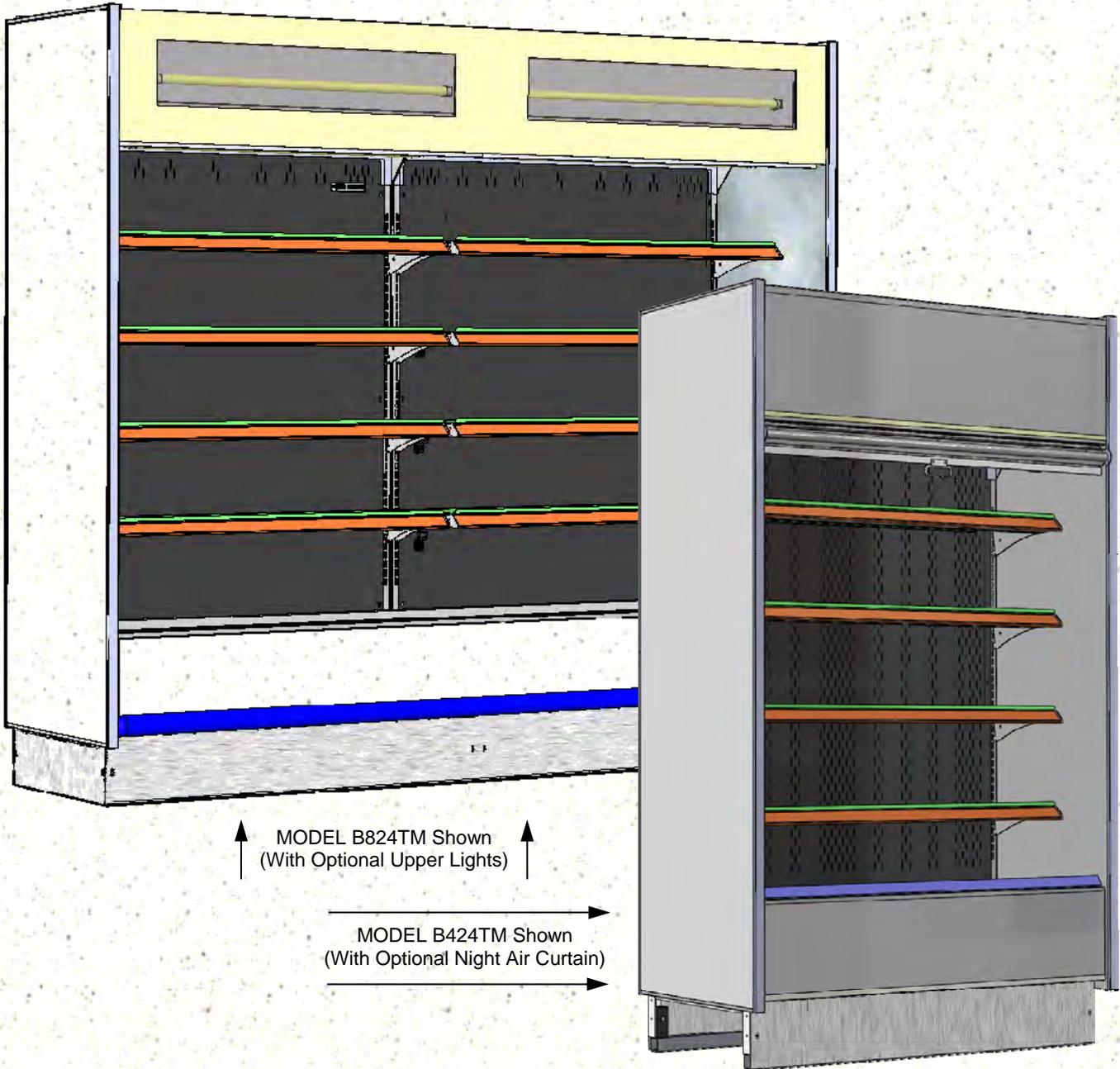




INSTALLATION AND OPERATING MANUAL

PN 54298

IN AISLE SELF-SERVICE REFRIGERATED CASES WITH TOP MOUNT CONDENSER PACKAGE



↑ MODEL B824TM Shown
(With Optional Upper Lights) ↑

→ MODEL B424TM Shown
(With Optional Night Air Curtain) →

Model B424TM.....	47 1/4"L* x 25"D x 84 3/4"H~
Model B424TM.4489.....	47 1/4"L* x 25"D x 84 3/4"H~
Model B424TM.4857.....	47 1/4"L* x 25"D x 84 3/4"H~
Model B824TM.....	92 1/4"L* x 25"D x 84 3/4"H~

**Includes End Panels
~ Units With Levelers Extended 1 5/8" Below Base Frame To Attain Listed Height*



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OVERVIEW

- These Structural Concepts Oasis® self-service cases are designed to merchandise packaged products at 41 °F (5 °C) or less product temperatures (unless custom cases with wire rack shelving).
- Cases should be installed and operated according to this operating manual's instructions to insure proper performance. Improper use will void warranty.

TYPE I vs. TYPE II ENVIRONMENTAL CONDITIONS

This unit is designed for the display of products in ambient store conditions where temperature and humidity are maintained within a specific range.

- Type I display refrigerators are intended for use in an area where environmental conditions are controlled and maintained so that the ambient temperature does not exceed 75 °F (24 °C) and 55% maximum humidity.
- Type II display refrigerators are intended for use in an area where environmental conditions are controlled

and maintained so that the ambient temperature does not exceed 80 °F (27 °C) and 60% maximum humidity.

- If unsure if your unit is Type I or II, see tag next to serial label. See **SERIAL LABEL LOCATION & INFORMATION LISTED / TECH INFO & SERVICE** section in this manual for sample serial labels.

COMPLIANCE

- Performance issues when in violation of applicable NEC, federal, state and local electrical and plumbing codes are not covered by warranty.
- See below compliance guideline.

WARNINGS

- Following are important warnings to prevent injury or death.
- Please read carefully!
- See next page for **PRECAUTIONS**.



COMPLIANCE
 This equipment **MUST** be installed in compliance with all applicable NEC, federal, state and local electrical and plumbing codes.



WARNING
 Risk of electric shock. Disconnect power before servicing unit. **CAUTION!** More than one source of electrical supply is employed with units that have separate circuits. *Disconnect ALL ELECTRICAL SOURCES before servicing.*



WARNING
 Hazardous moving parts. Do not operate unit with covers removed. Fan blades may be exposed when deck panel is removed. Disconnect power before removing deck panel.



WARNING
 Condenser Pan / Hot Gas Loop Condensate System is Hot! Disconnect and allow to cool before cleaning or removing from case.

PRECAUTIONS

- Following are important precautions to prevent damage to unit or merchandise.
- Please read carefully!
- See previous page for specifics on *OVERVIEW, TYPE I AND TYP II ENVIRONMENTAL CONDITIONS, COMPLIANCE* and *WARNINGS*.



CAUTION

Fluorescent lamps have been treated to resist breakage and must be replaced with similarly treated lamps.



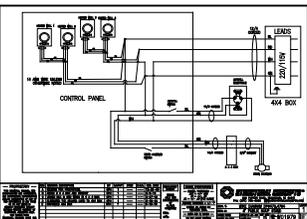
CAUTION! GFCI BREAKER USE REQUIREMENT

If N.E.C. (National Electric Code) or your local code requires GFCI (Ground Fault Circuit Interrupter) protection, you **MUST** use a GFCI breaker in lieu of a GFCI receptacle.



CAUTION! ADVERSE CONDITIONS / SPACING ISSUES

- Performance issues caused by adverse conditions are **NOT** covered by warranty.
- End panels must be kept at least **6-inches** away from any structure to prevent condensation.
- Unit must be kept at least **15-feet** from exterior doors, overhead HVAC vents or any air curtain disruption to maintain proper temperatures.
- Unit must not be exposed to direct sunlight or any heat source (ovens, fryers, etc.).
- Tile floors, low ceilings or small rooms will increase noise level. Whisper Cool compressor blanket or remote unit may resolve noise level issues.
- Keep at least **8-inch** clearance above unit for air discharge (self-contained units only).

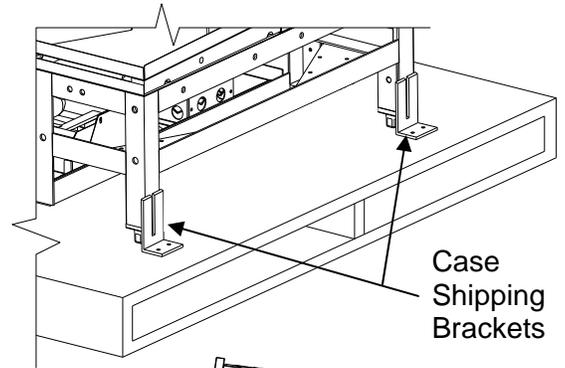


WIRING DIAGRAM FORMAT & LOCATION

- Each case has its own wiring diagram folded and in its own packet.
- Wiring diagram placement may vary; it may be placed near ballast box, field wiring box, raceway cover, or other related location.

