



Leer, Inc.
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Ice Merchandiser
115V 60Hz/1Ph and 230V 50Hz-60Hz/1Ph
INSTALLATION, OPERATION, AND SERVICE
MANUAL



WARNING: This product can expose you to chemicals including nickel, which is known to the State of California to cause cancer (For more information go to www.p65warnings.ca.gov)

FOR HYDROCARBON REFRIGERATION ONLY (R-290) SEE THE FOLLOWING CAUTIONARY STATEMENTS:



DANGER: This unit is charged with propane refrigerant. Verify refrigerant type use as noted on the merchandiser serial tag. Propane is a flammable and explosive gas. Please read this manual/guide carefully and follow all safety precautions contained herein to reduce risk of fire and/or explosion. Failure to follow the safety precautions may result in serious injury or death, and/or property damage. To minimize the risk of incidental ignition due to incorrect parts or improper service, component parts shall only be replaced with like components and servicing shall be done by licensed and qualified personnel.

- **DANGER** - Risk of fire or explosion. Flammable refrigerant used. Do not use mechanical devices to defrost the refrigerator. Do not puncture refrigerant tubing.
- **DANGER** - Risk of fire or explosion. Flammable refrigerant used. To be repaired only by trained service personnel. Do not puncture refrigerant tubing.
- **CAUTION** - Risk of fire or explosion. Flammable refrigerant used. Consult repair manual/owner's guide before attempting to service this product. All safety precautions must be followed.
- **CAUTION** - Risk of fire or explosion. Dispose of properly in accordance with federal or local regulations. Flammable refrigerant used.
- **CAUTION** - Risk of fire or explosion due to puncture of refrigerant tubing; follow handling instructions carefully. Flammable refrigerant used.
- **CAUTION** - Keep clear of obstruction all ventilation openings in the appliance enclosure or in the structure for building-in.

R290 Service and Repair Guidelines

- It is **HIGHLY** recommended to practice safe refrigeration repair techniques when servicing R290 refrigeration systems.
- Servicing includes repairs to the hermetically sealed system and/or any part of the electrical system. The EPA limit on the amount of R290 charge for commercial applications is 150 grams (5.29 oz).
- Repair on R290 systems must always be done in a well-ventilated area.
- Because R290 is highly flammable, a combustible gas leak detector is required when servicing R290 systems.
- The EPA has exempted R290 from Section 608, Venting Prohibition; however, due to safety concerns, it is recommended that R290 be recovered with a **R290** recovery unit.

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General Safety and Start-Up Information

Thank you for your purchase from the Leer team.

Read this manual and retain it for future reference. If you sell your merchandiser, please leave this manual with the merchandiser for the next owner.

Properly handle refrigerants according to local and national regulations before you scrap your old merchandiser.

Risk of child entrapment. Do not allow a child to play around or in a merchandiser! Help save a child's life. While in use or before you store your old freezer, ensure the doors are locked, mechanically blocked open or chained shut to prevent entrapment. Before you recycle your old freezer, take off the doors and remove the drain plug in the bottom of the cabinet.

Do not store or use gasoline or any other flammable material in the vicinity or inside any Leer product. Follow any local codes that may apply.

Storage and Transportation:

The merchandiser shall be stored and transported in an upright position. It is not recommended to tilt the merchandiser. If the merchandiser is tilted beyond 45° of vertical, oil may drain from the compressor causing premature failure.

Do Not stack merchandisers on top of one another due to risk of falling. Falling merchandisers could result in damaged units or serious injuries. It is recommended to use a warehouse racking design to accommodate the weight of the merchandisers and prevent falling.

Packaging:

Prior to installation, the outer packaging on the merchandiser will need to be removed. The majority of the packaging materials can be recycled and disposed of in an environmentally friendly manner. The wooden skid is secured to the underside of merchandiser with hex-headed screws and will require the use of a 3/8" (10mm) hex-socket for screw removal.

Glass door models are shipped with door support brackets installed between the merchandiser's door opening(s) and the bottom rail of the door. These support brackets need to be removed prior to operation of the merchandiser. Failure to remove the brackets will affect the seal of the door gasket to the cabinet face.

Installation

Note: Leer Merchandisers are commercial in design and not intended for residential use.

Placing Merchandiser:

When placing the merchandiser, allow a minimum of 3 inches (7.62cm) of air space from all surfaces of the cabinet and any surrounding structures. This air space allows for air flow over the surface of the cabinet, thus reducing condensation and aids in drying these surfaces. On outdoor models, the 3-inch (7.62cm) space behind the merchandiser will also help ensure that the evaporator drain tube, which exits the back wall, is not being restricted during the defrost cycle.

Note: Do not operate an indoor auto-defrost merchandiser without having a condensate evaporator assembly installed under the evaporator drain tube exiting the back wall of the cabinet. Failure to install this assembly will result in water draining directly onto the floor during the defrost cycle. This may result in water damage to the floor and create a hazardous slip condition in the area surrounding the merchandiser.

Optional NSF Installation:

R290 merchandisers shipped in the USA can be NSF compliant with the addition of a leveling kit. This must be known at the time of the order as the model number changes and the NSF markings are applied during production. These kits are required by NSF to maintain a 6-inch clearance from bottom of unit to the ground. This kit must be installed on location to maintain compliance. To install, use a proper lifting device to raise the merchandiser from the ground. Allow enough room to get the full kit under the skid plate. **DO NOT TIP THE MERCHANDISER** beyond 45° of vertical as mentioned in the "**Storage and Transportation**" section of this manual. Insert the stem of the leveling kit into the bottom of the skid plate. Lower the merchandiser into position while maintaining the 6-inch required NSF clearance.

Leveling kits are available for use on most merchandiser models. Contact Leer Merchandiser Customer Service Department. Phone: 800-766-5337 for additional information.

Merchandiser Leveling:

The merchandiser installation location should have a solid, level base. If the merchandiser is exhibiting a slight forward lean, the front of the cabinet should be blocked to bring the merchandiser to a level position. On auto-defrost models, a forward lean may prevent proper draining of the evaporator assembly during the defrost cycle.

Leveling kits are available for use on most merchandiser models. Contact Leer Merchandiser Customer Service Department. Phone: 800-766-5337.



Full leveling kit shown, inserted into the skid plate of the merchandiser.

Condensate Evaporator:

Indoor auto-defrost models require a condensate evaporator heater assembly. The condensate evaporator will require installation by the consumer. The merchandiser is to be placed so that there is at least 1 inch (2.54 cm) of air space between the back surface of the condensate evaporator housing and any wall surface behind the cabinet which will allow for heat dissipation away from the surface of the wall. The main power cord should also be routed to avoid pinching.

