#### Exterior

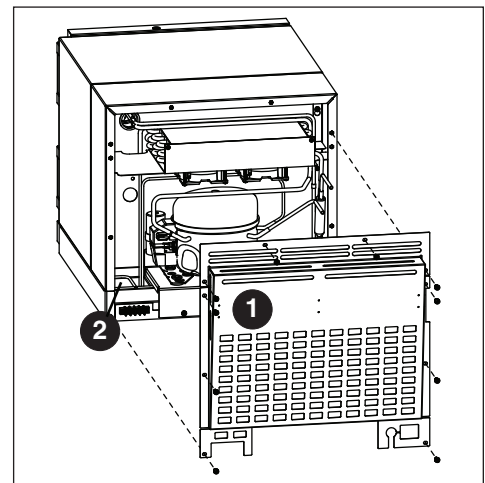
Wipe exterior with a soft cloth in the direction of grain as needed. Stainless steel polish may be used to enhance the finish of the unit.

## Annual Cleaning

Removal of dust and other particulates from air intake areas and the condenser is important for proper operation. Under certain conditions, some environments with large amounts of dust may require more frequent cleaning.

1. Move the power switch on lower rear panel to OFF and unplug the refrigerator.
2. Remove rear panel (**Fig. 21.1**).
3. Clean drain pan (**Fig. 21.2**) with a non-abrasive, non-chlorinated all-purpose detergent.
4. Use a vacuum cleaner with brush attachment to clean condenser, compressor motor, and related parts.
5. Reinstall rear panel.

**Fig. 21**



## Operation

The temperature control board and probe indicate when the refrigeration system is required to turn on and off.

The refrigeration system removes heat from the cabinet interior and rejects it to the surrounding room air. When the cabinet interior temperature rises above the controller cut-in temperature, the controller turns the refrigeration system on. The controller energizes the evaporator fan and solid-state control relay which energizes the condensing unit. The compressor uses a current-style starting relay and a starting capacitor to start the compressor motor.

When the cabinet interior temperature falls below the controller cut-out temperature, the controller turns the refrigeration system off. The controller contacts reopen, which de-energizes the evaporator fan motor and solid-state control relay which de-energizes the condensing unit (compressor and condenser fan motor).

Any accumulated frost on the evaporator coils melts during the off cycle. The condensate drains out of the unit to the condensate tray to the left of the condensing unit. The heat from the condensing unit evaporates any condensate in the drain pan.

## Temperature Control

The temperature control system is preset by the factory to maintain a cabinet temperature of 3.3 – 5.5 C (38 – 42 F). If desired, the set-point temperature can be raised as high as 10 C (50 F) by following the instructions in *Controller Operation* for changing the temperature set point. The 2.2 C differential will be maintained regardless of the controller set point.

## Automatic Defrost

REF Series refrigerators do not require manual defrosting. The unit defrosts automatically when the condensing unit is in the OFF cycle.

Any accumulated frost on the evaporator coil melts during the OFF cycle. The condensate drains to a plastic drain pan mounted below the condensing unit. The heat from the condensing unit evaporates any condensate in the drain pan.

## Controller Operation

In normal operation, the controller displays product temperature in degrees C (default) or user-selected degrees F. The controller is pre-programmed with a 4.4 C (40 F) set point. **COMP** displays when the compressor is running. If this set point does not meet your specific application needs, instructions for changing the set point are found below.

**Note:** Follett presets its refrigeration system to hold product temperature at approximately 4.4 C (40 F). If you are using this in a food service application, and installing in accordance with NSF, you must set the control set-point to 3.3 C (38 F). This will deliver a product temperature below the 4.4 C (40 F) NSF requirement.

## Controller Display

The controller display will show the product/bottle temperature in degrees C or degrees F as selected by the user except when the unit is in an alarm.

The controller has system indicators above the temperature display to let you know when: the compressor is energized (**COMP**), the evaporator fan is energized (**FAN**) or the unit is in defrost (**DEF**).



To display temperature Set-point		
Step	Input	Display
1	Press and release <b>SET</b>	Current set-point temperature will display for approximately 5 seconds. Display will return to current product temperature.

To change temperature Set-point		
Step	Input	Display
1	Press and hold <b>SET</b> for 3 seconds	Set-point will flash.
2	Press <b>UP</b> or <b>DOWN</b> arrows to desired set-point	New temperature set-point will flash on the display.
3	Press and release <b>SET</b> to accept	Product temperature will display.

## Controller Security

The controller can be locked so that the set-points in the controller cannot be changed.

1. To lock, press **UP** and **DOWN** arrows simultaneously until **LOC** appears (approximately 5 s).
2. To unlock the controller, press up and down arrows simultaneously until **UNL** appears. Changes are only accepted when the controller is unlocked.

## Changing Temperature Display from C to F

1. Press **SET** and **UP** arrow simultaneously until **L1** is displayed.
2. Press the **UP** arrow until **UNT** is displayed. Press **SET** then use the **UP** and **DOWN** arrows to change the temperature display from C to F. Press **SET** to accept. The display will return to the temperature in approximately 10 s.

## Changing Temperature Display from Decimal to Integer

1. Press **SET** and **UP** arrow simultaneously until **L1** (first level menu) is displayed. Release.
1. Press **SET** and **UP** arrow simultaneously until **L2** (second level menu) is displayed.
2. Press the **UP** arrow until **rES** is displayed. Press **SET** then use the **UP** and **DOWN** arrows to select **Int** (integer) instead of **Dec** (decimal). Press **SET** to accept.

## Sleep Function

Press the **SLEEP** button to blank the display, or press any button to wake the display. If the unit goes into an alarm, the display will wake to display the alarm.

