



# R-AS-10 MOBILE REFRIGERATED AIR SCREEN

## INSTALLATION GUIDE & OPERATING INSTRUCTIONS

### AIR SCREEN REFERENCE GUIDE

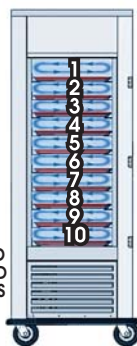
Model  
Number:  
R-AS-10

1

**KEEP  
10 TRAYS  
in unit**

*For Best Results and  
even air temps,  
retain 10 trays in  
unit at all times*

LOAD  
FOOD  
TRAYS



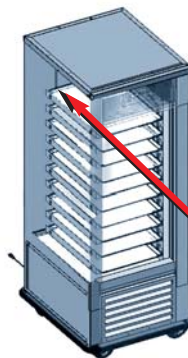
UNLOAD  
FOOD  
TRAYS

Replace  
with  
empty  
tray

2

**PLACE TRAYS**

*For Best Results  
place trays all  
the way to the  
back of unit.*



- A** Pre-chill cabinet with door closed minimum of one (1) hour.
- B** Load cabinet from the bottom to top, push trays to rear. Load with only **PRE-CHILLED FOOD** of 40°F (4.4°C) or colder.
- C** After loading chilled product, close door to allow inside temperature to stabilize.
- D** Unload cabinet from top to bottom.
- E** Defrost Cycle: Automatic or Manual. Allow 30 minutes with door closed.  
**OPEN DOOR ALARM:** Close door for 5 minutes and defrost will activate automatically. (Do NOT press Defrost icon)

#### NOTE

This unit is equipped with an Auto-Defrost feature.

An elevated *Temperature* may indicate the need of a defrost cycle.

Press **DEFROST** icon to:

\* **Activate a manual Defrost cycle at any time**  
OR

\* **Cancel a Defrost cycle in progress**

#### IMPORTANT:

If Unit Is Not Working  
**OR**  
Has An Elevated  
Temperature  
( NOT COOLING )

**Check The Following:  
Before Calling for Service**

- \* Is Unit Plugged In ?
- \* Is Power switch on ?
- \* Is Set Temp at 34°F (3°C)
- \* Is comp / condenser clean?
- \* Has unit been Defrosted ?

Ice build-up will accumulate on the coil during normal operation.

The ice will reduced the performance depending upon room temp, humidity and the length of time door was left open.

The AUTO and MANUAL DEFROST features allow proper defrosting of the accumulated ice on the coil.

Push the **"DEFROST"** icon on the control panel and allow 30 minutes for defrost cycle to complete.

UNIT CAN OPERATE WITH DOOR OPEN FOR UP TO **90 MINUTES**  
(Conditional)

REFER TO OPERATIONS / INSTALLATION MANUAL FOR MORE INFORMATION.

STKR\_AirScreen3Door

# **FWE MOBILE REFRIGERATED AIR SCREEN**

## **AIR SCREEN CREATES A "WALL" OF COLD AIR!**



Exclusive "Food Sentry" Air Screen Controls offer the ultimate performance and accurate cabinet temperatures when operating with the door opened, maintaining a temperature of 45°F (7.2°C) or below for a minimum of 45 minutes and a maximum of 90 minutes (conditional).

### **CONGRATULATIONS . . .**

..and thank you for purchasing an FWE Mobile Air Screen Refrigerator. Your unit has been designed and manufactured under rigid controls to assure you the most efficient service. It is a full time unit, and may be used continuously as a "standard" refrigerator (with the door closed) or as an "air screen" with the door open maintaining a 45°F (7.2°C) temperature or below for a minimum of 45 minutes and a maximum of 90 minutes (conditional) .



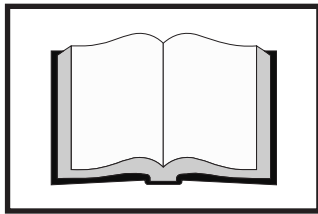
**R-AS-10**

Please take a moment to read through this booklet of important information pertaining to your cabinet.

By following a routine of proper use and care described on the following pages, your Air Screen will last for many years.

#### **IMPORTANT THINGS TO DO BEFORE USING AIR SCREEN:**

- Properly uncrate your unit and check for any possible damage.
- Read this operating manual and instructions.
- Return your Warranty & Manufacturer Registration Card. Your **Manufacturer Registration Card** must be returned within 30 days after initial delivery to put warranty into effect.
- Review installation instructions and have your unit(s) properly installed.
- Make sure all operators understand the contents of this manual and operation.



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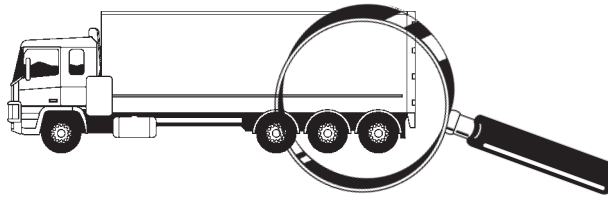
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# **FWE MOBILE AIR SCREEN REFRIGERATOR**

## **BEFORE SETTING UP**

### **DELIVERY INSPECTION**



All FWE refrigerators are shipped in containers in to prevent damage. Upon delivery of your new Air Screen:

- Inspect the shipping container for external damage. Any evidence of damage should be noted on the delivery receipt which should be then signed by the driver.
- Uncrate the unit and check for external damage. Carriers will accept claims for concealed damage if notified within fifteen (15) days of delivery and shipping container is retained for inspection.

The FWE - Food Warming Equipment Company - cannot assume responsibility for loss or damage suffered in transit. The carrier assumed full responsibility of delivery in good order when shipment was accepted. We are, however, prepared to assist you if filing a claim is necessary. Notices are posted on the outside of each carton regarding freight claims and damage to further familiarize you with this information, as shown here.

All units are factory tested for performance and certified free from defects when shipped. The utmost care has been taken in manufacturing, crating and final inspection at the factory and / or shipping point to assure against damage in transit.

Should there be noted damage upon uncrating, carefully check the crate for visible signs of the cause. Save all crating material and immediately file a claim of damage with the carrier. Under no conditions may a damaged unit be returned to FWE without an RGA - *Return Goods Authorization Number*. If damage is discovered, call your dealer, trucking company & FWE - Customer Service Department at 815-459-7500.

#### **IMPORTANT**

This merchandise has been thoroughly inspected and carefully packed before leaving our plant. Responsibility for its safe delivery was assumed by the carrier at the time of shipment. Claims for loss or damage to the contents, should therefore, be made upon the carrier as follows:

#### **CONCEALED LOSS OR DAMAGE**

Concealed loss or damage means loss or damage that does not become apparent until the merchandise has been unpacked. The contents may be damaged in transit due to rough handling even though the carton may not show external damage. When the damage is discovered upon packing, make a written request for inspection by the carrier's agent within fifteen (15) days of the delivery date. Then file a claim with the carrier since such damage is the carrier's responsibility. By following these instructions carefully, we guarantee our full support of your claims to protect you against loss from concealed damage.

#### **VISIBLE LOSS OR DAMAGE**

Any external evidence of loss or damage must be noted on the freight bill or express receipt, and signed by the carrier's agent.

Failure to adequately describe such external evidence of loss or damage may result in the carrier refusing to honor a damage claim. The form required to file such a claim will be supplied by the carrier.

#### **DO NOT RETURN DAMAGED MERCHANDISE TO US. FILE YOUR CLAIM AS ABOVE.**

In case of damage, it is your responsibility to save all carton(s) and packaging materials for the carrier's inspection.

# **FWE MOBILE REFRIGERATED AIR SCREEN**

## **DELIVERY INSPECTIONS & ELECTRICAL REQUIREMENTS**

### **PACKAGING:**

Your Air Screen Refrigerator is shipped from the factory on a wooden pallet and packaged in a durable cardboard container. The carton is attached to the wooden skid with the use of large staples. These should first be removed to avoid scratching the unit when lifting off the crate. Remove the wooden pallet and strapping material, and the unit should be rolled off the skid. Avoid laying the unit on its front, side or back for removal of the pallet.



NOTE: FWE does not recommend laying the unit down on its front, side or back. However, if you must, please be certain to allow the unit to remain in an upright position afterwards for 48 hours before plugging the unit in or attempting to place the unit in to service, to assure that the compressor oils and refrigerant may settle.

### **FWE'S POLICY ON DAMAGED GOODS:**

There are two types of damaged merchandise: VISIBLE DAMAGE AND CONCEALED DAMAGE.