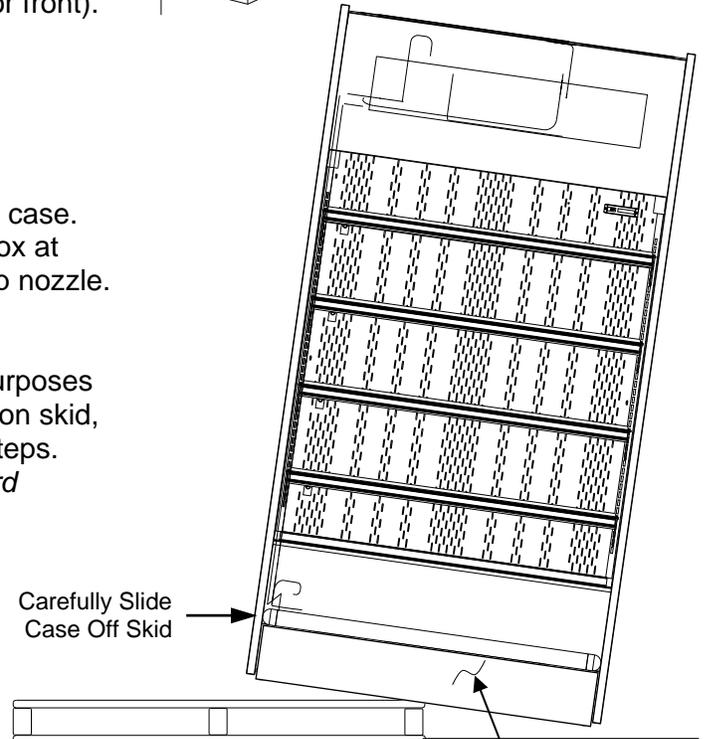
1. Remove Shipping Brackets Attached to Skid

- Remove screws holding Case Shipping Brackets to skid.
- Remove Case Shipping Brackets from Skid.
- See illustration at right. Note: Shipping Brackets will vary in size, shape, material and location depending upon case type and model.



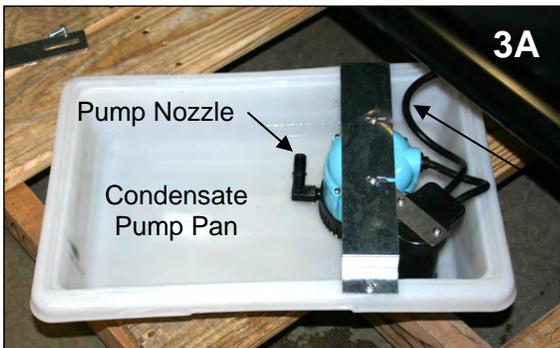
2. Remove Unit From Skid

- While supporting case, carefully slide case off from skid at either left or right side of case (NOT at case rear or front).
- See illustration at mid-right for method.
- Remove Shipping Support Board
- Place into proper position.



3. Attach Condensate Pan to Unit

- Condensate pump pan is shipped separately from case.
- After case is in position, plug cord into electrical box at underside of case, hook condensate hose to pump nozzle.
- Slide into place (at case underside).
- See illustrations 3A through 3D below.
- Note: Images 3A through 3D are for illustrative purposes only. Though images may show condensate pan on skid, case has been removed from skid prior to these steps.
- *Caution!* Be sure to loop the pump's electrical cord through the cord hooks under the case.



Electrical cord from pump (to be looped through the cord hooks under the case).



Condensate Pump Pan Support Bracket (one at either side)

Condensate Pump Hose

Drain Pipe (to be positioned over condensate pump pan)



View of Condensate Pump Pan (Positioned Properly and Fully Connected)



Sliding Condensate Pump Pan under case

POSITIONING CASE / SHIMMING SUPPORT RAILS / ADJUSTING LEVELERS

Note: Units shown may not depict an exact representation of your particular unit being installed.

1. Position & Align Case Alongside Other Cases

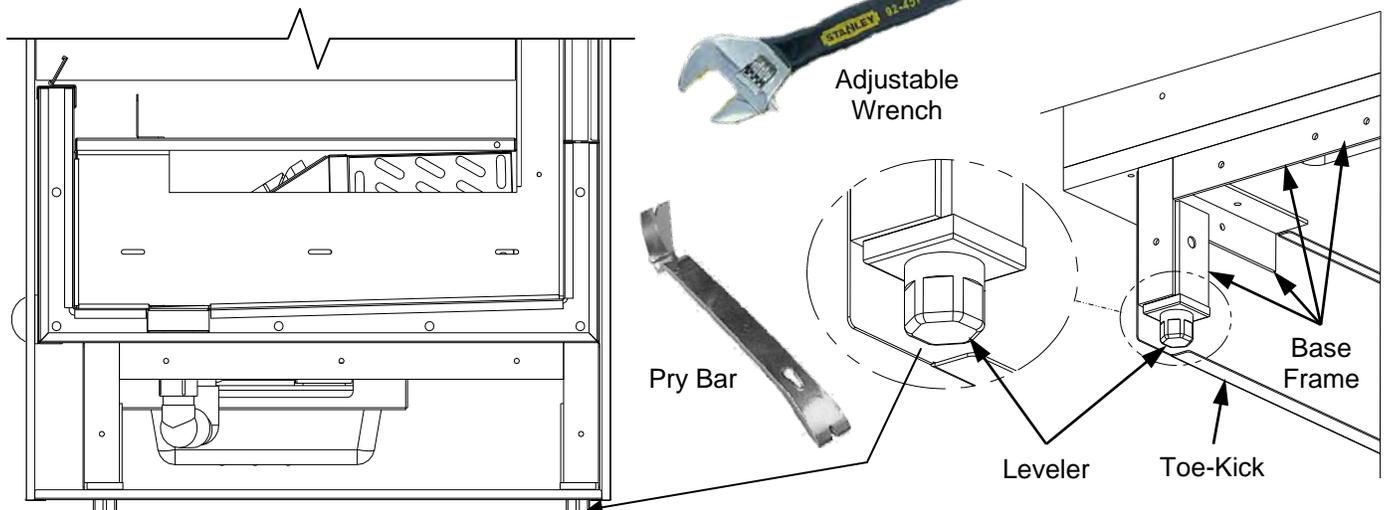
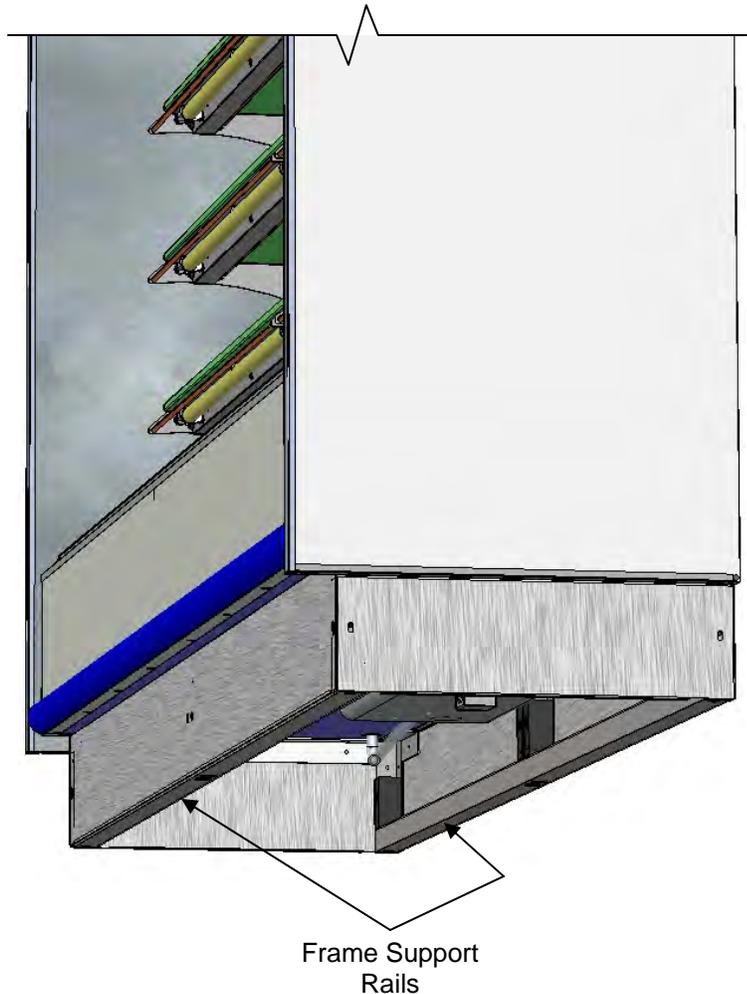
- Before adjusting levelers (or shimming frame support rails), make certain that the case is in proper position and, if required, aligned with adjoining case(s).
- This may require the repositioning of the case you are installing or the already positioned case(s).