Note: The condensate evaporator assembly is supplied with the glass door auto-defrost units but needs to be purchased separately for solid door auto-defrost units.

Note: Do not operate an auto-defrost model indoors without having a condensate evaporator assembly installed under the evaporator drain tube exiting the back wall of the cabinet. Failure to install this assembly will result in water draining directly onto the floor during the defrost cycle. This may result in water damage to the floor and create a hazardous slip condition in the area surrounding the merchandiser.

For more detailed information regarding the purchase of the Condensate Evaporator Kit for indoor use, please contact: Leer Merchandiser Customer Service Department. Phone: 800-766-5337.

Electrical:

Warning! Component parts shall only be replaced with like components. Electrical and servicing shall be done by licensed professionals. Disconnect power before performing service; certain models contain multiple voltages. Leer does not assume responsibility for any damage to people or things deriving from violation, improper use, or noncompliance with Leer's instructions.

DO NOT use extension cords. Extension cords may decrease the voltage to the unit and ultimately cause component failure.

Note: Select models are equipped with a main power switch. Make sure the switch is in the OFF position before plugging the merchandiser into the outlet.

WARNING: Operating more than one appliance on the same circuit may result in voltage fluctuations when both appliances are operating simultaneously. This voltage fluctuation may lead to premature compressor failure. Information regarding the electrical voltage and frequency being supplied to the merchandiser can be found on the machine's serial data plate located at the upper left-hand corner of the merchandiser's interior. Information regarding the maximum fuse/circuit breaker size required by a specific model is available from the condensing unit data plate.

Electrical service connections must be in accordance with the country's electrical standards and any local code that may apply.

115v Models:

The merchandiser must be plugged into a dedicated and properly grounded 115-volt 60hz/1Ph circuit with a circuit fuse or breaker rated at a 15 or 20 Amps depending on model. The 20 Amp plug configuration, that some models come with, should NOT be removed, and never use an adapter plug.

230v Models:

The merchandiser must be plugged into a dedicated 230-volt 50/60 Hz grounded receptacle electrical outlet with a circuit fuse or breaker. The condensing unit data plate will indicate the maximum fuse or breaker size.

Note- 230v only: Due to country differences in power cord plug requirements, the Leer power cord and condensate evaporator (when included) are not provided with electrical plugs to allow assembly of correct country standard plug for electrical connection. Country specific plugs will be included on request.

Operation

Temperature Controls:

R290 Merchandisers are only available with an electronic control.

Electronic Controls Digital Display:



Operating Mode Display:

- Snowflake "ON" – compressor enabled in run cycle; control displays current cabinet temperature.
- Snowflake "Flashing" – output display or anti short cycle delay enabled to protect the compressor from trying to start too frequently.
- Melting Snowflake "ON" – defrost in progress, control displays the letters "dE" or "dF"
- To view the control's programmed "Set Point" (cut-out temperature): press and release the "Set Key."
- To initiate a manual, defrost cycle: press and hold the "Manual Defrost Key" for more than 2 seconds.

Note: Manual Defrost will not initiate unless the unit is at standard operating temperatures.

Electronic Control Startup:

Turn the switch, if equipped, into the ON position. **After a 2-minute delay, the compressor and the condenser fan should start.** The evaporator fans and the interior light (if equipped) will operate immediately when power is applied. The condensing unit will continue to run until the air temperature in the cabinet reaches the unit set point.

Note: The 2-minute delay will occur any time the unit is turned off/loses power.

Note: On auto-defrost units, if a defrost is required upon startup the controller will enter defrost mode after the 2-minute delay. Normal operation will resume upon defrost termination and a short drip time.

Electronic Control Operation:

There are two separate electronic controls available based upon the cabinet types; Cold Wall or Auto-Defrost.

The electronic control is also located on top of the merchandiser. The electronic control combines the functions of both the mechanical thermostat and defrost timer into a single control. The control also offers the consumer the capability to monitor the operational status of the merchandiser via the icon and digital temperature display (located on the face of the control). The control has been programmed by Leer to operate the machine within the design parameters of the refrigeration system. The set-point (cut-out) for these auto-defrost controls has been set to 16°F (-9°C) with a differential of 8°F (4°C). The set-point (cut-out) for these cold wall controls has been set to 14°F (-10°C) with a differential of 7°F (4°C). Should the user desire to alter the set-point, the new set-points should not vary by more than +/- 4°F (2.2°C) from the original factory setting. Do not alter any of the programming parameters in the controls without first consulting with Leer.

Electronic Auto-Defrost Control Operation:

The electronic auto-defrost control contains two probe wires. Both probe wires are routed through the cabinet's suction line hole and into the evaporator assembly, which is mounted to the interior ceiling of the cabinet. The Red Air Sensing Probe ("P1") routes through the evaporator assembly and has its sensing bulb secured to the outer, left-hand wall of the evaporator housing. Probe "P1" monitors the air temperature in the merchandiser at that location. The Black Probe "P2" is inserted into the finned section of the evaporator coil, near the top of the evaporator assembly. This probe monitors the temperature of the evaporator coil during the defrost cycle.

The control is factory programmed to engage in a defrost cycle at 4-hour intervals. The defrost cycle is timed to last for a total of 24 minutes unless the temperature at "P2" reaches 60°F (15.5°C) prior to the end of the timed cycle. Should that occur, the temperature at "P2" will override and end the defrost cycle. During the defrost cycle, the control will display the letters "dE" or "dF" along with the melting snowflake icon.

Cold Wall (CW) Control:

The CW control is located under the condensing unit housing. The control has a single probe wire used to monitor the air temperature inside the cabinet. The probe enters through the top of the cabinet and is secured at a specific location where the back wall and ceiling of the interior meet. The control will display the air temperature in

the cabinet at the probe's location. Although the control has a Manual Defrost Key, this action is non-functional on CW cabinet models (see the defrost instructions for CW cabinet models in the "**Maintenance**" section of this manual).

Possible Displayed Alarm Codes:

"P1" – Air Probe failure: The control will override the "P1" functions and cycle the compressor at timed intervals, until the probe fault can be corrected.

"P2" – Evaporator Probe failure: The control will override the "P2" function and operate with a timed defrost cycle, until the probe fault can be corrected.

"HA" – Maximum Temperature Alarm: The cabinet air temperature has exceeded the programmed temperature for a period exceeding 15 minutes. The alarm will continue to display until the cabinet temperature drops below the maximum level.

"LA" – Minimum Temperature Alarm: The cabinet air temperature has dropped below the programmed minimum for a period exceeding 15 minutes. This alarm will continue to display until the cabinet temperature rises above the minimum level.