#### **A. CRATE HAS VISIBLE DAMAGE:**

1. The product / crate being received is visibly damaged.
2. The receiver should **refuse the damaged merchandise**.
3. Receiver should **sign the bill of lading indicating which merchandise is being "refused due to damage"**.

#### **B. CONCEALED DAMAGE:**

1. Merchandise is damaged and could not be externally detected.  
Your receiving operation should inspect for this type of damage.
2. **Save all packing material.**
3. Contact FWE Customer Service 815-459-7500 and alert them to the situation.
4. Receiver must call the carrier to schedule an inspection of the damaged merchandise within **15 days**.

## ***ELECTRICAL***

- A. Check SERIAL PLATE to be sure the unit is installed on the proper NEMA plug 5-20P (on standard unit) electrical supply.
- B. WARNING: This unit is provided with a three-pronged grounding plug. Be sure that the unit is plugged into a properly grounded outlet to avoid the possibility of electrical shock.

### **CORD & PLUG:**

Your Air Screen Refrigerator is supplied with a cord & plug attached. It is shipped coiled at the bottom of the cabinet, secured by a nylon strip. For your safety and protection, all units supplied with a cord and plug include a special three-prong grounding plug on the service cord. Select only a dedicated electrical outlet with grounding plug for power source. NOTE: Do not under any circumstances, cut or remove the round grounding prong from the plug, or use an extension cord.

### **POWER SUPPLY:**

The supply voltage should be checked prior to connection to be certain that proper voltage for the cabinet wiring is available (refer to the serial tag to determine correct unit voltage). Make connections in accordance with local electrical codes. Use qualified electricians. **USE OF A SEPARATE, DEDICATED 20 AMP CIRCUIT IS REQUIRED.** Size wiring to handle indicated load and provide necessary overcurrent protector in circuit (see amperage requirements on the unit's serial tag).

### **WIRING DIAGRAM:**

Refer to the wiring diagram for any service work performed on the unit. Should you require service, please contact FWE and provide the model and serial number of the unit involved.

# **FWE MOBILE AIR SCREEN REFRIGERATOR**

## **INSTALLATION & PROPER LOCATION**

### **INSTALLATION**

#### **LOCATION:**

Selecting a proper location for your Air Screen Refrigerator is very important.

#### **ALWAYS:**

- ✓ Install to assure that unit is level.
- ✓ Install to assure that unit is away from extreme heat.
- ✓ Install to assure that unit is away from a steamer.
- ✓ Install to assure that unit is NOT placed near or under a ventilation duct or hood, (this will disturb the airflow of the Air Screen and will hamper the performance of the unit).
- ✓ Install to assure that unit is 6" minimum distance from back of unit to wall or obstruction (ie; a wall).
- ✓ Install to assure that the door(s) may open a minimum of 90 degrees.

#### **NEVER:**

- ✗ Never install equipment in an area of standing water
- ✗ Never install near or under a ventilation hood or duct return
- ✗ Never install equipment in an area not conducive to safe and proper operator use.

#### **CLEARANCE:**

It is important for the proper operation and longevity of your FWE Air Screen that it have adequate provisions for air supply to the compressor. Allow approximately 6" - 12" between the back grill of the unit and the wall for proper air flow.

#### **INSTALLATION STEPS:**

- A. The outside carton has already been removed and inspected for damage. Remove all packing and strapping material from the exterior and interior of the unit. (Note: Packing material should be saved should there be any damage to unit.)
- B. Remove the FWE Air Screen from the shipping skid. This is done by tilting the unit and rolling it off the skid. ***Do not lay the cabinet down.***
- D. Tray slides have tabs formed into the side of the support. Simply put the tab into the square hole in the side of the cabinet and push down to seat. The supports can be installed in a horizontal plane or can be mounted in a slightly sloped orientation to cause the product to slide forward on the sheet pans.
- E. The LED digital temperature display is powered up when the unit is plugged in, it registers temperature in Fahrenheit degrees. The unit can be set up to show temperatures in Celsius degrees. (See Page 9, *ON/OFF Switch for Instructions.*)



# **FWE MOBILE AIR SCREEN REFRIGERATOR**

## **PERFORMANCE, INTENDED USE & CABINET FEATURES**

### **PERFORMANCE OVERVIEW:**

The Air Screen Refrigerator is specifically designed to hold 45°F (7.2°C) temperature or below for a minimum of 45 minutes and a maximum of 90 minutes, dependent upon application and operating conditions. Examples that may alter performance include room temp, humidity, surrounding air exchanges, voltage, internal temperature of food product placed into the cabinet, profile of food product, and food product density.

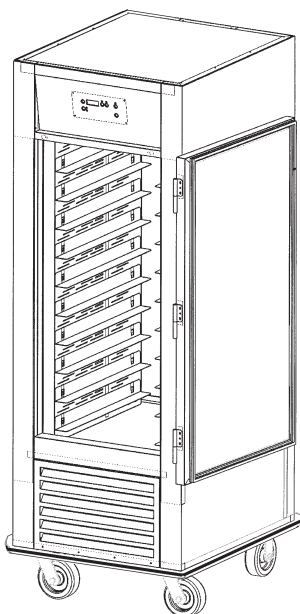
When the door of the unit is closed, it operates as a force air refrigerator with a highly efficient refrigeration system that provides faster “pull down” and “recovery” times than standard refrigerators. When the door is opened, a series of blower fans create a “wall” of air and areas of pressure, localizing a unique pattern of air from both the left and right side walls, as well as from the top. This movement across the cabinet opening helps to keep the cold air in and the warm air out of the food zone and is specifically designed to help maintain and prolong the interior cabinet temperature and, thus, help maintain internal food product temperatures for extended periods of time with the door open, contributing to safer product storage during service hours. This Air Screen seals itself around objects and is ideal for hospital and nursing home tray line / assembly line kitchen operations, flight kitchens, cafeterias, fast food and QSR applications. For best results, the air curtain was designed for “low profile” food products typical of these applications.

### **TYPICAL OPERATING PARAMETERS:**

The “screen” of air is capable of maintaining 45°F (7.2°C) temperature or below for a minimum of 45 minutes and a maximum of 90 minutes based at 75°F / 45% RH / 120V 20 amp dedicated circuit. A “**typical**” operational environment can expect a result of a 60 minute range. **HOWEVER, actual time** your unit will run in this temperature zone depends on many factors, such as:

- **Room ambient temperature**
- **Humidity levels**
- **Air disruption (such as a hood, vent, or air return)**
- **Amount of time unit was allowed to precondition the food(s)**
- **Food temperatures when placed into the unit**
- **Type of food packaging and profile of foods**
- **Regularly maintained and CLEANED condensing unit**

It should also be noted that there is a lag time between the “ambient air” temperature in the cabinet and that of the actual product temperature. The food temperature differential can be 10°F to 25°F (-12°C to -4°C) cooler than the temperature indicated by the temperature display. FWE Air Screen are supplied with a electronic controller, which is very accurate and intuitive.



### **FULL SWING DOOR WITH MAGNETIC HOLD OPEN CATCH:**

Door opens to lay flat against cabinet and is secured by a magnetic door edge “catch”. In addition, when the door is closed, it also is secured magnetically, thus removing the need of a cumbersome door latch.

**TRAY SLIDES:** Ten (10) pairs of removable stainless steel tray slides are provided standard at 4-1/2" spacing. Each tray slide can accommodate one (1) 18" x 26" pan / tray.

**SIDE GRIPS & REAR HANDLE:** For easy mobility and maneuvering stainless steel recessed hand grips are provided on the left and right sides, in addition to a 1" welded tubular push/pull handle is attached to the rear of the cabinet. A full wrap-around perimeter bumper protects the unit.

**CASTERS:** 6" diameter polyurethane casters are supplied standard for Air Screen models. They are attached to 10-gauge stainless steel corner plate reinforcements/stress pads. These are shipped already installed on the unit for immediate use.

# **FWE MOBILE REFRIGERATED AIR SCREEN**

## **ELECTRONIC CONTROLS**

**(A) ON/OFF BUTTON:** Your R-AS-10 unit's ON/OFF button has two uses: The first is to turn your R-AS-10 unit on and off. The second allows for you to select temperature display in either Fahrenheit or Celsius. Temperature display can be changed to indicate either degrees (F) Fahrenheit or degrees (C) Celsius. To change between temperature scales: While unit is plugged in and turned off, Press and hold the ON/OFF button for five seconds, after 5 seconds the display will show "de9F" or "de9C", release the ON/OFF button, display will continue to show "de9F" or "de9C" for three seconds then display will go blank: Press ON/OFF button to turn your R-AS-10 unit on. Display will show temperature followed by "F" or "C" to allow at glance recognition of temperature scale. Repeat this step to change temperature scale again.