## Minimum and Maximum Temperature Function

Records the highest and lowest temperatures logged by the probe selected to be displayed. Default display probe is P3 (product simulation bottle probe).

### High and low log display

1. Press the **UP** arrow to display the highest temperature the freezer has recorded since last reset or power cycle.
2. Press the **DOWN** arrow to display the lowest temperature that the freezer has recorded since last reset or power cycle.

### Reset high and low log

1. Press **UP** or **DOWN** arrow until recorded temperature is displayed.
2. Press and hold **SET** until **RST** is displayed.

## Alarming Functions

### Set high and low alarms

1. Press and hold **SET** and **UP** arrows simultaneously until **L1** is displayed. Use the **UP** and **DOWN** arrows to navigate parameters.
2. The **low** temperature alarm parameter is **AIL**. Once the parameter is displayed, press **SET** to display the low alarm temperature. The alarm temperature will flash on the display. Use the **UP** and **DOWN** arrows to set the alarm temperature. Press **SET** to accept.
3. The **high** temperature alarm parameter is **AIH**. Once the parameter is displayed, press **SET** to display the high alarm temperature. The alarm temperature will flash on the display. Use the **UP** and **DOWN** arrows to set the alarm temperature. Press **SET** to accept.

### Start-up alarm delay

The refrigerator unit has a 120 minute time delay between when the unit is energized to when the temperature alarms become active. This delay can be change in parameters in the controller under **Alarm Startup Delay (ASd)**.

### Mute the Alarms

The mute button is used to temporarily mute the audible alarm for 10 minutes. If the alarm condition of the unit has not changed in 10 minutes, then the alarm will sound again.

### Alarm acknowledgement and alarm Reset

The alarm will need to be acknowledged after the alarm condition has been resolved, before the alarm will reset. To acknowledge the alarm press and hold set until the RST is displayed.

### Probe calibration

The temperature probes can be calibrated from **-9.9 to +9.9**. The calibration is in the second level menu under **P1C** (control probe) **P3C** (Alarm).

### Alarm Codes

When the unit senses an alarm, the display will flash the following codes.

Value	Description
HA1	Temperature is above the High Alarm #1 set point.
LA1	Temperature is below the low Alarm #1 set point.
HA2	Temperature is above the High Alarm #2 set point.
LA2	Temperature is below the Low Alarm #2 set point.
Lob	Low battery alarm.

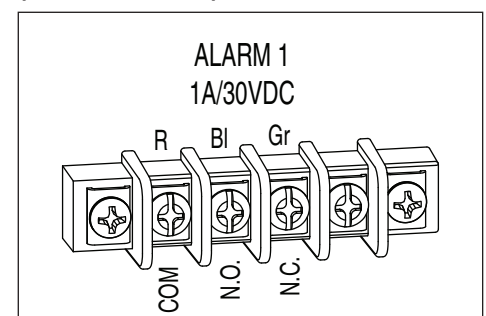
### Error Codes

Value	Description
P1-P8	Controller is not sensing the probe.
F9	Error saving new parameter values to permanent storage.
F10	Incomplete model configuration.
F21	Key shorted on user interface.
F22	Communication error with user interface.
F23	Communication error with Machine Control.

### Alarming Contacts – *Optional Accessory*

This unit can be equipped with dry contacts that may be connected to a 3rd party monitoring system. The dry contacts would have a Common, a Normally Open and a Normally Closed connection point. By default, Alarm Relay 1 is set to activate with any of the following alarms: Alarm 1 High temp, Alarm 1 Low temp, Door Open Alarm, and Power Loss Alarm.

**Fig. 22 - Rear Panel Connections (when installed)**



## Advanced Settings

The refrigerator can be further customized through the first level (L1) and second level parameters (L2) in the chart below.

1. Press and hold **SET** and **UP** arrows simultaneously until **L1** is displayed.
2. Use the **UP** and **DOWN** arrows to navigate the parameters. When the desired parameter is displayed, press **SET**.
3. Use the **UP** and **DOWN** arrows to navigate the sub menu of the parameter. Press **SET** to accept and the display will return to the parameter list (after 30 seconds the display will return to the temperature display).

Parameter	Display	Description
Beeper Function	bPr	Controls the audible beeper function on the controller. <b>Off, All, door, Alarm, Error.</b>
Beeper Volume	bPu	Sets the volume of the beeper: <b>0</b> (minimum) to <b>10</b> (maximum).
Button Clicks	btc	Sets if a beep should sound each time a button is pressed. <b>Yes</b> or <b>No</b> .
Sleep Function	SLP	Determines if sleep function activated from the panel. <b>Yes</b> or <b>No</b> .
Sleep Timer	SLt	Amount of time before the screen blanks automatically. <b>0 s</b> to <b>600 s</b> .
Alarm1 High Temp	A1H	High temperature to activate alarm1. User set point to 121 C (250 F).
Alarm1 Low Temp	A1L	Low temperature to activate alarm1. User set point to -46 C (-50 F).
Alarm1 Probe	A1P	Probe for Alarm. <b>P1</b> (cabinet air), <b>P3</b> (simulation bottle).
Units	unt	Display temperatures in degrees C or F. <b>F</b> or <b>C</b> .

1. Press and hold **SET** and **UP** arrows simultaneously until **L1** is displayed.
2. Press and hold **SET** and **UP** arrows simultaneously again until **L2** is displayed.
3. Use the **UP** and **DOWN** arrows to navigate the parameters. When the desired parameter is displayed, press **SET**.
4. Use the **UP** and **DOWN** arrows to navigate the sub menu of the parameter. Press **SET** to accept and the display will return to the parameter list (after 30 seconds the display will return to the temperature display).