Note: Should a "P1" or "P2" alarm occur, check the probe wire connections to the control prior to replacing the probe wire.

For more detailed information regarding Electronic Control programming and instructions, please contact:
Leer, Inc. Merchandiser Division Customer Service.
800-766-5337 <https://www.leerinc.com>

Loading Ice:

The merchandiser should be pre-chilled to operating temperatures prior to loading with ice. Pre-chilling will aid the merchandiser in reaching storage temperature at a faster rate once loaded and reduce the risk of melting product. Do not over fill the merchandiser with ice!

Cold Wall Models: If the bagged ice blocks off air flow from the front of the cabinet to the control's air probe, the control may not respond quickly enough to maintain proper cabinet temperature. Allow a minimum of 6" (15.24 cm) clearance between the top of the ice stack and the ceiling of the cabinet interior. This distance will allow a pathway for warmer air entering the cabinet during door openings to migrate to the probe.

Auto-Defrost Models: Avoid stacking ice above the top edge of the air ducts that are installed on the walls of the cabinet interior. Blocking off these air ducts may restrict the even distribution of air throughout the cabinet which may result in warm spots developing within the cabinet. Do not stack ice high enough to block off the evaporator fans in the evaporator assembly. The evaporator fans are intended to pull warm air entering the cabinet into the evaporator assembly and then push that warm air across the surface of

the evaporator coil. This process removes the heat prior to distributing the air into the cabinet.

Maintenance



Danger! Your unit is charged with propane refrigerant. Verify refrigerant type used as noted on the merchandiser serial tag. R290 (Propane) is a flammable and explosive gas. Component parts shall only be replaced with like components no matter the refrigerant type used. Maintenance and repair of the electrical and refrigeration systems shall only be done by licensed, trained, and qualified personnel. Disconnect power before performing service; certain models may contain multiple voltages. Leer does not assume responsibility for any damage to people or things deriving from violation, improper use, or noncompliance with Leer's instructions.

Cleaning the Merchandiser:

The merchandiser should be cleaned annually. In corrosive environments such as coastal regions and areas where deicing chemicals and road salts are used, more frequent cleaning is recommended.

The exterior of the merchandiser can typically be cleaned with the use of detergents diluted in warm water followed by a tap water rinse. The exterior paint is capable of withstanding the use of polishing compounds and most solvents. Before using stronger cleaning agents, they should be tested on a small, inconspicuous area prior to application onto visible surfaces of the merchandiser. If cleaning the interior of the merchandiser, the use of detergents with strong odors (i.e. citrus based cleaners), abrasive cleaners containing chlorine bleach, and any form of solvent based cleaners is not recommended. They may leave objectionable odors inside the cabinet which may be absorbed by the ice being stored in the merchandiser.

Cleaning Door Gaskets:

Door gaskets may mildew and stiffen over time. The gasket is made of a soft, flexible rubber-like material that can be cleaned using most kitchen and bath cleaners designed for mildew removal. Review manufacturer information and instructions on any cleaning agent prior to use to determine the cleaner's compatibility with the surface being cleaned.

Cleaning Condenser Coils:

It is recommended to inspect and clean the condenser coil and fan blades every 3 months.

There are a variety of methods available for cleaning condenser coils. Keep in mind that the debris is being drawn into the coil by the condenser fan and the debris should be removed in the opposite direction.

- The simplest and most preferred method is to use a vacuum cleaner to suck the debris out of the coil from the outside surface.

- Another method is using compressed air to blow dust from the coil. The debris should be blown out from the inside surface of the coil.

Warning! When using compressed air, there may be a cloud of dust released into the air surrounding the merchandiser. It is recommended that the service person wear proper protective equipment (i.e., safety glasses and a dust mask) when performing coil cleanings.

Note: Keep the top of the merchandiser clear of debris and DO NOT use any type of filter media in front of the condenser coil to trap dust. Filter testing has been proven to create enough restriction of air flow to reduce the efficiency of the coil's heat exchange.

Defrosting the Merchandiser:

The means and methods of ice removal depend upon whether the merchandiser is a cold wall model or an auto-defrost model.

Cold Wall Defrost Methods:

The evaporator tubing for the cold wall cabinet models is located within the walls of the cabinet. After the cold wall merchandiser is energized, a visual inspection of the cabinet's interior will reveal a serpentine frost pattern developing on the ceiling and walls. This frost pattern represents the configuration of the evaporator tubing inside the walls of the cabinet. As humidity enters the cabinet, it will collect and accumulate along this frost-line pattern. As the frost-line expands and builds in thickness, it will slow the heat transfer between the cabinet walls and the evaporator tubing. The cold wall cabinet models do not have the capability to self-defrost. To defrost the cold wall models, the product will need to be emptied from the cabinet and the power to the cabinet disconnected. Defrosting requires the entire interior surface of the cabinet to be warmed above freezing to melt and remove the build-up of ice from the interior surfaces. Power to the merchandiser for defrosting can be turned off by merely unplugging the cabinet from its power source or turning OFF the toggle switch. After the defrost operation is complete, return power to the merchandiser.

Warning! Never use metal ice scrapers, ice picks, hammers, or similar tools as these may inadvertently penetrate through the wall of the cabinet, puncture the evaporator tube, and cause irreparable system damage.

A floor drain is present in most merchandiser models. For outdoor models, the floor drain plug can be removed to allow water drainage. If draining to the ground is not desirable or if the merchandiser is located indoors, the water may be removed with the use of a wet-vac and disposed of.

NOTE: The floor drain plug must be replaced after water is drained out of the unit.

It is always suggested that some of the time allocated to defrost the cold wall cabinet may be utilized for the cleaning

of the condenser coil as well as inspecting the condition of wiring insulation, door gaskets, and spring-loaded hinges.

Auto-Defrost Methods:

It is recommended to check the operation and condition of the evaporator coil and for signs of excessive ice buildup every 3 months.

Auto-defrost models are equipped to be self-defrosting and enter defrost mode once every four hours automatically. During the defrost cycle, the power to the refrigeration system will be automatically re-directed to the defrost circuit. This will shut down power to the compressor, condensing fan, and evaporator fan motors. This will also send power to a heating element that is attached to the surface of the evaporator coil. The heat generated by the element will melt the ice build-up on the evaporator coil and the resulting melt water will drain through a tube out of the back wall of the merchandiser.

Warning! The defrost termination / safety switch functions as a possible fire protection device. Do not remove or bypass the switch from the defrost circuit.

On outdoor cabinet models, the melt water will exit the drain tube directly to the ground.