"de9F" indicates your R-AS-10 unit will display temperature in Fahrenheit.

"de9C" indicates your R-AS-10 unit will display temperature in Celsius.

**(B) POWER INDICATOR "ON" LIGHT:** Your R-AS-10 unit is equipped with an on indicator light. When illuminated the on light indicates Power is ON.

**(C) CYCLING INDICATOR LIGHT:** Your R-AS-10 unit is equipped with a cooling system cycle indicator light. When cycle light is "ON", this indicates your R-AS-10 unit is cooling down to the desired temperature. When the R-AS-10 refrigeration compressor is running the cycle light will come "ON" until your R-AS-10 has reached the desired temperature, and go "OFF" when your R-AS-10 has reached desired temperature.

**(D) TEMPERATURE DISPLAY:** Your R-AS-10 unit allows you to select the temperature display in two modes, Actual temperature or Set Point temperature. Set Point temperature is the FWE factory default. In circumstances where displaying the Actual temperature is desired the FWE R-AS-10 AIR SCREEN allows you to choose this function. Actual temperature will display internal cabinet temperature acting as an internal thermometer. To switch between Set-Point and Actual temperature display press and hold the temperature recall button. Display will flash "S" or "A" then display "SET" for Set-Point or "ACT" for Actual. When display is "SET" or "ACT" release the temperature recall button, to accept the new setting press and release the temperature recall button.

**(E) TEMPERATURE SETTING:** Your R-AS-10 units operating temperature is PRE-SET at 34°F (1.1°C) with an operating temperature range of 33°F to 38°F ( 0.56°C to 3.33°C). To change temperature press the up or down arrow temperature setting buttons.

**(F) TEMP RECALL:** Your R-AS-10 unit is equipped with an easy access temp recall button. The temp recall button has two uses.

**First** is to momentarily display set-point or actual temperature. When your R-AS-10 unit is set to display Set-Point temperature press and release the temp recall button to see actual temperature, display will show actual temperature for 3 seconds then revert back to Set-Point display. When your R-AS-10 unit is set to display actual temperature press and release the temp recall button to see set-point temperature, display will show set-point temperature for 3 seconds then revert back to actual temperature display. **Second**, The temp recall button is used to change temperature display between Set-Point and Actual temperature. Item (D) above describes how to change the display.

**(G) DEFROSTING THE EVAPORATOR COIL:** Your FWE R-AS-10 AIR SCREEN unit offers you four defrost options.

**First** is a smart auto defrosting option. Smart defrost is the factory default option and requires you to do nothing, the defrost cycle is automatic. Sensors on the evaporator coil read coil temperature and decide how long and how often your R-AS-10 unit requires defrosting. Depending on usage and environment your R-AS-10 unit will defrost in intervals of 4, 6, 8 and 10 hours.

**Second** defrost option is a user selected defrost time interval. This will allow you to select defrost time intervals that work best for your operation. You can select R-AS-10 unit defrost time intervals from every 4 hours to every 12 hours in one hour increments. To activate and set your custom defrost option press and hold the manual defrost, up arrow and down arrow buttons for ten seconds. The controller will beep and display a flashing 4HR, use the up and down arrow button to set your desired defrost interval time. When desired defrost interval time is reached press the temp recall button to accept your defrost time option. To unselect your timed defrost option repeat same steps and use the up or down arrow buttons until display shows "OFF", press the temp recall button to accept. This will revert back to the worry free auto smart defrost option. Important note: If you do select to use the timed interval defrost option FWE recommends setting the defrost interval at every 8 hours.

**Third** defrost option is a manual forced defrost. This is simply pressing the manual defrost button at any time you need to defrost the R-AS-10 evaporator coil. Pressing the manual defrost button will start a defrost cycle at any time regardless of what defrost option is selected. The light above the manual defrost will illuminate to let you know the unit is in defrost. The manual defrost button has a second function, when your R-AS-10 unit is in a defrost cycle you can terminate the defrost by pressing the manual defrost button, allow two minutes for cooling cycle to start.

**Fourth** defrost option is a hard defrost. This option will start a prolonged defrost cycle and should only be used in case of extreme evaporator ice build up. **You should only use the hard defrost option when instructed to do so by a member of FWE's customer service staff.** FWE customer service 815-459-7500.

During a defrost cycle the indicator light located above the manual defrost button will illuminate. The cooling system condenser/compressor and fans are momentarily disabled. Defrost feature allows proper defrosting of accumulated ice build up on the evaporator coil. The defrost cycle can be cancelled by pressing the manual defrost button. If a defrost cycle is cancelled in this manor there is a ONE minute wait period before the cooling system starts. The controller will display a 60 second countdown indicating the one minute wait period.

During a defrost cycle the condensation from the evaporator coil will flow from the top of the unit down a drain line to the condensate vapor pan. The condensate vapor pan will automatically evaporate all defrost condensation. There is no need to empty a defrost water pan. Vapor can sometimes be visible and should be considered a normal operating condition. Proper attention should be given to defrost your R-AS-10. Every "Event" or time the unit is used with door open, the coil may build up ice reducing the effectiveness and overall operation of your R-AS-10.



# FVE MOBILE REFRIGERATED AIR SCREEN

## CONTROL PANEL DESCRIPTION

**(F) Temp Recall -**  
Press to display either the "Actual Internal Cabinet" or "Set Point" temperature.

**(D) Temp Display -**

Unit may display either "Actual Internal Cabinet" actual temperature, or desired "Set Point" temperature in either Fahrenheit "dgF" (33°F to 38°F) or Celsius "dgC" (.56°C to 3.33°C) Scale.

Actual: The factory default setting shows the actual internal cabinet temperature and acts as a digital thermometer.

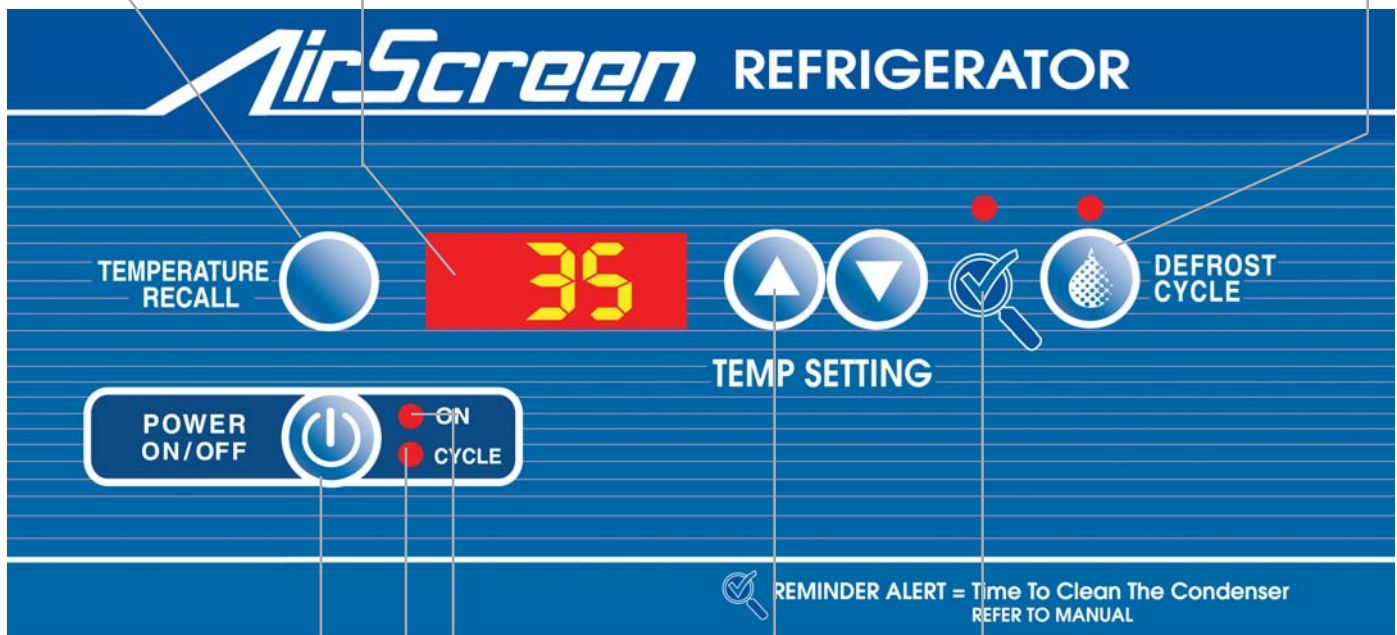
Set Point: To have temperature read-out display the "Set Point" temperature, press and hold the "Temp Recall" button for five (5) seconds. The display will flash either "S" (Set), or "A" (Actual) to indicate which mode is active. To switch back again, repeat this step holding the "Temp Recall" button for five (5) seconds.