Parameter	Display	Description
Alarm1 Delay	A1d	Alarm1 delay before sounding. <b>0</b> to <b>60</b> minutes
Alarm1 Function	A1F	Defines the action taken when Alarm2 is activated. <b>NO</b> (normally open), <b>NC</b> (normally closed), <b>R1</b> (activate relay), <b>R2</b> (not used), <b>DIS</b> (disable).
Alarm1 Reset	A2r	Temperature difference to reset alarm1. <b>0</b> to <b>10</b> degrees.
Alarm2 Delay	A2d	Alarm1 delay before sounding. <b>0</b> to <b>60</b> minutes.
Alarm2 Function	A2F	Defines the action taken when Alarm2 is activated. <b>NO</b> (normally open), <b>NC</b> (normally closed), <b>R1</b> (activate relay), <b>R2</b> (not used), <b>DIS</b> (disable).
Alarm2 Reset	A2r	Temperature difference to reset alarm1. <b>0</b> to <b>10</b> degrees.
Alarm Ring back	Arb	Defines the time delay until the alarm will resound. <b>0</b> to <b>120</b> minutes
Alarm Startup Delay	ASd	Defines the alarm delay during startup. <b>0</b> to <b>180</b> minutes.
Alarm Silencing	ASL	Determines if the alarms can be silenced or not. <b>Yes, No</b> .
Maintain Alarm	nAL	Determines if the alarm (1-3) should be maintained if the temperatures fall back into range. <b>Yes, No</b> .
Probe 1 Calibration	P1C	Offset value for probe 1 calibration. <b>-9.9</b> to <b>9.9</b> .
Probe 3 Calibration	P3C	Offset value for probe 3 calibration. <b>-9.9</b> to <b>9.9</b> .
Controller Parameter Reset	rSt	Reset to restore factory parameters.



## Follett Keypad Lock

### Default user passcode for first-time users

User Code 01 is factory set by default to **1 2 3 4 5 6**.

User Codes 01 to 40 do not have any codes set up and are available for user-programming.

Each time a button is pressed, a chirp will be heard.

### To Change the Master Code

The master code is needed to add or change the individual user codes. By default, the master code is set to **1 2 3 4 5 6**.

The master code is stored in User ID # 99.

1. Press **3 6 5**, the \*, followed by the current Master Code, followed by **ENTER** (5 chirps will be heard).
2. Press **9 9**, followed by **ENTER**. (3 chirps will be heard).
3. Enter the new master code, followed by **ENTER** (3 chirps will be heard).
4. Re-enter the new master code, followed by **ENTER**. (5 chirps will be heard).
  - Pressing **[CANCEL]** at any point will cancel the routine.

### To Enter or Change a User Code

1. Press **3 6 5**, the \*, followed by the Master Code, followed by **ENTER**. 5 chirps will be heard.
2. Enter the user ID (a two digit code from 00 to 40), followed by **ENTER**. 3 chirps will be heard.
3. Enter the new user code (4 to 6 numbers), followed by **ENTER**. 3 chirps will be heard.
4. Re-Enter the new User Code, Followed by **ENTER**. 5 chirps will be heard to acknowledge that a new code was entered.

Example: To enter a new user code of 4 4 3 3 5 5 for ID # 15

1. Press **3 6 5 \* 1 2 3 4 5 6 [ENTER]** (5 chirps will be heard).
2. Press **1 5 [ENTER]** (3 chirps will be heard).
3. Press **4 4 3 3 5 5 [ENTER]** (3 chirps will be heard).
4. Press **4 4 3 3 5 5 [ENTER]** (5 chirps will be heard).

The new code has been entered for the ID.

### To Delete a User Code

1. Press **3 6 5**, the \*, followed by the Master Code, followed by **ENTER**. 5 chirps will be heard.
2. Enter the user ID to clear, followed by **ENTER** (3 chirps will be heard).
3. Press **3 3 5, #** (3 chirps are heard) (335 = DEL).
4. Enter the user ID to clear, followed by **ENTER** (2 chirps will be heard).
5. Press **3 3 5, #** (5 chirps are heard).

The code assigned to that user ID has been deleted. If an error is encountered, the control will beep continuously for 3 seconds. The Master Code stored in user ID 99 cannot be deleted.

Example: To delete the user code in ID 15:

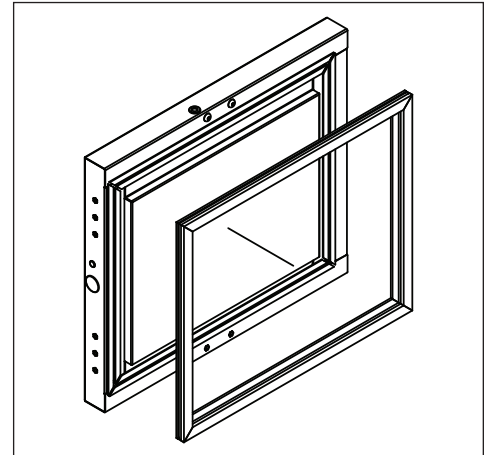
1. Press **3 6 5 # 1 2 3 4 5 6 [ENTER]** (5 chirps will be heard).
2. Press **1 5 [ENTER]** (3 chirps will be heard).
3. Press **3 3 5, #** (3 chirps will be heard) (335 = DEL).
4. Press **1 5 [ENTER]** (2 chirps will be heard).
5. Press **3 3 5, #** (5 chirps will be heard).

## Service

### Door Gasket Replacement

1. Remove existing gasket from mounting track (**Fig. 23**).
2. Verify mounting track is free of any remaining gasket material.
3. Align new gasket with mounting track and press firmly in place.
4. Open and close door, checking for proper gasket seal without pinching against refrigerator.

