



Operation, Installation and
Instruction Manual
For

Undercounter Refrigerators and Freezers

and

Pizza Preparation Tables

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Operators Manual

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Continental

Refrigerator

Pizza Preparation Table Supplemental Insert

PIZZA PREPARATION TABLE OPERATION

Pizza prep tables are designed and factory set to maintain an average cabinet and pan rail product temperature 38° F. In order to maintain pan temperature in the raised rail within N.S.F. parameters of 33 – 41° F, your pizza prep table is equipped with a coldwall rail. The coldwall rail must maintain a freezing temperature so that the pan product temperature can be maintained.

PIZZA RAIL SYSTEM SWITCH

A rail “On – Off” switch is located on the front grill so that the refrigeration can be turned “On” to the rail during use and shut “Off” at the end of the day to save energy and defrost the frost build up on the rail. Product should be removed from the rail during the evening and stored in the refrigerated base. The rail may need to be turned “Off” for periodic defrosting during the day if frost build up becomes excessive. Product must not be left in the rail during this defrosting period.

Important Note: Sandwich and pizza preparation tables are not intended for overnight food storage in the top pan rail.

PIZZA PREP TEMP ADJUSTMENT – BOTTOM STORAGE COMPARTMENT

If an adjustment is necessary to maintain the average cabinet temperature range of 38° F only, place a screwdriver into the thermostat slot (located inside of the cabinet on the side of the evaporator coil fan housing) and turn clockwise for a colder cabinet temperature or counterclockwise for a warmer cabinet temperature. Further adjustments out of the factory design temperature range must be made by a qualified refrigeration mechanic only.

PIZZA PREP TEMP ADJUSTMENT – COLDWALL RAIL

If an adjustment is necessary to maintain the coldwall rail temperature, a pressure control is located behind the front grill which controls the compressor operation and the temperature range of the rail. The factory recommended settings for this low pressure control are the following:

CUT IN = 45#

DIFFERENTIAL = 20 #

Before making any adjustments to the pressure control out of the factory design temperature range, please consult factory or qualified refrigeration mechanic.

RECEIVING YOUR NEW MODEL

Congratulations on your recent purchase of Bally Refrigerator superior food equipment products! When your shipment arrives, please thoroughly examine the shipping crate for any punctures, dents, or signs of rough handling. It is in your best interest to partially remove or open the shipping container in order to examine the model for any concealed damages which may have occurred during shipment. If the model is damaged, it must be noted on the delivering carrier's delivery slip or bill of lading (see "filing a damage claim" under warranty section).

GENERAL INFORMATION AND IMPORTANT OPERATING FACTS

This manual has been compiled to aid in the installation, operation and maintenance of your new equipment. Please take the time to read all of the material in order to become more familiar with your equipment and its operation, and enjoy optimum performance.

No floor drains or plumbing connections are required since all models are completely self-defrosting and use an automatic defrost condensate water evaporating system (see "condensate evaporator pan installation" under installation and location section).

All cabinets must be given sufficient time to reach normal operating temperature before placing any food inside cabinet or pans (if equipped). For refrigerators, approximately 1 hour of operation is required to lower the cabinet and pan temperature to 40 degrees F. During pull-down of open top models, pans should be in place and top lid should be kept closed. Freezers require approximately 2 hours of operation to lower the cabinet temperature to 0 degrees F (see "operation" section for further information).

On all open top refrigerators with salad pans, it is strongly recommended that the top lid be kept in the closed position when the unit is not in use or between rush periods. This is extremely important during the summer months and in hot kitchens. **Do not** keep the top lid open for prolonged periods of time and **never** operate open top models without all pans in place. Please note that sandwich and pizza preparation tables are not intended for overnight food storage in the open top pans.

Prior to factory shipping, all models are performance run tested for a minimum of 12 hours providing a highly sophisticated temperature analysis recording exclusive to each individual cabinet. This recording is supplied within this manual packet. A final leak check, vibration, noise level and visual examination is made by a qualified quality control team to assure a quality product. The carrier signs to this effect when he accepts the product for shipping. To insure the maximum in safety and sanitation, all models are listed under the reexamination service of underwriter's laboratories and with the national sanitation foundation.

UNCRATING YOUR NEW MODEL

The shipping container should remain on your model as protection against dents or scratches while transporting it to the actual set-up location. Remove the shipping container only at the last possible moment by following these simple steps:

1. Using a pry bar, pry off and remove crate end bottom staples.
2. Pry off and remove crate front and rear bottom staples.
3. Slide crate upward and remove it, being careful not to rub against cabinet.

There are up to four (4) bolts securing the cabinet to the wooden skid. The bolts are located at each end on the underside of the skid. In order to remove these bolts it is advisable to tilt the cabinet backwards and place wooden blocks at each end in order to hold it in its tilted position. Using a 3/4" socket or open end wrench, remove the bolts and carefully slide the model off of the skid. After skid removal, the cabinet should never be moved without dollies or rollers to avoid damage to the cabinet bottom or floor.

Important Note: Do not under any circumstances lay your new model on its front or sides. Only for a brief period, may you lay the model on its back and only then, when its properly blocked so as not to crush the louvered venting panel and also to allow provision for your hands in order to set it in its upright position without inflicting damage to the cabinet. **Do not plug in and operate model for at least three (3) hours after cabinet is set upright from being on its back as damage could result to the compressor.**

INSTALLATION AND LOCATION

CLEARANCES

Before moving the cabinet to its final point of installation, accurately measure all doorways or passages to assure clearance. If additional clearance is needed, cabinet doors can be easily removed (see instructions outlined in "removal of doors" section) and, or hood assembly (when equipped) can be easily removed (see instructions outlined in "removal of hood" section).

VENTILATION

The final location site of your air-cooled refrigerator or freezer must be able to provide a large quantity of cool, clean air. The refrigeration system operates most efficiently and trouble-free with cool, dry air circulation. Avoid locations near heat and moisture generating equipment such as stoves, ovens, cooking ranges, fryers, dish washers, steam kettles, etc., and also direct sunlight where temperatures can be in excess of 100 degrees F. Also, do not select a location in an unheated room or area where temperatures may drop below 55 degrees F. Air supply to the condensing unit is equally important. Restricting the air supply will place an excessive heat load on the condensing unit and adversely affect its operating efficiency.

Important Note: To assure maximum operating efficiency, your new "SW" series model should be located where an unrestricted air supply can circulate underneath and behind the cabinet. For optimum performance, the cabinet must be installed on legs or casters (see "installing legs or installing casters" later in this section) and a minimum of 3" on each side and rear of the cabinet **must** be provided (see figure 1a). Your model has been designed to operate sufficiently without legs or casters and directly on the floor as long as a minimum clearance of 8" is provided from the rear venting louvers and the rear wall (see figure 1b). Cabinet side clearance is not required when mounting your model directly on the floor without legs or casters. If necessary, special venting or air supply ducts must be installed by the installer if any of the above conditions cannot be achieved. **Do not** at any time obstruct the grill area in the rear of the cabinet in any way, and **never** place or store anything inside of the cabinet machine compartment. These rules are essential for maximum cooling capacity and long life of refrigeration parts.