To momentarily review the alternate display value, press and release the Temp Recall button.

**(G) DEFROST**

Press to initiate "ON DEMAND DEFROST"  
- OR - Over-ride a defrost cycle in progress

Defrost cycle is automatic.



**(A) On/Off Switch -**  
Serves two functions, turns cabinet ON or OFF and also allows you to change the **temperature scale** from Degrees (F) Fahrenheit to Degrees (C) Celsius as required.

**(B) Power Indicator Light**  
- Indicates that the power is on.

**(C) Cycling Indicator Light -**  
Indicates cabinet is cooling down.

**(E) Temperature Setting -**

**TO CHANGE TEMPERATURE:**  
Press **UP** Arrow - or - **DOWN** Arrow.



Operating temperature is pre-set at 34°F (1.1°C) with temperature range 33°F to 38°F (.56°C to 3.33°C).

**(H) Clean Condenser Reminder -**

Your R-AS-10 unit comes with a clean condenser reminder light, located next to the up and down arrow temperature control buttons. The most important thing you can do to insure a long, reliable service life for your R-AS-10 AIR SCREEN is to regularly clean the condenser coil. The condensing unit requires regularly scheduled cleaning to keep the finned condenser clean of lint and dust accumulation. Keeping the condenser clean allows the R-AS-10 unit to operate efficiently, use less energy and achieve top performance values. The clean condenser light will illuminate approximately every 60 days of run time to remind you its time to care for your R-AS-10 unit and clean the condenser coil. Reset the clean condenser timer by pressing the clean condenser button.

Refer to the "General cleaning and maintenance" section of this manual for proper cleaning instructions.

Every "event" or time the unit is used with the door open, the coil will build-up ice, reducing the effectiveness of the overall operation of the unit. Defrost feature allows proper defrosting of the accumulated condensation and ice build-up on the coil. Check water pan for a higher water level which indicates a successful defrost of the coil. Certain conditions may require 3 repeated sequential defrosts.

# ***FWE MOBILE REFRIGERATED AIR SCREEN***

## ***GENERAL OPERATION***

### ***TRANSPORTING***

WARNING: Do not attempt to move the Air Screen Refrigerator until the unit is turned off, the power cord is unplugged and out-of-the-way, or secured around rear handle.

- A. Door must be securely shut and all caster locks released.
- B. Maneuver unit by grasping the side handles or rear handle. CAUTION: The unit is designed for internal use and not designed for outdoor all-terrain transport. Though the compressor has been located at the bottom of the unit, lowering the center-of-gravity, the distribution of weight of the unit and food product makes the unit top heavy. Be cautious when approaching uneven flooring (such as door sills, drains, thresholds, etc).

### ***OPEN DOOR OPERATION***

1. Set Temp. Pre-chill empty cabinet to minimum of 34°F to 36°F (1°C to 2.2°C) with door closed minimum of one (1) hour.
2. Load cabinet from bottom to top with PRE-CHILLED FOOD AT 40°F (4.4°C) or colder. Push trays to rear of wall.

#### **FULL SWING DOOR WITH MAGNETIC HOLD OPEN CATCH:**

Door opens to lay flat against cabinet and is secured by a magnetic door edge.

**Note:** Prior to “operating with door open”, food product should be prechilled to an internal food temperature of 36°F (2.2°C) or below.

3. After loading, close cabinet door and allow inside temperature to re-stabilize to designated set temperature (or to desired internal temperature of food product).
4. Unload cabinet from top to bottom. Empty trays can be removed or left in the unit after unloading. Trays will not appreciably effect the overall performance of the unit, however, keeping the 10 tray slides racked in the cabinet after trays have been emptied of food product may result in slightly better performance.
5. This unit is equipped with an automatic condensate evaporator. To prevent water spills, leave unit plugged in with door closed after use. A recommendation would be to defrost after use as well, to free coil from ice build up formed during use.
6. Your R-AS-10 is equipped with a smart controller. During open door operation your R-AS-10 unit knows the door is open. When operating your R-AS-10 with door open the display will show “OPEN” and an internal count down timer will start. Your R-AS-10 unit will allow open door operation for a maximum of 90 minutes. During the 90-minute open door operation your R-AS-10 will not go into an auto or timed interval defrost cycle. During open door operation the cooling system will remain on. This ensures you will receive optimum open door performance. If door is open longer than 90 minutes an open door alarm will be activated. Display will flash “OPEN” and beep three times every ten seconds. **To terminate the open door alarm, the door must be closed and remain closed for five minutes. If door open alarm is activated, unit will activate a hard defrost cycle five minutes after door is closed.** Door must remain closed until defrost cycle is complete, approximately 30 minutes.

#### **7. INTERNAL CABINET TEMPERATURE WILL ELEVATE DURING DEFROST CYCLE.**

8. For performance values with door open, *see page 7.*
9. For trouble shooting and addressing performance issues, *see page 12.*

# FWE MOBILE REFRIGERATED AIR SCREEN

## GENERAL CLEANING AND MAINTENANCE



**WARNING: RISK OF ELECTRICAL SHOCK. DISCONNECT ELECTRICAL POWER SUPPLY BEFORE CLEANING ANY PARTS OF THE UNIT OR PRIOR TO ANY SERVICE.**

### CLEANING THE CONDENSER:

The most important thing you can do to insure a long, reliable service life for your FWE Air Screen Refrigerator is to **regularly clean the condenser (compressor) coil**. The condensing unit requires regularly scheduled cleaning to keep the finned condenser clean of lint and dust accumulation. Keeping the condenser clean allows the cabinet to operate efficiently, use less energy, and achieve top performance values.

To clean the condenser, first disconnect electrical power to the cabinet and remove the front and/or rear louver assembly. To remove the front louver assembly simply pull the assembly down and out, the louver assembly is held in place with magnets. To remove the rear louver assembly, remove all screws located on the louver assembly. Once the screws are removed the louver assembly can be removed.

Removing front louver assembly allows full access to the front facing condenser.

Vacuum any dirt, lint, or dust from the finned condenser coil, the compressor and other cooling system parts. If significant dirt is clogging the condenser fins\*, use soft brush or compressed air to blow this clear.

**\*NOTE: Care should be taken not to bend any of the condenser fins, as this will reduce performance and compressor life.**

Replace louver assembly and screws, on rear louver assembly, which hold it in place.

### GENERAL CLEANING GUIDE OF STAINLESS STEEL:

Stainless steel should be cleaned with warm water, mild soap and a soft cloth. Apply with a dampened cloth and wipe in the direction of the metal grain. A stainless steel polish may be used to renew and protect finish.

- Do not use gritty or abrasive cleaners as they may tend to mar and scratch the surface.
- **Do NOT use cleansers containing chlorine, this may promote corrosion of the stainless steel.**
- Check the ingredients of cleaning solutions or disinfectants used as they may contain chlorinated solvents. Always read the label of the cleaning solutions. Check for warnings about use on stainless steel products. Repeated use of chlorinated solvents may cause a chemical reaction with the stainless steel, which will damage the surface and cause rusting.

Care should also be taken to avoid splashing the unit with water containing chlorinated cleansers, when mopping the floor around the unit.

For stubborn odor spills, use baking soda and water (mixed to a 1 TBSP baking soda to 1 pint water ratio), or a paint thinner may be used. Unit must be then cleaned with warm water to remove any baking soda or thinner cleaner residue.

### CLEANING THE INTERIOR:

For stubborn stains, the use of baking soda is recommended. Use on breaker strips as well as door gaskets.

- For routine cleaning, it is **NOT** necessary to remove the interior air flow tunnels (left and right sides). These panels are critical to the performance of the Air Curtain.
- Door gasket is removable for cleaning when necessary.

**AIR FLOW TUNNELS:** Should the situation arise where the air flow tunnels needed to be removed (not required for routine cleaning) to clean a major spill that has flowed behind the air flow vents, lift pivot upward on retention device to loosen tunnel.

### ROUTINE VISUAL CHECK:

1. Inspect door gaskets. They should “snap” against door jamb before closure is complete. Visually check that the gaskets are sealed in their retainers and inspect for wear and tear. Replace if gaskets are torn or broken.
2. Inspect bumpers for damage or wear.
3. Inspect cord for damage or wear.
4. Remove any debris such as mop strings, hair and hair nets from casters and replace when tread is 1/4" thick.

