



Air Curtain Refrigerator Models Installation, Operation and Troubleshooting Manual



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3779 CHAMPION BLVD, WINSTON-SALEM, NC 27105

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THANK YOU

Thank you for purchasing a Victory ULTRASPEC™ Air Curtain Refrigerator cabinet! This unit has passed our strict Quality Control Inspection and meets the high standards set by Victory Refrigeration. You have made a quality investment that with proper maintenance will give you many years of 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 (888) 845-9800.

IMPORTANT INFORMATION - PLEASE READ

- * 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 on the next page of this manual. Please complete the card and submit it to Victory Refrigeration within 10 days of installation. Failure to properly register equipment may limit or void the warranty.
- * Victory 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.

LIMITED WARRANTY

(Continental USA Only)

The Seller warrants to the original purchaser, equipment manufactured by Seller to be free from defects in material and workmanship for which it is responsible. The Seller's obligation under this warranty shall be limited to replacing or repairing at Seller's option, without charge, F.O.B. Seller's factory, any part found to be defective and any labor and material expense incurred by Seller in repairing or replacing such part, such warranty to be limited to a period of thirty-six (36) months from the date of installation, provided, however, installation occurs within three (3) months of date of purchase and equipment is in normal use and service and is installed in accordance with manufacturer's recommendations and provided terms of payment have been fully met. All labor shall be performed during regular working hours. Overtime premium charges will be at Buyer's expense.

Proof of purchase must be supplied to Seller to validate warranty. This warranty is valid only if equipment is properly installed, started-up and inspected by the dealer or authorized Victory Service agent.

Removal or alteration of the serial/data plate from any equipment shall be deemed to release Seller from all warranty obligations or any other obligations, expressed or implied.

This warranty does not cover Thermostat, Controller, Thermometer or Defrost Timer calibration and/or adjustment, freight damage, normal maintenance items outlined in Owner's Manual, adjustment of door mechanisms or replacement of door gaskets, light bulbs, fuses or batteries. The warranty does not cover installation, start-up, normal maintenance, food loss, or other consequential damage.

Any repairs or replacement of defective parts shall be performed by Seller's authorized service personnel. Seller shall not be responsible for any costs incurred if the work is performed by other than Seller's authorized service personnel. Reimbursement claims for part(s) or labor service costs must be made in writing. Model, cabinet serial numbers and installation location must be shown on the claim. A receipted bill from the servicing agency must accompany the claim, together with full details of the service problems, diagnosis and work performed. Victory will determine at its sole discretion whether further documentation on a claim is to be submitted.

Seller shall not be liable for consequential damages of any kind which occur during the course of installation of equipment, or which result from the use or misuse by Buyer, its employees or others of the equipment supplied hereunder, and Buyer's sole and exclusive remedy against Seller for any breach of the foregoing warranty or otherwise shall be for the repair or replacement of the equipment or parts thereof affected by such breach.

The foregoing warranty shall be valid and binding upon Seller if and only if Buyer loads, operates and maintains the equipment supplied hereunder in accordance with the instruction manual provided to Buyer. Seller does not guarantee the process of manufacture by Buyer or the quality of product to be produced by the equipment supplied hereunder and Seller shall not be liable for any prospective or lost product or profits of Buyer.

THE FOREGOING WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESS AND IMPLIED WARRANTIES WHATSOEVER. SPECIFICALLY THERE ARE NO IMPLIED WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE.

The foregoing shall be Seller's sole and exclusive obligation and Buyer's sole and exclusive remedy for any action, whether in breach of contract or negligence. In no event shall Seller be liable for a sum in excess of the purchase price of the item.

You may fax this completed page to (800) 253-5168, or copy and mail the form below to Victory.

NOTE: The mail-in or faxed form must be filed out and forwarded to Victory by the installer or customer within 10 days after start-up. Failure to do this may invalidate the warranties. Retain this information for your records.