On indoor cabinet models, the consumer needs to install the condensate evaporator heater assembly (described in the “**Installation**” section of this manual) onto the exterior back wall of the cabinet. The melt water from the defrost cycle will drain into a catch pan where it will then be heated to the point of evaporation. The function of the condensate evaporator’s heating element should be checked routinely. Failure of the element could result in an over-flow condition for the assembly’s drain pan. A simple check of the heater would be a touch test of the surface temperature of the assembly’s housing. The condensate evaporator’s heating element is energized continuously so the surface of the housing should always be hot to the touch.

Glass Door Models and Maintenance:

The glass door is designed for use on indoor units or in a controlled environment. It is constructed with a non-heated, triple-pane glass-pack, with both inner and outer panes being tempered. To avoid possible condensation on the outer surface of the door, the temperature in the merchandiser should be maintained near its designed set-point of 16° +/- 4°F (-9 +/- 2.2°C) and the ambient dew point around the cabinet should be kept below 60°F (15.5°C). Any household glass cleaner can be used to clean the surface of the door. The glass door’s gasket is a rubber bellows-style magnetic gasket. The replacement gasket has an insert dart that installs into a retaining slot in the door frame. The gasket can be started in-place with light hand pressure, followed with mild impact pressure applied with a dead-blow hammer to ensure that the legs of the dart penetrate fully into the slot. During replacement, always set the gasket at the corners of the door first to reduce stretching the gasket. If the door gasket appears to be in good

condition but is failing to seal to the surface of the cabinet, both the spring-load tension and adjustment of the hinges should be checked.

Solid Door Models and Maintenance:

Merchandisers designed for outdoor use will have a metal clad door(s) that have been insulated with the same urethane foam insulation as the cabinet. The exterior metal is stucco embossed to hide minor impacts and is coated with a fluorocarbon paint system. This paint system was designed to withstand years of outdoor exposure. For routine cleaning of the door’s exterior surface, a mild detergent diluted in warm water should be adequate.

Decaling Recommendations Solid Door:

- a) Use a decal with a 2-mil (0.05mm) cast vinyl substrate. Cast vinyl contains less memory than a calendared vinyl or polyester substrate and will conform to the embossed surface with the least amount of stress on the decal’s adhesive.
- b) The decal’s adhesive should have a minimum peel strength rating of 80 oz. / inch (0.875 N / mm).
- c) Clean the surface of the door with isopropyl alcohol and either air dry or wipe with a clean cloth.
- d) Heating the surface of the door immediately before applying the decal will aid the adhesive bond of the decal. Never apply a decal to a surface that is colder than 50°F (10°C).
- e) Use a soft roller or plastic squeegee to apply the decal and press it onto the embossed surface of the metal. Applying a small amount of heat to the surface of the decal will aid in this process.

Door Gaskets and Hardware:

Routine inspection of the door gasket seal and the action of the door’s hinges is recommended. The upright door (measuring 27” x 46”) (68.58 cm x 116.84 cm) utilizes the same Kason Model 220 hinge on both solid and glass door models. The slant door (measuring 27” x 27”) (68.58 cm x 68.58cm) utilizes a Kason Model 211 hinge which is not spring-loaded. Both doors have the same gasket profile, which has a barbed dart that inserts into a slot in the surface of the door frame. Damaged or torn gaskets may allow infiltration of warm, moist air into the merchandiser and should be replaced. See **Figure 1** for door gasket replacement.

A simple test of the spring-load tension is to open the door just enough to insert two fingers between the surface of the cabinet and the handle side of the door. When the fingers are withdrawn, there should be enough tension set on the hinge spring to slowly move the door to a closed position. If the door does not move from this two-finger location, it is likely that either the spring-load requires re-tensioning or lubrication. If the door moves part way from the two-finger location but stops short of the cabinet, the compression of the gasket along the hinge side of the door should be checked. If there is too much compression, the door will bind when closed and should have its hinge-mount location

checked and possibly adjusted. Removing the hinge covers will expose the spring-loads for tension adjustment or removal. Removal of the spring-load will expose the hinge-adjustment plate and mounting screws should hinge adjustment be required. See **Figure 2** for instructions on how to install or adjust the spring cartridge.

R290 Refrigeration Service:



Danger! Do not attempt to open the refrigeration system! (R290) Propane is a flammable and explosive gas.

Like other refrigeration systems, a unit charged with R290 is not serviceable on a consumer level. The use of special tools and proper procedures performed by licensed, trained, and qualified professionals is required.

R290 General Information:

R290 refrigerant is flammable, but the amount of refrigerant used is relatively small and the chance of ignition in the event of refrigerant leak is extremely low. Millions of commercial and residential refrigeration products are using similar, if not exact, refrigerants worldwide.

R290 refrigeration grade propane has a much higher purity than standard propane. The higher moisture content of standard propane will damage a refrigeration system. Standard propane also has a scent added (another impurity) that refrigeration grade materials do not.

R290 is a high-performance refrigerant. The superior thermodynamic properties of R290 compared to R404a and R134a allow for a reduced charge per system and lower system energy use.

Most important, it's eco-friendly! R290 is classified as a hydrocarbon (HC) refrigerant, a natural non-toxic refrigerant, and the top alternative to hydrofluorocarbon (HFC) refrigerants. R290 has an Ozone Depletion Potential (ODP) of 0 and an ultra-low Global Warming Potential (GWP) of 3

Solid Door Magnetic Gasket Replacement Instructions:

1. Position solid door on a flat non-abrasive surface, exterior side down.
2. Remove old gasket by grasping firmly at the corner and pulling away from the door frame extrusion.
3. Inspect the extruded slot to insure there are no particles to interfere with the new gasket installation.
4. Align new gasket with door corners and use thumb to press into frame.
5. Start at one corner of the frame and begin pressing the new gasket into the slot. A non abrasive tool such as a hammer head works well for this application. Apply downward pressure while moving along the perimeter of the frame. Excessive pressure may stretch the gasket and cause bulging at the corners.

