BEVERAGE-AIR®

INSTALLATION AND OPERATING INSTRUCTIONS
for all Hydrocarbon
TMF Freezer Models

3071629RV05 Rev 10/13/2022
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SEE BACK COVER FOR WARRANTY REGISTRATION

WELCOME

Thank you for purchasing a Beverage-Air cabinet. This series has passed our strict quality control inspection and meets the high standards set by Beverage-Air Refrigeration! You have made a quality investment that with proper maintenance will give you many years of reliable service!

Please read the following installation and maintenance instructions before installing or using your unit. If you have any questions, Please call our Technical Service Department at **(800) 684-1199**. 8:00 AM to 5:00 PM EST.

Important Information

- PLEASE READ THESE INSTRUCTIONS CAREFULLY BEFORE INSTALLING OR USING, IF RECOMMENDED PROCEDURES ARE NOT FOLLOWED, WARRANTY CLAIMS MAY BE DENIED.
- Your warranty registration information is located with this manual. Please complete the card and submit it to Beverage-Air Refrigeration within TEN days of installation. Failure to properly register equipment may limit or void the warranty.
- Beverage-Air Refrigeration reserves the right to change specifications and product design without notice. Such revisions do not entitle the buyer to corresponding changes, improvements, additions, or replacements for previously purchased equipment.

SAFETY

This appliance has been designed with your safety in mind. It has many features to keep you from being harmed. However, safe operation and maintenance are your responsibilities.

CAUTION

Use: When using this unit, please:

- **Move it carefully.** If on casters be sure the casters do NOT run over the power cord.
- **Lock** the casters when in use.
- **Seek help.** This machine is heavy! Be sure to move with enough help to avoid tipping or dropping the cabinet.
- **Prevent children from playing in or on the cabinet**. Persons unable to use this product must be prevented access.
- **Follow all instructions**. There are many safety labels and directions on the unit. Heed them.
- **Watch your fingers**. There may be pinch points near the door hinges.

CAUTION

Maintenance

Do NOT:

- Clean a frozen evaporator with a sharp object
- Clean a dirty condenser with a sharp object.
- Store gasoline, kerosene or any other flammable material near the cabinet.

Do ALWAYS

- Use a Beverage-Air recommended technician certified to repair R290 equipment.
- Use ONLY Beverage-Air factory service parts. Use of non OEM parts can be dangerous because of the design changes needed to safely use R290.

Important Information to Add

Record the model number, serial number and the date of installation here for future reference. The model and serial numbers are on the unit's serial number dataplate, which is located on the left inside wall.

Model Number	
Serial Number	
Date of Installation	
Purchased From	

CAUTION **WARNING**

Observe the **Caution** and **Warning** notices. They are indicators of important safety information. Keep this manual for future reference.

IMPORTANT INFORMATION

This unit is intended to be used in a commercial application. That includes bars and restaurants.

If installed in a residence some commercial service companies may not be able to service it on site.

The manufacturer has designed and produced this machine with the finest in materials. The manufacturer assumes no liability for units that have been altered in any way. Alterations or part substitutions will void the warranty.

Limitations

The machine is designed for use indoors in a controlled environment. It must be kept dry, not overheated or subjected to excessive cold. May only be connected to a dedicated electrical circuit. Extension cords are not permitted.

	Minimum	Maximum
Voltage	100	130
Room Air Temp	75.2° F	100° F

Air Flow, All Models regardles of sections, or door count.

Agency Approvals

These marks appear on the dataplate or serial tag, located in the inside of the left wall. The dataplate also contains the model and serial numbers as well as electrical requirements.

PRODUCT INFORMATION

Model	Cabinet Dimensions w x d x h (Inches)	Sections	Full Load Amps	Power Cord Plug (NEMA)	Refrigerant Type / Charge (g)
TMF1HC-1S	26 9/32 X 33 9/16 X 80 1/2	1	4.73	5-15P	R-290 / 76*
TMF2HC-1S	53 31/32 X 33 9/16 X 80 1/2	2	8.3	5-15P	R-290 / 70**

Height includes casters.

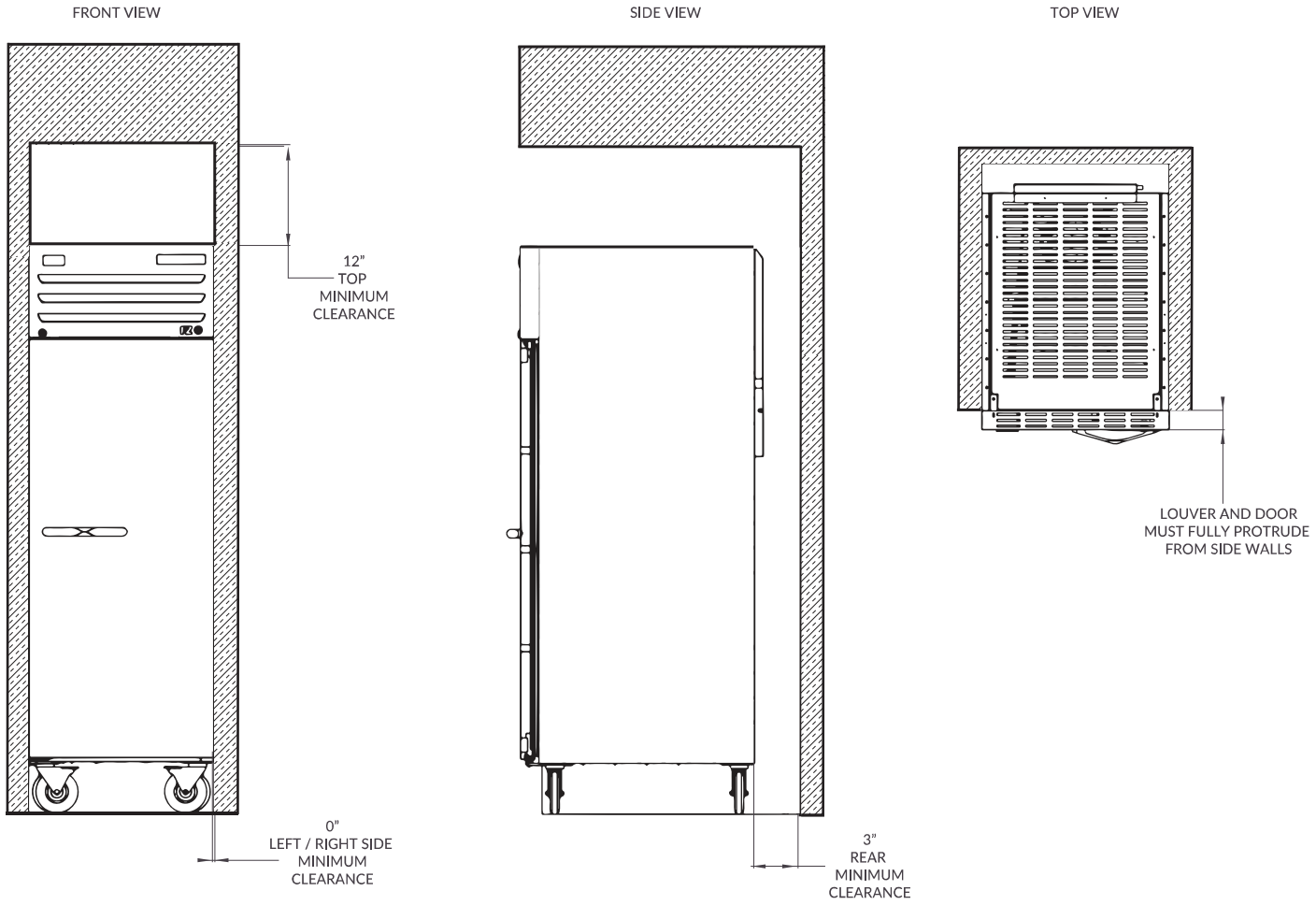
- As shipped, all models are set to -0.4°F., maintaining the cabinet temperature between -4°F and 28.4°F.
- All models are 115 volts, 60 Hz AC.
- ALWAYS REFERENCE YOUR EQUIPMENT DATA PLATE AMPS, REFRIGERANT AND REFRIGERANT CHARGE FOR THE MOST UP TO DATE AND ACCURATE VALUES.
- There are no access valves on the refrigeration system.

* 76 grams = 2.68 ounces.

**70 grams=2.46 ounces.

For each unit

CLEARANCE AND PLACEMENT



Placement

Consider the following when selecting a location for your Refrigerator:

Clearance:

- 12 in. at the top
- 3.0 in. at the rear
- 0.0 in. at the left side
- 0.0 in. at the right side

Note: Louver and Door must fully protrude from side walls

Floor Load: The floor on which the unit is located must be even and level, free from vibrations, and strong enough to support the combined weights of the unit and maximum product load-

Ventilation: Grille area at front must be free and clear of any object or wall.

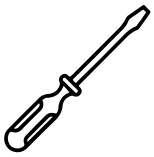
Power Outlet: Dedicated power outlet is located within the length of the unit's power cord.

UNPACKING AND SET UP

Carefully inspect the shipping carton for damage. This is the only time that shipping damage may be claimed. If damage is suspected, open the carton immediately and, if there is damage, retain the carton and contact the shipper to make a claim. Do NOT contact the manufacturer.

Uncrating

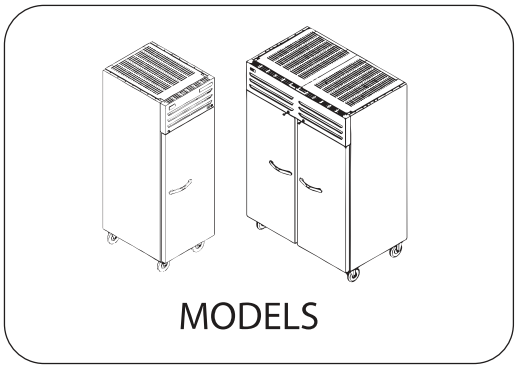
Tools Needed: Phillips screwdriver.

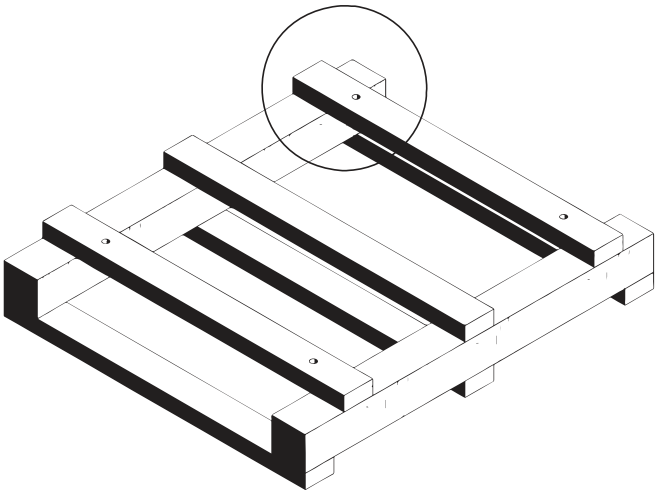


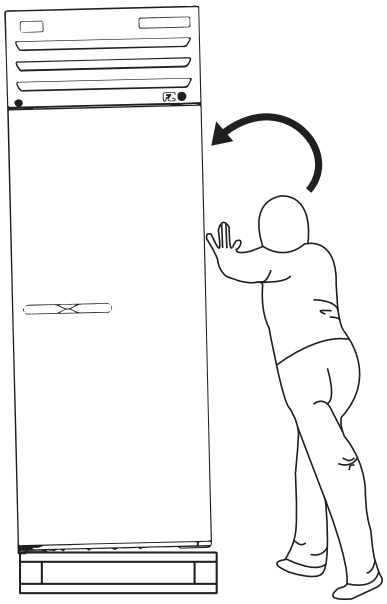
1. Cut the stretch wrap from any side, remove the cardboard from the corners, the cardboard top and the cardboard in the front and the back.
2. Remove the bond paper. Discard stretch wrap and any cardboard that will not be recycled.
3. Move unit as close to final position as possible before removing the skid.

Skid Removal

Loosen the four hex head screws attached to your model using a 3/4 inch wrench. Once the model is loose, push it to the left and tilt the cabinet to the other direction and block it securely with a 2 X 4 piece of lumber or other suitable material. While in this position, proceed to Page 8 to install casters.