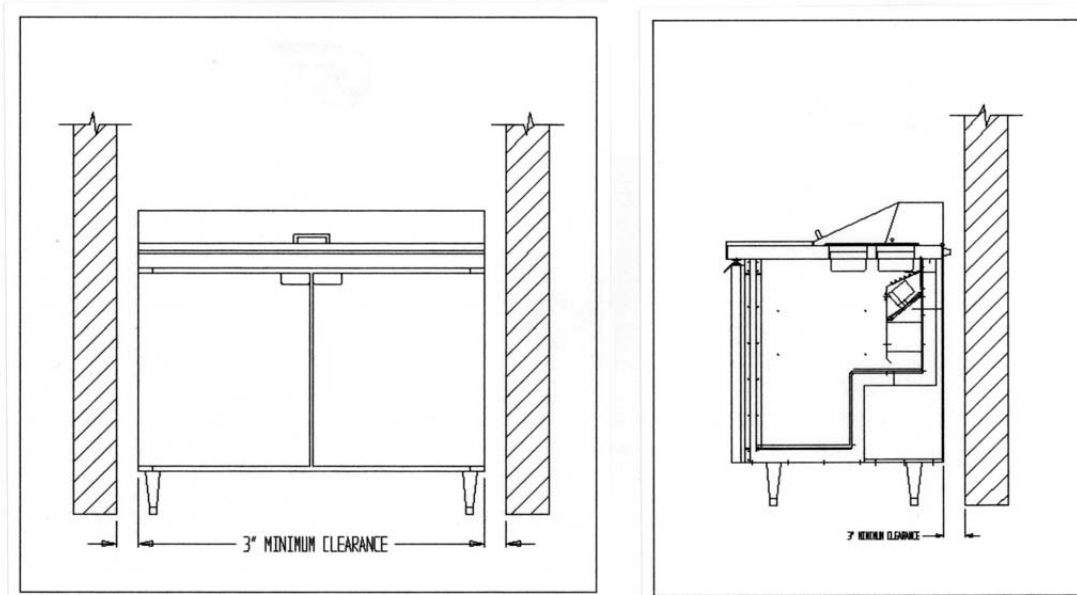


FIGURE 1a
MINIMUM CLEARANCE DIMENSIONS FOR OPTIMUM CONDITIONS

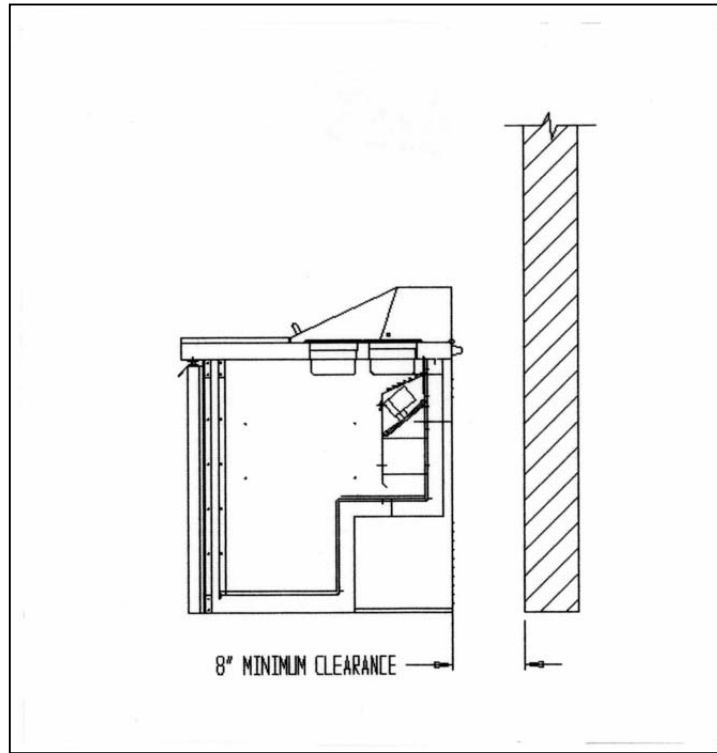


FIGURE 1b
MINIMUM CLEARANCE DIMENSIONS WITHOUT LEGS

FLOOR LOADS

The floor at the final location site must be level, free of vibration and strong enough to support the total combined weights of your new model plus the maximum product load which might be placed into it. A fully loaded reach-in model may reach 2,000 - 3,000 pounds. To estimate the possible product load weight, assume that each cubic foot of storage space weighs approximately 35 pounds. Multiply 35 pounds by the amount of cubic feet in the cabinet and obtain the product load weight. For example, a 20 cubic foot refrigerator can hold approximately 700 pounds of product (35 x 20) and assuming the refrigerator itself weighs 300 pounds, the total combined weight of cabinet and product is approximately 1000 pounds. Therefore, the floor in this example must be capable of supporting up to 1000 pounds.

INSTALLING LEGS AND LEVELING

Your new "SW" series model is supplied with adjustable type legs for leveling purposes. Each SW27, SW48, SW60 and SW72 model has four leg mounting holes on its case bottom. Legs are packed in the accessory carton from which they must be removed and installed on the cabinet case bottom (see figure 2). In order to install the legs, carefully tip the cabinet rearward adding four (4) 2" wood blocks underneath and simply screw the threaded leg studs into the case bottom front leg holes. Repeat this procedure by tilting the cabinet in the opposite direction and install the remaining legs. Make sure the legs are tightened extremely well or the entire model will sway or rock with each opening or closing of the doors, possibly causing damage to the case bottom. This procedure should be performed close to the final installation site and allow access to the rear of the cabinet for condensate evaporator installation (see "condensate evaporator installation" under installation and location section).

To assure your cabinet is level, all legs are equipped with bullet-type leveling bolts. These bolts can be turned by hand or by wrench, clockwise or counterclockwise to level the cabinet.

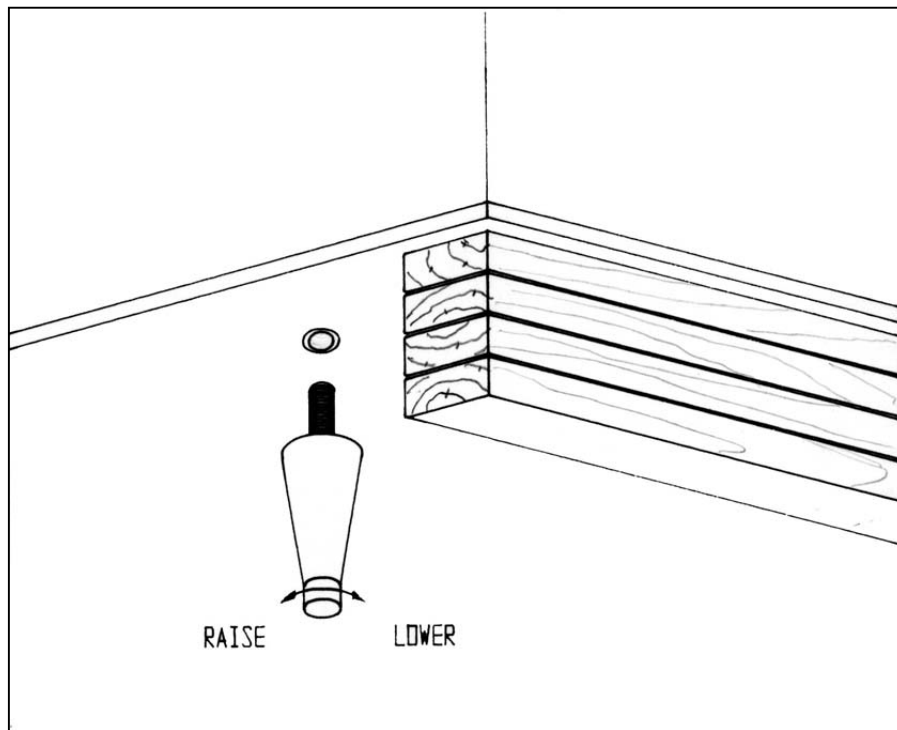


FIGURE 2
LEG INSTALLATION

Important Note: It is extremely important that your new model is perfectly level for proper operation. If it is not level, the following adverse conditions will

become apparent:

1. The door(s) will not be properly aligned and consequently will not provide a good seal.
2. Your model will run excessively due to improper door seal(s).
3. An excessive amount of ice will accumulate inside the cabinet, around the door opening(s) and especially on the finned evaporator coil. If allowed to continue, ice will eventually block the coil and the model will fail. This will result in the loss of all food stored within the cabinet.
4. Defrost water will fail to drain properly and will overflow the evaporator coil drain pan and into the cabinet of both refrigerator and freezer models.

INSTALLING CASTERS AND LEVELING

Your new "CRB" and "CPT" series models are supplied with non-adjustable casters. To install casters on your new model, follow the steps above for "installing legs" to install the casters, making sure again that the casters are tightened extremely well (see figure 3). If the casters are not installed tightly, the cabinet will sway or rock with each opening or closing of the doors, possibly causing damage to the case bottom.

To assure that your cabinet is level, caster cups must be installed under the casters which need leveling. Caster cups are not provided with your new model but can be purchased at most hardware or furniture stores. **Do not attempt to level casters by unscrewing them from the case bottom as this will cause damage to the cabinet bottom and leg hole threads, voiding all warranties.**

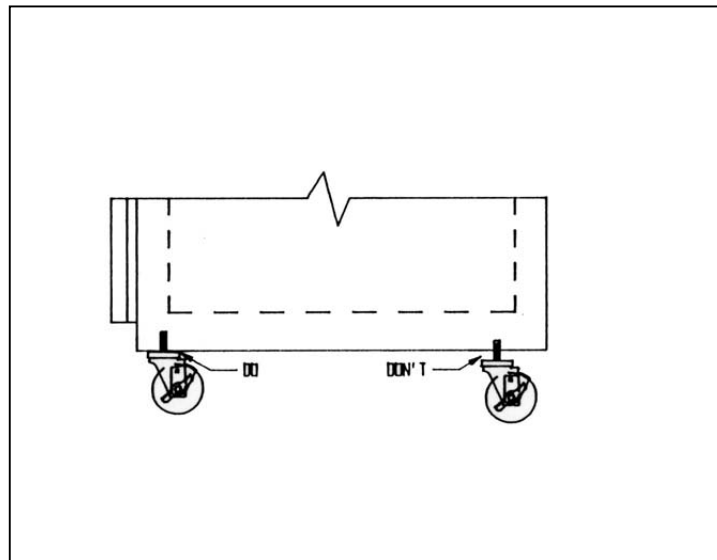


FIGURE 3
CASTERS MUST BE TIGHT TO CABINET BOTTOM

INSTALLING CONDENSATE EVAPORATOR

No floor drains or plumbing connections are required since all models use an automatic condensate water evaporating system. All models utilize a unique hot air condensate water evaporating system which is completely self-contained and no further assembly or maintenance is required. In some adverse conditions such as high ambient temperature, high humidity, extremely heavy usage, frequent loading for prolonged periods of time, and heavy pan loading, an optional electric condensate evaporator pan may be purchased as an accessory. An electric condensate evaporator pan is also supplied with all remote models. To install the condensate pan, remove all rear cabinet cover screws and install the mounting bracket on the case rear next to and behind the compressor as shown in figure 4. Slide the condensate pan onto the bracket, install the drain tube into the pan making sure it is not blocked or kinked, and plug the ten foot power cord into the receptacle labeled "vaporizer" located on the compressor compartment electrical box.