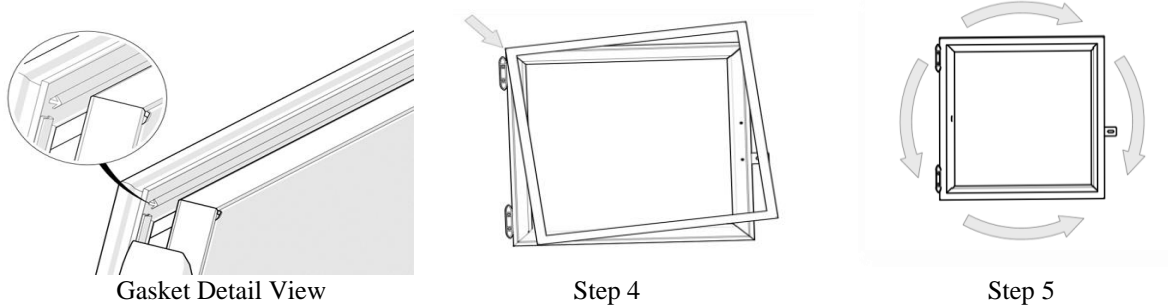
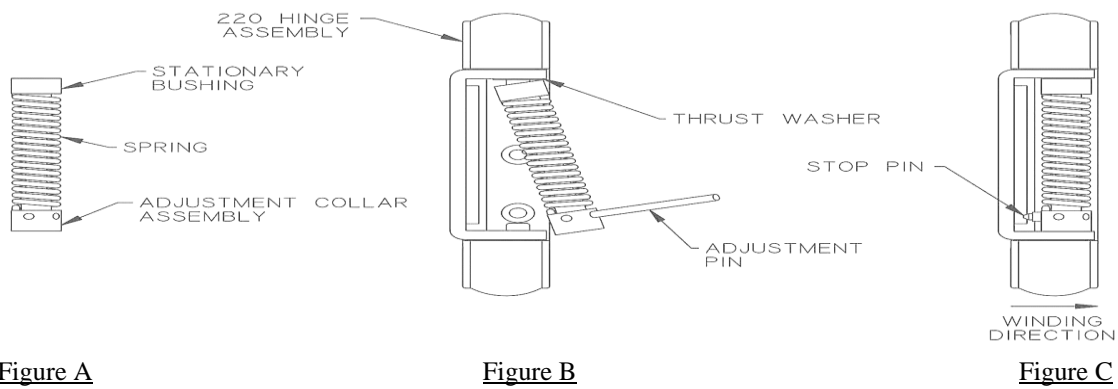


Figure 1: Door Gasket Install

Spring Cartridge Installation Instructions

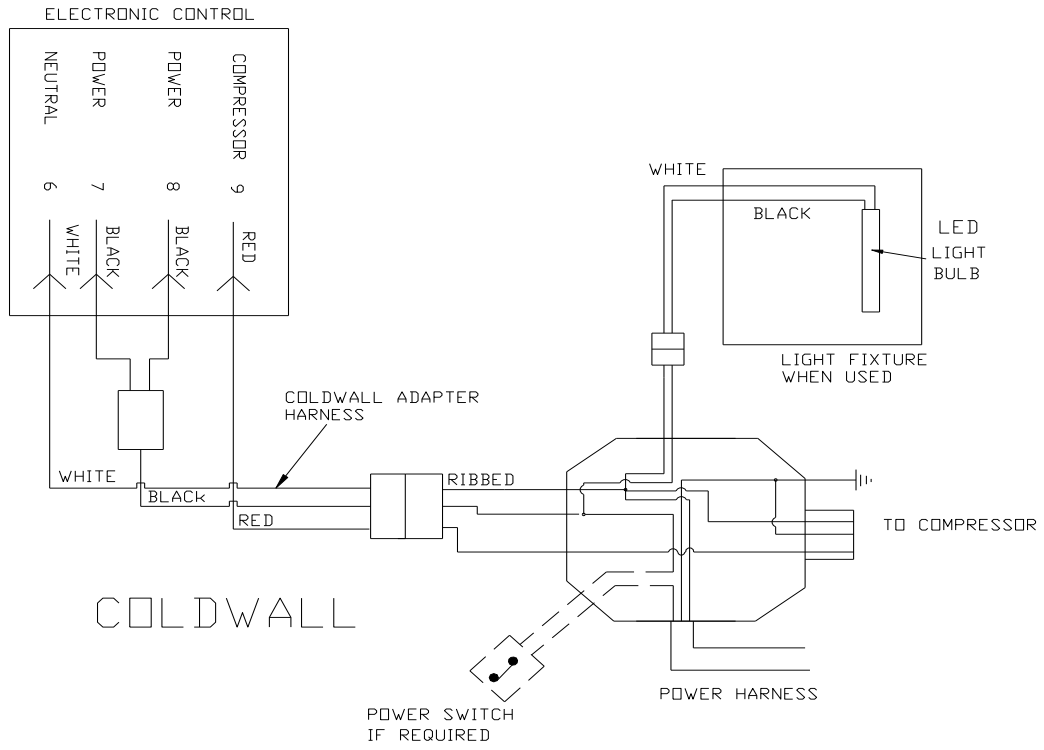


- 1) Install No. 220 Hinge with Adjustment Plate.
- 2) Assemble Spring Cartridge. Grease bushing end of pin prior to insertion into Stationary Bushing. Apply a small amount of grease to the hinge-pin hole on the end of the Adjustment Collar Assembly. (Fig. A).
- 3) Place Thrust Washer and Stationary Bushing over square pin in the Hinge and insert the Adjustment Pin into the Adjustment Collar. Using the Adjustment Pin, compress the Spring and place the Adjustment Collar over the round pin (Fig. b).
- 4) Using the Adjustment Pin, turn the Adjustment Collar until the Pin contacts the Hinge. Then insert the Stop Pin in hole of Adjustment Collar (Fig. C). **CAUTION:** The Stop Pin must fully seat on Adjustment Collar. Failure to do so may cause the Stop Pin to become dislodged. Inserting the Adjustment Pin more than halfway thru the Adjustment Collar can cause partial push out of the Stop Pin. Repeat adjustment until desired tension is reached. The maximum tension is 6 holes or approximately 1-1/4 turns.
- 5) Install Cover on Hinge.