Fig. 23



### Access Compressor Compartment

Follett's compressor compartment allows technicians to gain full access to the condensing unit from the refrigerator back without cutting refrigerant lines.

1. Remove rear panel (**Fig. 24**).
2. Remove two screws facing downward that secure the panel assembly to the base plate.
3. Loosen the six screws that secure the rear panel to the back of the refrigeration box. Lift rear panel off to access (**Fig. 25**).

Fig. 24

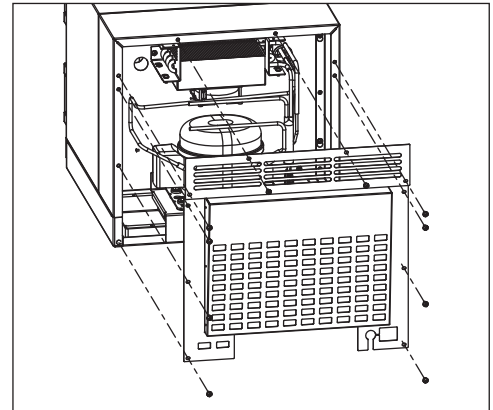
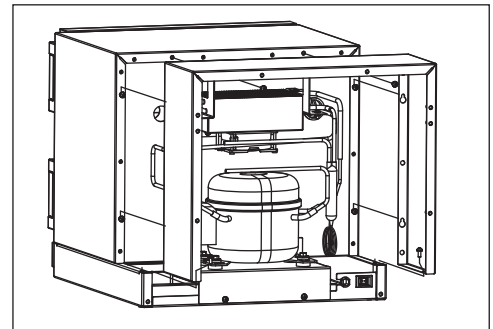


Fig. 25



### Changing the Back-up Batteries

1. Follow the instructions in the *Battery Backup* section page 6.
2. After Step 7, disconnect the battery connector (with black and red wires) from the top of the battery pack.
3. Remove the eight AA batteries from the battery pack.
4. Install eight new AA batteries into the battery pack.
5. Continue with Step 8 of the *Battery Backup* section.

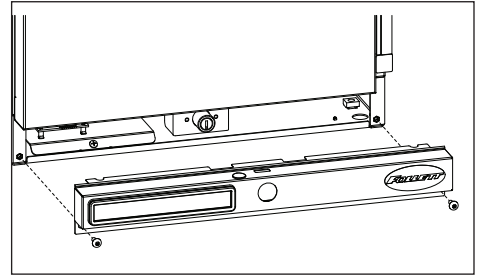
## Controller Replacement

1. Turn power switch to the OFF position and unplug the unit from the power supply.
2. Remove the two screws (**Fig. 26**) on the front panel at the bottom of the unit.
3. Remove the front panel and slide the panel to the right of the refrigerator.

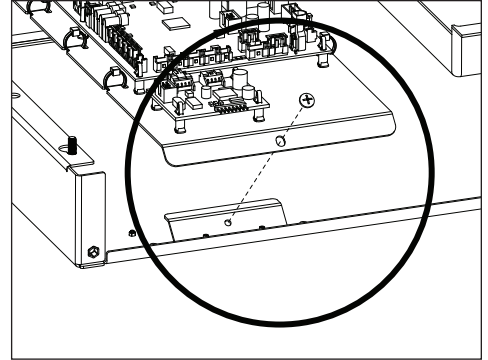
**Note:** Take care when removing, some wires may be connected to the front panel.

4. Find the control module and remove the screw at the front of the module (**Fig. 27**).
5. Lift the module and pull forward.