Important Note: It is extremely important to be sure that the condensate pan is plugged into its correct receptacle labeled "vaporizer" and that the condensing unit is plugged into its correct receptacle labeled "condensing unit".

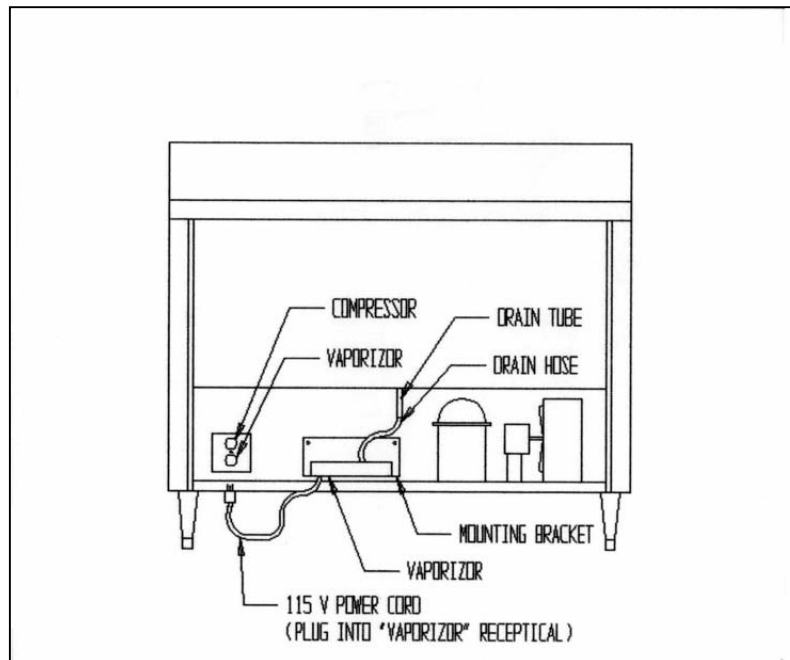


FIGURE 4
OPTIONAL ELECTRIC CONDENSATE EVAPORATOR INSTALLATION

REMOVAL OF DOORS AND DOOR ADJUSTMENT

During installation, it may become necessary to remove the cabinet doors to facilitate passage through narrow doorways or hallways. To remove a door, swing the door to the open-door position (90 degrees) and remove the two screws marked "a" (figure 5) while carefully holding the door open. Care must be taken to hold the door fully open during the screw removal since the top hinge is spring loaded and may snap towards the door when the screws are removed. After removing both screws, carefully lift the door straight upward to avoid bending the bottom hinge pin. To reinstall the door, reverse the above procedure.

Caution: The top hinge is spring loaded and may snap towards the door when the mounting screws are removed. Be sure to hold door fully open before removing mounting screws.

All doors have been aligned at the factory, however vibration during transportation may cause doors to shift and realignment may be necessary. **If the door(s) require realignment, proceed as follows:**

1. Swing the door to the open-door position and loosen but **do not remove** the screws marked "A" on both top and bottom hinges (see figure 5).
2. Relocate the door to its required position by hand or by tapping on the door edges with a hammer and a block of wood.
3. Securely tighten all screws "A".

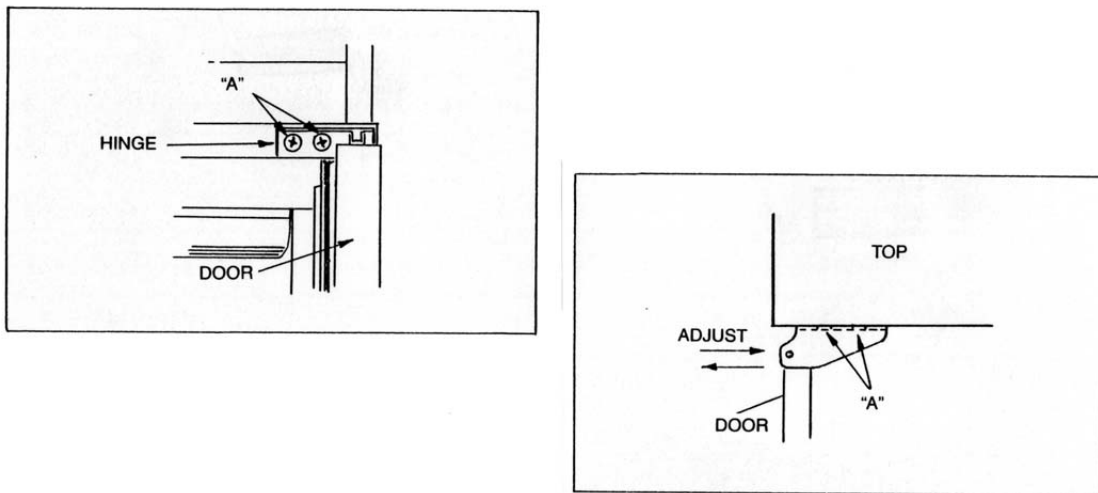


FIGURE 5
DOOR ADJUSTMENT AND REMOVAL

SELF-CLOSING HINGE MECHANISM MOUNTING

For proper operation of the self-closing doors on all sandwich unit and prep models, the hinge mechanism must be mounted to apply tension in the direction shown in figure 6. When the hinge is moved to the open-door position the hinge should be tension-free. However, when the hinge is moved back into the closed position, it should snap back. Caution should be taken when checking the spring loading as the hinge could snap back on fingers. If the hinge does not respond as described above, follow these steps:

1. Using the hinge upside down as a wrench, turn the mechanism in the door 180° in either direction. The mechanism should snap to a null point.
2. Remount the hinge as shown in figure 6.
3. Repeat the test procedure as described above until the hinge snaps back when it is moved from the open-door position towards the closed-door position.

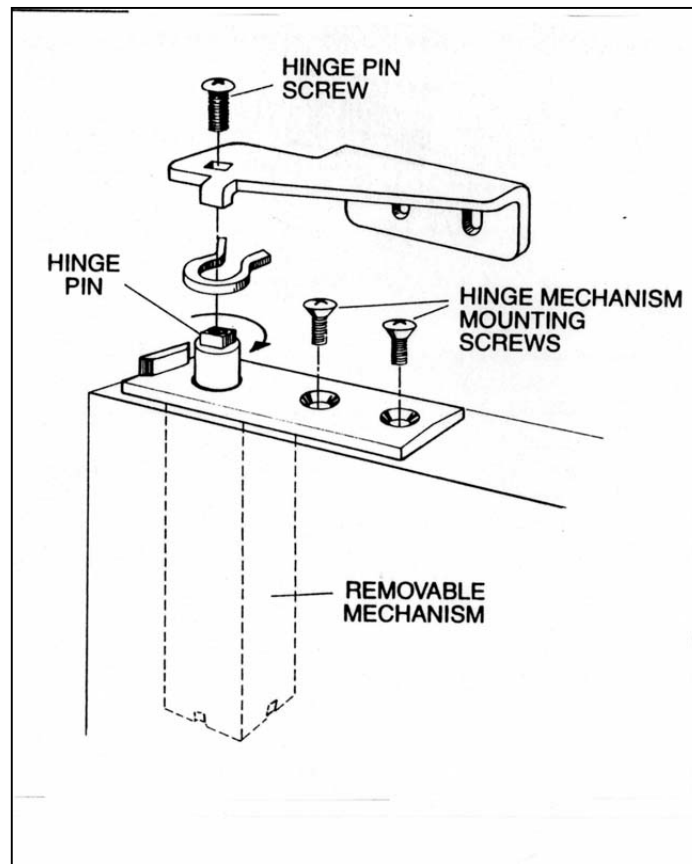


FIGURE 6
DOOR HINGE MECHANISM

REMOVAL AND REPLACEMENT OF HINGE MECHANISM

To remove the hinge mechanism from the door, remove the door from the cabinet as explained above. As shown in figure 6, remove the hinge plate from the hinge mechanism by removing the hinge pin screw. Also remove the horseshoe spring. Reinstall the hinge pin screw only partially leaving about 1/8" of exposed screw threads. Now, the hinge mechanism mounting screws can be removed thus allowing the mechanism to be removed by pulling on the hinge pin screw. If the mechanism does not readily slide out of the door, slide a claw hammer or forked prybar under the hinge pin screw head and using a block of wood for leverage, lift the entire mechanism out of the door. To install the new hinge mechanism, reverse the above procedure.

INITIAL CLEANING PROCEDURE

Prior to start-up and before placing any food inside of your new model, the interior of the cabinet should be thoroughly cleaned. Washing with a mild soap and warm water solution is recommended for cleaning the aluminum and stainless steel surfaces of your cabinet. This should be followed by cleaning with a baking soda solution (three (3) tablespoons of baking soda to each quart of warm water). Rinse thoroughly with clear water and dry with a clean, soft cloth.

Important Note: Never use harsh detergents, cleaners, scouring powders or chemicals when cleaning your model. Failure to dry the interior surfaces after cleaning may result in a streaking or staining of the metal.

Complete cleaning procedures and precautions are listed in the "periodic cleaning procedure" under the maintenance section.

START-UP PROCEDURE

ELECTRICAL CONNECTIONS

To insure proper operation, your new model must be connected to an individual circuit that can supply the full voltage as stated on the cabinet serial data plate. For correct voltage, power draw, and wire accommodations, check the data on the serial data plate located on the inner right wall of your new model. Verify that this information exactly matches the electrical characteristics at the installation location. An electrical wiring diagram, located on the inside compressor compartment rear, next to the electrical console box, should also be consulted during connection. For reference, a copy of each electrical wiring diagram is located at the rear of this manual in the "maintenance" section.