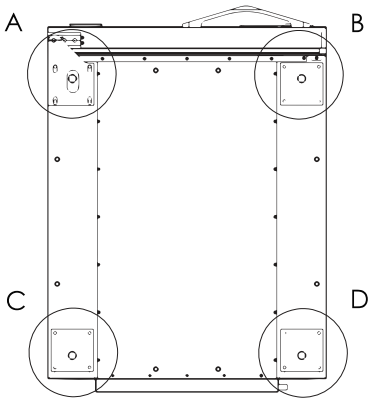




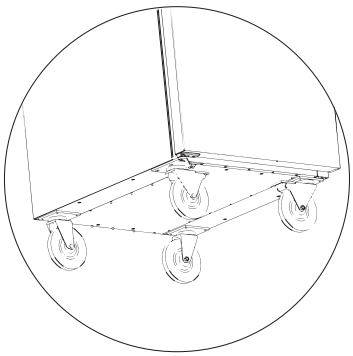


INSTALLING THE CASTERS

1. **Inside your model you will find a kit of four 6" casters (2 with brakes, and 2 free moving). The installation points are** located on the bottom corners of the unit.

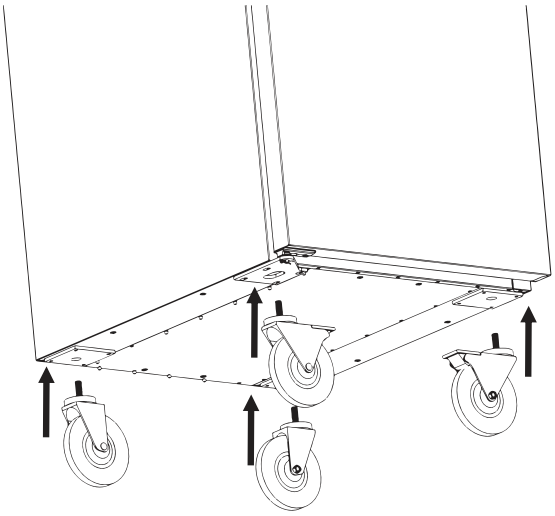


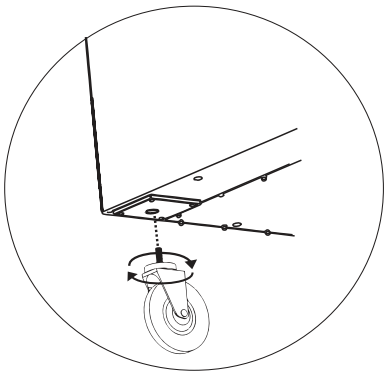
NOTE: CASTERS WITH BRAKES ARE PLACED ON THE FRONT OF THE UNIT, FREE MOVING ON THE REAR.



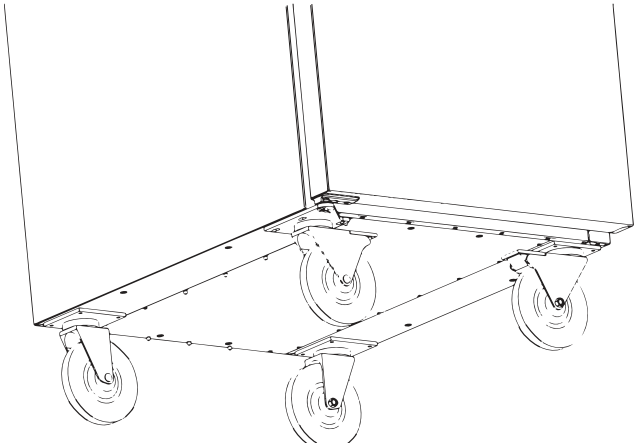
Correctly installed casters

2. Thread the stem casters into the holes on the bottom of the cabinet and tighten by hand as much as possible.





3. Once the caster cannot be turned any more, use a 3/4 inch wrench to tighten the nut in the caster until it's snug. **After the first 2 casters are installed, tilt the cabinet to the opposite side and block it securely and repeat steps 2** and 3 for the other 2 casters.

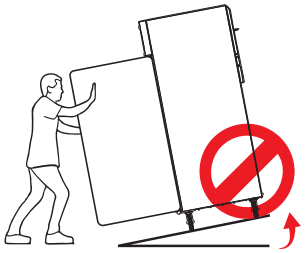


IMPORTANT SAFETY INFORMATION

SAVE THESE INSTRUCTIONS

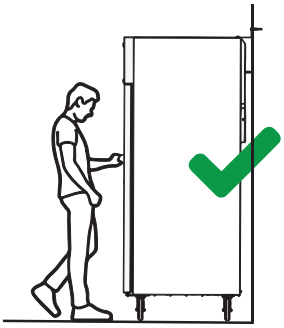
⚠ WARNING

The refrigerator may tip forward when too much pressure is applied to an open door or when the refrigerator is installed on an unlevel surface. This may cause injury if the refrigerator tips over or products (food/liquids) fall from the top of the refrigerator.



⚠WARNING

Refrigerator Anti-tip device



For additional protection against refrigerator tipping inicidents, the supplied anti-tip device shall be installed on the wall. The refrigerator anti-tip device secures the refrigerator to the wall and prevents the refrigerator from tipping forward.

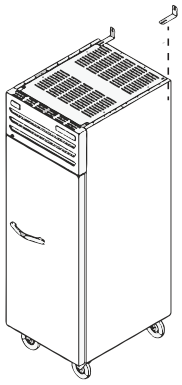
It is important to bear in mind that to avoid the risk of tipping over, it is essential to install the equipment on a completely flat leveled surface.

***IMAGES FOR ILLUSTRATION PURPOSES ONLY**

Anti-tip bracket installation instructions

Refrigerator Anti-tip device, for both one and two door equipment

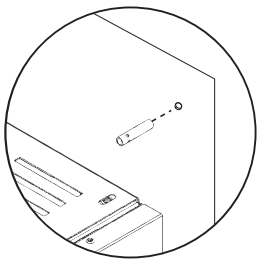
To avoid risk of the appliance tipping, it must be secured by a properly installed anti-tip bracket, for both one and two door equipment.



STEP 1. LOCATE ANTI-TIP BRACKET

Place the anti-tip wall bracket up against the rear wall and in line with the desired location of the back side of the refrigerator.

Use the anti-tip wallbracket as a template for marking the holes on the wall. Mark the hole locations with a pencil, nail or awl.



STEP 2. DRILL AND INSTALL SLEEVE ANCHORS.

Place the anti-tip wallbracket lined up with the wall holes marks.

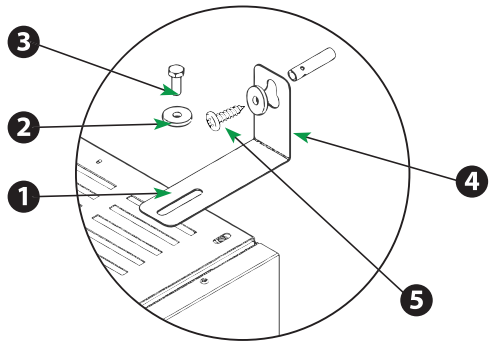
Drill the holes for the anchors of the wall at the center of the holes. (Use a 1/4¨ drill bit).

Install the sleeve anchors into the drilled holes.

STEP 3. INSTALL THE ANTI-TIP WALL BRACKET

Install the sleeve anchors into the drilled holes. Place the anti-tip wall bracket as indicated in step 2.

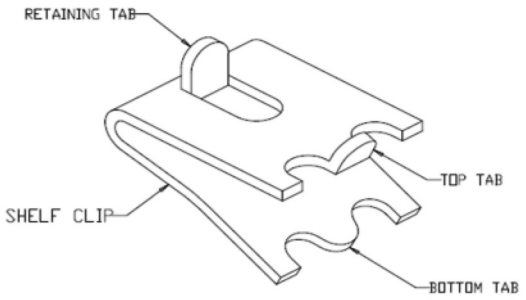
Install the 1/4¨ lag bolts through the anti-tip wall bracketand tighten appropriately.

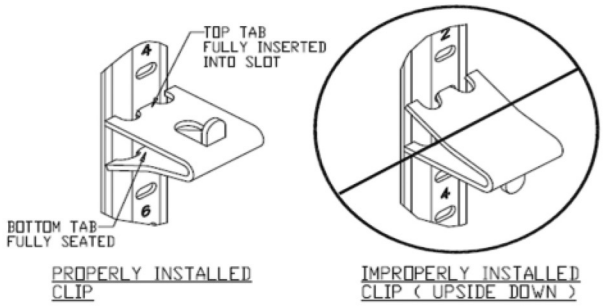


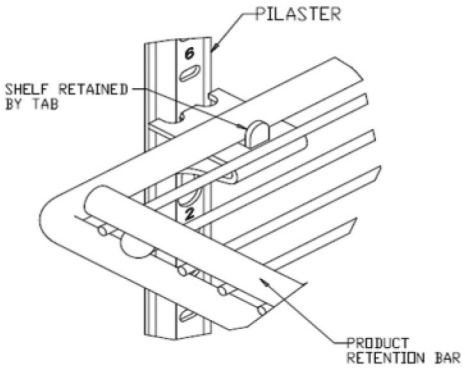
***IMAGES FOR ILLUSTRATION PURPOSES ONLY**

SHELF INSTALLATION

1. Determine the proper location for the shelf clips. The reference numbers on the pilaster can serve as a guide to ensure all clips are properly located.
2. Insert the top tab of the shelf clip into the desired hole of the pilaster. The retaining tab MUST be facing up as shown.
3. Rotate the clip downwards and insert the bottom tab into the matching hole in the pilaster. The clip may need to be squeezed slightly during installation.
4. Install all remaining clips.
5. Install shelves onto clips with the product retention bar facing up. Be careful not to dislodge clips during installation.
6. Place shelves so that the retaining tab on the clip captures the shelf as shown.
7. Confirm that the shelf is resting on ALL 4 clips and that the clips are securely attached to the pilasters.
8. Improper shelf clip installation could cause the shelf and / or the product on it to fall, resulting in damage to the unit and possible bodily injury.
9. Do NOT overload the shelves. The unit is designed to use all shelves that are supplied in an equally spaced manner. Contact Beverage-Air customer service if fewer shelves or a different configuration to ensure shelf overloading will not occur.







ELECTRICAL

This is a cord-connected unit, and must be connected to its own **dedicate**d power supply. Check the dataplate on the machine to confirm the voltage and per the dataplate use the correct fuses or HACR circuit breakers.

Note: Do not connect to GFI / GFCI outlets. Connection to that type of outlet can result in product loss due to unsafe cabinet temperature when GFI device trips from moisture.

Power Cord

This 115 volt model is equipped with a cord and a 5-15P plug.

If the power cord becomes damaged, it must be replaced with the identical cord.

Follow All National and Local Codes

This Unit Must Be Grounded. Do not use extension cords and do not disable or by-pass ground prong on electrical plug.

Initial Start Up

Plug the power cord into the proper power supply.

The cabinet will soon begin to blow warm air out of the top area, and cool air will flow from the inside blower.

The cabinet temperature has been set at the factory and should not need adjustment, however if it was changed, the standard setting is -0.4° F.

Cautions

Care must be taken whenever moving or servicing the unit. The refrigerant is contained in a sealed system, but if released it may be flammable.

USING THE UNIT

Operation is simple, just keep the unit connected to the correct power supply and the freezer will maintain the internal temperature it has been set to. Keep the doors and/or drawers closed as much as possible to avoid unnecessary run time.

The controller displays the current internal temperature.

Adjusting the set temperature lower will NOT cause the system to lower the temperature faster. When on, the refrigeration system is always operating at maximum.

The temperature was set at the factory at -0.4˚F, but you can adjust it to your own selected temperature. Five seconds after setting, the display will automatically show the current temperature again.