3779 CHAMPION BLVD
WINSTON-SALEM, NC, 27105
TEL: (888) 845-9800 : FAX: (800) 253-5168

Cabinet Model No. _____

Cabinet Serial No. _____

(Data plate information located inside cabinet on the upper left wall)

**WARRANTIES NOT VALID UNLESS REGISTERED AT
FACTORY WITHIN 10 DAYS AFTER START-UP DATE.**

ORIGINAL DATE OF INSTALLATION _____

CUSTOMER NAME _____ PHONE _____

STREET _____ CITY _____ STATE _____ ZIP CODE _____

DEALER'S NAME _____ PHONE _____

STREET _____ CITY _____ STATE _____ ZIP CODE _____

RECEIVING, UNCRATING & INSTALLATION INSTRUCTIONS

Proper installation is the first step to operation. We recommend that your Air Curtain Refrigerator be installed by a Victory authorized service technician.

Receiving

Prior to shipping, all Victory products are factory tested for performance and thoroughly inspected to ensure they are free of any defects. Upon receipt, carefully examine the unit for any damage that may have occurred during shipping and delivery. Any damage, discrepancies, shortages or overages should be noted on the carrier's **Bill of Lading** and a freight claim must be filed immediately with the carrier. If damage is noticed after receipt, contact the carrier's local terminal and file a freight claim. In either case, it is important that all original cartons, crates and interior packaging material are saved until inspection has been made with the delivering carrier.

Uncrating

WARNING: *Never lay your Air Curtain Refrigerator down on either its back, front or sides. This causes compressor oil to enter the refrigerant lines which can damage the compressor at start-up. If the unit is laid down, it must be set upright for a minimum of 24 hours before starting the compressor. Failure to adhere to the above recommendation will void the warranty.*

Tools Needed: *Level, Flathead Screwdriver, Box Cutting (or Carpenter) Knife*

1. Take off the cardboard top capping by removing all clear tape and staples with a flathead screwdriver. Also remove all staples at the bottom of the cardboard carton and skid.
2. Starting from the top of the cardboard carton, carefully take a box cutting knife and try to make one continuous cut until you come to the wooden skid. Remove the cardboard carton from around the cabinet and discard.

***Note:** *An additional clear, plastic, protective wrap is applied directly to the exterior of all cabinets with glass doors.*

3. Move cabinet as close to final location as possible before removing skid.

WARNING: *The cabinet must be blocked and secured when removing the shipping skid.*

4. Remove protective vinyl coating from all interior and exterior surfaces.
5. The floor on which the cabinet will rest must be even/level, free of vibration and strong enough to support the combined weights of the cabinet plus the maximum product load.

Air Curtain Refrigerator Location

Consider the following when selecting a location for your Air Curtain Refrigerator:

1. **Clearance** - Make sure Air Curtain Refrigerator surrounding supports the 270° (degrees) door swing.
2. **Ventilation** - The Air Curtain Refrigerator has a bottom-mounted front breathing refrigeration system of which no clearance is required.

Cabinet Cleaning

Prior to use, the interior and exterior surfaces of the cabinet should be cleaned thoroughly with warm water, mild detergent and a soft cloth. Apply with a dampened cloth and wipe in the direction of the metal grain and allow to air dry with the door(s) open. **DO NOT** use chlorinated or abrasive cleansers, and only use a soft clean cloth.

Electric Supply

115 Volt self-contained units are provided with a 15 or 20 Amp power cord with plug that is shipped coiled on top of the cabinet. The power cord is equipped with a 3-prong (grounding) plug that is to be used in an appropriately rated and dedicated 3-prong (grounding) receptacle.

***NOTE:** *Have a wall outlet checked by a qualified electrician for polarity and proper grounding prior to plugging in the power cord.*

For units not provided with a power cord, the electrical connection should be made by a qualified electrician in accordance with local electrical codes. The electrical supply requirements are on the rating (or data) plate located on the left hand interior wall of the cabinet. Use of a dedicated circuit with separate grounding wire is required.

Pan Slides

All STS Air Curtain Cabinets are supplied 15 sets of pan slides. The slides are attached by means of key hole slots to the air distribution ducts on 3-3/4" (inch) centers for maximum air circulation.

Pan slides are designed to bottom support 18" x 26" (inch) pans and are easily removable; no tools required.

OPERATION

Interior Temperature Control

Your Air Curtain Refrigerator has been preset at the factory and should not require any additional adjustment. However, if adjustment is necessary, locate the temperature control at the rear access panel. There are two adjustment screws on the control. **TURN THE LOWER SCREW ONLY!** Clockwise for colder interior temperatures, counter-clockwise for a warmer temperature.