**Experiencing White Powder Residue?**  
Your cleanser contains chlorine.  
Do NOT use cleansers containing chlorine.

# ***FWE MOBILE REFRIGERATED AIR SCREEN***

## ***SERVICE INFORMATION***

### ***BEFORE CALLING FOR SERVICE, PLEASE CHECK THE FOLLOWING:***

If the unit is **NOT COOLING** down to the proper temperature, check these two common causes:

1. **The evaporator coil needs defrosting.** Press the “ON DEMAND DEFROST” button on the control panel. Unit will defrost in approximately 20 minutes. Light above defrost button will illuminate when in defrost. The unit will automatically return to normal operation after a defrost cycle, having a transition time of two (2) minutes. **Certain conditions may require 3 repeated sequential defrosts.**  
**A “HARD DEFROST”:** Consult FWE Customer Service for HARD DEFROST procedures.
2. **Dirt, lint, and/or dust are on the condenser (compressor) coil.** To clean the condenser, first disconnect electrical power to the cabinet and remove the screws on the front and/or rear louver assembly. Removed louvered panel allowing full access to the front facing condenser. Vacuum any dirt, lint, and/or dust from the finned condenser coil, the compressor and other cooling system parts. If significant dirt is clogging the condenser fins, use brush or compressed air to blow this clear.  
**NOTE: Care should be taken not to bend any of the condenser fins, as this will reduce performance and compressor life.** Replace louver assembly and screws which hold it in place.

If the unit is **NOT WORKING** at all, please check the following:

- Is the electrical cord plugged in?
- Is the circuit breaker on and fuse OK?
- Is the “ON” indicator light illuminated? Press POWER On/Off button to illuminate.

If after checking the above items and the unit is still not operating properly, please contact FWE for an authorized service agent.

Phone: 815-459-7500      Fax: 815-459-7989      [sales@fweco.net](mailto:sales@fweco.net)

### **SPARE PARTS:**

Spare or replacement parts may be obtained through a parts supplier or an authorized service agent.

Phone: 815-459-7500      Fax: 815-459-7989      [www.FWEparts.com](http://www.FWEparts.com)

### **WARRANTY REGISTRATION:**

Complete the enclosed warranty card shipped with the unit. Mail or fax to:

Food Warming Equipment Company, Inc.  
P. O. Box 1001  
Crystal Lake, IL 60039-1001

Fax: 815-459-7989

### **HELPFUL HINTS FOR TOP PERFORMANCE:**

**1. LOAD CABINET FROM BOTTOM TO TOP**

**2. PUSH PANS AND TRAYS ALL THE WAY BACK TO REAR WALL**

**3. UNLOAD CABINET FROM TOP TO BOTTOM**

**4. DEFROST UNIT DAILY OR AFTER EACH PROLONGED USAGE**

**5. REGULARLY CLEAN CONDENSER (COMPRESSOR) COIL**

#### **PROBLEM**

#### **POSSIBLE CAUSE/REMEDY**

1. Product zone temperature too high.

1. Control Setting Too High - Reset Control
2. Inadequate Air Circulation - Rearrange Product Load To Improve Air Circulation And Flow. **Keep Empty Trays in Position.**
3. Unit May Need To Be Manually Defrosted. (Refer to Page 5.)
4. Unit May Be In Defrost Cycle. See Indicator Light. Close Door And Wait 20 Minutes for Defrost Cycle To Finish.
5. Clean the Condenser (Refer to Page 11.)

2. Air Screen unit fails to start - no hum.

1. Power Cord is Disconnected - Reconnect
2. Fuse - Replace Fuse
3. Circuit Breaker has Tripped. Reset Breaker in Electrical Box.
4. Overload Protection - Determine Reason & Correct, Replace If Necessary
5. Unit may need to be defrosted or has tripped off due to overload. Wait 30 minutes: Unit will self-reset.

3. Condensing unit fails to start - hums but trips on overload protector.

1. Unit may need to be defrosted or has tripped off due to overload. Wait 30 minutes: Unit will self-reset.
2. Improperly Wired - Check Wiring Against Diagram
3. Low Voltage - Determine Reason & Correct
4. Starting Capacitor Defective - Determine Reason & Replace
5. Relay Not Closing - Determine Reason & Correct, Replace If Necessary
6. Compressor Motor Has Winding Open Or Shorted - Replace Compressor
7. Internal Mechanical Trouble In Compressor - Replace Compressor



# ***FWE MOBILE AIR SCREEN REFRIGERATOR***

## ***TROUBLESHOOTING GUIDE (cont'd)***

<b><u>PROBLEM</u></b>	<b><u>POSSIBLE CAUSE/REMEDY</u></b>
4. Condensing unit starts, but fails to switch	<ol style="list-style-type: none"><li>1. Improperly Wired - Check Wiring Against Diagram off of "start" winding.</li><li>2. Low Voltage - Determine Reason &amp; Correct</li><li>3. Relay Failing To Open - Determine Reason &amp; Correct, Replace If Necessary</li><li>4. Run Capacitor Defective - Determine Reason &amp; Replace</li><li>5. Excessively High Discharge Pressure - Check Discharge Shut-Off Valve, Or Insufficient Cooling On Condenser</li><li>6. Compressor Motor Has Winding Open Or Shorted - Replace Compressor</li><li>7. Internal Mechanical Trouble In Compressor - Replace Compressor</li></ol>
5. Condensing unit starts and runs, but short cycles on overload protector.	<ol style="list-style-type: none"><li>1. Additional Current Passing Through Overload Protector - Check Wiring Diagram. Check For Added Fan Motors, Pumps, etc., Connected To Wrong Side Of Protector</li><li>2. Low Voltage To Unit (or unbalanced if three phase) - Determine Reason &amp; Correct</li><li>3. Overload Protector Defective - Check Current - Replace Protector</li><li>4. Run Capacitor Defective - Determine Reason &amp; Replace</li><li>5. Excessive Discharge Pressure - Check Ventilation, Restrictions In Cooling Medium, Restrictions in Refrigeration System</li><li>6. Suction Pressure Too High - Check For Possibility Of Misapplication. Use Stronger Unit</li><li>7. Compressor Too Hot (return gas) - Check Refrigerant Charge (fix leak) Add If Necessary</li><li>8. Compressor Motor Has Winding Shorted - Replace Compressor</li></ol>
6. Condensing unit runs but short cycles on.	<ol style="list-style-type: none"><li>1. Overload Protector - See #3 Above</li><li>2. Thermostat - Differential Set Too Close</li><li>3. High Pressure "Cut-Out" Due To:<ol style="list-style-type: none"><li>a) Insufficient Air or Water Supply - Check Air or Water Supply To Condenser, Correct</li><li>b) Overcharge - Reduce Refrigerant Charge</li><li>c) Air In System - Purge</li></ol></li><li>4. Low Pressure "Cut-Out" Due To:<ol style="list-style-type: none"><li>a) Liquid Line Solenoid Leaking - Replace e</li><li>b) Compressor Valve Leak - Replace</li><li>c) Undercharge - Fix Leak, Add Refrigerant</li><li>d) Restriction In Expansion Device - Replace Device</li></ol></li></ol>
7. Condensing unit operates for prolonged periods or continuously.	<ol style="list-style-type: none"><li>1. Unit may need to be defrosted.</li><li>2. Shortage Of Refrigerant - Fix Leak, Add Charge</li><li>3. Control Contacts Stuck or Frozen Closed - Clean Contacts or Replace Control</li><li>4. Excessive Heat Load Placed Into Cabinet - Allow Unit Sufficient Time For Removal Of Latent Heat</li><li>5. Prolonged or Too Frequent Door Openings - Plan or Organize Schedule To Correct Condition</li></ol>