2. Cases With Frame Support Rails: Shim

- Illustration at top right shows case with frame support rails.
- Shims will be provided with all cases that have frame support rails.
- Use shims to level case.
- **Note: After case is in position, it must be sealed to floor to prevent entry or leakage of liquid or moisture.**

3. Cases With Levelers: Adjust Levelers

- After case is in position, adjust case so it is level and plumb (as shown at right).
- You may need to remove front and/or rear toe-kick to access levelers.
- Use adjustable wrench (and possibly a pry bar) to adjust leveler.
- Do not use pry bar on toe-kick as it may buckle.
- Do not use pry bar on end panel; it may chip.
- Use pry bar **ONLY** on base frame to avoid damaging case.
- See illustration and photos at lower right.



Electrical and Control Access

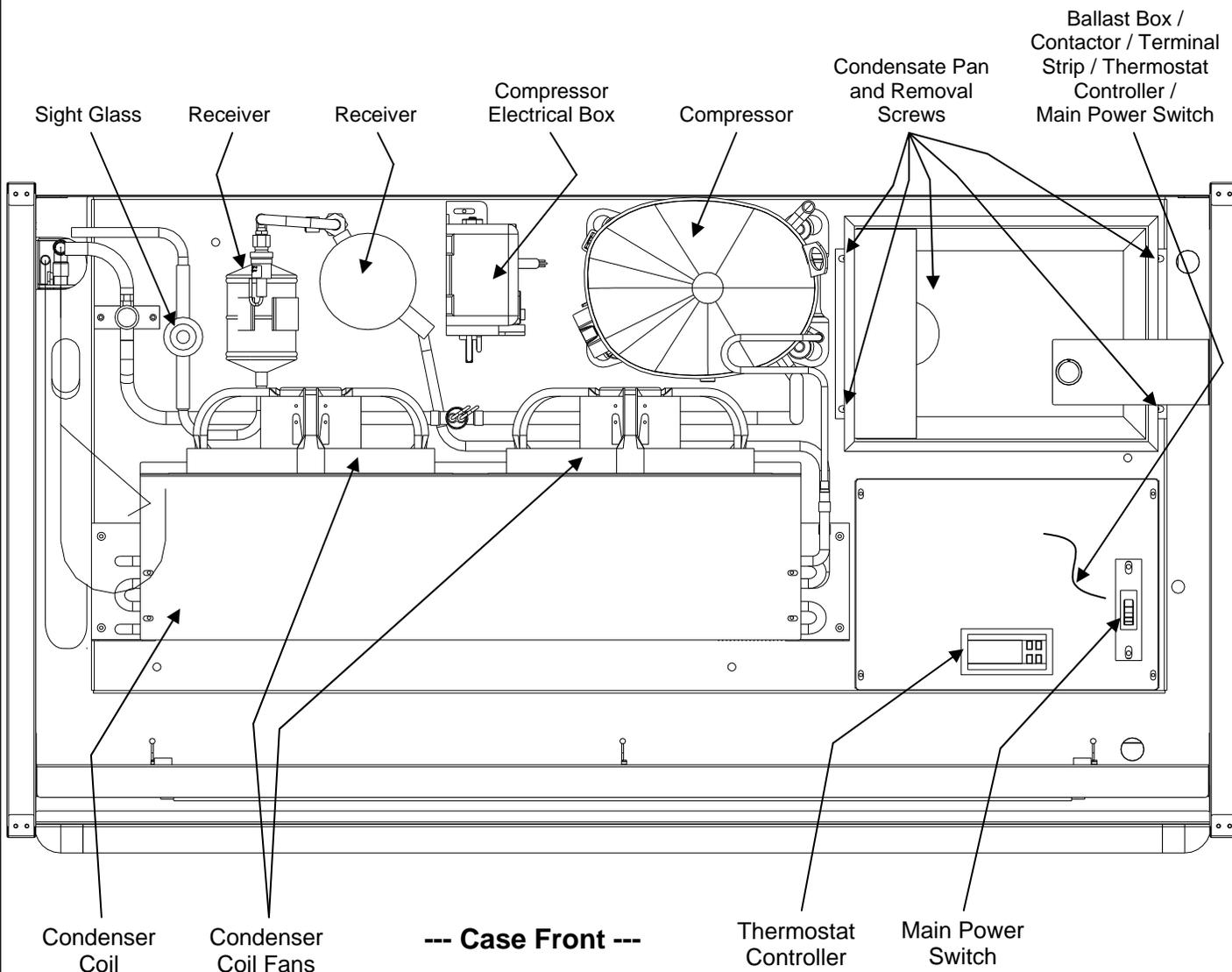
- Main power cord and switch are accessible from the top front right hand side of header assembly.
- Thermostat control settings / refrigeration service ports / evaporator pan are also accessible from top.
- Illustration below provides layout of components.

Condensate Pan Access

Warning! Disconnect power before providing maintenance and service to unit.

- Condensate pan is accessible from the top of the unit.
- Unplug the evaporator pan from its outlet.
- Remove screws holding the condensate pan foot to the compressor pan (see illustration below).

- **Caution!** To avoid injury, check temperature of pan prior to handling condensate pan.
- If condensate pan must be removed from unit (to properly clean), remove carefully by lifting condensate pan up and off base.
- Empty condensate pan contents into suitable container.
- See **PREVENTIVE MAINTENANCE (TO BE PERFORMED BY TRAINED SERVICE PROVIDERS)** section in this manual for cleaning specifics.
- When done servicing or cleaning, return and reconnect in reverse order it was removed.
- Note: See next page for Model B824TM refrigeration package layout & access.



CASE STARTUP & REFRIGERATION PACKAGE ACCESS - MODEL B824TM ONLY

Electrical and Control Access

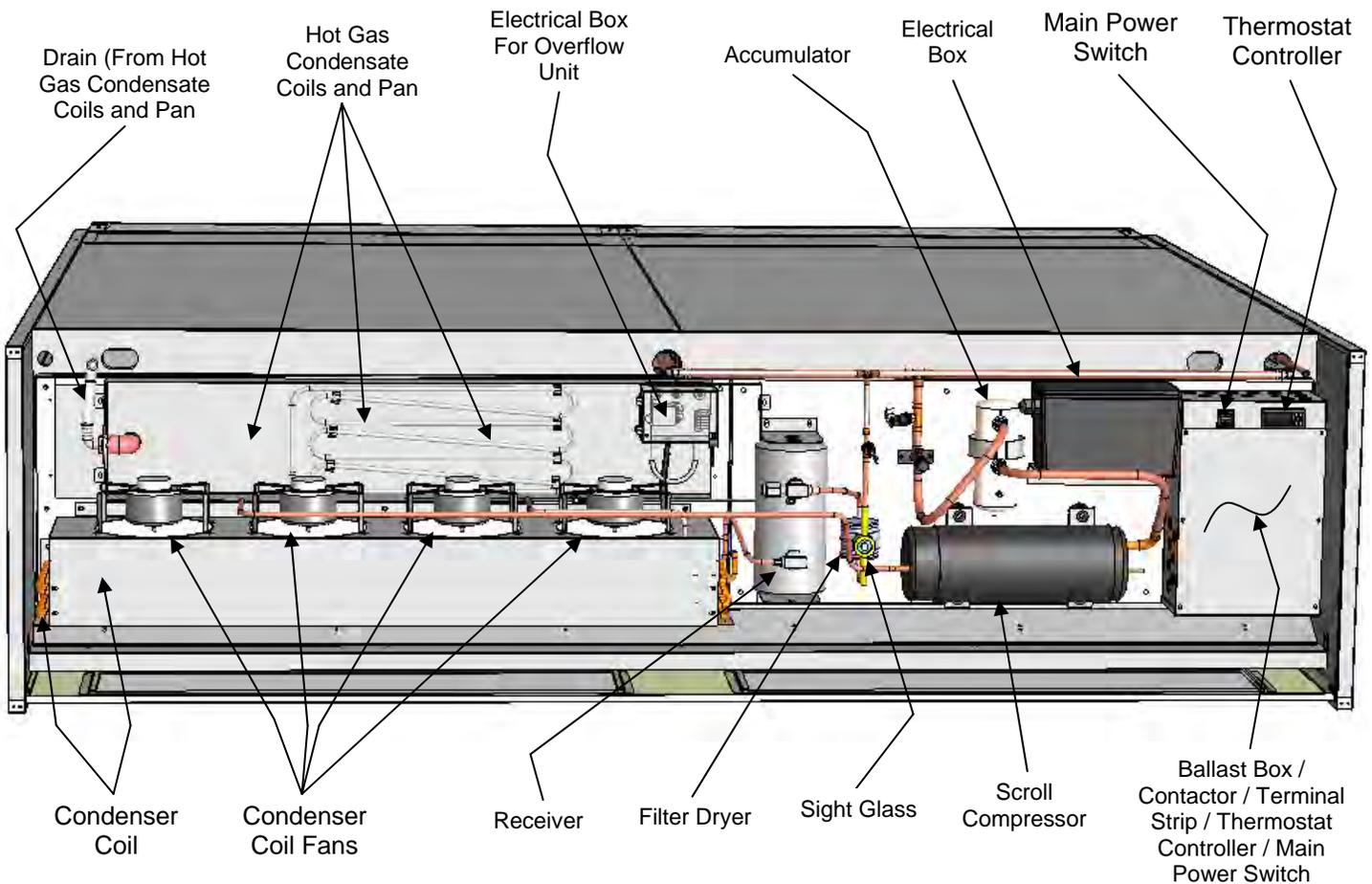
- Main power cord and switch are accessible from the top front right hand side of header assembly.
- Thermostat control settings / refrigeration service ports / evaporator pan are also accessible from top.
- Illustration below provides layout of components.