The upper (cut-in) screw has been preset for defrosting the coil and should not be reset unless by a qualified refrigerator service company.

NOTE: Air Curtain Refrigerators are equipped with an electric condensate vaporizer. Excess condensate water flows from the evaporator cooling coil, down a drain tube in the back of the cabinet, to the vaporizer located at the bottom.

When this cold water enters the vaporizer, a thermostat is activated and the water is boiled off. The resulting steam is vented by an aluminum elbow and vapor may be seen at the bottom and/or front of the unit. This is part of normal operating procedure for the condensate disposal system.

All the water in the vaporizer should be allowed to boil off after the unit has finished operation for the day to avoid possible overflow.

How the Air Curtain Refrigerator Works

Your Air Curtain Refrigerator performs a little differently than the average refrigerator. When the door is shut the cabinet operates as a standard refrigerator for normal temperature storage. The cabinet is designed with air ducts on the left and right side of the interior. Each air duct has a series of strategically placed holes for proper air flow. When the door is opened, a curtain of cold air blows across the cabinet opening from left to right. This keeps hot air out and cold air in, assuring safe storage during peak service time. This is accomplished by means of three blower fans and motors that are activated by the door switch. This action triples the air velocity in the product zone.

IT IS HIGHLY RECOMMENDED THAT THE AIR CURTAIN CABINET DOOR OPENINGS NOT EXCEED 45 MINUTES. MORE THAN 45 MINUTES OF DOOR OPENING TIME PUTS THE CABINET AT RISK TO NOT OPERATE PROPERLY!

Victory Air Curtain Refrigerators can maintain temperatures of 38°F to 40°F for approximately one hour. The actual time your cabinet will retain product temperature depends on many factors such as ambient temperature and humidity, the amount of time your unit is allowed to precondition the product type and temperature when placed in the unit, type of packaging, and profile foods. The Air Curtain Refrigerator is designed primarily for **low profile product** such as salads, pudding, desserts, milk, etc. Do not place large pans or containers inside that will block or hamper the air flow and the overall performance of the cabinet.

If the door is left open for a period of longer than one hour, the ambient temperature will rise, however the product temperature will lag considerably. The differential in ambient to product temperature could be as much as 15° F.

Moving the Cabinet

Even though the cabinet weighs 320 pounds, it is easy to maneuver when in use. This is accomplished by the use of recessed side hand grips, a push bar handle with rubber bumpers and heavy duty non-mar casters.

Since the condensing unit is located at the base of the cabinet, there is a low center of gravity making it more stable when transporting, and the operator has easy access to all pans at a comfortable working height.

PERIODIC MAINTENANCE

Cabinet Cleaning

Victory Refrigeration recommends periodic internal and exterior cleaning as outlined below.

Daily Exterior Cleaning

1. Clean the surface with a sponge and cleaning solution. Use a non-abrasive cleaner that does not contain chlorine.
2. Polish with a soft cloth, wiping with the grain of the metal.
3. Once a week wipe with a film cutting agent or stainless steel polish to maintain shine.

Weekly Interior Cleaning

1. Remove all food, food related items and shelves.
2. Discontinue power to the cabinet at the main power supply circuit breaker.

3. Remove loose food particles from the interior floors, walls and ceiling.
4. Scrub all interior surfaces and door gaskets with a warm detergent solution 100°F (38°C) - 120°F (49°C) and a soft nylon bristled brush.
5. Rinse with clear water and allow to air dry.
6. Reinstall the shelves.
7. Return power to the cabinet by resetting main power supply circuit breaker.
8. Return food to the cabinet when temperature indicator reaches safe food temperature.

Condenser Maintenance

The condensing unit is located at the bottom rear of the cabinet. Monthly cleaning is necessary to keep the required amount of air passing through the condenser and maintain operating efficiency.

1. Disconnect the electrical service cord from the receptacle.
2. Use a vacuum cleaner with proper brush attachments, a stiff brush or a whisk broom to clean the compressor motor and related parts. In extreme cases of dust and grease build-up, the condenser fins may require blowing out with compressed air.

WARNING: Failure to keep the condenser coil clean may cause premature failure of the compressor-motor which will NOT be covered by warranty.