# ***FWE MOBILE REFRIGERATED AIR SCREEN***

## ***TROUBLESHOOTING GUIDE (cont'd)***

### **PROBLEM**

### **POSSIBLE CAUSE/REMEDY**

- |   |  |
|---|--|
| 8. Start capacitor open or shorted or blown.  | <ol style="list-style-type: none"><li>6. Evaporator Coil Iced - Defrost</li><li>7. Restriction In Refrigeration System - Determine Locations &amp; Remove</li><li>8. Dirty Condenser - Clean Condenser</li><li>9. Filter Dirty - Clean or Replace</li></ol>  |
| 9. Run capacitor open, shorted or blown.  | <ol style="list-style-type: none"><li>1. Relay Contacts Not Opening Properly - Clean Contacts or Replace Relay If Necessary</li><li>2. Prolonged Operation On Start Cycle Due To:<ol style="list-style-type: none"><li>a) Low Voltage To Unit - Determine Reason &amp; Correct</li><li>b) Improper Relay - Replace</li><li>c) Starting Load Too High - Correct By Using Pump Down Arrangement If Necessary</li></ol></li><li>3. Excessive Short Cycling - Determine Reason For Short Cycling (see #6 above) And Correct</li><li>4. Improper Capacitor - Determine Correct Size</li></ol> |
| 10. Relay defective or burned out.  | <ol style="list-style-type: none"><li>1. Improper Capacitor - Determine Correct Size &amp; Replace</li><li>2. Excessively High Line Voltage (110% of rated max) - Determine Reason &amp; Correct</li></ol>   |
| 11. Suction line frosted or sweating.   | <ol style="list-style-type: none"><li>1. Incorrect Relay - Check &amp; Replace</li><li>2. Incorrect Mounting Angle - Remount Relay In Correct Position</li><li>3. Line Voltage Too High or Too Low - Determine Reason &amp; Correct</li><li>4. Excessive Short Cycling - Determine Reason (see #6 above) &amp; Correct</li><li>5. Relay Being Influenced By Loose Vibrating Mounting - Remount Rigidly</li><li>6. Incorrect Run Capacitor - Replace With Proper Capacitor</li></ol>  |
| 12. Liquid line frosted or sweating.  | <ol style="list-style-type: none"><li>1. Overcharge of refrigerant - Correct Charge</li><li>2. Evaporator Fan Not Running - Determine Reason &amp; Correct</li></ol>   |
| 13. Noisy condensing unit.  | <ol style="list-style-type: none"><li>1. Restriction In Dehydrator or Strainer - Replace Part</li><li>2. Liquid Shut-Off (king valve) Partially Closed - Open Valve Fully</li></ol>  |
| 14. Error Message: "Err1"<br>"Err2"<br>"Err3"<br>"Err4"<br>"Err5"<br>"Err6"<br>"Err7"<br>"Err8" | <ol style="list-style-type: none"><li>1. Loose Parts or Mounting - Find &amp; Tighten</li><li>2. Tubing Rattle - Reform To Free Of Contact</li><li>3. Bent Fan Blade Causing Vibration - Replace Blade</li><li>4. Fan Motor Bearing Worn - Replace Motor</li></ol> <ol style="list-style-type: none"><li>1. Sensor Failure</li><li>2. Configuration Connector Error</li><li>3. Not Defined</li><li>4. Under Temperature</li><li>5. Over Temperature</li><li>6. Key Shorted</li><li>7. Door Switch</li><li>8. EEPROM Possible Corruption</li></ol>  |

# FWE MOBILE REFRIGERATED AIR SCREEN

## REPLACEMENT PARTS

### Hardware

#### DESCRIPTION

Top Lift-Off Hinge Assembly  
 Bottom Wing with Pin Hinge Assembly for Left Hand Units  
 Bottom Wing with Pin Hinge Assembly for Right Hand Units  
 Tray Slide (Pair)  
 Recessed Hand Grips  
 6" Poly Caster, Rigid  
 6" Poly Caster, Swivel w/Brake  
 Door Gasket 26" x 48"  
 Bumper Insert, Black Vinyl  
 Power Cord, 115 volt, 10'  
 Power Cord, 208v, 220v, 240v, 10'  
 Electronic Control Panel  
 Control Panel Overlay

#### PART NUMBER

HNG LO AC  
 HNG LO BW L  
 HNG LO BW R  
 50084  
 PL FLSH  
 CSTR 6 R-2  
 CSTR 6 SB-2  
 GSKT MAG2648  
 BMPR INSERT  
 CRDSET 20/115  
 CRDSET 10/220  
 CNTRL REFRIG 6MOD2  
 CNTRL PNL AIRSCREEN2

### Upper Evaporator and Blower Assembly

#### DESCRIPTION

Evaporator  
 Door Switch  
 Defrost Element  
 Defrost Relay  
 Expansion Valve  
 Ring Fan 8"  
 Thermistor Probe

#### PART NUMBER

EVAP AC  
 SWH MAG REED  
 EL DFST AC  
 RLY 30AMP-120  
 VLV EXP R3A1 BRZ  
 FAN RING 8  
 PROBE-NTC-REF-12

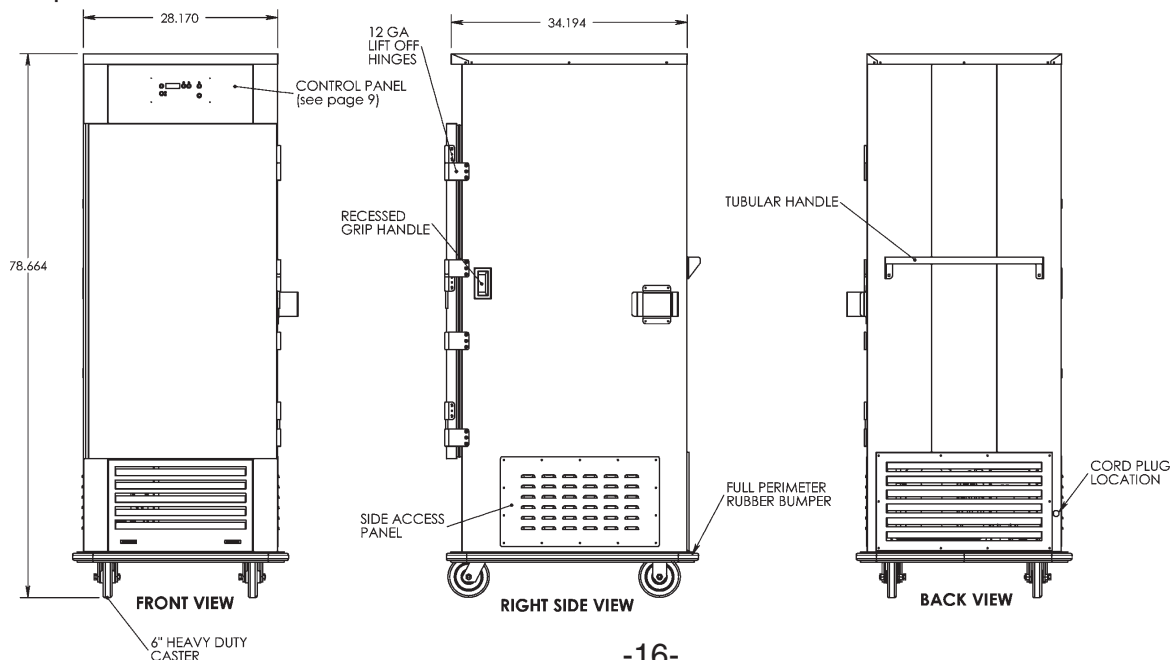
### Lower Condensing Unit Assembly

#### DESCRIPTION

Front Louvered Panel  
 Side Louvered Panel  
 Rear Grill  
 Compressor with Relay  
 Compressor Relay  
 Catch-All Filter  
 Blower Motor  
 Condensing Unit  
 Electric Condensate Pan  
 Contactor 2 Pole  
 Start Capacitor