Important Note: The condensing unit supplied with all self-contained models is designed to operate with a voltage fluctuation of $\pm 10\%$ of the voltage indicated on the cabinet serial data plate. Full voltage of the correct service, on an individual line not affected by the operation of other electrical appliances, must be available to the condensing unit at all times. **Burnout of the compressor due to exceeding the high or low voltage limits is easily detected and will automatically void the factory warranty.**

115 VOLT, 60 HZ, 1 PHASE CONNECTION

All 115 volt models are provided with a U.L. approved power cord and polarized plug which is factory installed.

Warning: Any alterations to this cord and plug could cause an electrical hazard and will void the factory warranty.

To insure proper operation, this equipment must be plugged into a NEMA 5-15r compatible, grounded receptacle that can supply the full voltage as stated on the serial data plate.

208-230 VOLT, 60 HZ, 1 PHASE CONNECTION

All 208-230 volt models are to be permanently connected and are provided with four (4) field wiring leads which exit the electrical console box located in the machine compartment rear, next to the compressor. The cabinet circuitry is 115 volts and the condensing unit is 208-230 volts in which the wiring includes a neutral and a mechanical ground. This wiring should be connected to the appropriate power source by a qualified electrician and must conform to all local electrical codes.

SPECIAL VOLTAGE CONNECTIONS

When models are ordered from the factory with special, optional voltages, connections should be made as required on the electrical wiring diagram provided on the inside compressor compartment rear next to the electrical console box.

START-UP CHECKLIST

After your model has been installed, leveled, cleaned, and electrically connected in accordance with this manual, please take the time before start-up to observe the following precautions to assure trouble free operation:

1. Check that all exposed refrigeration lines are free of severe dents or kinks.
2. Check the condenser fan and evaporator fans for freedom to rotate without any obstructions
3. Make sure that the cabinet is properly leveled (see "leveling" under installation and location section).

The system should run smoothly and quietly in accordance with generally accepted commercial standards. If any unusual noises are heard, turn the unit off immediately and check for any obstructions of the condenser or evaporator fans. Fan motors, fan blades, or fan housings can be jarred out of position through rough handling in transit or during installation.

Caution: If unit is unplugged or disconnected for any reason, allow several minutes (5-6 minutes) before turning the unit back on to allow the system pressures to equalize. Disregarding this procedure could cause an overload and prevent the unit from operating.

REMOTE APPLICATIONS

All models are available for purchase as remote models in which case the condensing unit is purchased separately and installed at the time of installation. All remote models are equipped with an expansion valve located within the evaporator coil housing, and both liquid and suction lines stubbed and extending out from the cabinet rear behind the rear cover. Installation of the refrigeration accessories, condensing unit, and electrical hook-up should be performed by qualified refrigeration personnel of a competent refrigeration company only.

OPERATION

All cabinets must be given sufficient time to reach normal operating temperature before placing any food inside cabinet or pans (if equipped). Refrigerators are designed to maintain an ideal cabinet and pan temperature of 38° F to 40° F (3.3° C to 4.4° C) and approximately 1 hour of operation is required to reach this temperature. During pull-down of open top models, pans should be in place and top lid should be kept closed. Freezers are designed to maintain an ideal cabinet temperature of to 0° F (-17.8° C) and approximately 2 hours of operation are required to reach this temperature.

THERMOMETER CALIBRATION

Your new "SW" series model has a non adjustable hanging thermometer located inside the cabinet, mounted on the coil housing cover (see figure 7). This thermometer is maintenance-free and needs no further calibration. "CRB" and "CPT" series models have a hanging thermometer in the accessory carton to mount on any shelf inside the cabinet.

PIZZA PREPARATION TABLE OPERATION

Pizza prep tables are designed and factory set to maintain an average cabinet and pan rail product temperature of 38° F. In order to maintain pan temperatures in the raised rail within N.S.F. parameters of 33 – 41° F, your pizza prep table is equipped with a coldwall rail. The coldwall rail must maintain a freezing temperature so that the pan product temperature can be maintained.

PIZZA RAIL SYSTEM SWITCH

A rail “On – Off” switch is located on the front grill so that the refrigeration can be turned “On” to the rail during use and shut “Off” at the end of the day to save energy and defrost the frost build up on the rail. Product should be removed from the rail during the evening and stored in the refrigerated base. The rail may need to be turned “Off” for periodic defrosting during the day if frost build up becomes excessive. Product must not be left in the rail during this defrosting period.

Important Note: Sandwich and pizza preparation tables are not intended for overnight food storage in the top pan rail.

PIZZA PREP TEMP ADJUSTMENT – BOTTOM STORAGE COMPARTMENT

If an adjustment is necessary to maintain the average cabinet temperature range of 38° F only, place a screwdriver into the thermostat slot (located inside of the cabinet on the side of the evaporator coil fan housing) and turn clockwise for a colder cabinet temperature or counterclockwise for a warmer cabinet temperature. Further adjustments out of the factory design temperature range must be made by a qualified refrigeration mechanic only.

PIZZA PREP TEMP ADJUSTMENT – COLDWALL RAIL

If an adjustment is necessary to maintain the coldwall rail temperature, a pressure control is located behind the front grill which controls the compressor operation and the temperature range of the rail. The factory recommended settings for this low pressure control are the following:

CUT IN = 45#

DIFFERENTIAL = 20 #

Before making any adjustments to the pressure control out of the factory design temperature range, please consult factory or a qualified refrigeration mechanic.

UNDERCOUNTER REFRIGERATOR SYSTEM AND ADJUSTMENT

All self-contained undercounter refrigerators are designed and factory set to maintain an average cabinet temperature of 38° F. The temperature control is accessible inside of the cabinet product compartment, on the right back wall next to the evaporator coil (see figure 7 for thermostat location). If an adjustment is necessary to maintain the above temperature range **only**, place a screwdriver into the thermostat slot and turn clockwise for a colder cabinet temperature or counterclockwise for a warmer cabinet temperature. Further adjustments out of the factory design temperature range must be made by a qualified refrigeration mechanic only.

Important Note: All refrigerators are designed with an automatic, "off-cycle" defrost system which means that defrosting occurs automatically when the compressor is not operating during an off-cycle. **Do not** set the thermostat too cold where the cabinet temperature will fall below 35° F because the evaporator will become blocked by ice since the compressor off-cycle will be considerably shortened. This will result in loss of food stored within the cabinet and require service to defrost the evaporator and re-adjust the thermostat.

UNDERCOUNTER FREEZER SYSTEM AND ADJUSTMENT

All self-contained undercounter freezers are designed and factory set to maintain an average cabinet temperature of 0° F. All freezers are designed for the purpose of holding pre-frozen food and although they are capable of freezing small quantities of fresh food, they are not to be used as fast or blast freezers. **Do not** attempt to freeze bulk quantities of fresh foods. The temperature control is accessible inside of the cabinet product compartment, on the right back wall next to the evaporator coil (see figure 7 for thermostat location). If an adjustment is necessary to maintain the above temperature range **only**, place a screwdriver into the thermostat slot and turn clockwise for a colder cabinet temperature or counterclockwise for a warmer cabinet temperature. Further adjustments out of the factory design temperature range must be made by a qualified refrigeration mechanic only.

DEFROST OPERATION

All freezer models are equipped with an automatic, electric defrost system consisting of an electric evaporator coil heater, evaporator drain pan heater, automatic electric defrost time clock, and defrost high limit switch. The defrost system is time initiated by the time clock and temperature terminated by the high limit switch. The time clock is preset for three (3) defrost periods per day at eight (8) hour intervals and a fail safe cut-off time of 20 minutes. Please note that defrost settings are **not** programmable.

The defrost time clock is located in front of the electrical console box in the rear machine compartment of your freezer. If desired, to pre-set the initiation of the defrost cycle to the time of day on the defrost time clock, turn the knob on the center dial of timer face clockwise until the unit defrost cycle begins (compressor and all fans will terminate). Defrost will begin at this same time every day at eight (8) hour intervals. For example, if an 8:00 am defrost is desired, at 8:00 am turn the defrost manual set knob to initiate defrost and a defrost cycle will start every day at 8:00 am, 4:00 pm, 12:00 am. It will be necessary to reset the time of defrost on the timer if the freezer is turned off or has loss of power.

EVAPORATOR ASSEMBLY

All sandwich units, undercounter refrigerators and freezers have an easily accessible, easily serviceable, performance rated, forced-air evaporator assembly which utilizes a plasticized fin coil for extended life. All models utilize a full length, extra large evaporator coil with a uniquely directed air flow distribution which keeps pan product and compartment product at uniformly constant temperatures. The complete evaporator assembly is shown in figure 7.