Hot Gas Loop Condensate Pan (and Electric Coil Overflow Pan) Access

Warning! Turn off Main Power Switch Before Providing Maintenance or Service to Unit.

- Both hot loop condensate pan and electric coil overflow pan is accessible from top of unit.
- **Caution! Before accessing pans, turn main power off and allow to cool!**

- To avoid injury, check temperature of pans prior to accessing.
- See **PREVENTIVE MAINTENANCE (TO BE PERFORMED BY TRAINED SERVICE PROVIDERS)** section in this manual for cleaning specifics.
- When done servicing or cleaning, turn main power switch back on.
- Note: See previous page for other models' refrigeration package layout & access instructions.



--- Case Front ---

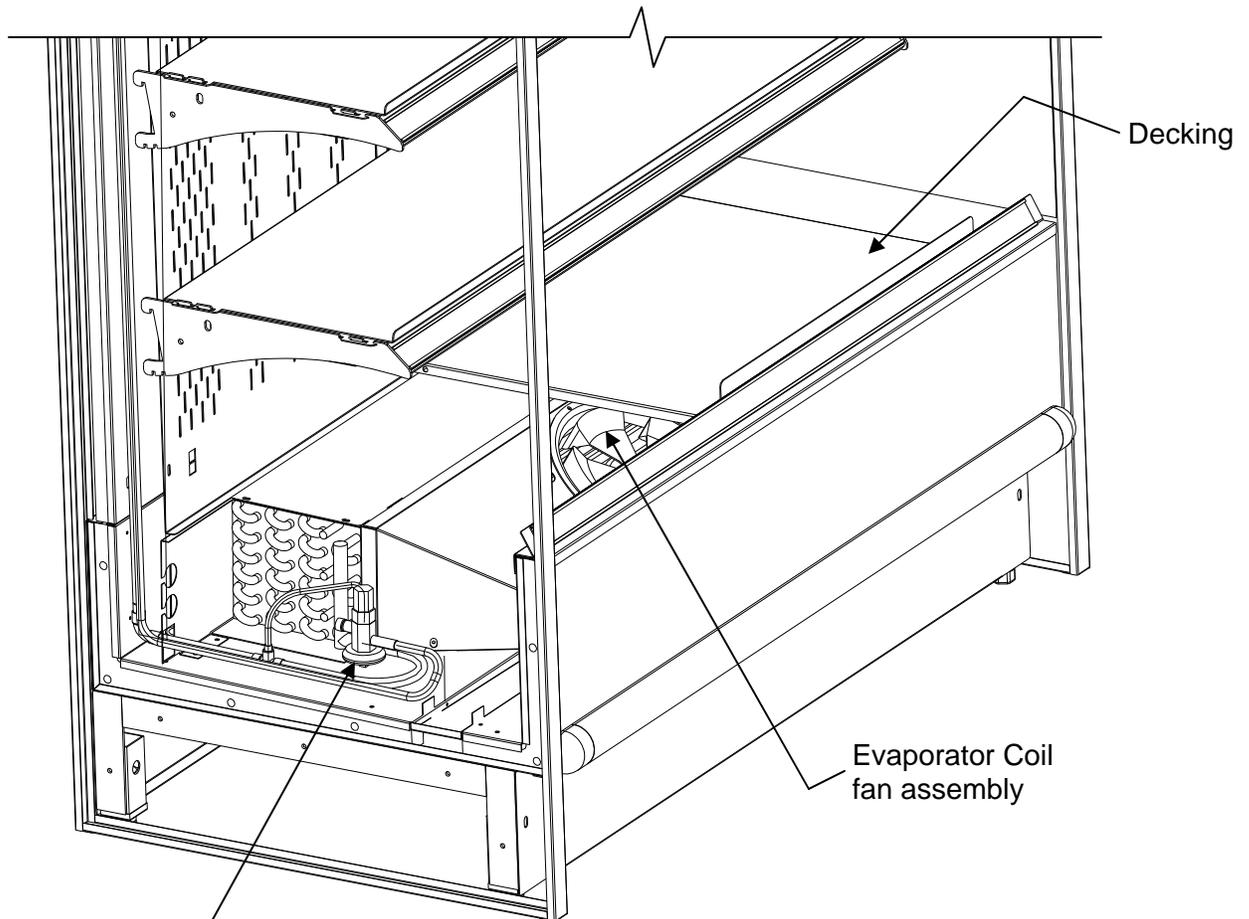
1. Evaporator Coil Fan Discharge

When Main Power Switch is turned on, Refrigeration Assembly will energize (see **CASE START-UP & REFRIGERATION ASSEMBLY ACCESS** section).

- Evaporator Coil fan should turn on. From inside of the case, check for discharge air from honeycomb discharge duct (see next page for honeycomb location), to confirm that the fan is functioning properly.
- When the case is in a start up mode or has been idle for a long period of time, the unit will require 75 minutes of run time to pull-down temperature.

2. TXV Valve

- TXV Valve (at Customer Front-Left of Case).
- Decking must be removed for access.
- See illustration below for location.



View of TXV valve after customer end panel removed (for illustrative purposes only).