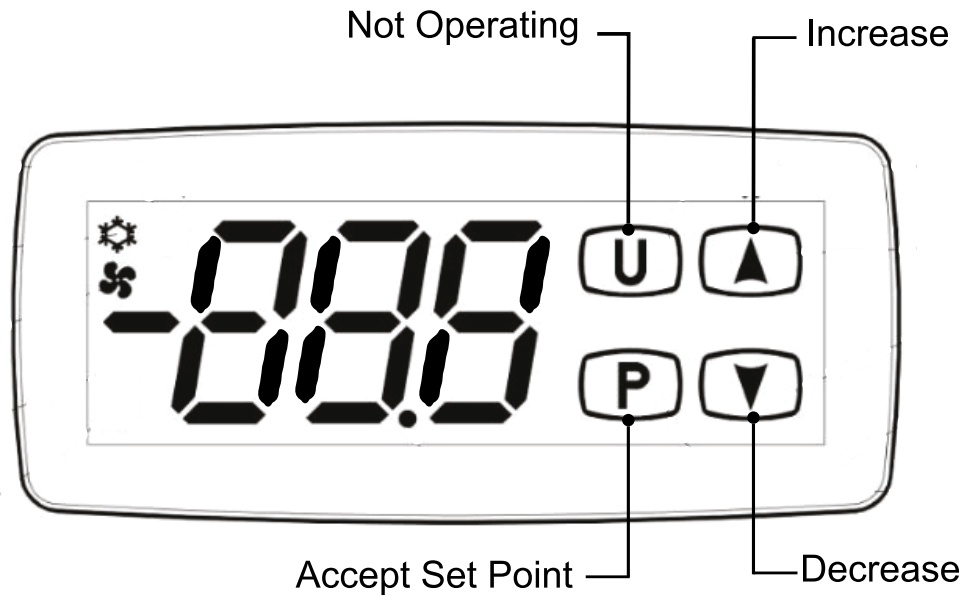
After turning on the equipment, it will defrost automatically every six hours. During the defrost cycle, the display will show the legend dEF, and at the end of the defrost cycle the message PdF will be displayed until the set temperature is reached, or 15 minutes have elapsed.

To start a defrost manually, press the button with the up arrow for five seconds while the temperature is shown on the display.

The internal fan will normally be on all the time except when the door is opened. When the door is opened, the fan will turn off for one minute, after that, it will turn on again even if the door is still open.

The compressor and it's fan will only turn on when the internal temperature is greater than or equal to the SetPoint + 1.8˚F, and will turn off when the internal temperature is less than or equal to the SetPoint - 1.8˚F. Every time the compressor is turned off, a minimum compressor off time of five minutes will be applied to prevent wear and tear, and prolong the life of the equipment.

The equipment will turn the light on when opening the door and turn it off when closing it.



In most cases the only thing displayed will be the cabinet temperature. When something other than normal operation has occurred, a message will be shown.

Message Displayed	Why	What to do
dEF	Unit is defrosting	Nothing. Normal operation.
PdF	Post-defrost in progress	Nothing. Normal operation.
Hi	Cabinet temperature too warm	**Confirm doors or drawers are closed.**
Lo	Cabinet temperature too cold	Apply a defrost, if the message does not change, call for service.
oP	Door is open	Close door, if message does not change, call for service
E1 -E1 E2 -E2 E3 -E3	Sensor unplugged or has failed	Call for service.
HU	The supply voltage exceeds the maximum	Wait for the voltage to stabilize.
LU	Supply voltage below minimum	Wait for the voltage to stabilize.

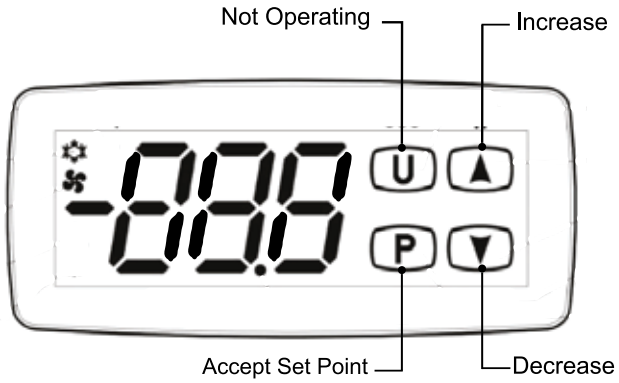
SEQUENCE OF OPERATIONS FREEZER

The freezer operates based on the air temperature measured by the probe located at the return air.

	ON		OFF	
COMPONENT	OPERATION	CONTROLLER ACTION	OPERATION	CONTROLLER ACTION
COMPRESSOR	During normal operation, if 5 minutes have elapsed since the compressor stopped, the compressor turns on when the air temperature at the probe is greater than or equal to the SetPoint + 1.8 °F	The Compressor Contact is energized (E34B – Terminal #2)	The compressor turns off when the air temperature at the probe is less than or equal to the SetPoint - 1.8°F	The Compressor Contact is deenergized (E34B – Terminal #2)
CONDENSER FAN	The Condenser Fan turns on when the Compressor is running	The Condenser Fan is wired directly to the Compressor, not through the controller	The Condenser Fan **turns off when the** Compressor is not running	The Condenser Fan is wired directly to the Compressor, not through the controller
EVAPORATOR FAN	**If the freezer door is closed, the evaporator fan will be on continuously**	Evaporator fan Contact is energized (E34B - Terminal # 3)	When opening the freezer door, the evaporator fan will turn off for 1 minute, after that the evaporator fan will turn on even if the door remains open.	**Evaporator fan + door open** **Contact is de-energized for 1 minute (E34B - Terminal #3)**
LIGHT	When the door is opened	The Light Contact is energized (E34B Terminal #4)	When the door is closed	The Light Contact is de-energized (E34B Terminal #4)
DEFROST RESISTANCE	If 6 hours have elapsed since the last defrost.	The Defrost contact is energized (E34B - Terminal#5)	If 20 minutes have elapsed after a defrost has been initiated or the temperature at the defrost sensor exceeds 38°F	The Defrost contact is de-energized

Condition	Compressor	Condenser Fan	Evaporator Fan	Lights	DEFROST RESISTANCE
Cabinet Temp<= Setpoint + 1.8°F	ON	ON	ON	ON or OFF	OFF
Cabinet Temp <= Setpoint - 1.8°F	OFF	OFF	ON	ON or OFF	OFF
Defrost	OFF	OFF	OFF	ON or OFF	ON

Electronic Controller



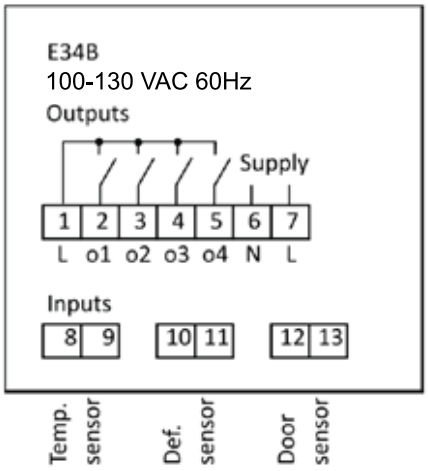
Control Panel Display

	Defrost LED			Alarm LED	
	On fixed:	Defrost active		**On fixed:**	ALARM Present
	Flashing:	Dripping state		Flashing:	ALARM Silenced
	Off:	Defrost is off		**Off:**	No Alarm
	Fan LED			Compressor LED	
	On fixed:	Fan active		**On fixed:**	Compressor active
	Flashing:	Standby Fan (Normal operation.)		Flashing:	Standby Compressor(Normal operation.)
	Off:	Fan Off		**Off:**	Compressor off

NOTE: When switched on, the instrument panel performs a lamp test for a few seconds.

Keyboard Functions

▲	▼	U	P
UP	DOWN	DEFROST (ESC)	SET (ENTER)
Quick press and release	Quick press and release	Quick press and release	Quick press and release
• Increases Set Point	• Decreases Set Point	• No function	• Accept Set Point
Long press and release	Long press and release	Long press and release	Long press and release
• Start/Stop Defrost	• No function	• No function	• No function



Changing the Set point

Current temperature

1. 

The display shows the current temperature

Flashing temperature setpoint

2. 

Press: UP/DOWN to adjust setup

3. 

Press the P key to accept or wait 5 seconds, the display automatically reverts to showing the current temperature.

Electronic Controller Alarms

Alarm Code	Trigger	Outputs	Comments
"Hi"	Air temperature is above 60°F	Blink "Hi"	High temperature alarm
"Lo"	Air temperature is less than -22°F	Blink " Lo"	Low temperature alarm
"oP"	Door open	Blink “oP”	Door open alarm
"HU"	The line voltage is higher than the upper limit	Blink “HU”	High voltage alarm
"LU"	Line voltage is less than the lower limit	Blink “LU”	Low voltage alarm
"E1 -E1"	"S1" error	Blink “E1” or “-E1”	"S1" sensor failure (short or open)
"E2 -E2"	"S2" error	Blink “E2” or “-E2”	"S2" sensor failure (short or open)
"E3 -E3"	"S3" error	Blink “E3” or “-E3”	"S3" sensor failure (short or open)

CLEANING AND MAINTENANCE

Cleaning Schedule:

Cabinet	Condenser coil	Gaskets	Routine Maintenance
Daily wipe down Weekly interior	Quarterly cleaning	Daily inspection, check that hinges are tight to the cabinet.	Annually

Daily Exterior Cleaning

It is much easier to clean on a regular basis than to have to remove stains once they have built up.

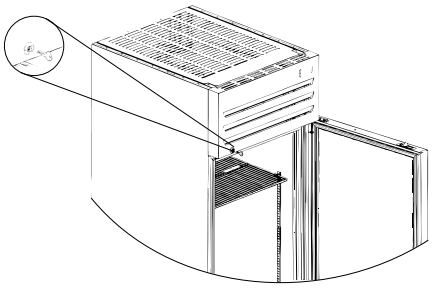
1. Wash with a clean sponge and a mild detergent that does not contain chlorine.
2. Rinse with clean water.
3. Dry with a soft cloth.
4. Polish with a soft cloth, wiping with the grain.
5. Wipe weekly with stainless steel cleaner.

Weekly Interior Cleaning

1. Remove all food, food related items and shelves. Store the food at a safe temperature.
2. Disconnect power to the unit (unplug it or switch the breaker off).
3. Remove all loose food particles from the inside walls, floor, door liner and ceiling.
4. Scrub all interior surfaces and door gaskets with a warm (100°F to 110°F) detergent solution and a soft scrub brush.
5. Rinse with clean water and allow to air dry.
6. Return the shelves to the unit and secure them.
7. Restore power.
8. Return food to the unit when it has reached a safe temperature.

CONDENSER CLEANING

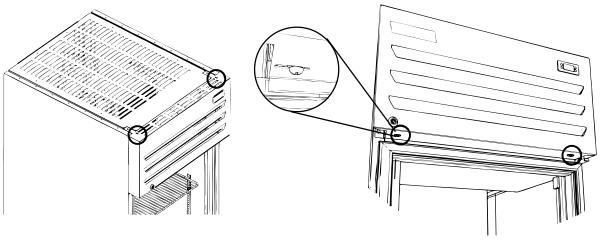
Keeping the condenser coil clean is critical to efficient operation.



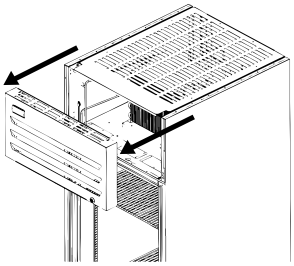
Before starting:

* Unplug unit from power supply.
* The lock must be turned off to remove the louver.

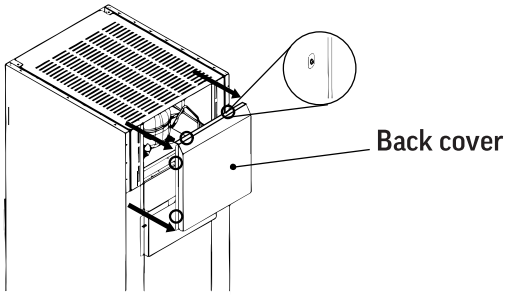
1. Remove the 4 screws holding the louver, (2) down and (2) up. As shown in the pictures.



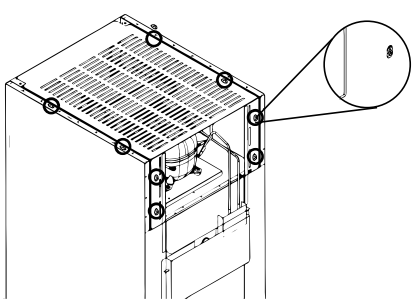
2. Remove the louver, also disconnecting the harnesses.