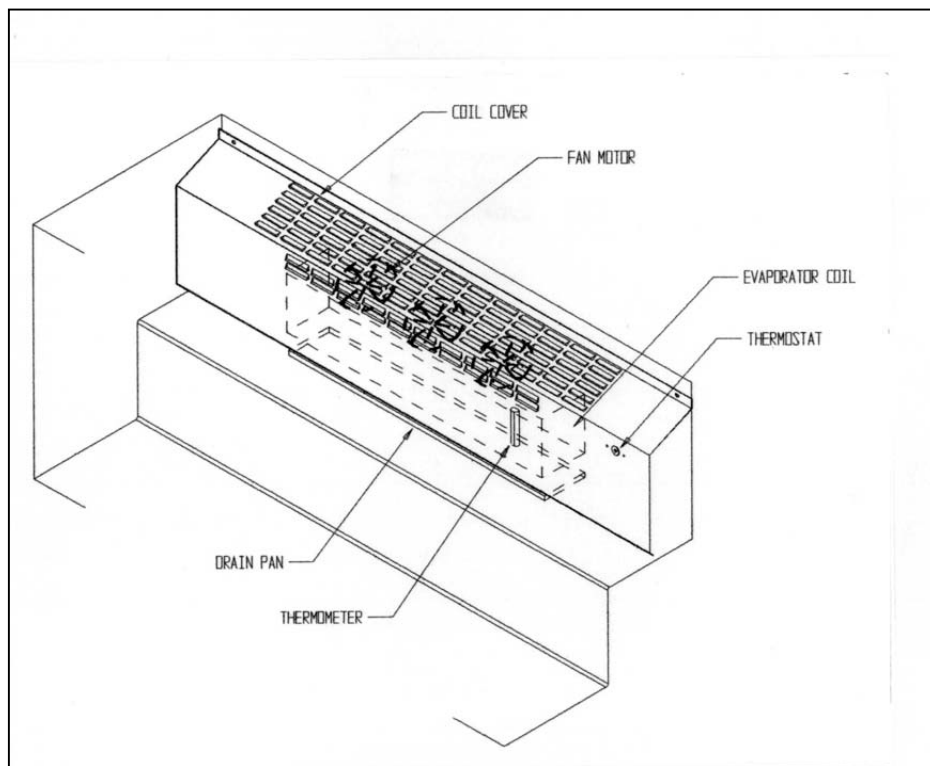


FIGURE 7
EVAPORATOR ASSEMBLY

INTERIOR ACCESSORIES

The standard interior accessory package that is supplied from the factory with your new sandwich unit model consists of standard pilaster strips with pilaster clips (four (4) clips per shelf), and one (1) epoxy coated shelf per section.

SHELVING INSTALLATION

Pilaster strips which support the shelving are secured to the cabinet walls with special pilaster screws which allow the strips to be readily removed for cleaning without the use of tools. Shelf clips are easily installed by inserting them into the pilasters at the desired shelf location and shelf installation is as simple as placing the shelf on the clips as shown in figure 8.

Important Note: When loading shelves with food product, allow space between rows of product for proper air circulation, and **do not** load product to block back wall above step (leave at least 2" of air space between product and back wall above step).

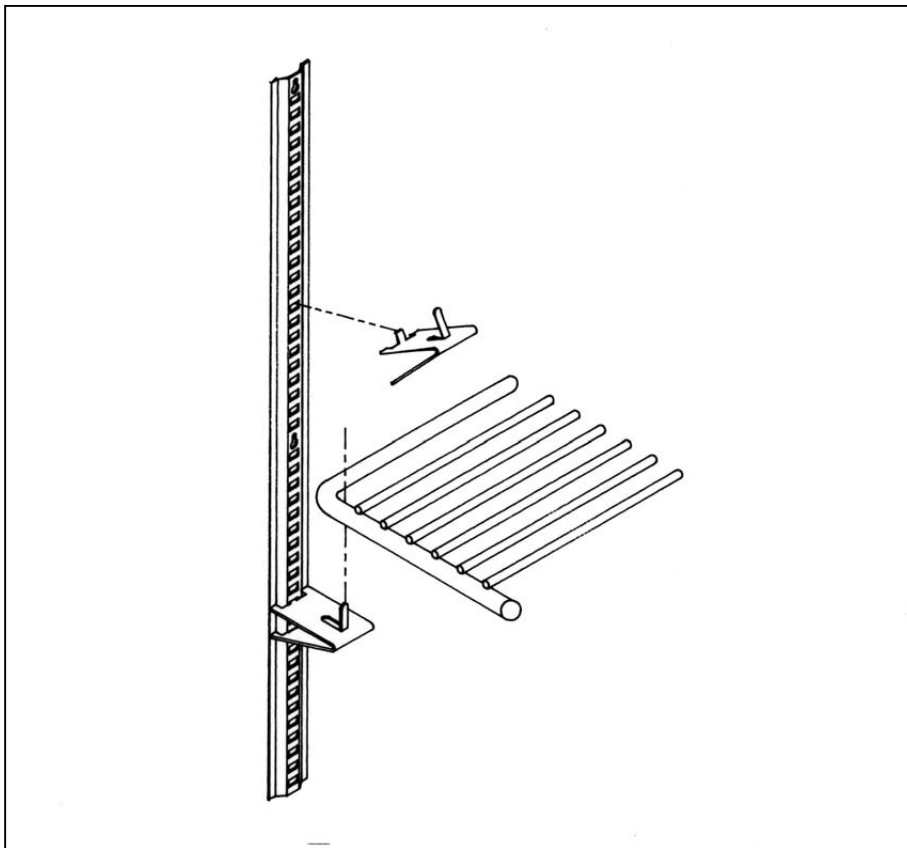


FIGURE 8
STANDARD SHELF PILASTER

OPTIONAL ACCESSORIES

In addition to the optional heavy-duty pilaster and clip as shown in figure 9, all models are available with an overhead or double-overhead shelf. Models can even be stacked with a heavy duty stacking collar adapter kit as shown in figure 10. **Please consult the price list for additional interior and exterior options and accessories available from the factory for your model.**

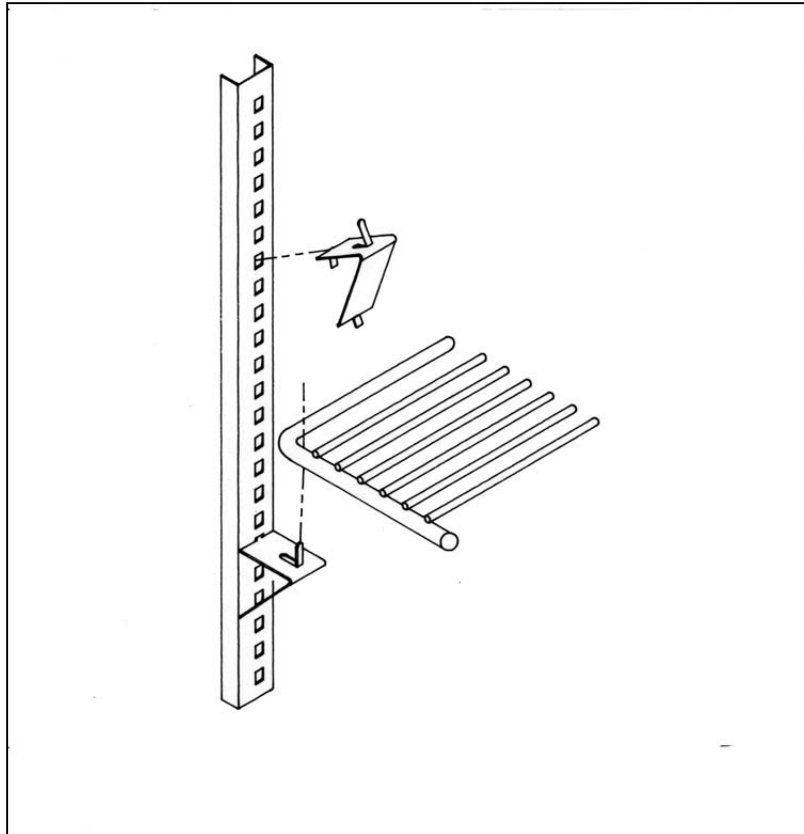


FIGURE 9
OPTIONAL HEAVY-DUTY PILASTER

OPTIONAL OVERHEAD OR DOUBLE-OVERHEAD SHELF

All open top models are available with an optional overhead or double-overhead shelf.

To install either the overhead or the double-overhead shelf, place the shelf into position on the work top (if your model was ordered with the overhead shelf, mounting holes will be added on the cabinet at the factory), line up holes and secure overhead shelf with the supplied screws. If the overhead shelf was ordered separately, follow the mounting instructions supplied with the shelf.

OPTIONAL STACKING COLLAR ADAPTER KIT

All SW27, SWF27, SW48, SWF48 solid top models can be stacked one on top of the other with the use of a heavy duty, stainless steel stacking collar as shown in figure 10. When stacking a refrigerator and freezer, it is always best to place the freezer model on the bottom for maximum efficiency. The front grill which is attached to the stacking collar body is attached with easily removable thumbscrews and should be removed periodically for cleaning. The front grill should always be clean and clear of debris and **never** blocked.

To stack your models, the following instructions should be followed:

1. Decide which model is to be on "top" and which model is to be on "bottom".
2. On "top" model, remove both bottom rear cover screws on "bottom" model, remove both top joggle clip screws with bumpers.
3. Carefully install four legs on "top" model and set this model on the work top of the "bottom" model. (adjust all leg bullets outward (ccw) about three full turns prior to installing)
4. Install stacking collar as shown in figure 10, making sure all rear screw hole slots line up on both top and bottom models where screws were removed from in step #2. If screw hole slots do not line up (left to right) with screw holes then the stacking collar has been mounted upside down. Remove and re-install correctly.