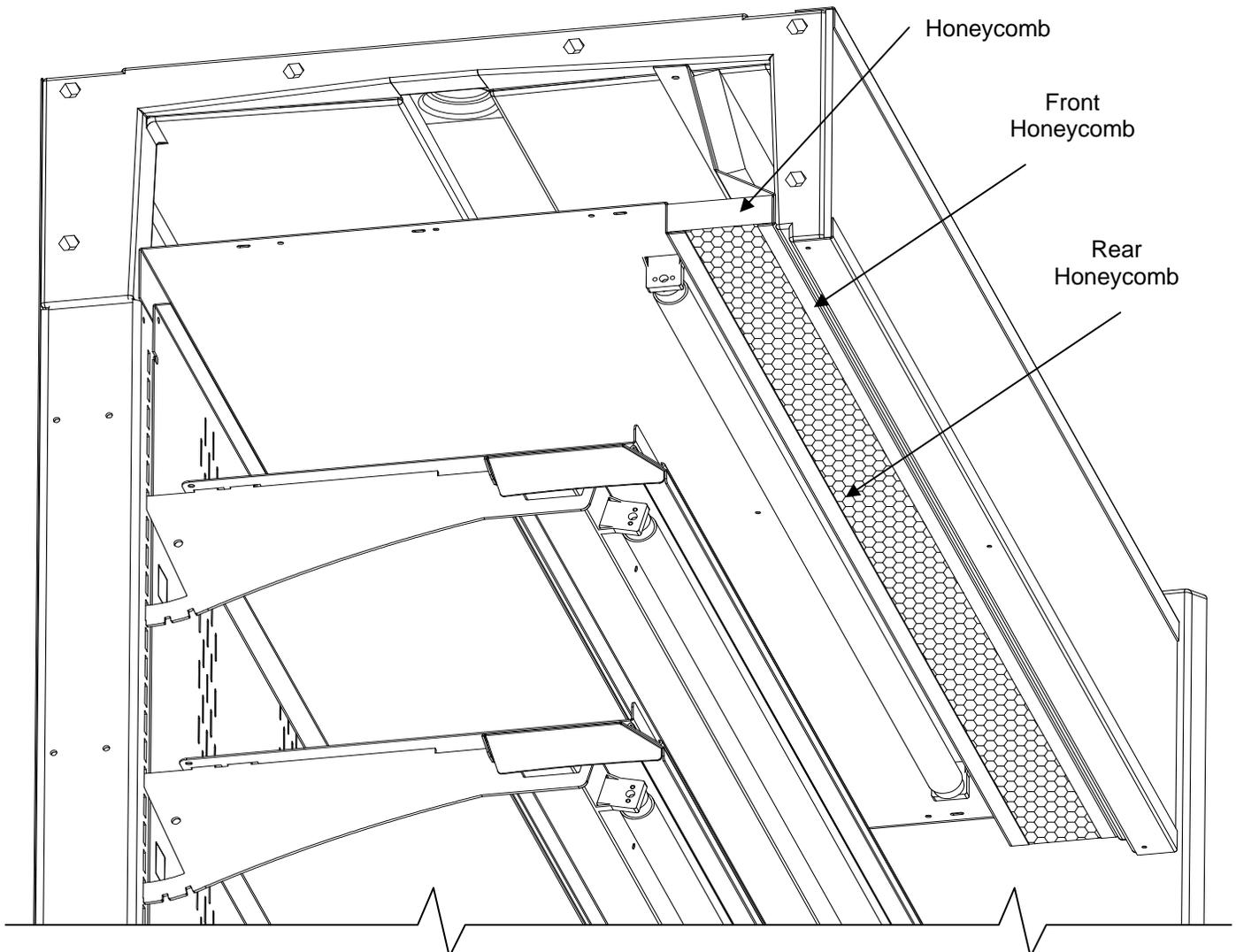
HONEYCOMB AIR DIFFUSER ACCESS / REMOVAL / INSTALLATION

1. Honeycomb Air Diffuser Removal

- Honeycomb is located in discharge air duct.
- Use a device of suitable strength and agility such as a ballpoint pen or long nose pliers.
- Wedge instrument in Honeycomb near the Front Honeycomb Retainer Lip (see illustration below).
- Applying pressure toward case rear, so that Honeycomb will scrunch together; then pry downward and away from the top light and discharge panel.
- Pull honeycomb out fully buy grasping with fingers and pulling downward.

2. Honeycomb Air Diffuser Installation

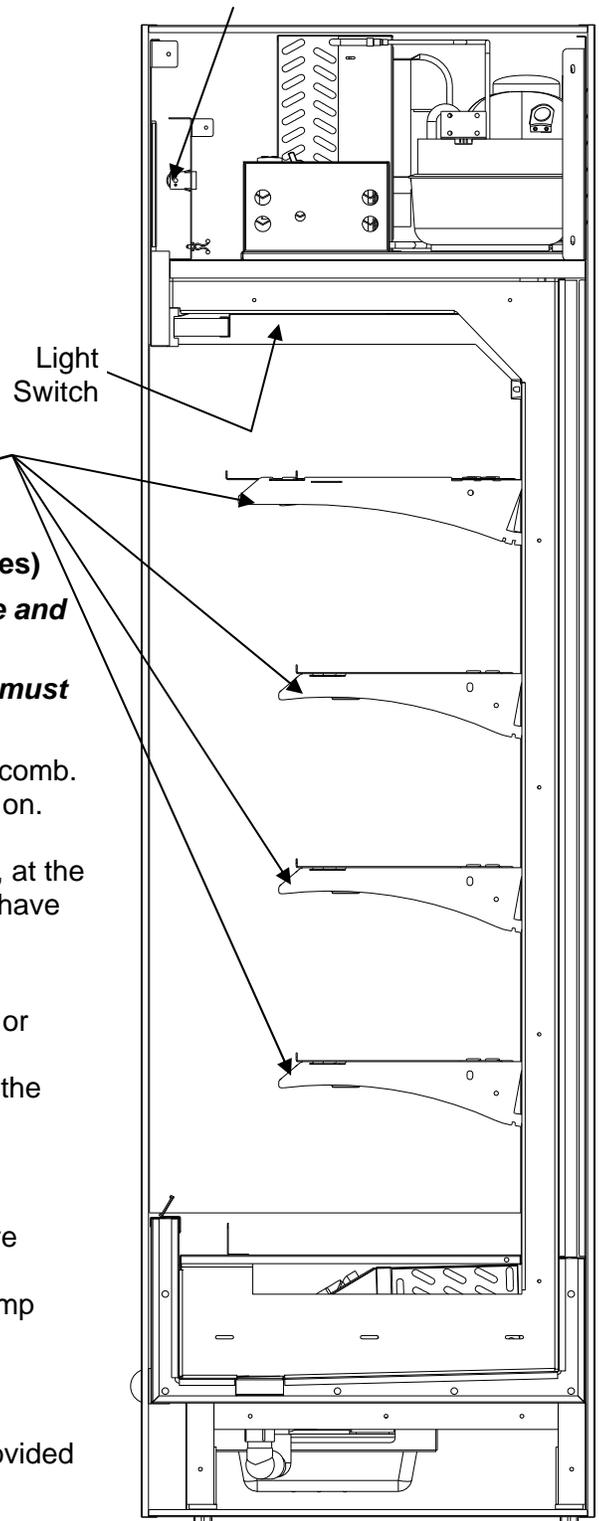
- Insert honeycomb up into Rear Honeycomb Retainer Lip first.
- Apply pressure toward case rear, so that the Honeycomb will 'scrunch' together; then apply pressure to honeycomb, lifting it up past Front Honeycomb Retainer Lip and 'un-scrunch' Honeycomb.
- **Note:** Depending upon model and features, the illustration below may slightly differ from yours.
- **Note:** *Illustration below reflects general outline of sample case and does not reflect any particular model or options.*



LIGHT FIXTURES (INCLUDING OPTIONAL LIGHTS IN HEADER)



Optional: Lights in Headers Are Accessible From Top of Case. Ample Space is Provided For Lamp Removal/Replacement



Light Fixtures (Note: Light Fixtures May Not Be on All Cases)

Warning! Disconnect power before providing maintenance and service to unit.

Caution: Lamps have been treated to resist breakage and must be replaced with similarly treated lamps.

- Note: Light Switch is at underside of header, behind honeycomb. All lights come on at same time when light switch is turned on.

Light fixtures are to be located on underside of shelf assembly, at the top inside of case, and lower front nose of case. Some cases have lights in header. See illustration at right for lamp locations.

Removal of lamp:

- Rotate lamp (1/4-turn) either direction to disengage (upper or lower) pins/contacts from lamp-mounting sockets.
- Remove bulb by applying even pressure from back side at the bulb ends and pulling the remaining contact from sockets.

Installation of lamp:

- Align pins with slot.
- Insert pins into socket by rotating the bulb 1/4-turn to secure either the (upper or lower) pin contacts into the sockets.
- Rotate remaining bulb contacts (1/4-turn) into remaining lamp mounting socket contacts.

Lights in headers:

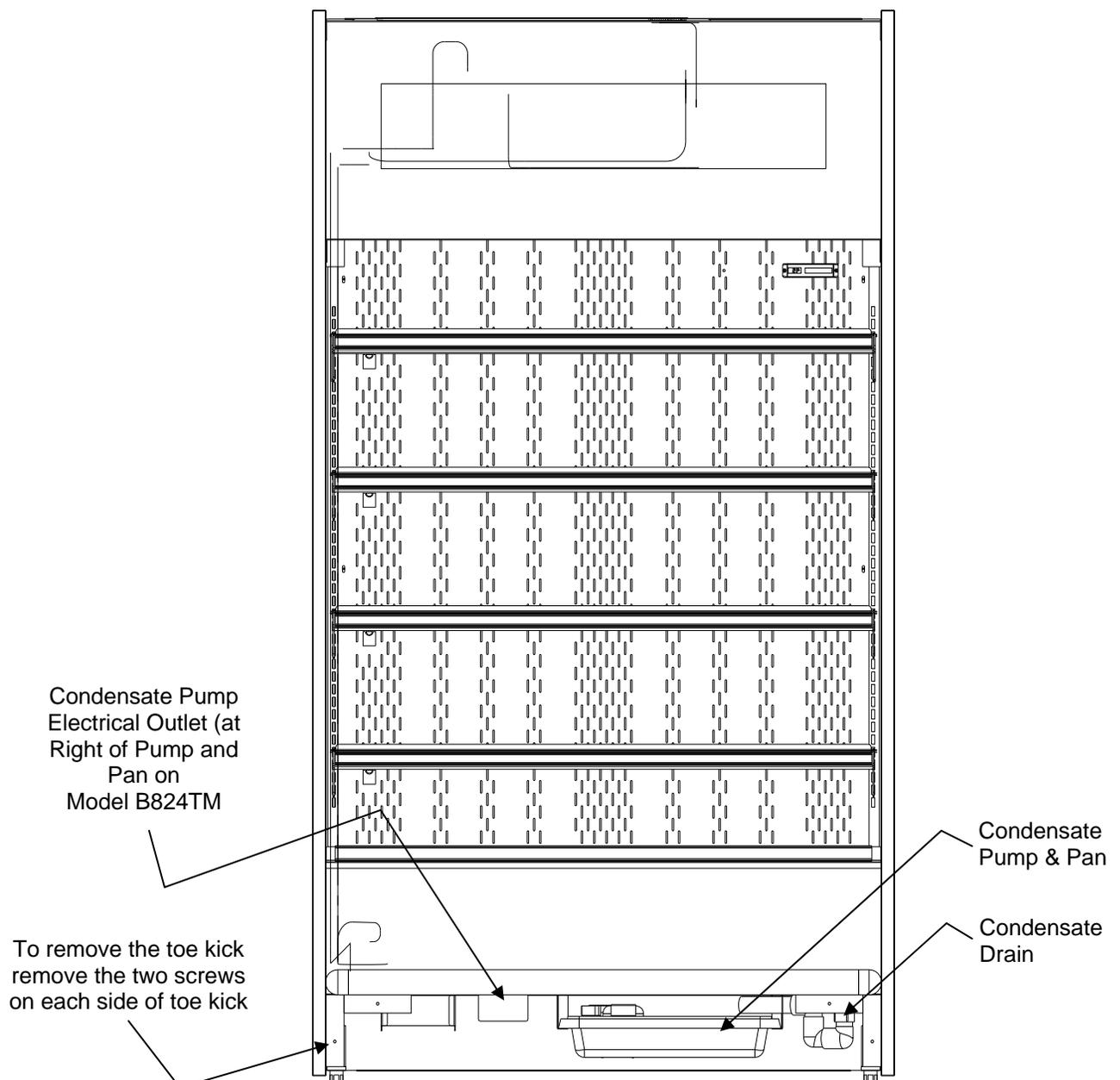
- Lights in headers are optional.
- Lights are accessible from top of case. Ample space is provided for lamp removal and replacement

CONDENSATE PUMP AND PAN ACCESS

Condensate Pump Pan Access

Warning! Disconnect power before providing maintenance and service to unit.

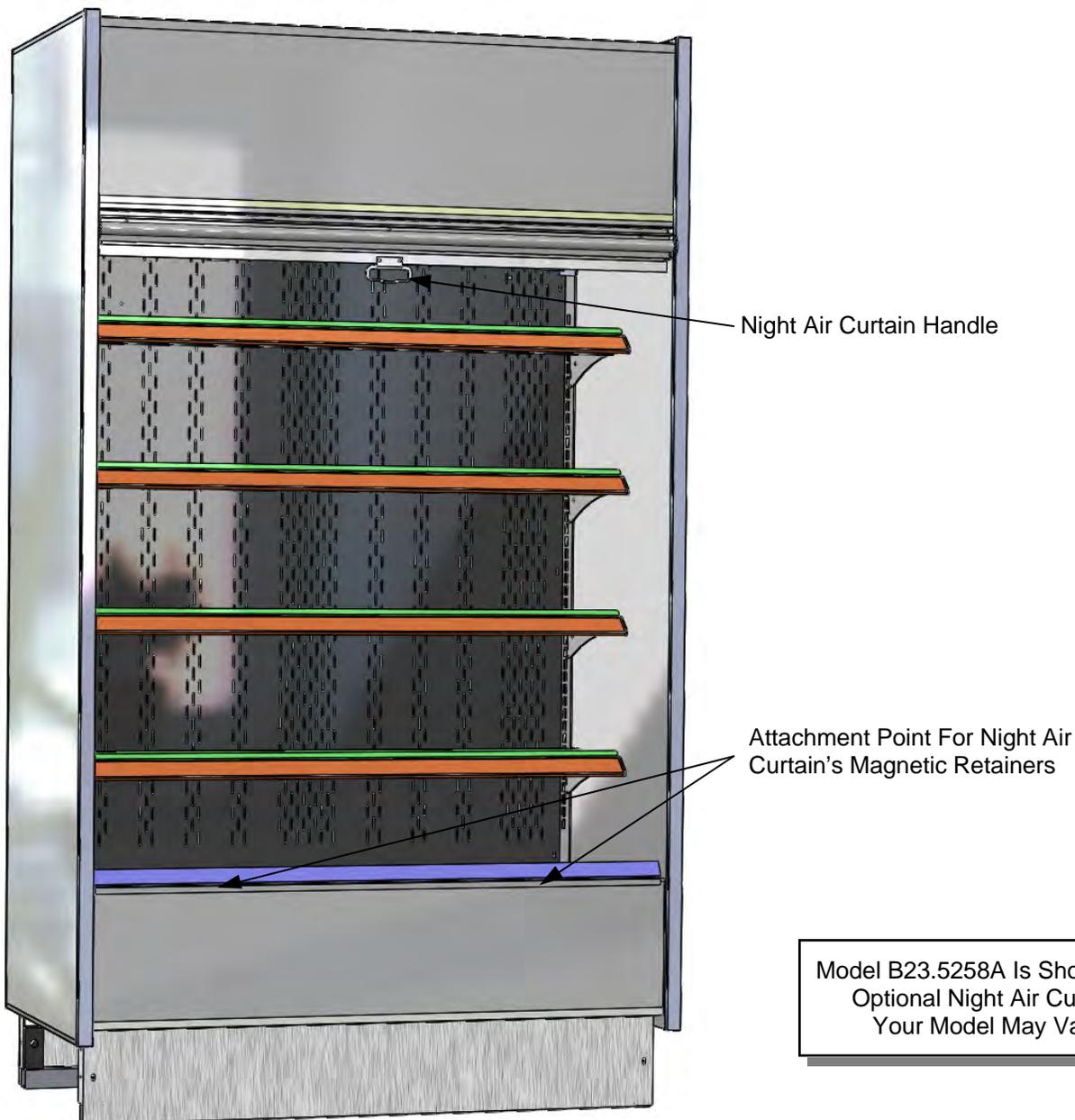
- Remove the two (2) screws holding the toe kick in place. (see illustration below).
- The Condensate Pan is accessible from the bottom of the unit. Unplug the Condensate Pan from its outlet.
- A 1/2" reinforced hose is provided to evacuate condenser water from condensate pump pan to an evaporator pan placed on the top of case.
- Disconnect pump hose from condensate pump Carefully slide out the Condensate Pan from the Condensate Pump cradle.
- When done servicing or cleaning, return and reconnect in reverse order it was removed.



OPTIONAL NIGHT AIR CURTAIN OPERATING INSTRUCTIONS

Optional Night Air Curtain Operating Instructions

1. Use caution when handling Night Air Curtain.
2. Display case may come with Night Curtain already attached. If not, a retrofit kit will be provided. If using SCC-supplied retrofit kit, attach to display case by inserting screws at top-underside of display case.
3. Grasp the handle and pull downward to desired location (see illustration below).
4. Night Air Curtain's Magnets will hold curtain in lowered position (as illustrated below).
5. To return Night Air Curtain to its retracted position, grasp handle, lift up and away from its magnetic attachment plate and carefully wind Night Air Curtain back into roll.
6. **Caution!** Do not allow spring-loaded Night Air Curtain to freely snap back into roll. Doing so can eventually destroy Night Air Curtain's tension and retractability.
7. To entirely detach Night Air Curtain from case, slide Night Air Curtain toward rear of case, freeing it from its 'keyhole' slots. Lift upward and away from case.



GENERAL CLEANING (TO BE PERFORMED BY STORE PERSONNEL)

AREA TO CLEAN	FREQ.	INSTRUCTIONS
Case Exterior	Daily	Acrylic (if Any): Clean with a warm water and mild soap solution and soft cloth. Never use ammonia-based cleaners on acrylic.
	Daily to Weekly	Case Front/Sides/Bumper: Use a mild soap and water solution and a soft cloth.
	Weekly to Monthly	Condenser Coil: Vacuum or brush grille condenser coil at case front (on top of case). Use metal or fiber brush to remove dust and dirt that can collect on condenser coils. Be careful not to damage the fins on the coil. See INSTALLATION section in this manual for instructions on side panel removal.
Case Interior	Daily to Weekly	<p>Shelves / Shelf Supports / Air Return Grilles / Decking / Inside End Panels</p> <ul style="list-style-type: none"> • Wipe off shelf supports, air return grilles and decking with moist cloth. • Shelf supports can be removed for more thorough cleaning. • Air return grilles can be removed for more thorough cleaning. • Decking is NOT to be removed.