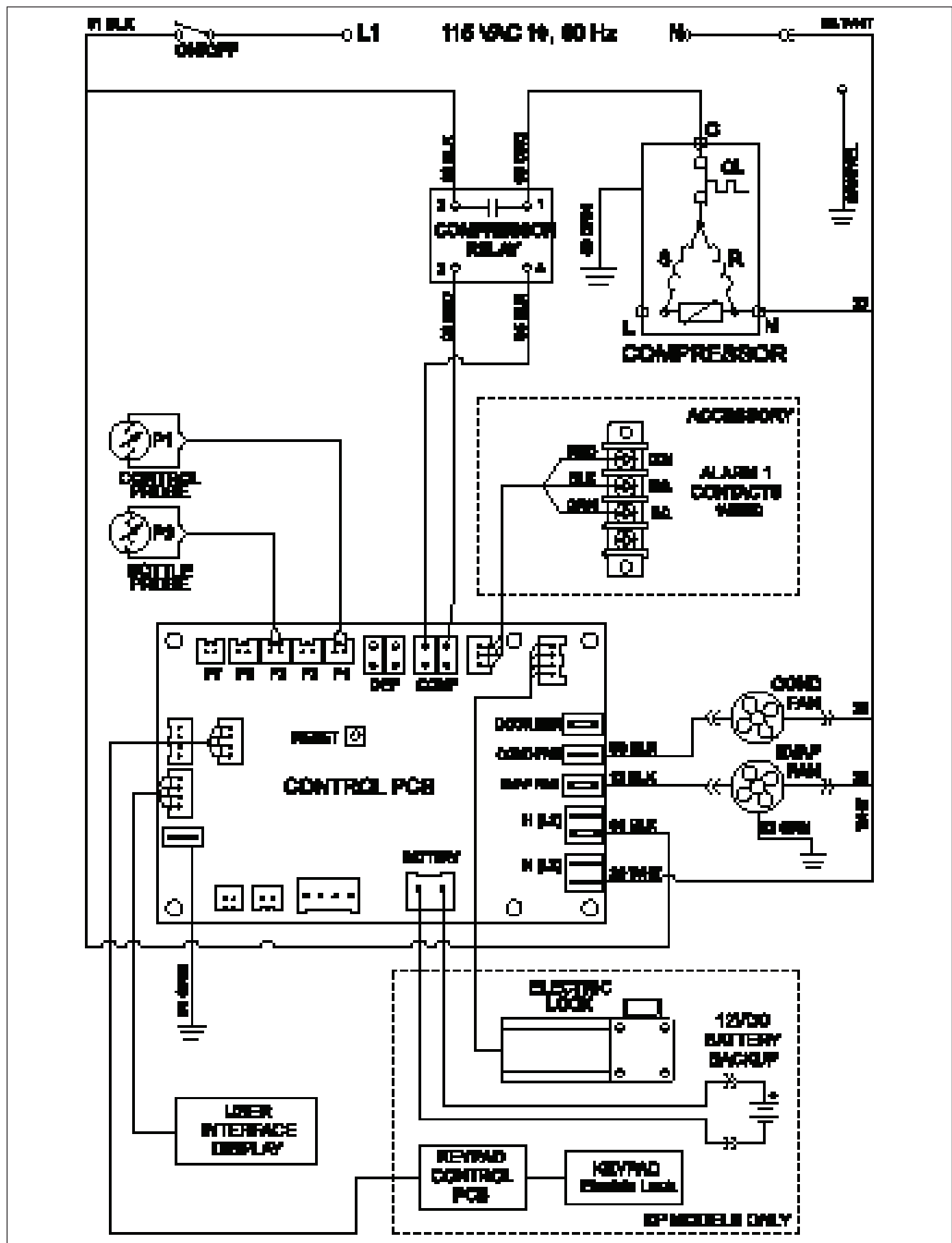
**Fig. 26**



**Fig. 27**



## Wiring Diagram



## Checking Refrigeration System Pressures



### CAUTION!

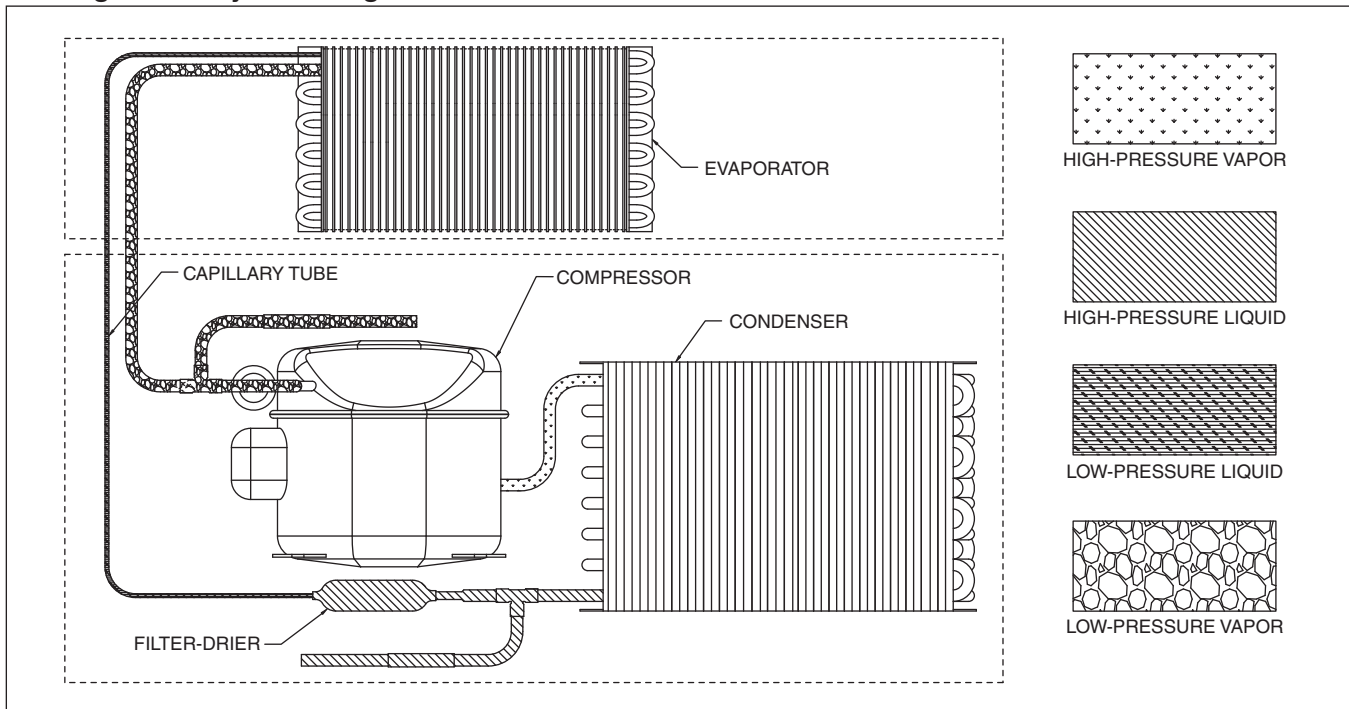
Please contact Follett Technical Service at (877) 612-5086 or (610) 252-7301 in the event of a refrigeration problem that requires evacuation and recharging.