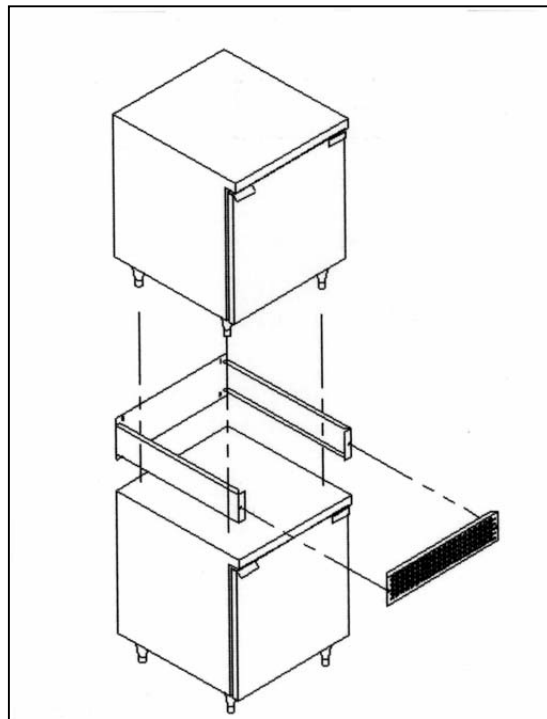


FIGURE 10
OPTIONAL STACKING COLLAR

5. Leg bullets can now be lowered (cw) by reaching in front access of stacking collar so that top model is snug against the stacking collar. Once snug, install the rear screws that were removed in step #2 and peel off the adhesive tape backing strip around the side flanges of the stacking collar so that both units are bonded together.
6. Align the front grill holes with the stacking collar holes and secure both thumbscrews.

SAFETY PRECAUTIONS

The following safety precautions should be followed when operating any appliances:

- ★ Always disconnect the power cord before attempting to work on or clean any equipment.
- ★ Disconnect the power cord when the appliance will be idled for a long period of time.
- ★ **Do not** attempt to service this unit yourself as removing any covers may cause exposure to dangerous voltage.
- ★ Always route the power cord so that it is not likely to be walked on or pinched by other appliances. **Never** use extension cords.
- ★ **Do not** overload outlets with more than one appliance. This can result in fire or electrical shock.
- ★ Your model is equipped with a grounded and polarized plug. Do not defeat the purpose of this plug by removing the ground post or using a non-polarized adapter without properly grounding the outlet.
- ★ When a replacement part is required, always insist on factory authorized parts only.

MAINTENANCE

PERIODIC CLEANING PROCEDURE

It is best to clean your refrigerator or freezer when the product load is at its lowest level inside your cabinet. To clean the interior or exterior cabinet surfaces, the following procedure should be followed:

1. Disconnect your model from its power supply and remove all food product from inside.
2. Open all doors and allow the cabinet to reach room temperature. Remove all accessories (shelves, racks, pilasters, clips, etc.) From within the model, wash with a baking soda and warm water solution, and rinse thoroughly with clear water. Dry all of the accessories completely with a soft clean cloth.
3. Once the cabinet has reached room temperature, wash the entire cabinet inside and out with a baking soda and warm water solution. For slightly more difficult cleanups, ammonia or vinegar in warm water can be used. Rinse thoroughly with clear water and dry with a soft clean cloth. Failure to dry all surfaces completely may cause water stains or streaking on the aluminum or stainless steel finish.

4. Return all accessories to their respective positions and return electric supply power to the model.

Precautions

1. Never use harsh detergents, cleaners, scouring powders, or chemicals when cleaning your model.
2. Strong bleaches tend to corrode many materials and should never come in contact with stainless steel.
3. Tincture of iodine, or iron should not come in contact with stainless steel. These solutions, which cause stainless steel to discolor, should be rinsed off immediately if contact occurs.
4. Some foods, such as mustard, mayonnaise, lemon juice, dressings or salts, may attack or corrode stainless steel.
5. Gritty, hard abrasives will mar the finish of stainless steel and aluminum and are not recommended.

GENERAL PREVENTATIVE MAINTENANCE

Performance of the air cooled condensing unit located inside of the compressor machine compartment of your new model, depends exclusively upon the amount of air passing through the condenser fins. Your refrigerator or freezer will run more efficiently, consume less current, and provide a maximum of trouble-free service throughout its lifetime if the condenser is kept clean and an adequate supply of clean, cool air is provided at all times. Periodically (at least once a month) inspect the condenser coil, which is located directly behind the rear panel grill, to check for debris or blockage.

If the condenser coil is dirty or blocked, disconnect the power supply to your model and using a stiff brush, brush the dirt from the condenser fins until the condenser is clear from any debris. Using a vacuum cleaner with a brush attachment may aid in this cleaning process. After cleaning, restore electrical service to your model.

PARTS AND SERVICE

Always provide the cabinet model and serial number (located on the data plate on the inside right wall of the cabinet) whenever contacting the factory or your dealer regarding questions or when ordering parts.

MODEL # _____ **Serial#** _____

TROUBLESHOOTING AND SERVICING GUIDE

PROBLEM	PROBABLE CAUSE	CORRECTION
Condensing unit will not start - no hum.	<ol style="list-style-type: none"> 1.LINE DISCONNECTED, SWITCH OPEN. 2.FUSE REMOVED OR BLOWN. 3.OVERLOAD PROTECTOR BLOWN. 4.CONTROL "OFF" DUE TO COLD LOCATION. 5.CONTROL STUCK IN OPEN POSITION. 6.WIRING IMPROPER OR LOOSE. 	<ol style="list-style-type: none"> 1.CLOSE START OR DISCONNECT SWITCH. 2.REPLACE FUSE. 3.DETERMINE REASON AND CORRECT/REPLACE 4.RELOCATE CONTROL. 5.REPAIR OR REPLACE CONTROL. 6.CHECK WIRING AGAINST DIAGRAM.
Condensing unit will not start - hums but trips on overload protector.	<ol style="list-style-type: none"> 1.IMPROPERLY WIRED. 2.LOW VOLTAGE TO UNIT. 3.STARTING CAPACITOR DEFECTIVE. 4.RELAY FAILING TO CLOSE. 5.COMPRESSOR MOTOR HAS A SHORTED OR OPEN WINDING. 6.INTERNAL MECHANICAL TROUBLE IN COMPRESSOR. 7. INSUFFICIENT AIR SUPPLY 	<ol style="list-style-type: none"> 1.CHECK WIRING AGAINST DIAGRAM. 2.DETERMINE REASON AND CORRECT. 3.DETERMINE REASON AND REPLACE. 4.DETERMINE REASON AND REPLACE. 5.REPLACE COMPRESSOR. 6.REPLACE COMPRESSOR. 7. CLEAR CONDENSER & ALLOW COMPRESSOR TO COOL DOWN
Condensing unit starts and runs, but short cycles on over-load protector.	<ol style="list-style-type: none"> 1.ADDITIONAL CURRENT PASSING THROUGH OVERLOAD PROTECTOR. 2.LOW VOLTAGE TO UNIT. 3.OVERLOAD PROTECTOR DEFECTIVE. 4.RUN CAPACITOR DEFECTIVE. 5.EXCESSIVE DISCHARGE PRESSURE. 6.EXCESSIVE SUCTION PRESSURE. 7.INSUFFICIENT AIR SUPPLY 	<ol style="list-style-type: none"> 1.CHECK WIRE DIAGRAM.CHECK FOR ADDED COMPONENTS CONNECTED TO WRONG SIDE OF OVERLOAD PROTECTOR. 2.DETERMINE REASON AND CORRECT. 3.CHECK CURRENT,REPLACE PROTECTOR. 4.DETERMINE REASON AND REPLACE. 5.CHECK VENTILATION,RESTRICTIONS IN COOLING MEDIUM OR REFRIG. SYSTEM. 6.CHECK FOR MISAPPLICATION. 7.CLEAR CONDENSER & ALLOW COMPRESSOR TO COOL DOWN
Condensing unit starts, but fails to switch off of "start" winding.	<ol style="list-style-type: none"> 1.IMPROPERLY WIRED. 2.LOW VOLTAGE TO UNIT. 3.RELAY FAILING TO OPEN. 4.RUN CAPACITOR DEFECTIVE. 5.EXCESSIVELY HIGH DISCHARGE PRESSURE. 6.COMPRESSOR MOTOR HAS A SHORTED OR OPEN WINDING. 7.INTERNAL MECHANICAL TROUBLE IN COMPRESSOR. 	<ol style="list-style-type: none"> 1.CHECK WIRING AGAINST DIAGRAM. 2.DETERMINE REASON AND CORRECT. 3.DETERMINE REASON AND REPLACE. 4.DETERMINE REASON AND REPLACE. 5.CHECK DISCHARGE SHUT-OFF VALVE, POSSIBLE OVERCHARGE. 6.REPLACE COMPRESSOR. 7.REPLACE COMPRESSOR.