Lubrication

Unless otherwise specified, all Victory refrigerators and freezers are equipped with permanently lubricated motors. The compressor-motor is a sealed unit and is constantly lubricated when in operation. The condenser and evaporator fan motors are also equipped with lubricated bearings which never need to be oiled.

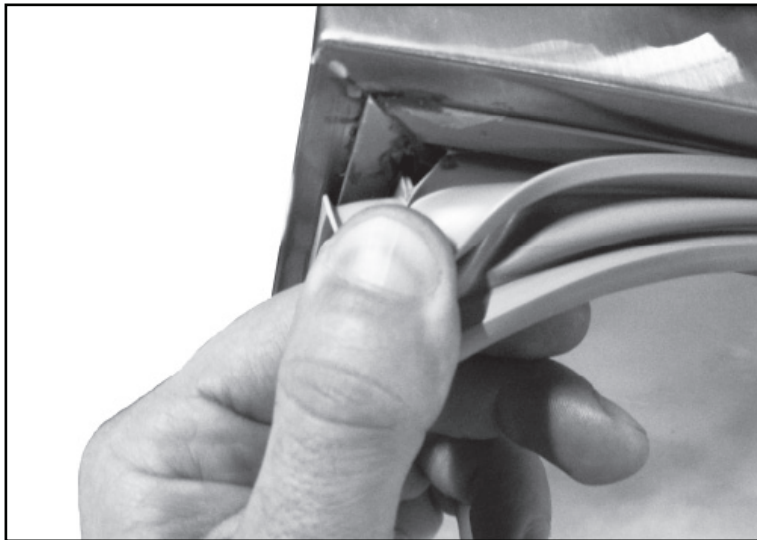
Installing Replacement Door Gasket (if required)

Removing

Beginning at one corner, pry the gasket loose from the retaining strip. Peel remainder of the gasket from the door and discard.

Replacing

Before replacing, be sure the gasket and door are at room temperature. (If necessary, soak the gasket in warm water to make it more pliable.) Align the new gasket frame on the door retainer strip. Starting at one corner, press each corner of the gasket into the retainer strip. Once started, the gasket can be easily inserted around the entire perimeter of the door by simply press rolling into place.



Door Gasket & Retainer Strip

TROUBLESHOOTING GUIDE FOR COMMON PROBLEMS

Caution: Disconnect Power Supply Prior To Attempting Any Service!

Problem	Possible Cause	Remedy
<i>Cabinet not running</i>	Fuse blown or circuit breaker tripped.	Replace fuse or reset circuit breaker.
	Power cord unplugged.	Plug in cord.
	Main Power switch turned off	Turn power switch on.
	Improper Voltage supplied to cabinet (Voltage does not match Data Plate).	Correct supply voltage (Remove extension cords or other equipment on circuit, etc.)
	Thermostat set too high	Set thermostat to lower temperature. (Cut-In: 36°F, Cut-Out: 16°F; Differential of 20°F)
<i>Condensing Unit on Refrigerator or Freezer runs for prolonged period or continuously</i>	Excessive amount of warm product loaded in cabinet.	Allow adequate time for product to cool down.
	No product in cabinet.	Load cabinet with product.
	Prolonged door opening or door ajar.	Make sure door is closed when not in use. Avoid prolonged door openings. (*Note: Door Openings must not exceed 45 minutes)
	Door gasket not sealing properly.	Check gasket condition. Adjust door or replace gasket.
	Dirty Condenser coil.	Clean the condenser coil.
	Improper air flow around Condensing Unit.	Ensure adequate air space, relocate away from heat generating equipment, direct sunlight, or direct path of air conditioning or heating ducts.
	Evaporator coil blocked with ice.	Turn unit off and allow coil to defrost. Make sure thermostat is not set too cold and that door gasket is sealing properly.
<i>Refrigerator or Freezer cabinet temperature too high</i>	Thermostat set too high.	Set thermostat to lower temperature. (Cut-In: 36°F, Cut-Out: 16°F; Differential of 20°F)
	Poor air circulation in cabinet.	Re-arrange product to allow proper air circulation.
	Exterior Thermometer out of calibration.	Refer to Users Manual for calibration procedure.
	Excessive amount of warm product in cabinet.	Allow adequate time for product to cool down.
	Prolonged door openings or door(s) ajar.	Make sure door(s) are closed when not in use. Avoid prolonged door openings. (*Note: Door Openings must not exceed 45 minutes)
	Dirty condenser coil.	Clean the condenser coil.
	Insufficient clearance around cabinet or excessively high ambient temperature.	Ensure adequate air space, relocate away from heat generating equipment (ovens, fryers, etc.), and out of direct sunlight.
	Evaporator coil blocked with ice.	Turn unit off and allow coil to defrost. Make sure thermostat is not set too cold. Also, check gasket condition.
<i>Cabinet is noisy</i>	Part(s) loose.	Locate and tighten loose part(s)
	Tubing Vibrating.	Ensure tubing is free from contact with other tubing or components.
<i>Refrigerator is freezing product</i>	Thermostat is set too low.	Set thermostat to higher temperature. (Cut-In: 36°F, Cut-Out: 16°F; Differential of 20°F)
	Cabinet overloaded with product	Remove or rearrange product.
<i>Refrigerator or Freezer Compressor will not start - hums and trips on overload protector</i>	Dirty Condenser coil.	Clean the condenser coil.
	Excessive heat generated from equipment nearby	Relocate cabinet, or adjacent heat generating equipment.
	Voltage to cabinet too high or too low.	Check and correct supply voltage.
<i>Door won't close tight</i>	Cabinet is not level.	Level cabinet by adjusting legs or shiming casters.
	Door not seated properly in hinge.	Adjust door on hinges by lifting slightly, rotating and reseating.
<i>Condensation on the face of cabinet</i>	Fascia Heaters are not working.	Check Fascia Heaters for power all the time unless cabinet is disconnected from Main Power Supply. Change out if required.