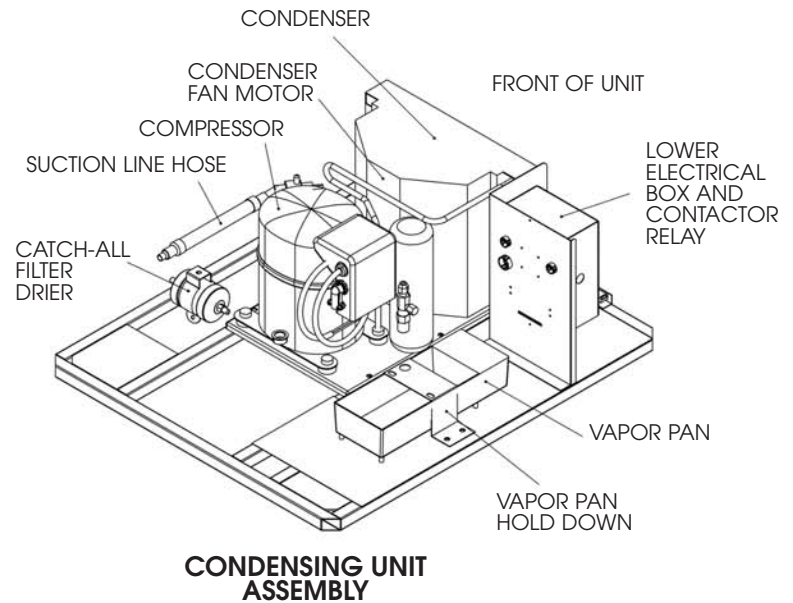
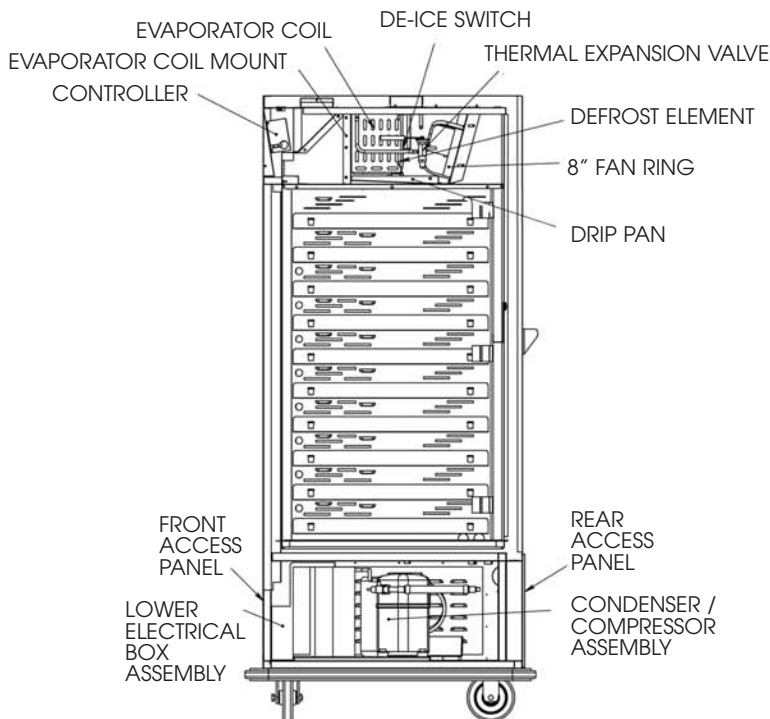
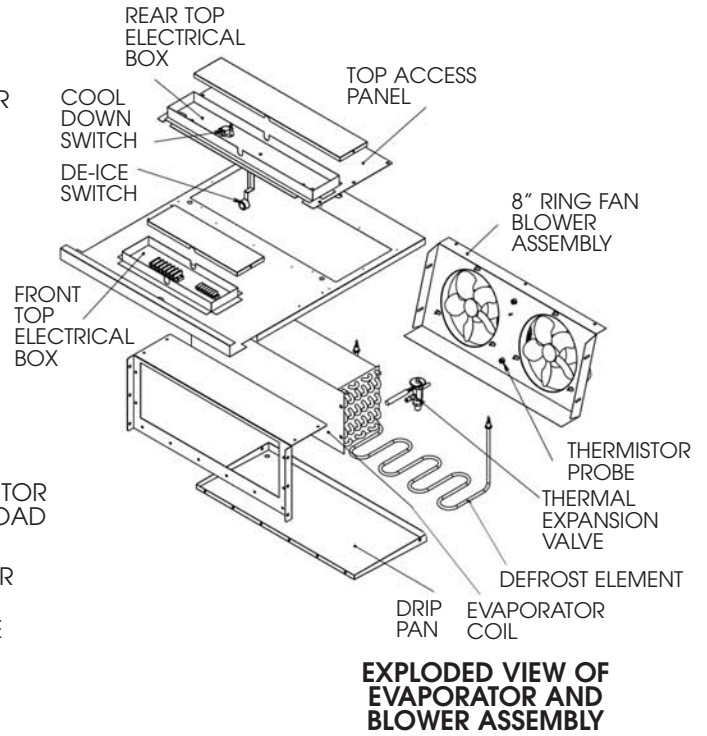
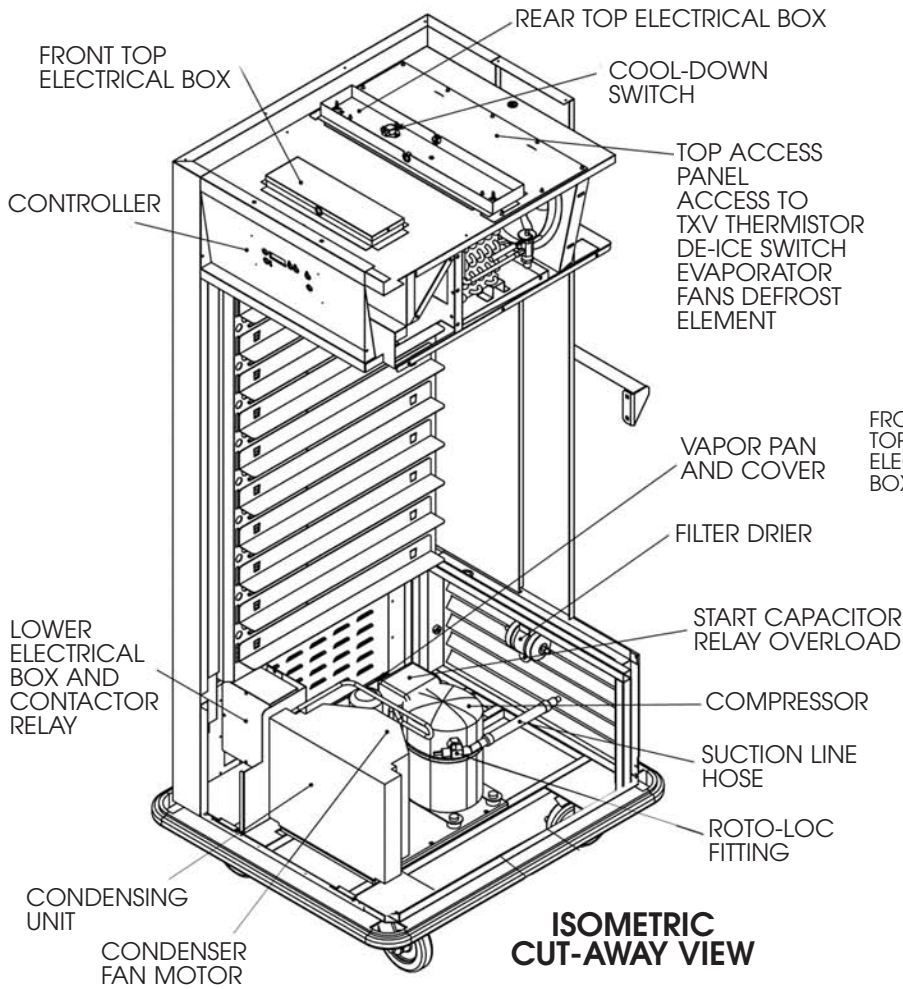
#### PART NUMBER

21446  
 21445  
 4391  
 COMPR R3 404  
 COND UNIT R3 404 RELAY  
 FLTR DRY BRZ  
 COND UNIT R3 404 FAN MOTOR  
 COND UNIT R3 404  
 VAPOR AC  
 CONTACT 2 POLE 120V 40 AMP  
 COND UNIT R3 404 CAPACITOR