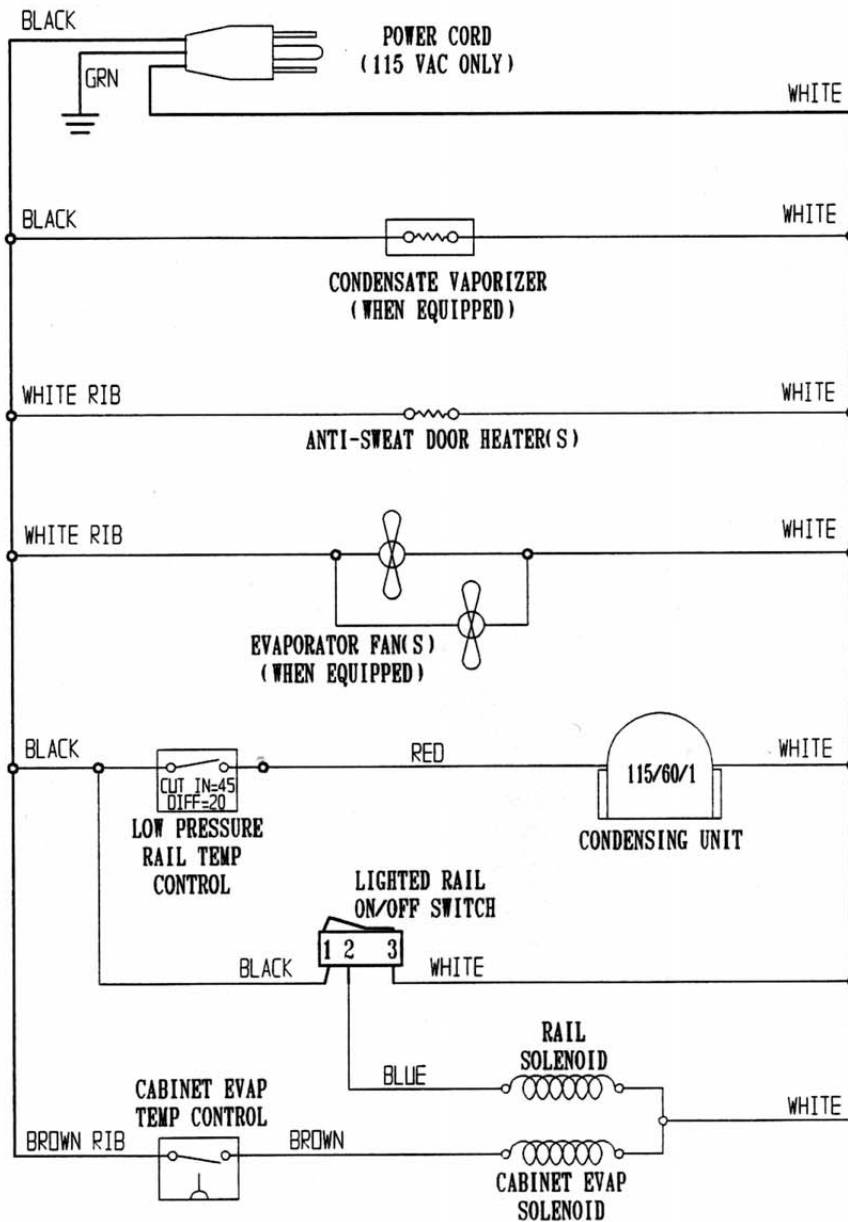
PROBLEM	PROBABLE CAUSE	CORRECTION
Condensing unit runs, but short cycles on:	1.OVERLOAD PROTECTOR. 2.THERMOSTAT. 3.HIGH PRESSURE CUT-OUT DUE TO: (a) INSUFFICIENT AIR SUPPLY. (b) OVERCHARGE. (c) AIR IN SYSTEM. 4.LOW PRESSURE CUT-OUT DUE TO: (a) VALVE LEAK. (b) UNDERCHARGE. (c) RESTRICTION IN EXPANSION DEVICE.	1.SEE PROBLEM # 3. 2.DIFFERENTIAL MUST BE WIDENED. 3. (a) CHECK AIR SUPPLY TO CONDENSER. (b) EVACUATE AND RE-CHARGE. (c) EVACUATE AND RE-CHARGE. 4. (a) REPLACE, EVACUATE AND RE-CHARGE. (b) EVACUATE AND RE-CHARGE. (c) REPLACE EXPANSION DEVICE.
Condensing unit runs, but for prolonged periods or continuous .	1.SHORTAGE OF REFRIGERANT. 2.CONTROL CONTACTS STUCK CLOSED. 3.EXCESSIVE HEAT LOAD PLACED INTO CABINET. 4.PROLONGED OR TOO FREQUENT DOOR OPENINGS. 5.EVAPORATOR COIL ICED. 6.RESTRICTION IN REFRIGERATION SYSTEM. 7.DIRTY CONDENSER. 8.FILTER DRIER CLOGGED.	1.FIX LEAK,EVACUATE AND RE-CHARGE. 2.CLEAN CONTACTS OR REPLACE CONTROL. 3.ALLOW UNIT SUFFICIENT TIME FOR REMOVAL OF LATENT HEAT. 4.PLAN OR ORGANIZE SCHEDULE TO CORRECT CONDITION. 5.DEFROST EVAPORATOR COIL. 6.DETERMINE LOCATION AND REMOVE. 7.CLEAN CONDENSER COIL. 8.REPLACE,EVACUATE AND RE-CHARGE.
Start capacitor open, shorted or blown.	1.RELAY CONTACT NOT OPENING PROPERLY. 2.PROLONGED OPERATION ON START CYCLE: (a) LOW VOLTAGE TO UNIT. (b) IMPROPER RELAY. (c) STARTING LOAD TOO HIGH. 3.EXCESSIVE SHORT CYCLING. 4.IMPROPER CAPACITOR.	1.CLEAN CONTACTS OR REPLACE RELAY. 2. (a) DETERMINE REASON AND CORRECT. (b) REPLACE WITH CORRECT RELAY. (c) CORRECT BY USING PUMP DOWN. 3.DETERMINE REASON FOR SHORT CYCLE, (SEE PROBLEM #5) AND CORRECT. 4.DETERMINE CORRECT SIZE AND REPLACE.
Run capacitor open, shorted or blown.	1.IMPROPER CAPACITOR. 2.EXCESSIVELY HIGH LINE VOLTAGE, OVER 110% OF RATED MAXIMUM.	1.CHECK SIZE AND REPLACE. 2.DETERMINE REASON AND CORRECT.
Relay defective or blown out.	1.INCORRECT RELAY. 2.INCORRECT MOUNTING ANGLE. 3.VOLTAGE TOO LOW OR TOO HIGH. 4.EXCESSIVE SHORT CYCLING. 5.LOOSE OR VIBRATING MOUNTING POSITION 6.INCORRECT RUN CAPACITOR. 7.LOOSE WIRING ON RELAY OR OVERLOAD.	1.CHECK RELAY AND REPLACE. 2.REMOUNT RELAY IN CORRECT POSITION. 3.DETERMINE REASON AND CORRECT. 4.DETERMINE REASON AND CORRECT (SEE PROBLEM # 5). 5.REMOUNT RIGIDLY. 6.REPLACE WITH PROPER CAPACITOR. 7.TIGHTEN ALL WIRING SCREWS.

PROBLEM	PROBABLE CAUSE	CORRECTION
Product zone temperature too high.	1.CONTROL SETTING TOO HIGH. 2.INADEQUATE AIR CIRCULATION. 3.DIRTY CONDENSER	1.ADJUST T-STAT 2.REARRANGE PRODUCT LOAD TO IMPROVE AIR CIRCULATION. 3.CLEAN CONDENSER COIL
Suction line frosted or sweating.	1.OVERCHARGE OF REFRIGERANT. 2.EVAPORATOR FAN NOT RUNNING. 3.EXPANSION VALVE STUCK OPEN. 4.EXPANSION VALVE SUPERHEAT TOO LOW.	1.EVACUATE AND RE-CHARGE. 2.DETERMINE REASON AND CORRECT. 3.CLEAN VALVE,EVACUATE AND RE-CHARGE. 4.ADJUST SUPERHEAT TO REQUIRED SETTING
Liquid line frosted, cold, or sweating.	1.RESTRICTION IN DRIER STRAINER. 2.LIQUID LINE SERVICE VALVE PARTIALLY CLOSED.	1.REPLACE DRIER,EVACUATE AND RE-CHARGE 2.OPEN VALVE FULLY OR REPLACE IF NECESSARY.
Noisy condensing unit.	1.LOOSE PARTS OR MOUNTINGS. 2.TUBING RATTLE OR VIBRATION. 3.BENT FAN BLADE CAUSING EXCESSIVE VIBRATION. 4.FAN MOTOR BEARINGS WORN.	1.TIGHTEN ALL MOUNTING PARTS AND SHROUD COVER. 2.REFORM TUBING TO BE FREE OF CONTACT. 3.REPLACE FAN BLADE. 4.REPLACE FAN MOTOR.
THERMOMETER READS DIFFERENT THAN ACTUAL TEMPERATURE	1.CALIBRATION 2.DEFECTIVE	1.CONSULT OPERATIONS MANUAL AND CALIBRATE 2.REPLACE
WATER LEAK INSIDE UNIT	1.CONDENSATE DRAIN PAN NOT INSTALLED PROPERLY 2.UNIT NOT LEVEL 3.DRAIN PAN MISALIGNED 4.DEFECTIVE DRAIN PAN	1.CONSULT OPERATION MANUAL FOR INSTALL INSTRUCTION 2.MAKE SURE UNIT IS LEVEL OR PITCHED BACK SLIGHTLY 3.MAKE SURE DRAIN PAN IS ALIGNED PROPERLY 4.REPLACE
DOORS MISALIGNED	1.SHIFTED DURING SHIPPING	1.REFER TO OPERATION MANUAL FOR HINGE ADJUSTMENT