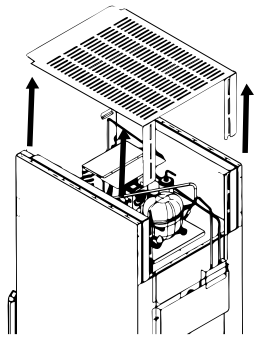


3. Remove the 6 screws from the “Back cover”, which is located on the back of the equipment.

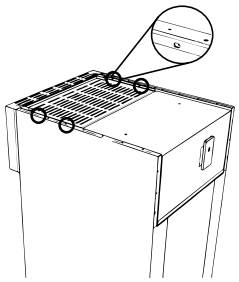


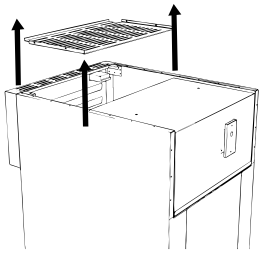
4. For TMF1HC-1S or TMF2HC-2S, remove 8 screws which hold the upper grill to be able to access the unit.



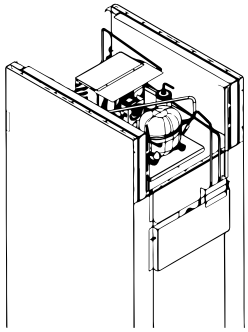


Otherwise, for TMR1HC-1S or TMR2HC-1S only 4 screws are removed

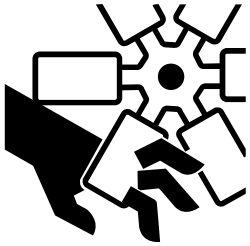




5. Finally, you now have access to the unit, to continue with the necesary maintenance.



CAUTION **Rotating fan blade can cause personal injury.**



Unplug unit from power supply before beginning to clean condenser

6. Examine condenser surface, if dusty, brush and vacuum the dust and lint from the surface of the coil. Brush up and down to avoid damaging the fins. Use care to not disturb the wires connected to the controller.

Note: If the coil is greasy, the coil will need to be cleaned with coil cleaner and that should be left to an experienced technician.

7. Return grill to unit.

Note: Air filters are not recommended as they restrict the flow of cooling air.

METHODS FOR CLEANING STAINLESS STEEL

Cleaning Needed	Cleaning Agent	Method of Application	Affect on Finish
Smears and fingerprints	Areal 20, Lac-O-Nu, Lumin Wash O'Cedar Cream Polish, Stainless Shine.	Rub with cloth as directed on the package.	Satisfactory for use on all finishes. Provides barrier film to minimize prints.
Stubborn Spots and Stains, Baked-On Splatter, and Other Light Discolorations	Allchem Concentrated Cleaner.	Apply with damp sponge or cloth. Rub with damp cloth.	Use in direction of polish lines on No. 4 (polished) finish. May scratch No. 2 (mill) and Nos. 7 and 8 (polished) finishes.
	Samae, Twinkle or Cameo Copper Cleaner	Rub with damp cloth.	
	Grade FFF Italian pumice, whiting, or talc.	Rub with dry cloth.	
	Liquid NuSteel Paste NuSteel or DuBois Temp. Copper's Stainless Steel Cleaner Revere Stainless Cleaner Household cleansers, such as Old Dutch, Lighthouse, Sunbrite, Wyandotte, Bab-O, Gold Dust, Sapolio, Bon Ami, Ajax, or Comet Grade F Italian Pumice, Steel Bright, Lumin Cleaner, Zud, Restore, Sta-Clean, or Highlite. Penny-Brite or Copper-Brite.	Use small amount of cleaner. Rub with dry cloth using a small amount of cleaner. Apply with damp sponge or cloth. Rub with a damp cloth. May contain chlorine bleaches. Rinse thoroughly after use. Rub with a damp cloth. Rub with a dry cloth using a small amount of cleaner.	
Heat tint or discoloration	Penny-Brite or Copper-Brite. Past NuSteel, DuBois Temp, or Tarnite. Revere Stainless Steel Cleaner. Allen Polish, Steel Bright, Tenacious Deposits, Rusty Discolorations, Industrial Atmospheric Stains Wyandotte, Bab-O or Zud.	Rub with a dry cloth. Rub with a dry cloth or stainless steel wool. Apply with damp sponge or cloth. Rub with a damp cloth.	
Burnt-On Foods and Grease Fatty Acids, Milkstone (where swabbing or rubbing is not practical)	Easy-Off, De-Grease-It, 4 to 6% hot solution of such agents as trisodium phosphate or sodium tripolyphosphate or 5 to 15% caustic soda solution	Apply generous coating. Allow to stand for 10-15 minutes. Rinse. Repeated application may be necessary.	Excellent removal, satisfactory for use on all finishes.
Tenacious Deposits, Rusty Discolorations, Industrial Atmospheric Stains	Oakite No. 33, Dilac Texo 12, Texo NY, Flash-Klenz, Caddy Cleaner, Turco Scale 4368 or Permag 57.	Swab and soak with clean cloth. Let stand 15 minutes or more according to directions on package, then rinse and dry.	Satisfactory for use on all finishes
Hard Water Spots and Scale	Vinegar. 5% oxalic acid, 5% sulfamic acid, 5 to 10% phosphoric acid, or Dilac, Oakite No. 33, Texo 12, Texo N.Y.	Swab or wipe with cloth. Rinse with water and dry. Swab or soak with cloth. Let stand 10-15 minutes. Always follow with neutralizer rinse, and dry.	Satisfactory for all finishes. Satisfactory for all finishes. Effective on tenacious deposits or where scale has built up.

HELP

Trouble Diagnosis for the User		
Malfunction	Possible Cause	Likely Solution
No cooling - unit is silent	Unit not plugged in. Fuse or circuit breaker tripped. Power cord plug loose in outlet.	Connect to proper voltage circuit Replace fuse or reset breaker. Check outlet for loose connection, replace as needed
Unit cools but seems to be on all the time	Dirty condenser	Clean condenser
Space temperature too high	Dirty condenser Evaporator iced over Unit in high temperature environment	Clean condenser Defrost evaporator Reduce temperature of room
Space temperature too low	Temperature control	Adjust or replace control
Trouble Diagnosis for the Technician		
No cooling - compressor does not hum	Temp control stuck in open position	Replace temp control.
No cooling - compressor hums but does not start	Low voltage to unit. Compressor starting system failure	Check voltage, correct as needed. Check start relay and start capacitor. See next step.
No cooling - compressor starts but shuts off	Compressor start relay failure Compressor start capacitor failure	Replace relay. Replace capacitor.
No cooling - compressor cycles on and off	Overheating weak overload	Clean condenser, check fan motor and blade. Check refrigerant charge. Replace overload.
Unit cools, but is slow to pull cabinet temperature down	Evaporator fan not turning	Check fan(s), on multiple fan units one fan may be turning slowly and will need to be replaced.
Unit cools but turns on and off frequently	No product in cabinet. Temperature control defective Refrigeration issue	Fill cabinet Replace control Have system checked
Makes excessive noise	Tubing rattle Loose parts Bent or broken fan blade Noisy fan motor	Check tubing for routing Check for loose components Replace fan blade Replace fan motor

FOR THE SERVICE TECH - R290

Refrigeration service should only be attempted by a trained trade professional certified to work on R290 systems.

Here are some critical service items.

This list does not qualify anyone to service the unit. It is a reminder and checklist for the service tech. Keep these in mind for **R290 service**:

- Wire nuts are NOT to be used when changing an electrical part.
- The switches in this product are sealed, **only exact replacements** may be used.
- The process tubes are to be used for service access.
- Cut out (with tubing cutter) refrigeration components that are to be replaced. Do NOT un-braze.
- Because R290 can be vented into the air during service, the venting MUST be in an area free from flame or spark. It must also be in a well ventilated area, with a nearby open window or door.
- A sign noting service of a system containing propane must be attached to the unit during refrigeration service.
- A combustible gas leak detector must be used to inform anyone in the area when propane is present in the air.

Other Information:

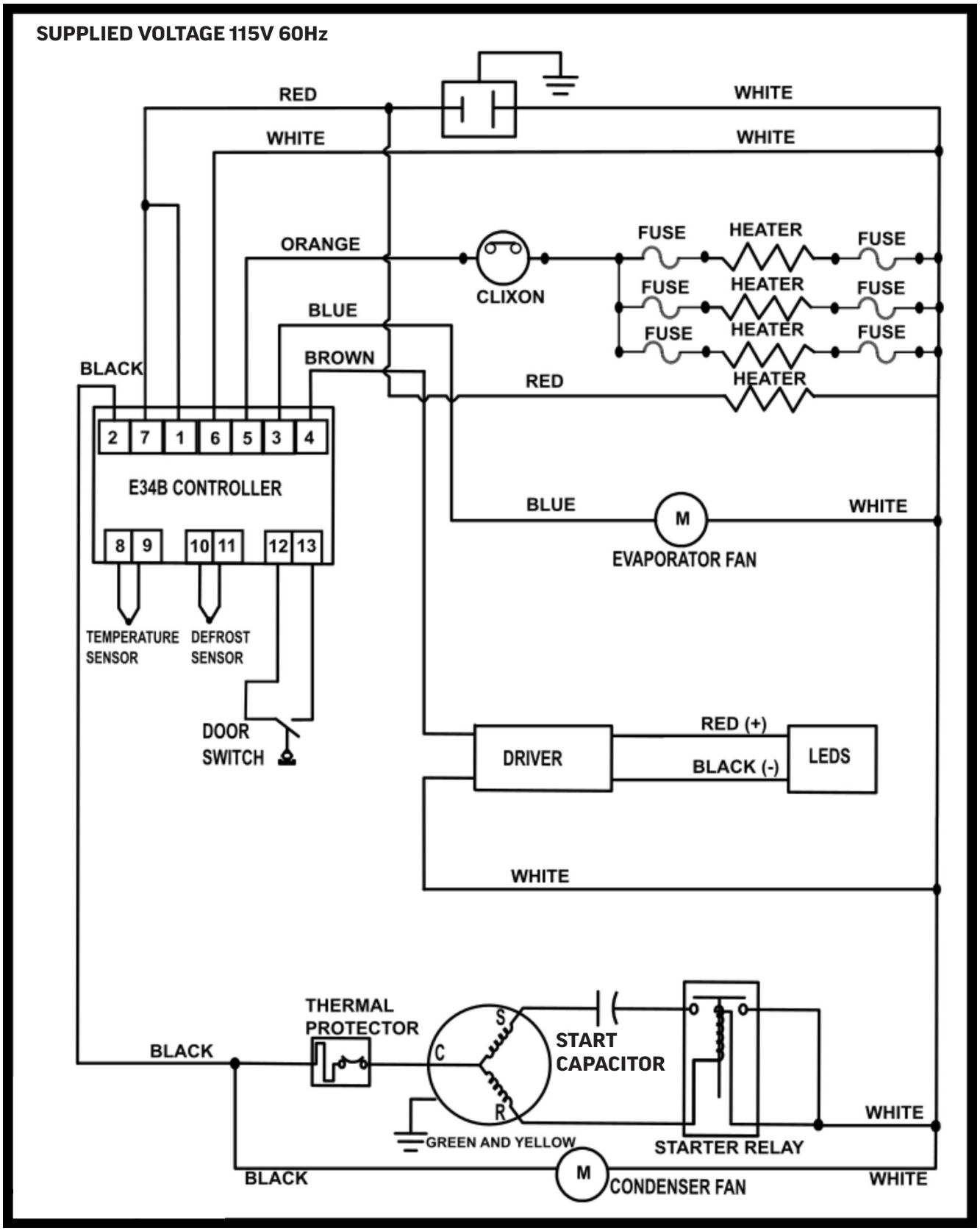
Evacuation: It is critical that a refrigeration system be leak free and internally dry. A thorough evacuation with a good vacuum pump with a micron gauge attached is the only way to ensure that the system is dry and ready for a charge of refrigerant.

Charging: The system is critically charged and the proper type and amount MUST be weighed in.