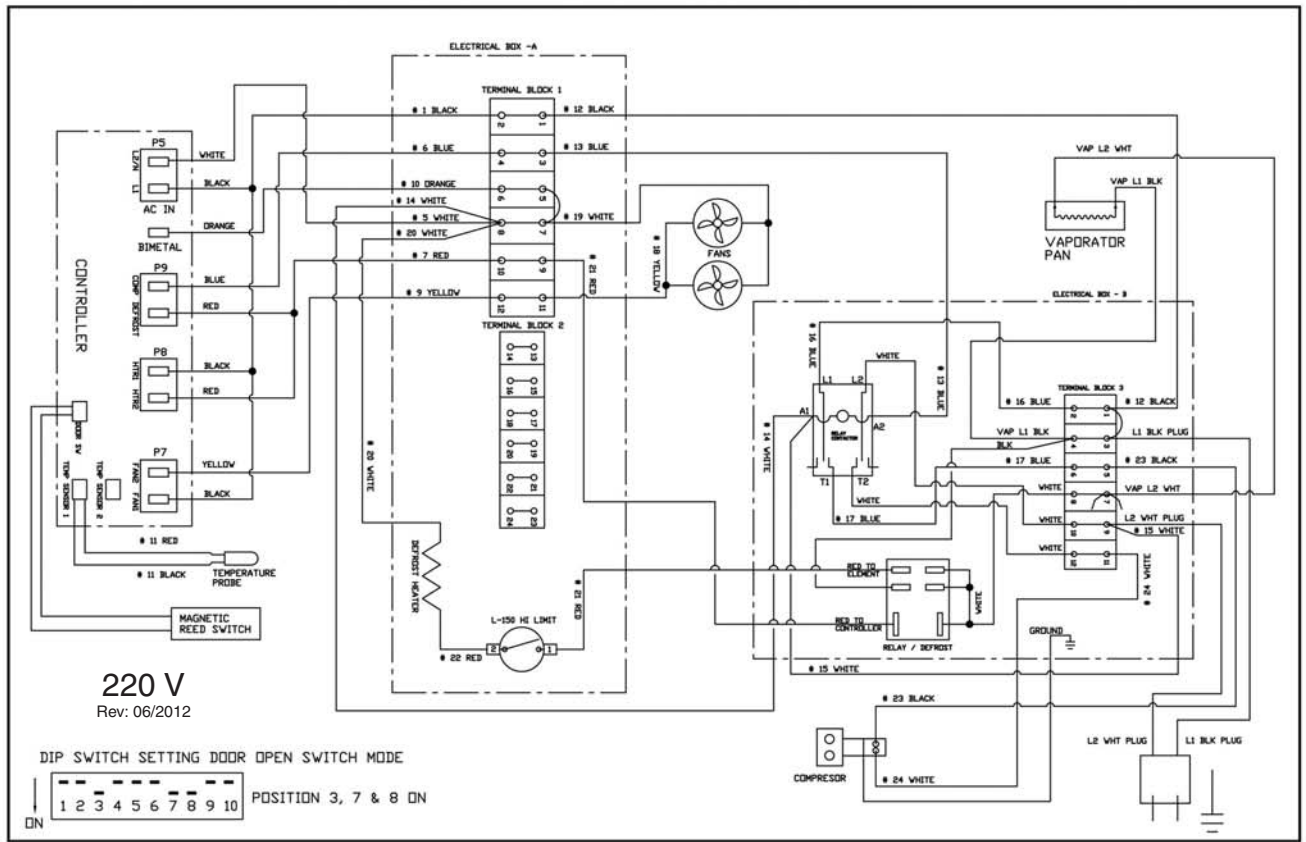
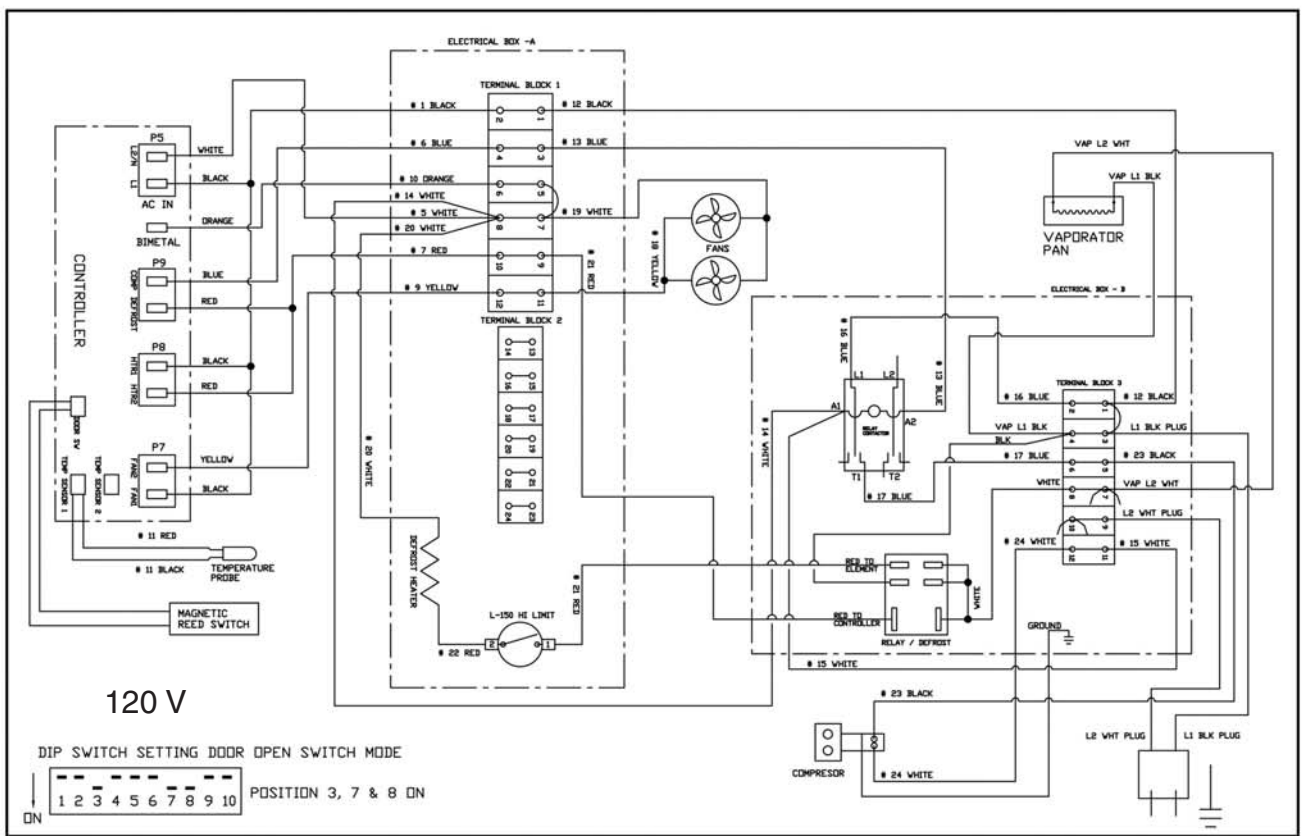
# FWE MOBILE AIR SCREEN REFRIGERATOR

## REPLACEMENT PARTS



# FWE MOBILE REFRIGERATED AIR SCREEN

## WIRING DIAGRAM





# **FWE MOBILE AIR SCREEN REFRIGERATOR**

## **LIMITED TWO YEAR WARRANTY**

**FWE / Food Warming Equipment Company, Inc.** (Seller) warrants to the original purchaser, subject to the exceptions and conditions below, that FWE manufactured equipment shall be free from defects in material or factory workmanship, under ordinary use for the purpose for which it is designed. The effective warranty period is as follows:

**PARTS:** Seller will furnish without charge to the original purchaser, FOB Sellers' factory, replacement parts for repairs to all new standard catalog products and factory custom / modified units, which in Seller's sole judgement, prove defective in materials or workmanship under normal and proper use with the reserved right to request the return of any part claimed to be defective, prior to issuing replacement part or authorizing warranty service, for a period of two (2) years from date of original shipment from Seller's plant, *except for equipment used in a **Correctional Environment / Facilities**, which is warranted for a period of one (1) year from date of original shipment from Seller's plant.*

**LABOR:** Seller's labor warranty shall be performed by a Seller-approved Service Agency who must contact Seller to obtain a Warranty Service Authorization (WSA) number prior to performing any repairs. If service is required during overtime periods, the difference between overtime and standard labor rates shall be paid by the purchaser. Seller does not assume any responsibility for any charges not expressly authorized, incidental to the repair or replacement of equipment covered by this warranty, nor charges exceeding, in Seller's sole judgement, normal and customary amounts. Only approved travel charges will be allowed. Seller's labor warranty shall be from the date of original shipment date from Seller's plant for a period of one (1) year, *except for equipment used in a **Correctional Environment / Facilities** which is warranted for a period of six (6) months.*

This warranty is for normal usage and does not apply to any product or parts thereof that have been misused, altered, or where Seller's operating instructions or specific voltage is not observed; nor shall this warranty apply to defective products or parts resulting from accident following date of original shipment, nor extend to or cover removal, installation, reinstallation or calibration, or service calls or cost of repairs undertaken by a customer. This warranty is also subject to the following:

- 1.] Customer returning the warranty registration card, accompanying Sellers original shipment, to Seller within thirty (30) days of receipt;
- 2.] Giving immediate notice of any allegedly defective part or product to Seller; and
- 3.] Customer, at Sellers request, returning said defective parts or product to Seller.

This is the sole warranty applicable to the merchandise. It is expressly understood that Seller's liability hereunder is limited to the repair or replacement, at Seller's option, of products or parts, defective materials or workmanship as provided above. Seller's judgement as to the cause and nature of any defect will be final. Seller shall in no case be responsible for special or consequential damages or any other obligation or liability with respect to products sold by Seller.

This warranty, as stated above, applies to equipment installed in the Continental United States. FWE equipment installed outside the Continental United States shall carry parts coverage only. All labor costs are approved on a discretionary basis, based on like repairs in the Continental U.S. This warranty shall stand in whole or in part as allowed by law. Any exclusion of a part of this warranty, as may be allowed by law, shall not void balance of warranty.

This is a limited warranty pursuant to the Consumer Product Warranties Act, 15 U.S. Code. section 2303.