### REF1, REF2

	REF1		REF2	
Condenser inlet air temperature	70 F (21.1 C)	80 F (26.6 C)	70 F (21.1 C)	80 F (26.6 C)
Suction pressure (psig)	13.0	14.0	13.0	14.0
Discharge pressure (psig)	126	140	126	140

**Note:** Do not attempt to obtain correct refrigeration pressures by adjusting the system charge.

### Refrigeration System Diagram



### Compressor Information

Danfoss model	TL2.5
Run load amps (RLA)	2
Lock rotor amps (LRA)	16
Ohms start winding to common	4.9
Ohms run winding to common	5.3
Ohms start winding to run winding	10.2

## Refrigerator Troubleshooting

### Before calling for service

1. Check that unit is plugged in.
2. Test outlet with another appliance to verify power.

### Troubleshooting Matrix

Sympton	Possible Cause	Solution
Refrigerator does not operate (no components run).	Power switch faulty or in OFF position; loose connection.	Turn power switch to ON; check switch and connections.
	Refrigerator not plugged in.	Connect plug.
	No power to cord.	Restore power.
	Temp controller not energizing components.	Check controller contact terminals for power. Replace controller if needed.
	Probe not sensing set point temperature.	Replace controller and/or probe.
Compressor does not run.	Thermal overload open or defective.	Allow to cool or replace.
	Capacitor and/or relay defective.	Replace as required.
	Compressor defective.	Replace compressor.
Evaporator fan motor does not run.	Defective fan motor.	Replace fan motor.
Refrigerator does not shut off.	Controller not sensing cut-off temperature.	Replace controller and/or probe.
	Controller keeping refrigeration system energized.	Replace controller.
Refrigerator does not maintain temperature (all components run).	Condensor or evaporator coil needs cleaning.	Clean coils.
	Faulty door gasket.	Replace door gasket.
	Excessively high ambient or inadequate air clearance.	Maximum recommended ambient is 100 F (38 F). See <a href="#">Locating the Refrigerator on page 5</a> .
	Refrigerant leak.	Locate and repair leak.
	Incorrect refrigerant charge.	Recover, evaluate and weigh in correct charge.
	Plugged capillary tube.	Replace capillary tube and filter drier.
	Inefficient compressor.	Consult technical services.

If problems persist after following this basic troubleshooting guide, call Follett technical service group at (877) 612-5086 or +1 (610) 252-7301.

## Accessories

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The following accessories are available for Performance Plus undercounter refrigerators. Instruction sheets are available in the download section of the Follett website ([www.follettice.com](http://www.follettice.com)).

### Temperature Surveillance Module Accessory (P/N 00168674)

- Reference instruction 00168609 (packed with module)

### Temperature Alarm Accessory (P/N 00112185)

- Reference instruction 00112052 (packed with temperature alarm accessory)

### Digital Data Logger (P/N 01057561)

- Reference instruction 01057579 (packed with digital data logger)

Digital data logger includes the following:

Description	Part #
Temperature probe certificate of traceability Calibration by Dickson (NIST) and ISO/IEC 17025	01057595
DicksonWare software and USB cable	01057603
AC power adapter	01057611
60 ml product simulation bottle	00112037
Velcro, hook and loop fastener	206406

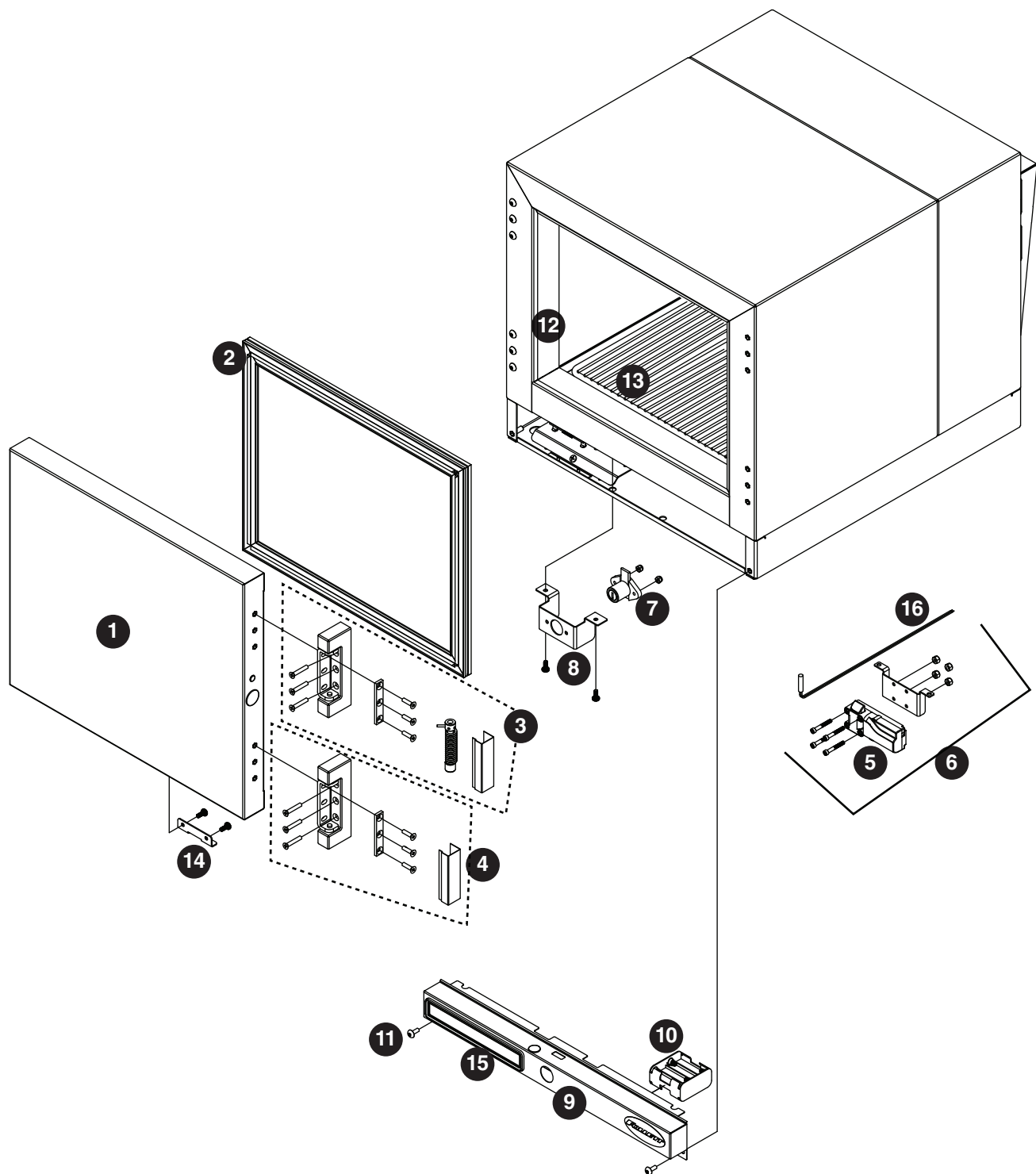
### Glycerine - 16 oz. bottle (P/N 00959296)