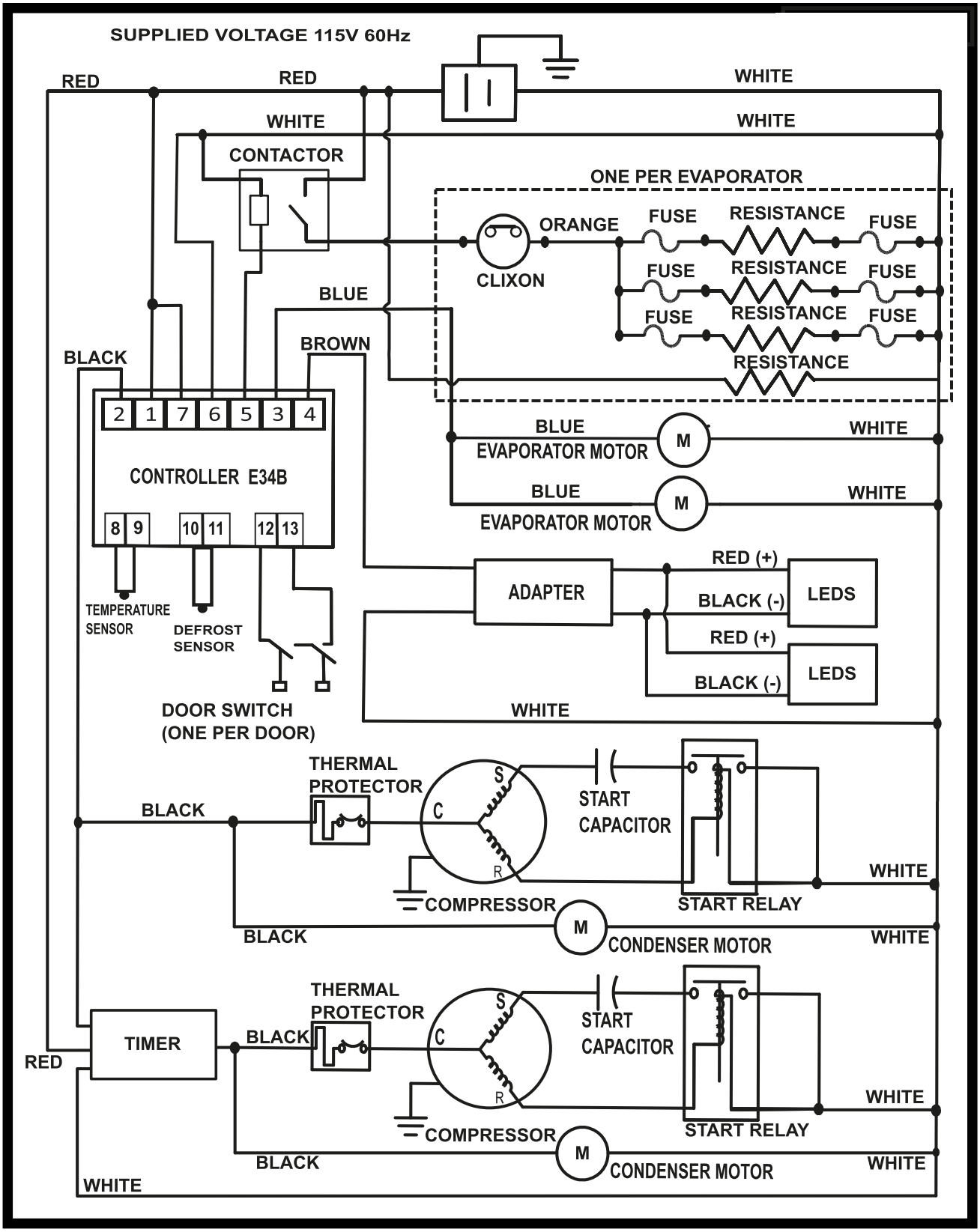
Overcharge symptoms: Unit will cool properly but the suction line temperature will be unusually cold. Compressor run time will be longer than normal.

Undercharge symptoms: Long run time, poor cooling and a hot compressor dome are the main symptoms of an undercharge.

FOR THE SERVICE TECH - WIRING DIAGRAM FOR TMF1HC-1S



FOR THE SERVICE TECH - WIRING DIAGRAM FOR TMF2HC-1S



LIMITED WARRANTY

WARRANTY (Warranty valid in USA and Canada)

TWO (2) YEAR PARTS AND LABOR WARRANTY:

Beverage-Air Corporation warrants to the original purchaser of Beverage-Air branded equipment, including all parts thereof, that such equipment is free from defects in material and workmanship, under normal use, proper maintenance, and service as indicated by Beverage-Air installation and operation instructions, for a period of TWO (2) years from the date of installation, or twenty-seven (27) months from the date of shipment from the manufacturer, whichever is earlier.

ADDITIONAL FIVE (5) YEAR COMPRESSOR PART WARRANTY*:

In addition to the warranty set forth above, Beverage-Air warrants the hermetically/semi-hermetically sealed compressor (part only) for an additional FIVE (5) years beyond the first TWO (2) years warranty period; not to exceed eighty-seven (87) months from the date of shipment from Beverage-Air, provided upon receipt of the compressor, manufacturer examination shows the sealed compressor to be defective. This extended warranty does not cover freight for the replacement compressor or freight for the return of the failed compressor.

* Units shipped after 09/01/2023. Previous warranty applies to units shipped prior.

EXCEPTIONS:

- CT96 and CF3 models carry a one (1) year parts and labor warranty, limited to fifteen (15) months from date of shipment from Beverage-Air. These are excluded from additional compressor warranty.
- SR/SF (Slate) models carry a two (2) year parts and labor warranty, limited to twenty-seven (27) months from date of shipment from Beverage-Air.
- TMR/TMF carry a two (2) year parts and labor warranty, limited to twenty-seven (27) months from date of shipment from Beverage-Air.
- Blast Chillers carry a three (3) year parts and labor warranty; additional two (2) years compressor part only.
- Units installed in Residential applications will be not covered under this warranty. Units are intended for Commercial use only.

Also, this extended compressor-part only warranty does NOT apply to any electrical controls, condenser, evaporator, fan motors, overload switch, starting relay, capacitors, temperature control, filter/drier, accumulator, refrigeration tubing, wiring harness, labor charges, or supplies which are covered by the warranty above. Note: 3rd party extended warranties are not covered by this warranty statement.

Normal wear parts, such as light bulbs/lams and gaskets are not covered by this warranty. For the purpose of this warranty, the original purchaser shall be deemed to mean the individual or company for who the product was originally installed.

Units that utilize variable speed compressor technology can experience nuisance tripping on Class A GFCI outlets which have a trip limit of 4 mA to 6 mA. To avoid this issue in a location that requires GFCI circuit protection, Beverage Air & Victory recommends using a HUBBELL Model Number GFRST83W 20A Heavy Duty Hospital Grade Self-Test GFCI Receptacle.

Our obligation under this warranty shall be limited to repairing or replacing, including labor, any part of such product, which proves thus defective. Beverage-Air reserves the right to examine any product claimed to be defective.

The labor warranty shall be for self-contained units only and for standard straight time, which is defined as normal service rate time, for service performed during normal working hours. Any service requested outside of a servicer's normal working hours will be covered under this warranty at the normal rate and any additional overtime rate will be at the responsibility of the equipment purchaser.

Any part or accessory determined to be defective in the product should be returned to the company within thirty (30) days under the terms of this warranty and must be accompanied by a record of the cabinet model, serial number, and identified with a return material authorization number (RMA#) issued by the manufacturer.

Special installation/applications, including remote locations, are limited in coverage by this warranty. Any installation that requires extra work, and/or travel, to gain access to the unit for service is the sole responsibility of the equipment purchaser.

Improper operation resulting from factors, including but not limited to, improper or negligent cleaning and maintenance, low voltage conditions, inadequate wiring, outdoor use (unless otherwise specified) and accidental damage are no manufacturing defects and are strictly the responsibility of the purchaser.

LIMITED WARRANTY (CONT'D)

With the exception of Blast Chillers, the product is designed for maintaining temperature and not bringing food to a desired temperature therefore cannot be held responsible for this function under warranty.

Units must be in a conditioned environment or warranty will be void.

Condensing coils must be cleaned at regular intervals. Failure to do so can cause compressor malfunction and will void warranty. Although cleaning requirements vary in accordance with operation of various products, Beverage-Air recommends a minimum monthly cleaning.

NO CLAIMS CAN BE MADE AGAINST THIS WARRANTY FOR SPOILAGE OF FOOD, PRODUCTS, LOSS OF SALES OR CONSEQUENTIAL DAMAGES.

THE FOREGOING WARRANTIES ARE EXPRESSLY GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESS, IMPLIED, OR STATUTORY, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE HERBY DISCLAIMED, ALL OTHER OBLIGATIONS OR LIABILITIES ON OUR PART, AND WE NEITHER ASSUME, NOR AUTHORIZE ANY OTHER PERSON TO ASSUME FOR US, ANY OBLIGATION OR LIABILITY IN CONNECTION WITH THE SALE OF SAID REFRIGERATION UNITS OR ANY PARTS THERE OF.

This warranty shall not be assignable and shall be honored only in so far as the original purchaser. This warranty does not apply outside the limits of the United States of America and Canada, nor does it apply to any part that has been subject to misuse, neglect alteration, accident, or to any damage caused by transportation, flood, fire, acts of terrorism, or acts of God.

LIMITATION OF LIABILITY:

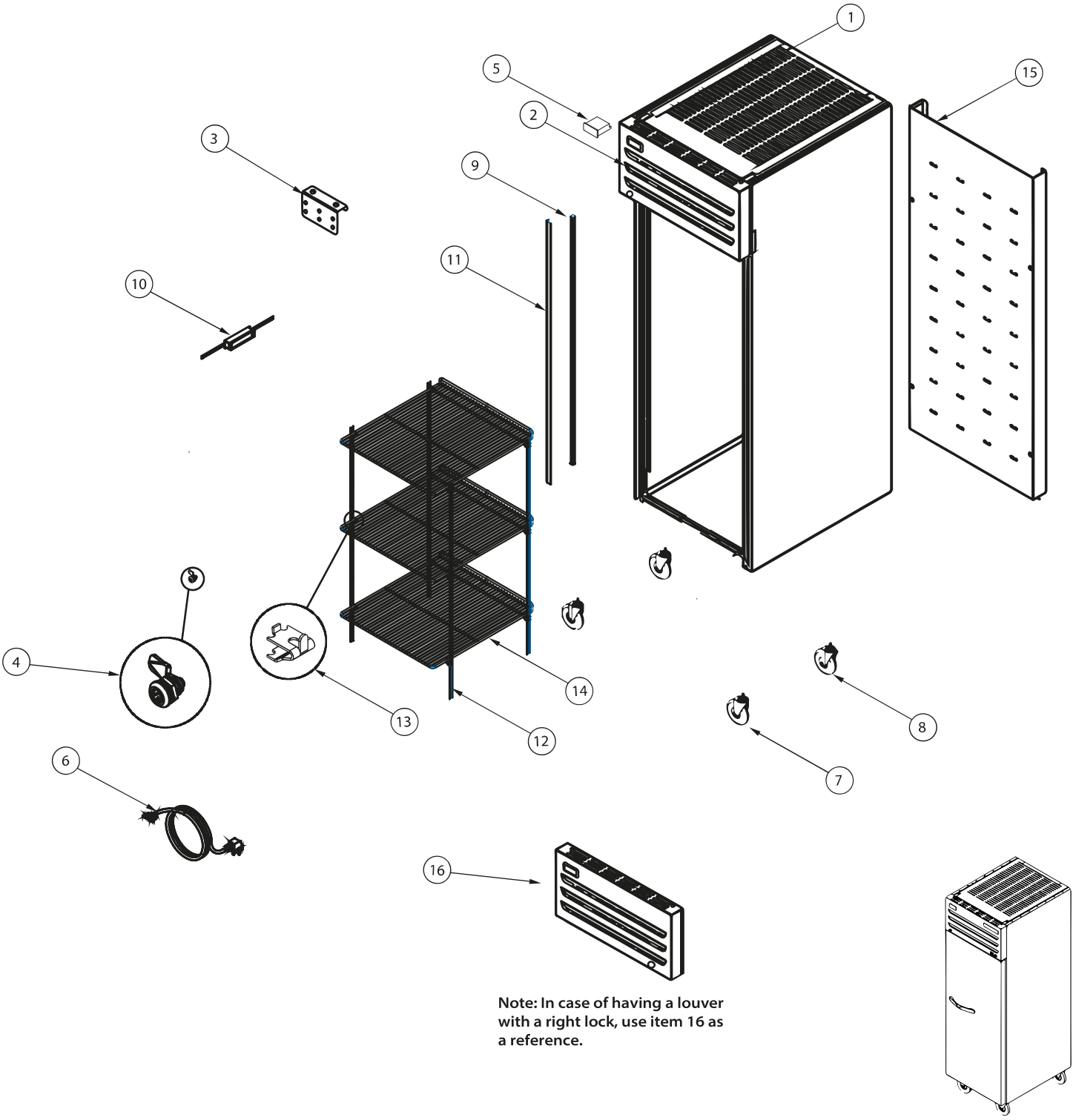
Beverage-Air Corporation or their affiliates shall not be liable for any indirect, incidental, special or consequential damages, or losses of a commercial nature arising out of malfunction equipment or its parts components thereof, as a result of defects in material or workmanship.