COMMON REPLACEMENT PARTS

REFRIGERATION COMPONENTS

50181401	Temperature Control, 3 Ft. Cap Tube (Mounted at Top of Cabinet)
50181402	Temperature Control, Ranco 6 Ft. cap tube (Mounted On the Bottom)
50156801	Coil, Evaporator (Fin to Fin Dimensions: 6" x 6" x 20")
10490001	Coil Assembly (Consists of Coil and Heat Exchanger)
50633501	Compressor, AJ7441A, 1/2 H.P.
10477111	Drain Pan Assembly
50199101	Capillary Tubes, .049" x 10' (2 required)
44103001	Heat Exchanger Assembly (Consists of cap tube & suction line w/ flared fitting)
50184101	Accumulator, Suction Line 1/2"
50369501	Crankcase Valve
50183802	Filter Drier
50647001	Condenser Coil

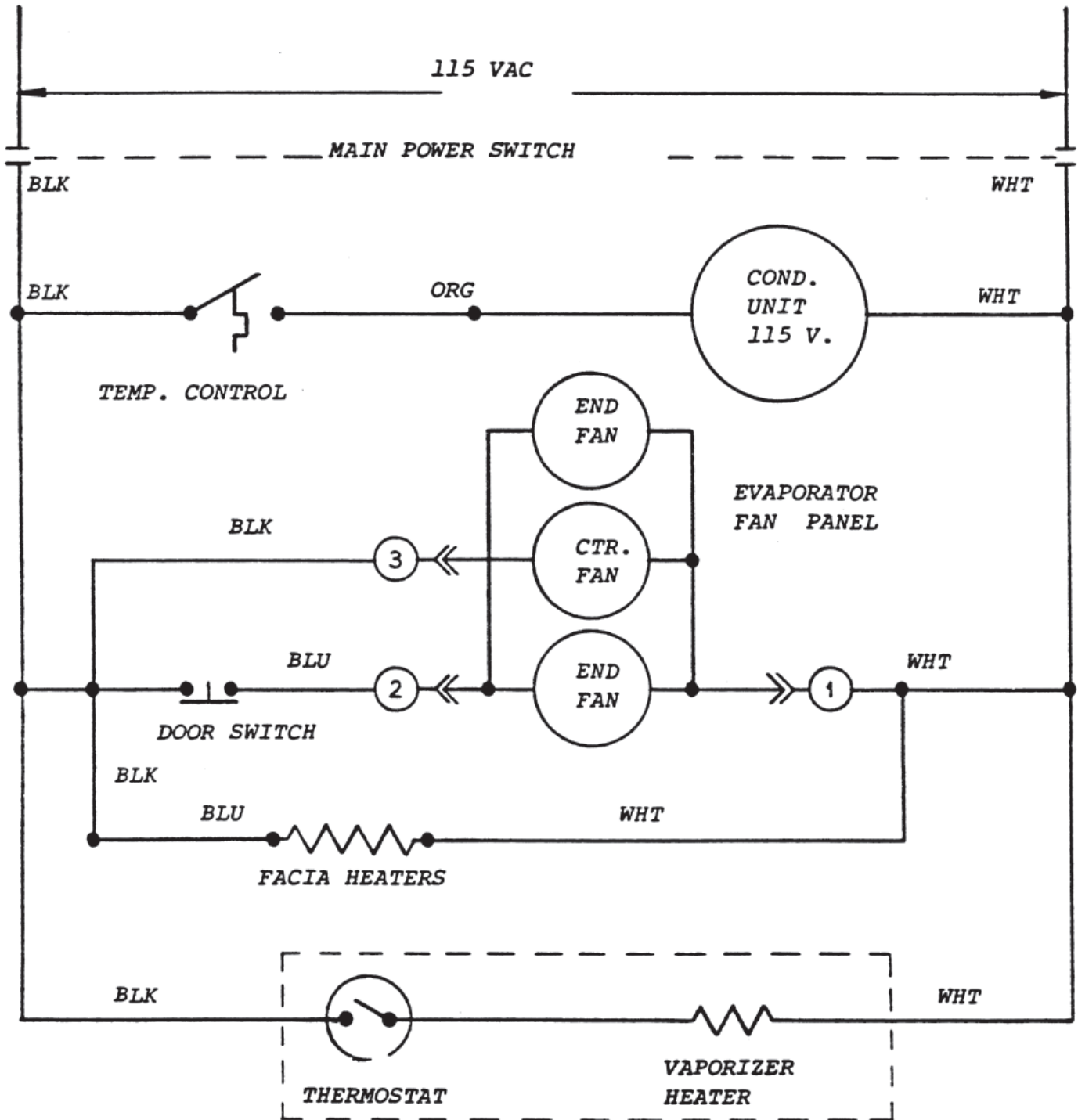
ELECTRICAL ITEMS

50193101	Motor, 9 Watt Condenser Fan
50639801	Motor, 115 Volt Evaporator (*04096601 Mounting Bracket)
50580101	Blade, 6" Evaporator Fan (*4 Plastic Blades)
50618701	Blade, 8- 3/4" CW AL Condenser Fan
50618401	Fan Bracket, Condenser (*for 115V Fan Motor)
50595001	Heater Wire, 115 Volt Door Frame (*Blue & White Leads)
50584001	Switch, DPST 20 Amp Toggle