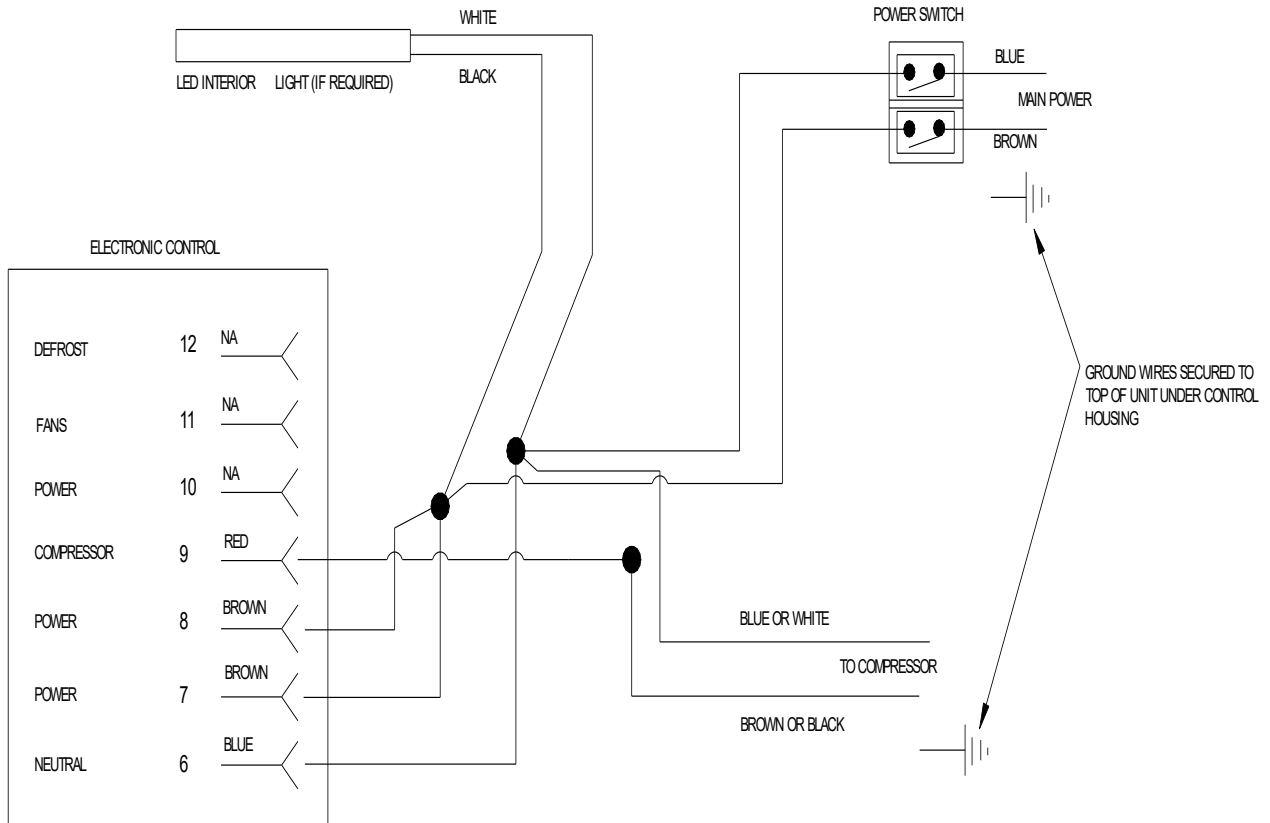
WARNING: Use safety glasses when installing and adjusting spring tension.