THE ORIGINAL OWNER'S SOLE AND EXCLUSIVE REMEDY AND BEVERAGE-AIR'S SOLE AND EXCLUSIVE LIABILITY SHALL BE LIMITED TO THE REPAIR OR REPLACEMENT OF PARTS OR COMPONENTS CONTAINED IN THE EQUIPMENT IDENTIFIED ABOVE WHICH UNDER NORMAL USE AND SERVICE MALFUNCTION ASA RESULT OF DEFECTS IN MATERIAL OR WORKMANSHIP, SUBJECT TO THE APPLICABLE PROVISIONS AND LIMITATIONS STATED ABOVE.

Note: Additional Terms and Conditions of sale may apply.
Notice: Specifications are subject to change without notice.
Contact Beverage-Air for specific model agency approval.
All prices are ex-works Brookville, PA. September 1, 2023

REPLACEMENT PARTS FOR TMF1HC-1S

GENERAL ASSEMBLY



Note: In case of having a louver with a right lock, use item 16 as a reference.

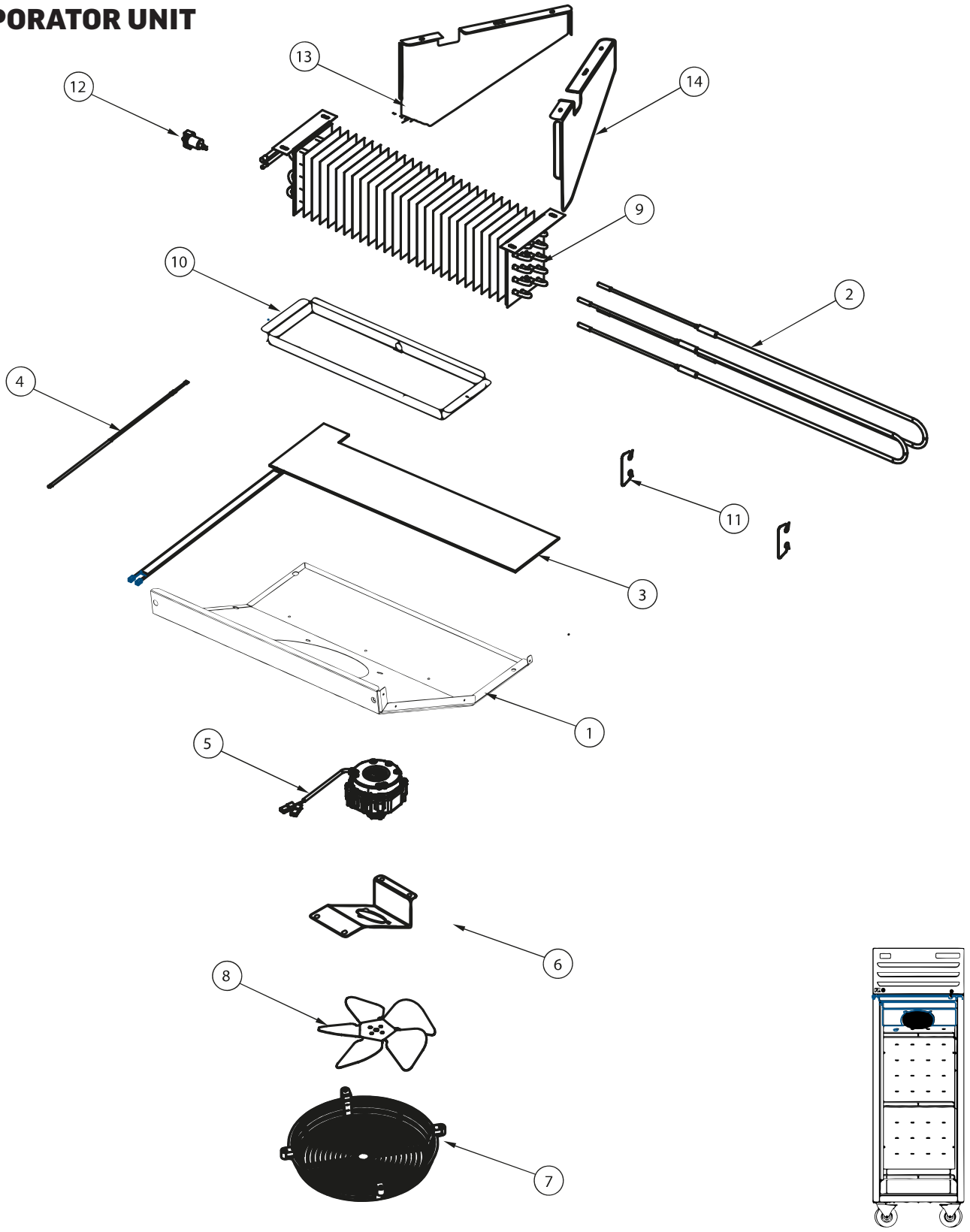
GENERAL ASSEMBLY CONT'D

ITEM	SPARE PART CODE	DESCRIPTION
*	3071368	TEMPERATURE SENSOR (1.5m).
*	3071406	SENSOR 1.5m (GRAY)
1	2098669	CONDENSER GRILLE
2	2112880	LOUVER 1D (RIGHT HINGE)
3	2106497	LOUVER SUPPORT BRACKET
4	2094602	LOCK CYLINDER
5	2105763	TMFXHC-1S CONTROLLER
6	3022239	POWER CORD
7	3071428	CASTER 6" NON BRAKE
8	3071429	CASTER 6" WITH BRAKE
9	2113625	SUPPORT KIT FOR LED STRIP
10	2083672	20W LED DRIVER
11	2080513	LAMP SUPPORT
12	3062036	PILASTER
13	2079798	CLIP, PILASTER
14	3062152	WIRE SHELF 600
15	2098685	BACK DIVERTER AIR
*	3069874	CONTROL ADJUSTMENT CLIP E34-BHRRR
*	3071338	WIRE HARNESS, MAIN (SSF18 E34B)
*	3070836	SENSOR SWITCH (E34B)
*	3059502	HARNESS SWITCH 600 UL
16	2106068	LOUVER 1D (LEFT HINGE)

NOTES

Models with the same refrigeration system and operation condition are included in this manual
Drawings are an approximate representation of the reality
All accessories (shelves, clips, etc) are considerate from product base, extra items are not included

EVAPORATOR UNIT

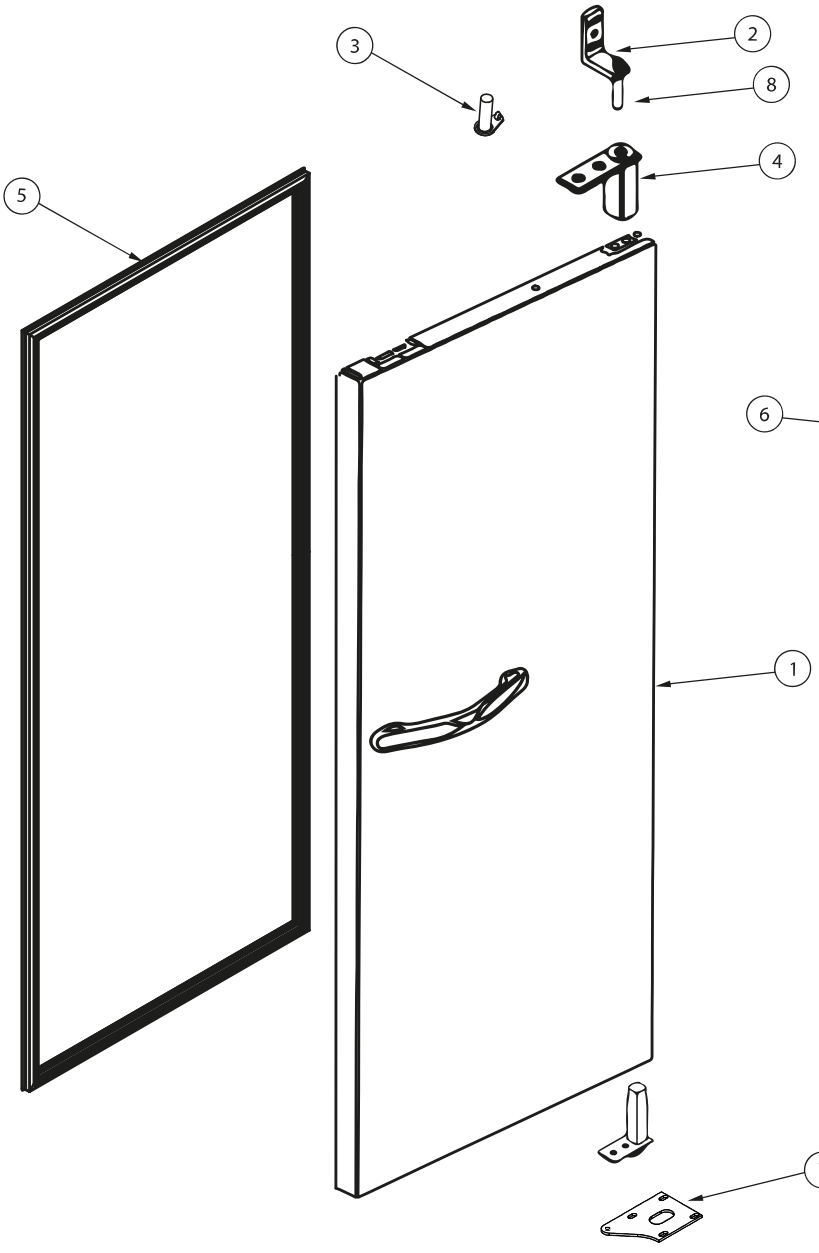


EVAPORATOR UNIT CONT'D

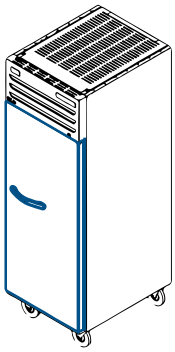
ITEM	SPARE PART CODE	DESCRIPTION
1	2106573	EVAPORATOR COVER
2	3060392	DEFROST HEATER 125W/127V
3	3060390	FLEXIBLE HEATER 100W 115V C/ADH UL VF20
4	3060389	FLEXIBLE HEATER 8.2W 115V
5	3030464	FAN MOTOR 115V 50/60 Hz 1800 RPM
6	2098679	EVAPORATOR MOTOR MOUNT.
7	3069834	WIRE FAN GUARD
8	3024837	FAN BLADE 8" 28°
9	2079060	EVAPORATOR 20T 1/4 AL 6APP LA450 RIGHT
10	2098682	TRAY EVAPORATOR
11	3044570	EVAPORATOR HOLDER
12	3048713	BIMETAL DISC DEFROST 23.89/5°C 15A 120AC
13	2098782	RIGHT AIR DIVERTER
14	2098781	LEFT AIR DIVERTER