### Wall-mount Kit (P/N 00969949)

- Reference instruction 00969642

### Remote Alarm Contact Accessory (P/N 01092022)

## Replacement Parts

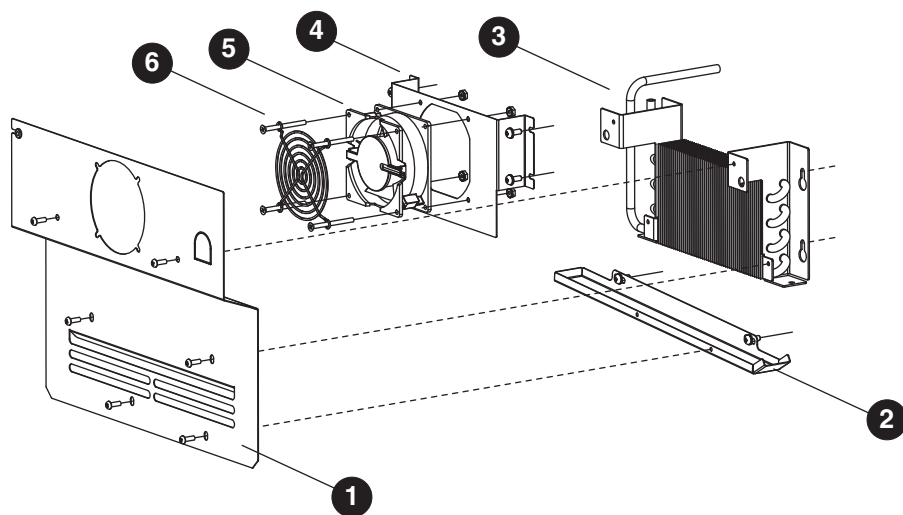




## Hardware

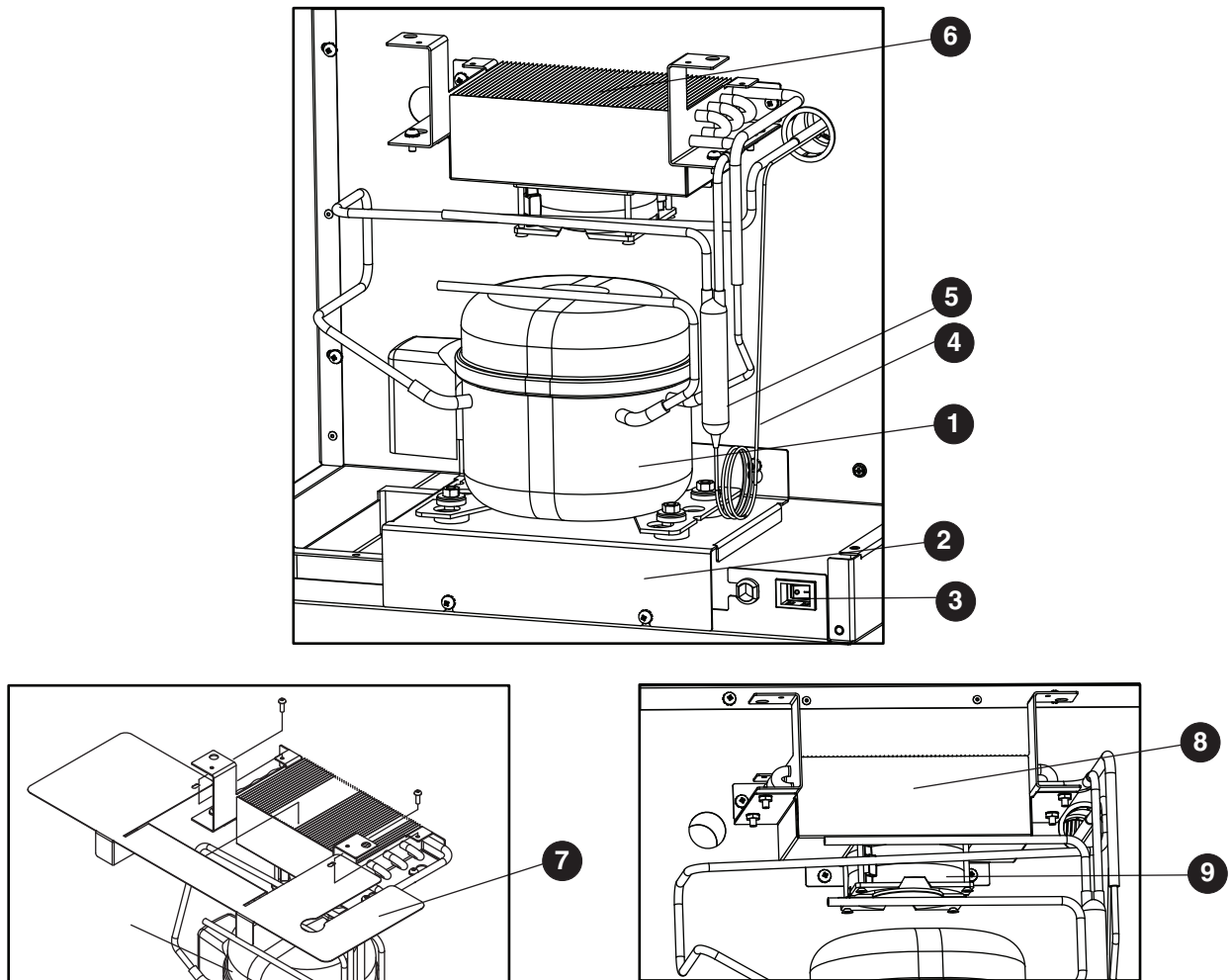
Reference #	Description	Part #
1	Door with gasket and lock strike bracket, REF1	00953182
1	Door with gasket and lock strike bracket, REF2	00953174
2	Gasket, door, REF1	00960823
2	Gasket, door, REF2	00960831
3	Hinge, top with spring and hardware	01053677
4	Hinge, bottom	00940478
Not shown	Hinge kit, top and bottom with hardware	01053685
5	Spring bolt lock	01065507
6	Spring bolt with latch, bracket, and hardware	01081702
7	Lock, deadbolt with keys	00959528
8	Bracket, lock mounting	01041920
9	Panel, front	01081660
Not shown	Panel, front with keypad	01081678
10	Battery pack	01085018
Not shown	Foot pads	00900134
11	Screws, front panel (2 required)	203460
12	Strip sealer, REF1/2, /FZR1/2	01081736
Not shown	Fascia heater, REF1	01064641
Not shown	Fascia heater, REF2	01064666
13	Shelf	01037266
14	Bracket, lock strike	01041953
15	Display, controller	01085794
Not shown	Bracket, bottle	00961656
Not shown	Bottle, solution, 60 mL	00112037
Not shown	Gasket, bottle	0012029
16	Read switch	01053917
Not shown	Pilaster, screw	206796
Not shown	Pilaster	00961334
Not shown	Support, shelf	00156240