TROUBLESHOOTING (TO BE PERFORMED BY STORE PERSONNEL)

CONDITION	TROUBLESHOOTING
Case Is Not Level	See POSITIONING CASE / SHIMMING SUPPORT RAILS / ADJUSTING LEVELERS section in manual for additional information.
Water Is On The Floor	Call service provider.
Fan Emits Excessive Noise	Call service provider.
Case Lights Are Not Working	Check that light switch is in the <i>on</i> position.
	Check that ALL of the light cords and plugs are properly connected. See LIGHT FIXTURES (INCLUDING OPTIONAL LIGHTS IN HEADER) section in this manual for specifics.
	If case lights still do not come on, call service provider.
Case is Not Holding Proper Temperature	If a large amount of warm product was added to the case, it will take time for the temperature to adjust. Product must be pre-chilled before placing in case.
	Check that the case is not in the sun or near a heat or air-conditioning vent. See OVERVIEW / NSF® TYPE / COMPLIANCE / WARNINGS / PRECAUTIONS section in this manual for specifics.
	If case is located near front doors, temperature fluctuation can hinder unit's ability to maintain temperature.
	Check air return grilles (area at front of decking) for obstructions. DO NOT set product on air grilles as this will prevent proper airflow!
	If case still is not holding proper temperature, call service provider.

GENERAL CLEANING (TO BE PERFORMED BY TRAINED SERVICE PROVIDERS ONLY)

WARNING! TURN OFF CASE BEFORE PERFORMING GENERAL CLEANING!

AREA TO CLEAN	FREQUENCY	INSTRUCTIONS
Case Interior	Monthly	<p><u>Evaporator Fan Shroud Area (Under Decking):</u> <i>Caution! Due to rotating fans in area, turn off case and disconnect plug from wall outlet before beginning fan shroud (and surrounding tub area) cleaning!</i> 1) Turn off power. 2) Remove decks from case. 3) Clean fan shroud area (and surrounding tub area) with moist cloth.</p>
	Monthly	<p><u>Pan For Pumping Condensate to Top of Unit:</u> (Located at underside of unit): Remove front toe-kick to access.</p> <ul style="list-style-type: none"> • Check that pump is working correctly. • Check that condensate pan is free of residue, dust or dirt. • If it must be cleaned, slide out from under unit; clean with mild soap and water solution and soft cloth. Rinse. Return to underside of case in reverse order it was removed from case.
	Quarterly	<p><u>Tub & Drain:</u> <i>Caution! Due to rotating fans in area, turn off power to case and disconnect plug from wall outlet before beginning tub & drain cleaning!</i> Vacuum tub under decks. Clean with soap and water solution. Wipe dry with clean cloth. Keep drain free of debris to prevent clogging.</p>

PREVENTIVE MAINTENANCE (TO BE PERFORMED BY TRAINED SERVICE PROVIDERS)

WARNING! TURN OFF CASE BEFORE PERFORMING PREVENTIVE MAINTENANCE!

PREVENTIVE MAINTENANCE	FREQ.	INSTRUCTIONS
Case Exterior	Quarterly	Under Case Cleaning: Whenever accessing condensate pump pan at underside of case, vacuum (or use broom) under the case to remove all dust, debris and dirt that may collect.
	Quarterly	<p>Condensate Pan (or Hot Gas Loop Condensate Pan):</p> <ul style="list-style-type: none"> • <i>Warning! Condensate Pans Are HOT! Disconnect power from case and allow to cool before cleaning!</i> • See CASE STARTUP & REFRIGERATION PACKAGE ACCESS section for in-depth instructions on accessing the condensate pans. • Use a scrub-brush and a de-scaling solution such as CLR® (to prevent corrosion, lime and rust). Follow instructions as to proper dilution, safety precautions and scrubbing method. • If condensate pan can be removed from case (should thorough cleaning require removal), disconnect pan from unit and clean accordingly. Caution! Due to electrical components, do not submerge in water! Reattach to case after cleaning. • Hot gas condensate loop pan (and its accompanying electric coil overflow pan) is not removable from case. After thoroughly cleaning pan with scrub-brush and solution, rinse thoroughly with clean water (using spray bottle) and wipe dry with sponge or paper towel.
Case Interior	Quarterly	<p>Tub, Coil, Drain, Fan Blades, Motors, Brackets:</p> <p><i>Disconnect power from the case before cleaning the Tub, Coil, Fan, Motor and Drain Area!</i></p> <ul style="list-style-type: none"> • Remove Decking, Sub-Deck (if any) and Fan Shroud. • Use vacuum to clean Evaporator Coils. • Clean Tub, Coil and Drain with warm water, clean cloth, brush and mild soap solution. • Remove any debris that may clog drain. • Wipe down Fan Blades, Motors and Brackets with moist cloth. • Replace Decking, Sub-Deck (if any) and Fan Shroud.
	Quarterly	Honeycomb: Check honeycomb air diffuser to determine if it is dirty. If dirty, remove from case. See HONEYCOMB AIR DIFFUSER ACCESS / REMOVAL / INSTALLATION section of this manual for cleaning specifics.

TROUBLESHOOTING (TO BE PERFORMED BY TRAINED SERVICE PROVIDERS ONLY)

CONDITION	TROUBLESHOOTING
Water Is On The Floor	Check that the drain trap is free of debris.
	Check that the drain hose is correctly positioned over evaporator pan.
	Check store conditions. <ul style="list-style-type: none"> • For NSF® Type 1 Conditions (most cases): ambient conditions are to be at 55% max. humidity / 75°F. • For NSF® Type 2 Conditions: ambient conditions are to be at 60% maximum humidity / 80°F.
	Check that the hot gas condensate pan is properly connected.
	Check that evaporator pan is heating properly.
Fan Emits Excessive Noise	Check that the case is aligned, level and plumb.
	Check evaporator fan for cleanliness.
	Unplug/power off fan motors. Check motor shaft for bearing wear.
	Check that fan motors are securely mounted in brackets.
	Verify that fan blades are securely mounted to fan motor.
	Check that nothing is preventing blade rotation.
	Check that the fan shroud is properly secured.
Fans Are Not Working	Check that the MAIN power switch is on.
	Check that fans are plugged in at the fan shroud.
	Check for foreign material obstructing fan performance.
	Check that fan blades freely rotate within fan shrouds
	Check that power is going to fans
	Check that fan wiring is connected on terminal blocks.
Digital Control Display Is Blank.	Check that the MAIN power switch is on.
	Check the circuit breaker box for tripped circuits.
System Is Not Operating	Check that the utility power is on.
	Check that the MAIN power switch is on.
	Check the circuit breaker box for tripped circuits.
Case Lights Are Not Working	Check that light switch is in the <i>on</i> position.
	Check that ALL of the light cords and plugs are properly connected. See LIGHT FIXTURES/LIGHT SWITCH LOCATION section in this manual for specifics.
	Service Technicians Only: Check voltage at ballasts. If voltage is entering but not exiting ballast, ballast is faulty.

TROUBLESHOOTING (TO BE PERFORMED BY TRAINED SERVICE PROVIDERS ONLY), CONTINUED

CONDITION	TROUBLESHOOTING
Control Display Is Flashing	See your case's serial label for your model's specified settings. See SERIAL LABEL LOCATION & INFORMATION LISTED / TECH INFO & SERVICE section in manual for label location, etc.
Case Is Not Holding Temperature	If a large amount of warm product was added to the case, it will take time for the temperature to adjust. Unit needs product to be pre-chilled.
	Temperature changes during defrost mode but will return to normal. Fourth LED will indicate defrost cycle in progress.
	Check that case is not in sun or near a heat or air-conditioning vent.
	If case is located near front doors, temperature fluctuation can hinder unit's ability to maintain temperature.
	Check that condenser coil has been cleaned.
	Check air grilles for obstructions.
	Check sight glass for flashing and/or low charge.
	Check Set Point Temperature; it may be adjusted too high.
Condensing Unit Is Not Operating	Check that the power is turned on.
	Determine if temperature controller settings are properly set. See your case's serial label for your model's specified settings. See SERIAL LABEL LOCATION & INFORMATION LISTED / TECH INFO & SERVICE section in manual for label location, etc.