DOOR

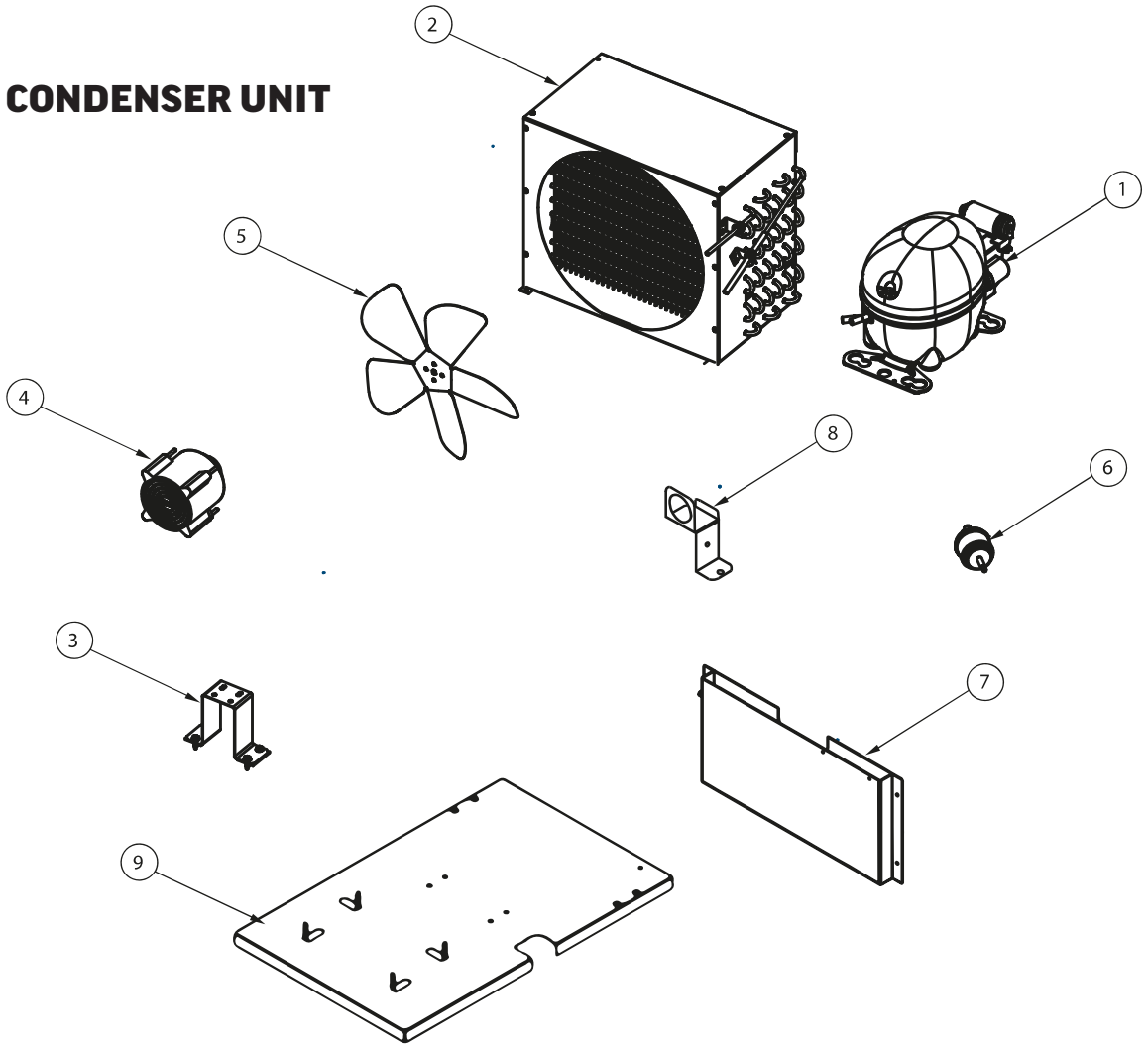
ITEM	SPARE PART CODE	DESCRIPTION
1	2105958	LEFT DOOR (RIGHT HINGE)
2	3061457	TOP HINGE
3	2085902	MAGNETIC SWITCH
4	3038236	SELF-CLOSING HINGE
5	3061454	DOOR GASKET 600/1300 PKD
6	2105950	RIGHT DOOR (LEFT HINGE)
7	2113605	SELF-CLOSING LOWER HINGE
8	2113626	DOOR BOLT KIT



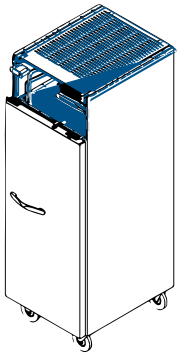
Note: In case of having a door with a left hinge, use item 6 as a reference.



CONDENSER UNIT

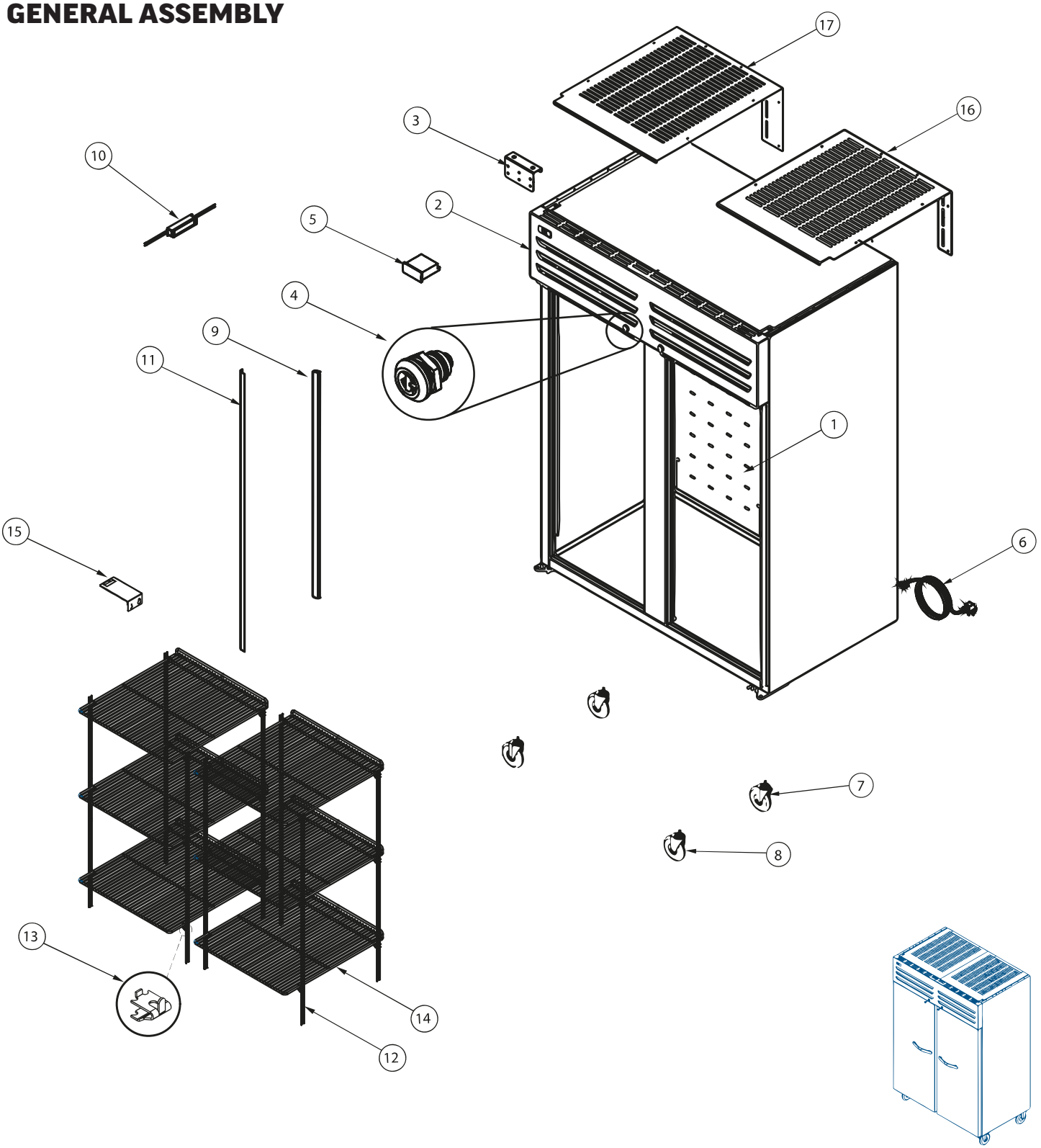


ITEM	SPARE PART CODE	DESCRIPTION
1	3061539	COMPRESSOR EMB EMC3145U 115V 60 Hz R2
2	2050184	CONDENSER 120 SAL 60T 3/16
3	3043320	CONDENSER MOTOR MOUNT.
4	3038047	FAN MOTOR 115V 50/60 Hz 1400 RPM
5	3031820	FAN BLADE 10" 28°
6	3043930	FILTER DRIER 0.9 HP DCL
7	2103201	CONDENSATION TRAY
8	2091281	FILTER MOUNTING
9	2098636	CONDENSER BASE



REPLACEMENT PARTS FOR TMF2HC-1S

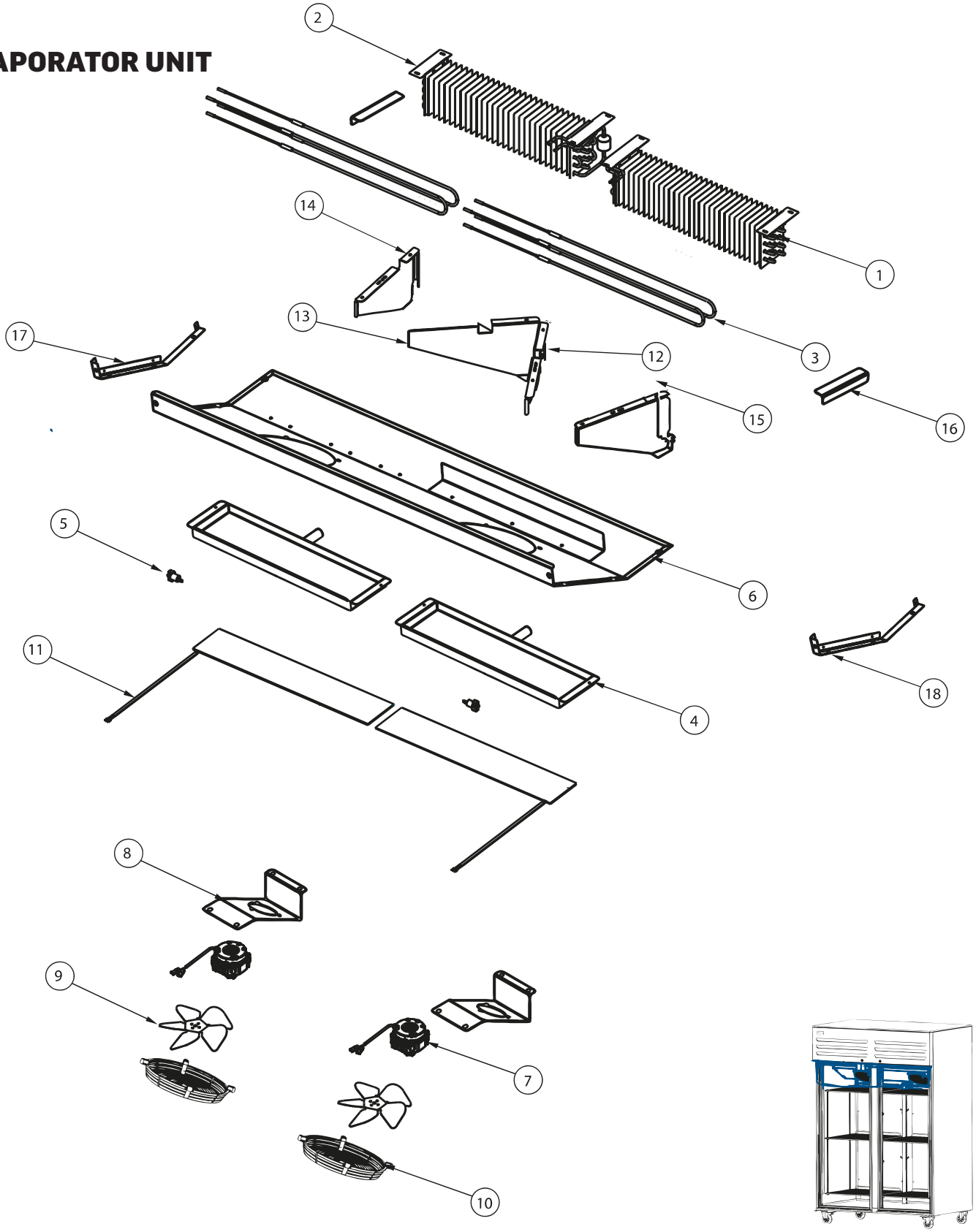
GENERAL ASSEMBLY



GENERAL ASSEMBLY CONT'D

ITEM	SPARE PART CODE	DESCRIPTION
*	3071368	TEMPERATURE SENSOR (1.5m)
*	3071404	SENSOR 2M (GRAY)
1	2098685	BACK DIVERTER AIR
2	2106071	LOUVER 2D
3	2106497	LOUVER SUPPORT BRACKET
4	2094602	LOCK CYLINDER
5	2105763	TMFXHC-1S CONTROLLER
*	3069874	CONTROL ADJUSTMENT CLIP E34-BHRRR
6	3022239	POWER CORD
7	3071428	CASTER 6" NON BRAKE
8	3071429	CASTER 6" WITH BRAKE
9	2065590	LED LIGHT STRIP (1m)
10	2079228	40W LED DRIVER
11	2080513	LAMP SUPPORT
12	3062036	PILASTER
13	2086268	CLIP, PILASTER
14	3062165	WIRE SHELF 1300
15	2102122	POLE MOUNT, PILASTER
16	2098728	CONDENSER GRILLE, LEFT
17	2098729	CONDENSER GRILLE, RIGHT
*	3071337	WIRE HARNESS, MAIN (SSC39 E34B)
*	3070836	SENSOR SWITCH (E34B)
*	3059499	HARNESS SWITCH 1300 UL
*	3030429	MAGNETIC SWITCH
*	3057883	TIMER TGC 115V 10A 50/60Hz UL
*	2078239	CONTACTOR, 1 POLE, 1A