## Evaporator



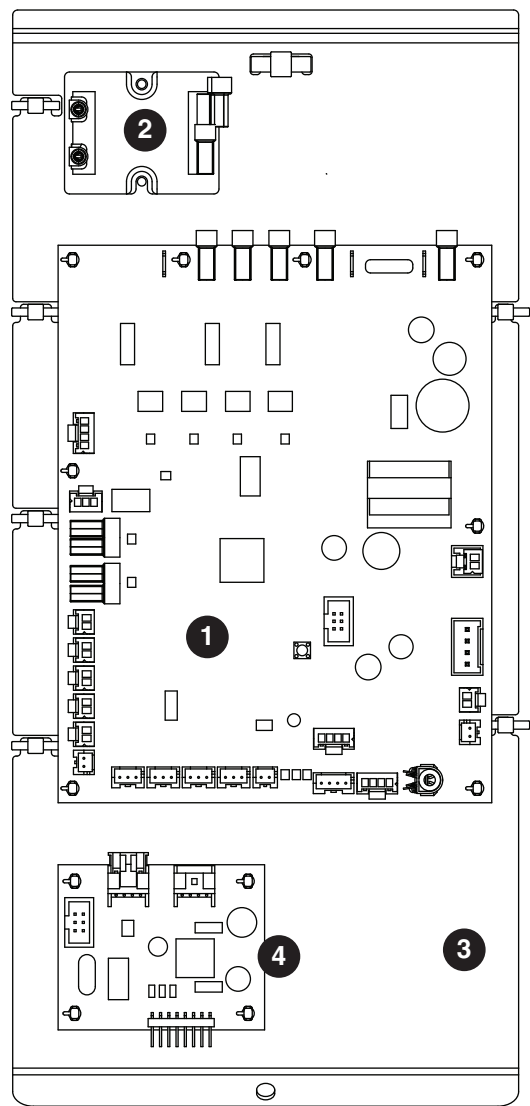
Reference	Description	Part #
1	Cover, Evaporator, REF1	00958728
Not shown	Cover, Evaporator, REF2	00958975
2	Drain Pan, Evaporator, REF1 and REF2	00961037
3	Coil, Evaporator/Condenser, REF1 and REF2	00939835
4	Shroud, Evap Fan, REF1 and REF2	00958736
5	Motor, Fan	00940460
6	Guard, Fan	00940452
Not shown	Bracket, Probe Guard	00980854

## Compressor Components



Reference	Description	Part #
1	Compressor, REF1 and REF2 (includes 00959510, 00961631, 00997959)	01053529
2	Bracket, Compressor Support, REF1 and REF2	00958694
3	Switch, Rocker, Recessed	00967604
4	Capillary Tube, REF1 and REF2	00959510
5	Filter/Drier	00961631
6	Coil, Evaporator/Condenser, REF1 and REF2	00939835
7	Baffle, Air	00965814
8	Shroud, Condenser Fan, REF1 and REF2	00958744
9	Motor, Fan	00940460
Not shown	Cord, Power, NEMA 5-15 Hospital Grade	00961268
Not shown	PTC Starting Device, Compressor	00997957

Control Board



Reference	Description	Part #
1	Control board, REF1/2	01085802
1	Control board, keypad, REF1/2 - KP models	01085810
2	Compressor relay	01042092
Not shown	Probe, temperature	01062801
3	Mounting plate, control board	01062110
Not shown	Stand offs, control board	00903005
Not shown	Mounting plate screw	204511
4	Driver board	01085844

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