10490503	Vaporizer Assembly, 115 Volt / 300 Watt
50190901	Vaporizer Thermostat, Bi-metal 3/4" Diameter
50584201	Cord & Plug, 115 Volt / 20 Amp
50357501	Switch, Plunger Type Door
10477011	Fan Panel Assembly (*with Motors, Blades & Brackets)
10489801	Power Harness, Cabinet

DOORS & COMPONENT PARTS

10583403	Door Assembly, Complete RH Hinge w/ Stainless Steel Handle
10583404	Door Assembly, Complete LH Hinge w/ Stainless Steel Handle
50674101	Glass Door, RH Hinge (Early Style Lock located above Handle)
50682302	Glass Door, LH Hinge (Late Style Lock located in center of Handle)
50582903	Gasket, Magnetic 53- 3/8" x 25 - 9/16"
50677001	Gasket, Glass Door
50594801	Retainer, Gasket Top and Bottom 24- 3/4" Long
50594802	Retainer, Gasket Sides 52- 17/32" Long
50674103	Door Handle, Long
50575301	Hinge Assembly, RH
50575302	Hinge Assembly, LH
50190701	Lock, Cylinder Type - Key XC-3 (*Key Part No. 50190702)
50597107	Lock, Cylinder Type - Key #312 (*Key Part No. 50597108)

WIRING DIAGRAMS





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