EVAPORATOR UNIT

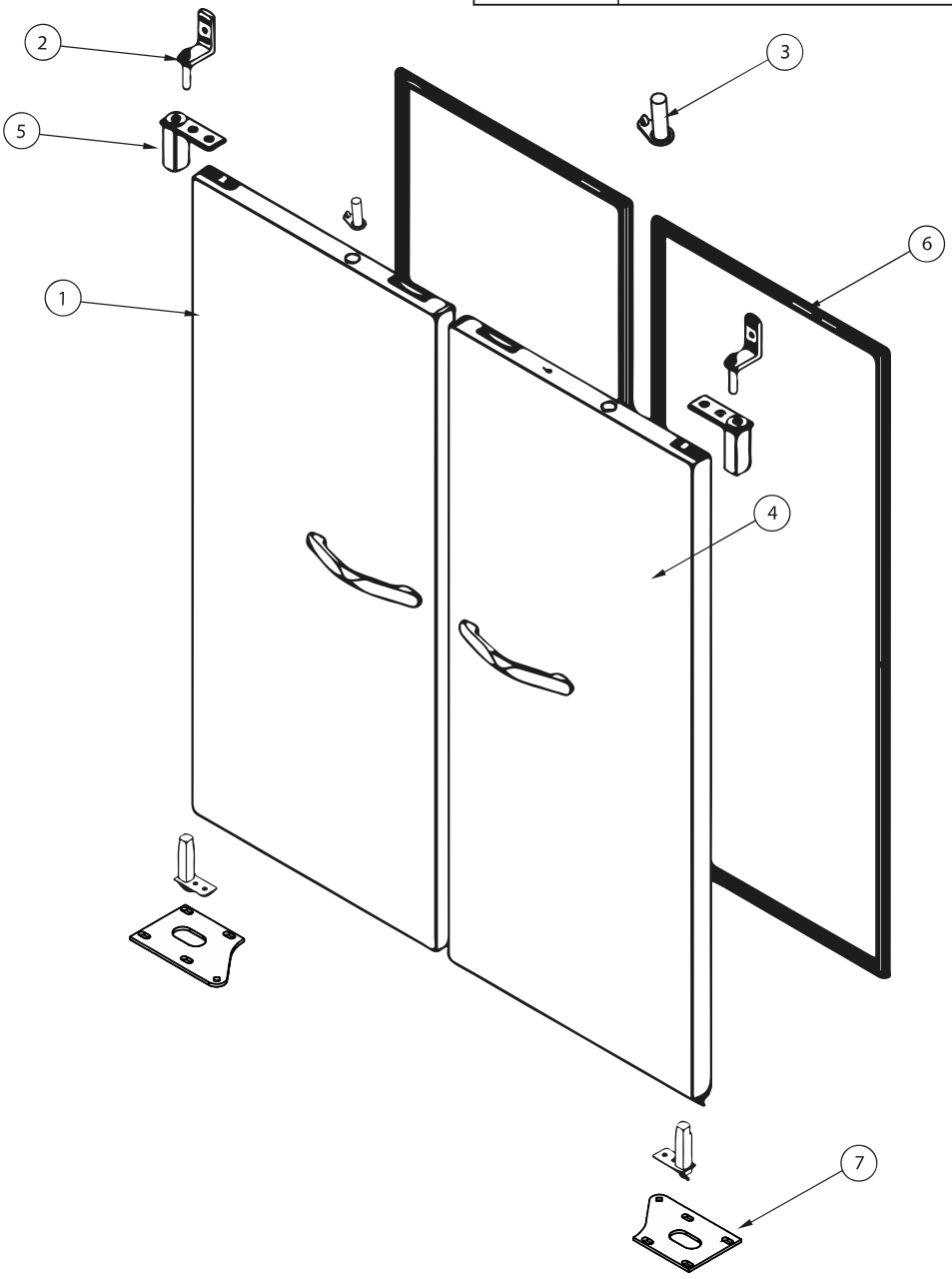


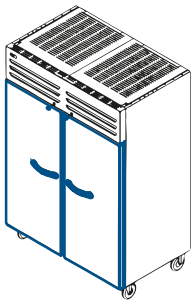
EVAPORATOR UNIT CONT'D

ITEM	SPARE PART CODE	DESCRIPTION
*	3060389	FLEXIBLE HEATER 8.2W 115V
1	3054284	EVAPORATOR 327 20T 1/4 AL 6APP LA490 LEFT
2	3054283	EVAPORATOR 327 20T 1/4 AL 6APP LA490 RIGHT
3	3042886	DEFROST HEATER
4	2098748	EVAPORATOR TRAY
5	3048713	BIMETAL DISC DEFROST 23.89/5°C 15A 120AC
6	2106572	EVAPORATOR COVER
7	3030464	FAN MOTOR 115V 50/60 Hz 1800 RPM
8	2098679	EVAPORATOR MOTOR MOUNT.
9	3024837	FAN BLADE 8" 28°
10	3069834	WIRE FAN GUARD
11	3060394	FLEXIBLE HEATER 100W 115V C/ADH FS 1300
12	2098746	LEFT INT AIR DIVERTER
13	2098747	RIGHT INT AIR DIVERTER
14	2098976	RIGHT EXT AIR DIVERTER
15	2098977	LEFT EXT AIR DIVERTER
16	2098684	EVAPORATOR TRAY MOUTING
17	2106579	RIGHT EVAPORATOR COVER MOUNT
18	2106578	LEFT EVAPORATOR COVER SUPPORT

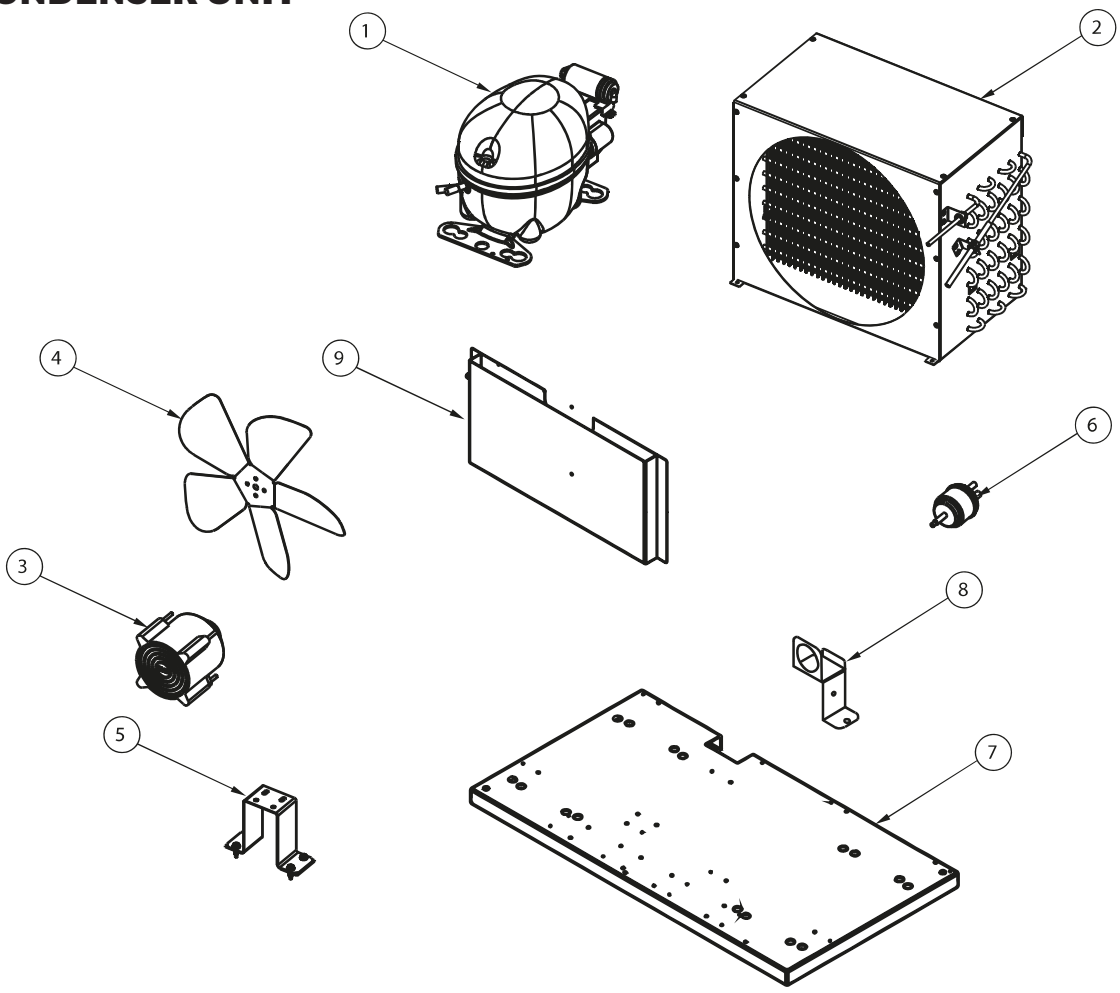
DOOR

ITEM	SPARE PART CODE	DESCRIPTION
1	2105950	RIGHT DOOR (LEFT HINGE)
2	3061457	TOP HINGE
3	2085902	MAGNETIC SWITCH
4	2105958	LEFT DOOR (RIGHT HINGE)
5	3038236	SELF-CLOSING HINGE
6	3061454	DOOR GASKET 600/1300 PKD
7	2113605	SELF-CLOSING LOWER HINGE

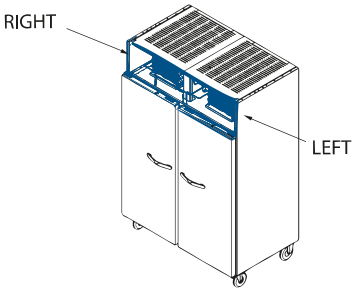




CONDENSER UNIT



ITEM	SPARE PART CODE	DESCRIPTION
1	3056028	COMPRESSOR EMB EMC3134U 115V 60 HZ
1	3056027	COMPRESSOR EMB EMC3140U 115V 60 HZ
2	2050184	CONDENSER 120 SAL 60T 3/16
3	3030464	FAN MOTOR 115V 50/60 HZ 1800 RPM
4	2078132	FAN BLADE (200mm) 5A 28°
5	3043320	CONDENSER MOTOR MOUNT.
6	3043930	FILTER DRIER 0.9 HP DCL
7	2098636	CONDENSER BASE
8	2091281	FILTER MOUNTING
9	2103201	CONDENSATION TRAY



Warranty Registration

Register your product online at **beverage-air.com/parts-service** or fill out and mail the form below.

Cabinet Model Number: _____ Date Of Installation: _____

Cabinet Serial Number: _____

Location Of Product

Business Name: _____

Business Street: _____

Business City: _____ State: _____ Postal Code:_____

Mail to: Beverage-Air, 3779 Champion Blvd, Winston-Salem, NC 27105

Rev. 10/22