Figure 2: Spring Install Instructions

Electronic Control- Cold Wall Wiring Diagram 115V

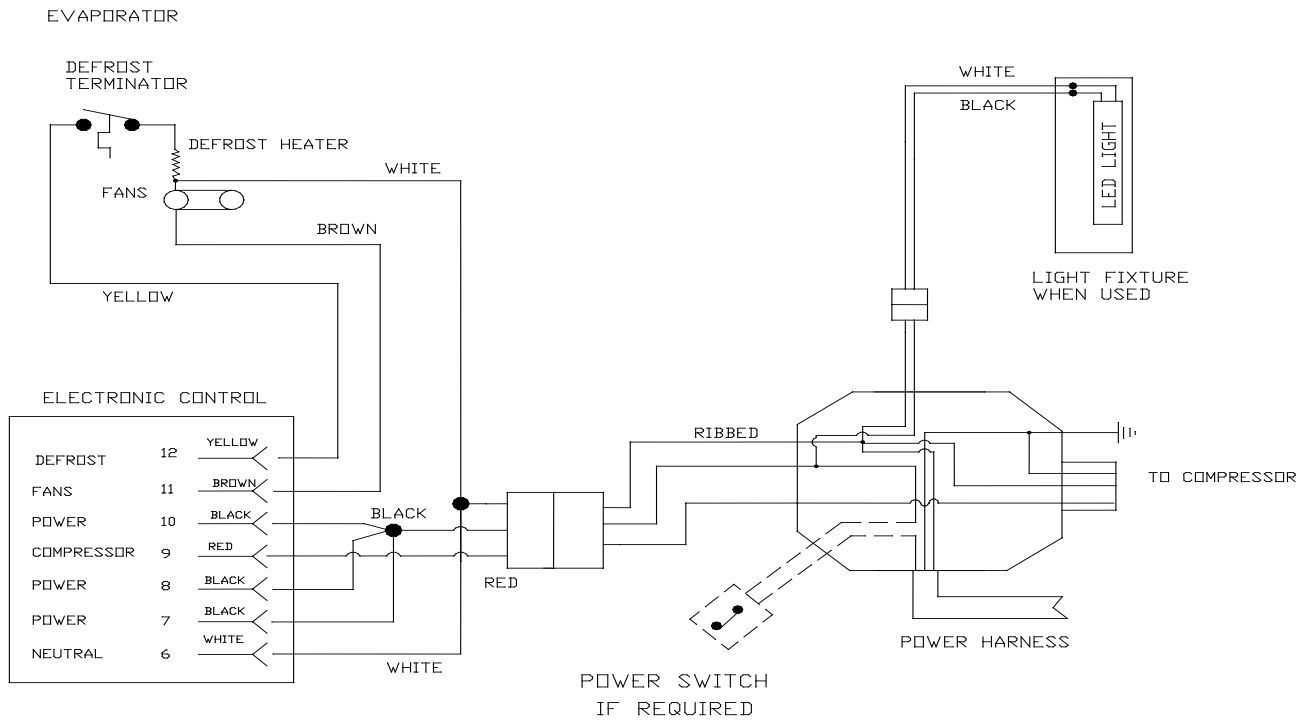


Electronic Control- Cold Wall Wiring Diagram 230V

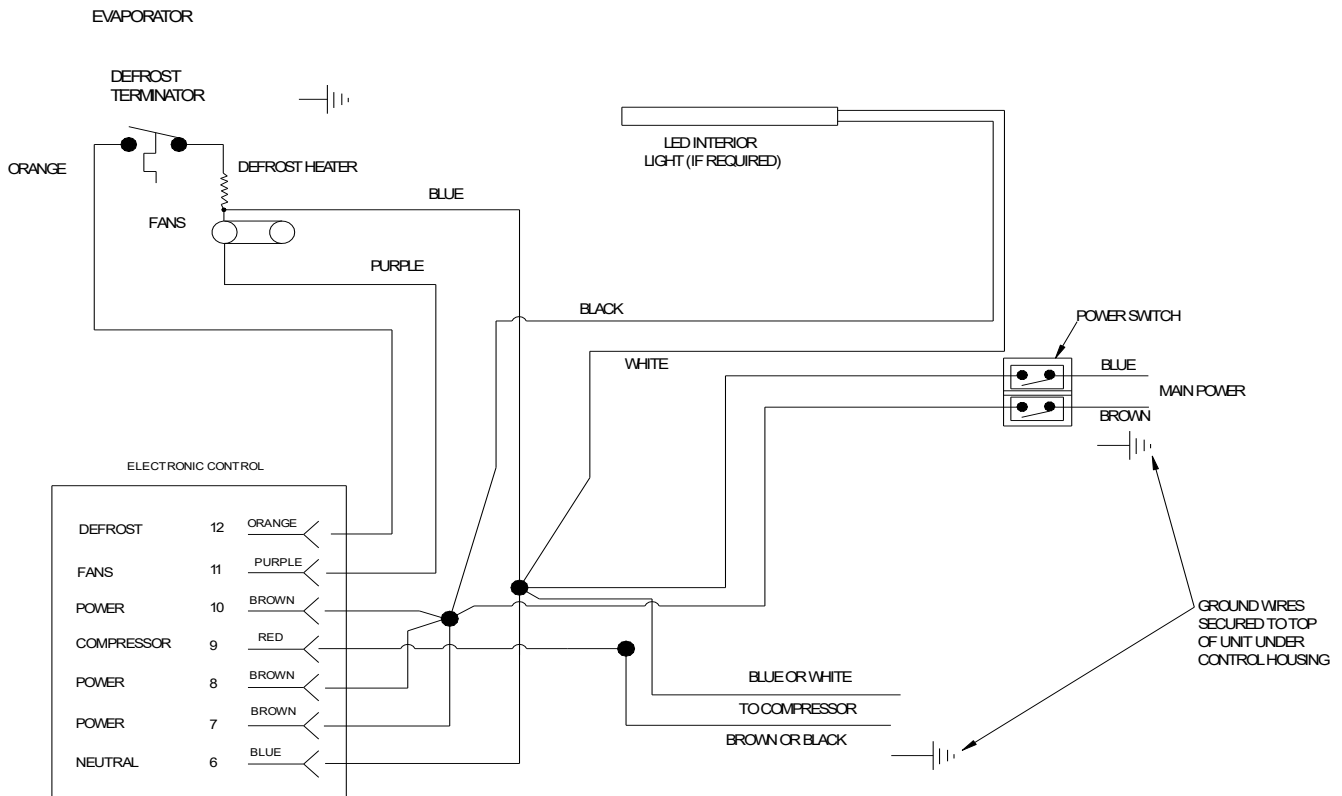


Note: Leer electrical and refrigeration parts are U.L. recognized or CE Marked and installed to comply with CE or U.L. merchandiser product listings. Replacement of parts that are not U.L. recognized or CE Marked and not installed per original assembly will void merchandiser U.L. listing or CE Marking and Leer warranty.