WIRING DIAGRAMS

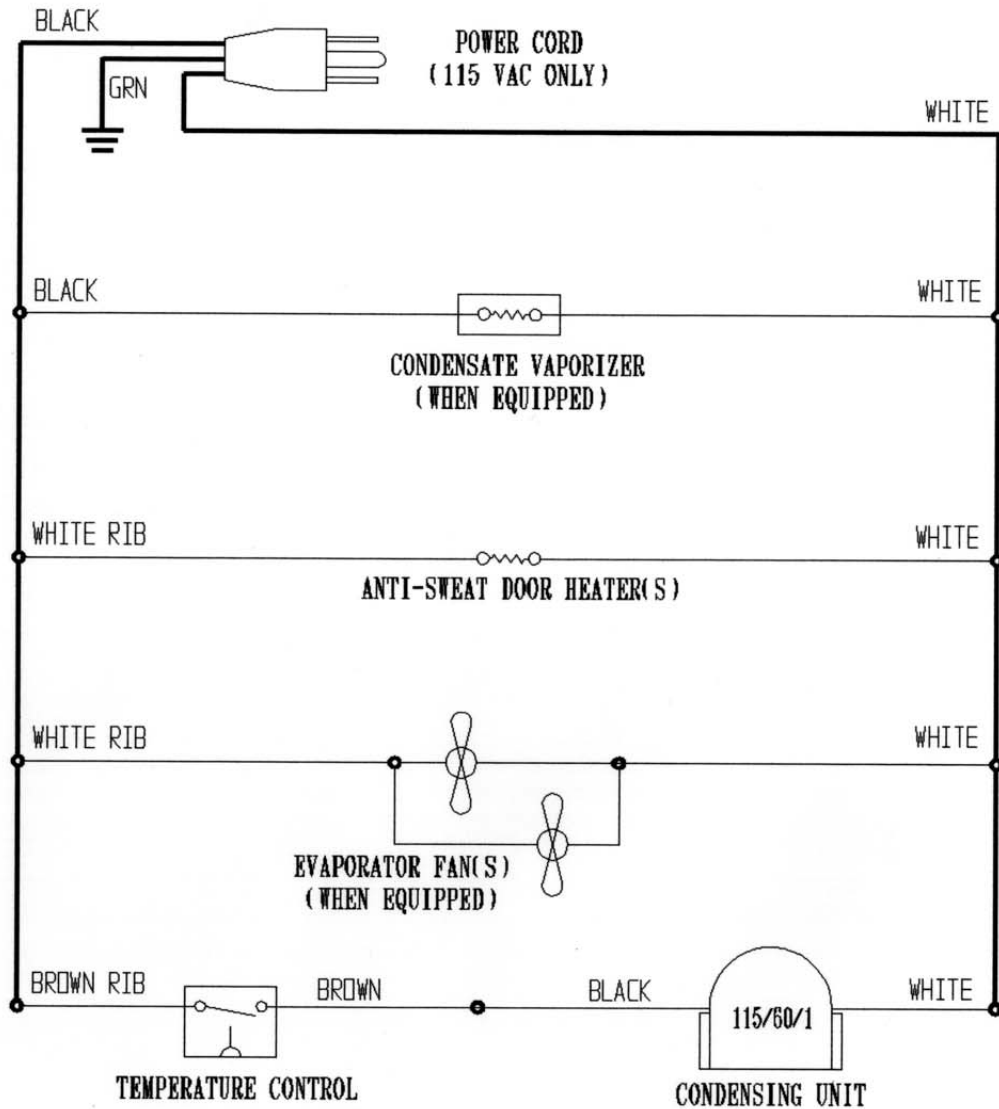
WD-R6

SELF-CONTAINED PIZZA PREPARATION TABLE 115/60/1



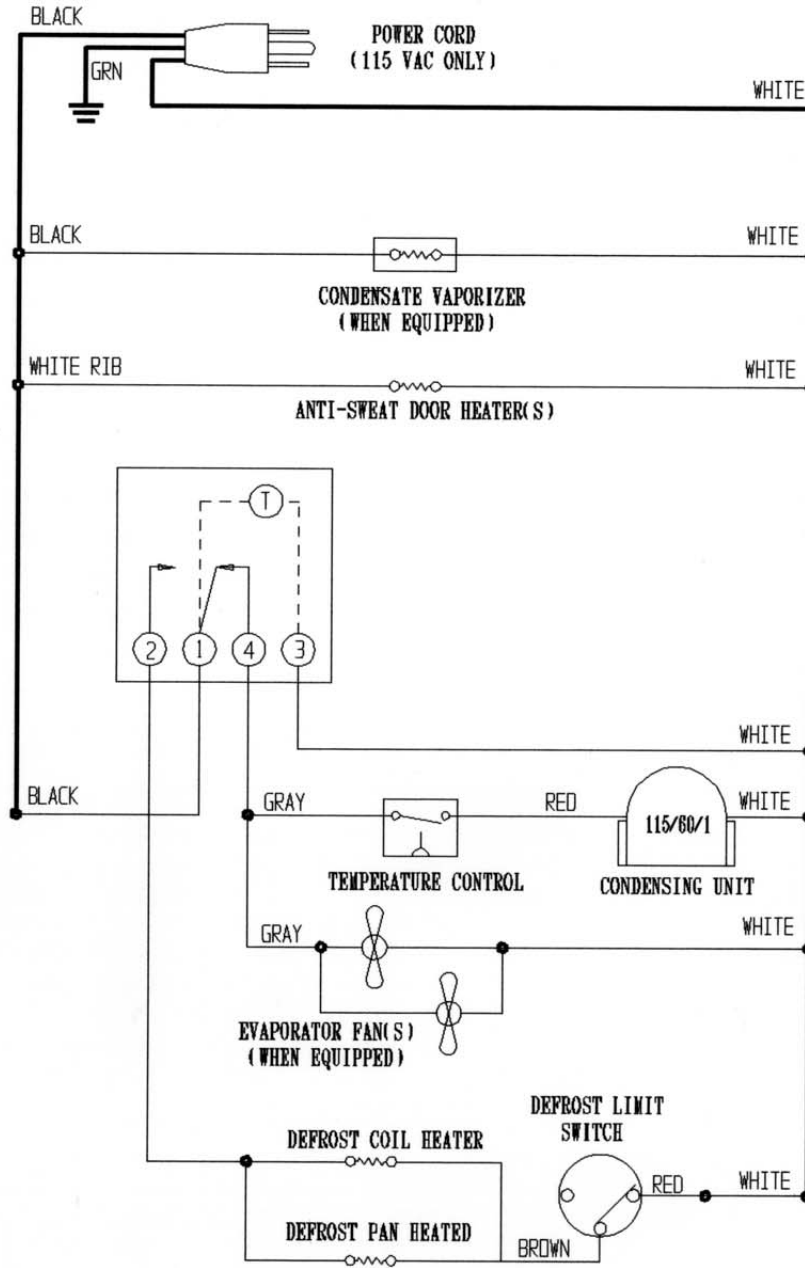
SELF-CONTAINED UNDERCOUNTER REFRIGERATOR WD-R5

115/60/1



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SELF-CONTAINED UNDERCOUNTER FREEZER WD-F5 115/60/1



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Continental

Refrigerator

Pizza Preparation Table Supplemental Insert

PIZZA PREPARATION TABLE OPERATION

Pizza prep tables are designed and factory set to maintain an average cabinet and pan rail product temperature 38° F. In order to maintain pan temperature in the raised rail within N.S.F. parameters of 33 – 41° F, your pizza prep table is equipped with a coldwall rail. The coldwall rail must maintain a freezing temperature so that the pan product temperature can be maintained.

PIZZA RAIL SYSTEM SWITCH

A rail “On – Off” switch is located on the front grill so that the refrigeration can be turned “On” to the rail during use and shut “Off” at the end of the day to save energy and defrost the frost build up on the rail. Product should be removed from the rail during the evening and stored in the refrigerated base. The rail may need to be turned “Off” for periodic defrosting during the day if frost build up becomes excessive. Product must not be left in the rail during this defrosting period.

Important Note: Sandwich and pizza preparation tables are not intended for overnight food storage in the top pan rail.

PIZZA PREP TEMP ADJUSTMENT – BOTTOM STORAGE COMPARTMENT

If an adjustment is necessary to maintain the average cabinet temperature range of 38° F only, place a screwdriver into the thermostat slot (located inside of the cabinet on the side of the evaporator coil fan housing) and turn clockwise for a colder cabinet temperature or counterclockwise for a warmer cabinet temperature. Further adjustments out of the factory design temperature range must be made by a qualified refrigeration mechanic only.

PIZZA PREP TEMP ADJUSTMENT – COLDWALL RAIL

If an adjustment is necessary to maintain the coldwall rail temperature, a pressure control is located behind the front grill which controls the compressor operation and the temperature range of the rail. The factory recommended settings for this low pressure control are the following:

CUT IN = 45#

DIFFERENTIAL = 20 #

Before making any adjustments to the pressure control out of the factory design temperature range, please consult factory or qualified refrigeration mechanic.