Electronic Control- Auto Defrost Wiring Diagram 115V

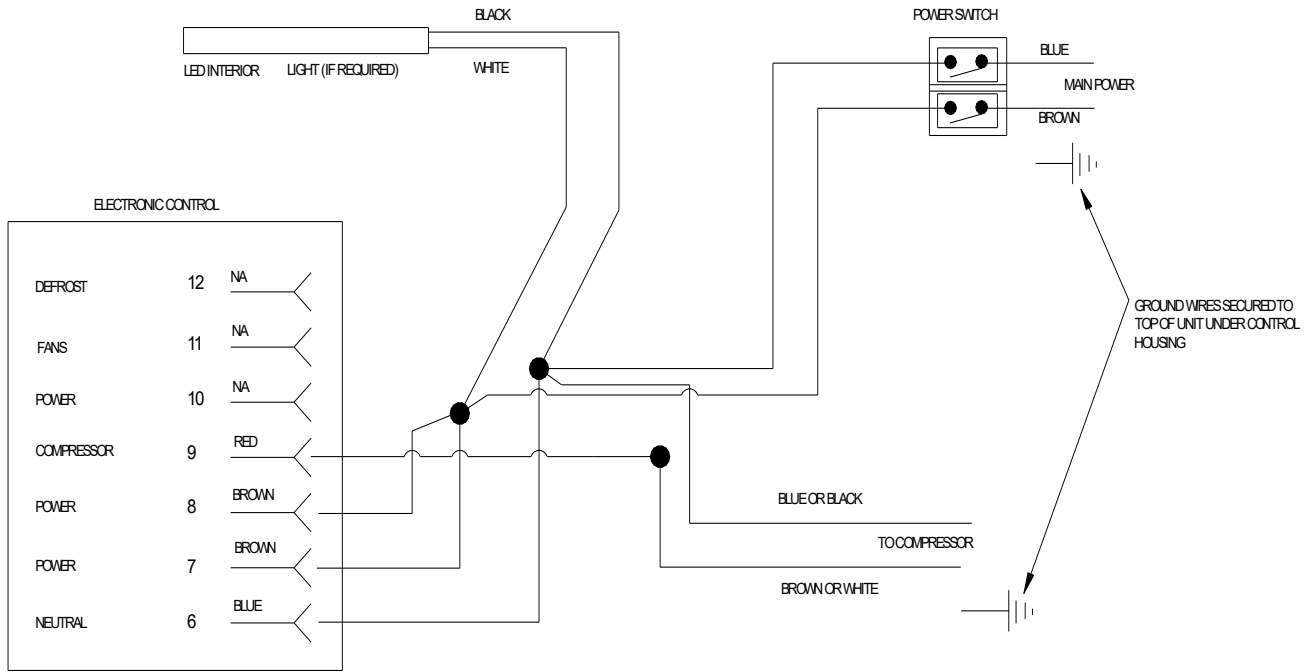


Electronic Control- Auto Defrost Wiring Diagram 230V

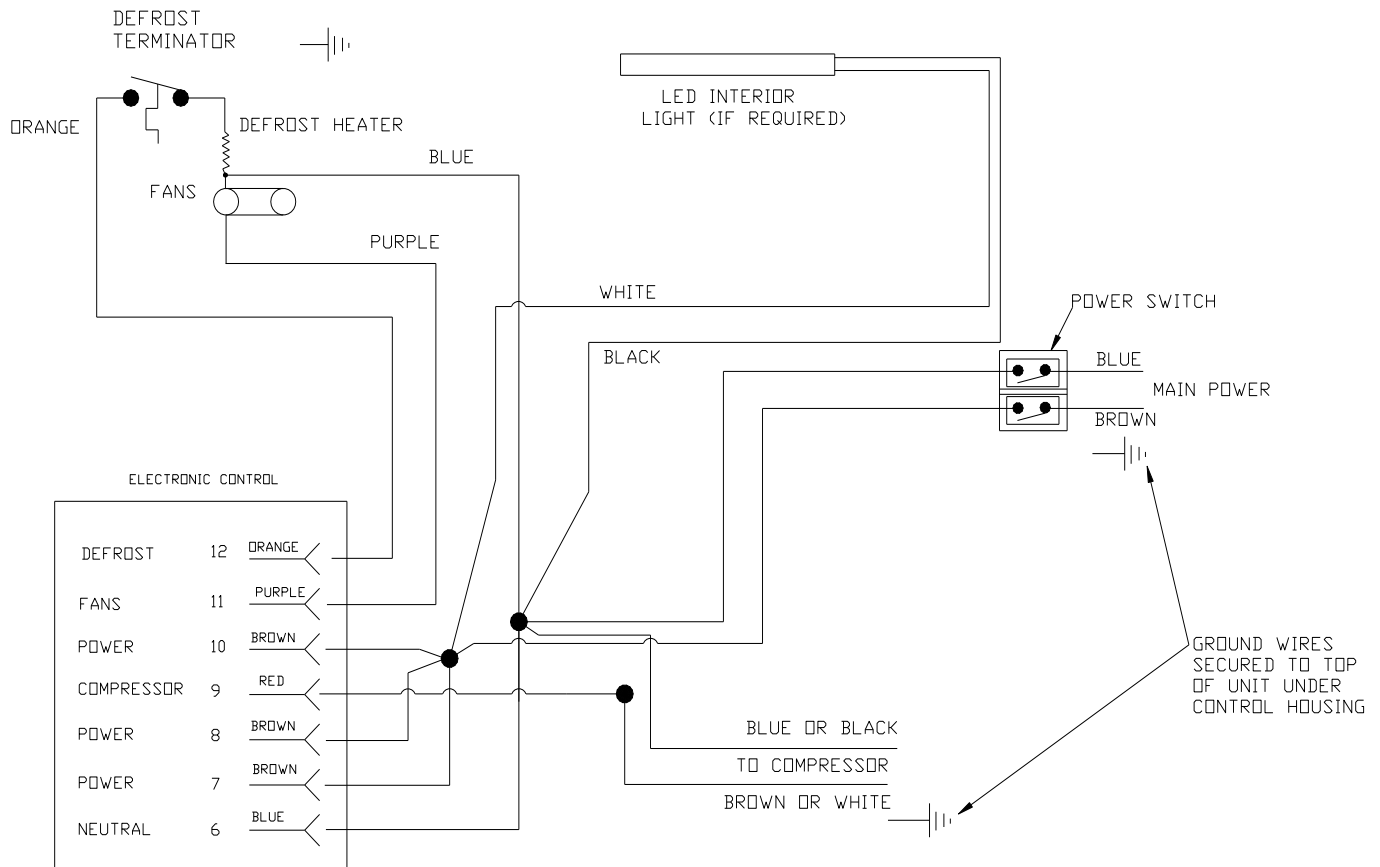


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Electronic Control- Cold Wall Wire Diagram 230V Australia



Electronic Control- Auto Defrost Wire Diagram 230V Australia



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Warranty

MERCHANTISERS INSIDE NORTH AMERICA: Seller warrants the merchandiser under normal use and service, for one (1) year for the component parts (to be shipped by seller), and ninety (90) days for repair labor from the date of original shipment. The merchandiser compressor motor is warranted for five (5) years from the date of original shipment. SELLER MUST BE CONTACTED AND PROVIDED A MERCHANTISER SERIAL NUMBER FOR WARRANTY CLAIM. This applies only to goods installed in the United States, Canada or Mexico. Seller's obligation under this warranty shall be limited to repair (subject to the limitations below) or replacement of any part(s), F.O.B. Seller's factory, which prove(s) defective within the applicable warranty period. Seller reserves the right to inspect defective part(s) and may at Seller's discretion require return of part(s) to Seller's factory for inspection. The determination as to whether any defect exists shall be made in Seller's sole judgement.

NORTH AMERICA GENERAL PROVISIONS APPLICABLE TO ALL WARRANTIES AND PRODUCTS: Seller shall not be liable for any breach of any express warranty set forth above unless Seller is informed immediately upon the discovery of defective part(s). The warranties described above are not assignable and shall operate only in favor of the original buyer/user. In event of any claim for breach of express warranty, Seller shall be responsible for labor charges for repair or replacement of any defective part(s) or assembly only for defects reported to Seller within ninety (90) days after the date of installation. ALL LABOR CHARGES SHALL BE AUTHORIZED OR APPROVED BY SELLER PRIOR TO THE REPAIR OR REPLACEMENT OF PART(S). In all other events, Seller shall not be responsible for any labor charges. Labor charges shall only include standard straight time labor hours at the site of product installation, and shall exclude charges for travel time, mileage, or other premium charges. These warranties shall not apply to any goods, or any part thereof, which may have been subject to any damage in transit, accident, negligence, abuse or misuse, unauthorized alteration, or repair, acts of nature or failure to follow any of the Seller's manuals or instructions, if in Seller's sole judgement, such act, omission or event has detrimentally affected the physical condition, use or operating qualities of the product.

INTERNATIONAL MERCHANTISERS OUTSIDE NORTH AMERICA: Seller warrants the merchandiser under normal use and service, for one (1) year for the component parts (to be shipped by seller). The merchandiser compressor motor is warranted for one (1) year from the date of original shipment. SELLER MUST BE CONTACTED AND PROVIDED A MERCHANTISER SERIAL NUMBER FOR WARRANTY CLAIM. This applies only to goods installed outside the United States, Canada, or Mexico. Seller's obligation under this warranty shall be limited to repair (subject to the limitations below) or replacement of any part(s), F.O.B. Seller's factory, which prove(s) defective within the applicable warranty period. Seller reserves the right to inspect defective part(s) and may at Seller's discretion require return of part(s) to Seller's factory for inspection. The determination as to whether any defect exists shall be made in Seller's sole judgement.

INTERNATIONAL GENERAL PROVISIONS APPLICABLE TO ALL WARRANTIES AND PRODUCTS: Seller shall not be liable for any breach of any express warranty set forth above unless Seller is informed immediately upon the discovery of defective part(s). The warranties described above are not assignable and shall operate only in favor of the original buyer/user. Seller shall not be responsible for any labor charges. These warranties shall not apply to any goods, or any part thereof, which may have been subject to any damage in transit, accident, negligence, abuse or misuse, unauthorized alteration, or repair, acts of nature or failure to follow any of the Seller's manuals or instructions, if in Seller's sole judgement, such act, omission or event has detrimentally affected the physical condition, use or operating qualities of the product.

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MODEL NO. _____ SERIAL NO. _____