TROUBLESHOOTING - CONDENSING SYSTEM (BY TRAINED SERVICE PROVIDERS ONLY)

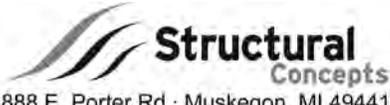
CONDITION	TROUBLESHOOTING
Head Pressure Too High	Check that the condensing coil is not dirty or covered.
	Check that condensing fans are working.
	Check that refrigerant is not overcharged.
	Perform sub-cooling check and verify that no contaminants are in system.
	Check that liquid line filter dryer is not plugged.
	Check that close-offs are intact (around condensing coil) and that air is not recirculate.
	Check that store ambient temperature isn't above maximum allowed. See OVERVIEW / TYPE / COMPLIANCE / WARNINGS / PRECAUTIONS / WIRING / PLUGS section in this manual.
Head Pressure Too Low	Check if sight glass is flashing or showing low charge.
	Check that suction pressure isn't too low.
	Check that compressor reed valves aren't bad. Look for high suction/low head pressure. Perform pump-down.

TROUBLESHOOTING - EVAPORATOR SYSTEM (TRAINED SERVICE PROVIDERS ONLY)

CONDITION	TROUBLESHOOTING
Low Suction Pressure	Check if sight glass is flashing or showing low charge.
	Check that expansion valve (TXV) isn't restricted. Check element charge.
	Check that liquid line or filter isn't restricted. Check that refrigeration lines and/or hoses are not kinked on either high or low sides.
	Check that evaporator fan motors are working.
	Check that superheat is between 6 °F to 8 °F.
	Check that there is no air recirculation around evaporator coil.
	Check that evaporator coil is not iced up.
High Suction Pressure	Check for refrigerant overcharge.
	Check that compressor reed valves aren't bad. Look for high suction/low head pressure. Perform pump down.
	Check that the "cooling load" isn't high. Product must be pre-chilled before placing in refrigerated section of case.
	Check that case is at least <u>15-feet</u> from exterior doors, overhead HVAC vents or any air curtain disruption.
	Check that unit is not exposed to direct sunlight via windows or any other heat source (ovens, fryers, etc.).
	Check that superheat adjustment isn't low.
	Check TXV bulb installation <ul style="list-style-type: none"> a. Poor thermal contact. b. Warm location.

Serial Label Location & Information Listed / Technical Information & Service

- Serial labels are located near the electrical access on your case.
- Serial labels contain electrical, temperature & refrigeration information, as well as regulatory standards to which the case conforms.
- For additional technical information and service, see the *TECHNICAL SERVICE* page in this manual for instructions on contacting Structural Concepts' Technical Service Department.
- See images below for samples of both refrigerated and non-refrigerated serial labels.



888 E. Porter Rd · Muskegon, MI 49441

ENCORE[®] MODEL HV74RSS SCROLL
SERIES SERIAL NO.

FOR PARTS AND SERVICE
CALL 1-800-433-9489

SAMPLE ONLY

  3048256 CONFORMS TO UL STD 471 CONFORMS TO NSF STD 7 CERTIFIED TO CAN/CSA STD C22.2 NO 120	ELECTRICAL RATING REFRIGERANT DESIGN PRESSURE MINIMUM CIRCUIT MAXIMUM OVERCURRENT	120/1/60 24A R404A AMOUNT ?? OZ HIGH 450 LOW 200 30A 30A
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SAMPLE ONLY

Super Heat Temp	8-10°F
BTUH Requirements	9,738 BTUH @ 20° F SST
Defrost	6 defrosts per day, 45° F termination, 45 min. failsafe

SAMPLE ONLY

----- Sample Serial Label For Refrigerated Case -----



888 E. Porter Rd · Muskegon, MI 49441

Addenda[®] PC5682 txtRemote
txtSerialNumber

120 VOLTS 60 HZ SINGLE PHASE 1.84AMP

FOR PARTS OR SERVICE CALL
STRUCTURAL CONCEPTS
AT
1-800-433-9489

SAMPLE ONLY

|||

|||

----- Sample Serial Label For Non-Refrigerated Case -----

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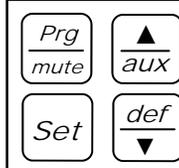
Programming The Instrument

To Modify The Setpoint

Set Press and hold the "SET" key for at least 1 second.

aux **def** 2. Use arrow keys **▲** **▼** on temperature controller to increase (or decrease) the setpoint.

Set 3. Quickly press and release the "SET" key again.



To Modify Defrost, Differential, Other Parameters

Prg/mute **Set** 1. Press & hold "Prg" & "SET" keys together for five (5) seconds; display will flash "0", representing password prompt.

Set 2. Confirm by pressing "SET" key.

aux **def** 3. Press **▲** or **▼** to reach the category to be modified.

Set 4. Press "SET" to modify this selected parameter.

aux **def** 5. Increase or decrease the value using the **▲** or **▼** button respectively.

Set 6. Press the "SET" key to temporarily save the new value and return to the display of the parameter.

Prg/mute 7. Press & hold the "Prg" key for at least 5 seconds to save changes. This action will also mute the audible alarm (buzzer) & deactivate the alarm relay.

How To Change Reading From Fahrenheit (°F) To Celsius (°C)

Prg/mute **Set** 1. Press and hold "Prg" and "SET" keys together for at least 5 seconds; display will show "0" (password prompt).

Set 2. Confirm by pressing "SET" key.

aux **def** 3. Press **▲** or **▼** until reaching the parameter "/ 5".

Set 4. Press "SET" to modify this selected parameter.

aux **def** 5. Press **▲** or **▼** to change value to desired setting: "0" for Celsius (°C) or "1" for Fahrenheit (°F).

Set 6. Press "SET" key to temporarily save the new value and return to the display of the parameter.

Prg/mute 7. Press & hold "Prg" key for at least 5 seconds to save changes. **Note! All values will automatically convert to new scale. No conversion is required.**

Warning! Save Your Parameter Settings!

1. To store the new parameter values, PRESS and HOLD the "Prg" key for at least 5 seconds.
2. All modifications made to parameters will be lost if you do NOT press a button within 60 seconds. Should this "timeout" occur, normal operational settings (prior to modifications being made) will resume.
3. If the instrument is switched off before pressing the "Prg" key, all modifications to parameters will be lost.

def **To Activate Manual Defrost**
Press and hold "def" key for at least 5 seconds.

aux **To Activate / Deactivate Auxiliary Output**
Press and hold the "aux" key for 1 second.

Prg/mute **aux** **To Reset Any Alarms With Manual Reset**
Press and hold the "Prg" and "aux" key for at least 1 second.

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User Interface - Display

ICON	FUNCTION	DESCRIPTION	Normal operation			Start up
			ON	OFF	BLINK	
	COMPRESSOR	ON when the compressor starts. Flashes when the activation of the compressor is delayed by safety times.	Compressor on	Compressor off	awaiting activation	
	FAN	ON when the fan starts. Flashes when the activation of the fan is prevented due to external disabling or procedures in progress.	Fan on	Fan off	awaiting activation	
	DEFROST	ON when the defrost is activated. Flashes when the activation of the defrost is prevented due to external disabling or procedures in progress.	Defrost in progress	Defrost not in progress	awaiting activation	
	AUX	Flashes if the anti-sweat heater function is active, ON when the auxiliary output (1 and/or 2) selected as AUX (or LIGHT in firmware version 3.6) is activated.	AUX auxiliary output active (version 3.6 light auxiliary output active)	AUX auxiliary output not active	Anti-sweat heater function active	
	ALARM	ON following pre-activation of the delayed external digital input alarm. Flashes in the event of alarms during normal operation (e.g. high/low temperature) or in the event of alarms from an immediate or delayed external digital input.	Delayed external alarm (before the time 'A7' elapses)	No alarm present	Alarms in norm. operation (e.g. High/low temperature) or immediate or delayed alarm from external digital input	
	CLOCK	ON if at least one timed defrost has been set. At start-up, comes ON for a few seconds to indicate that the Real Time Clock is fitted.	If at least 1 timed defrost event has been set	No timed defrost event set	Alarm clock	ON if real-time clock present
	LIGHT	Flashes if the anti-sweat heater function is active, ON when the auxiliary output (1 and/or 2) selected as LIGHT is activated (in firmware version 3.6 it does not flash in anti-sweat heater mode and comes on when the dead band output is active).	Light auxiliary output on (version 3.6 dead band auxiliary output active)	Light auxiliary output off	Anti-sweat heater function active (version 3.6 does not flash in anti-sweat heater mode)	
	SERVICE	Flashes in the event of malfunctions, for example E2PROM errors or probe faults.		No malfunction	Malfunction (e.g. E2PROM error or probe fault). Contact service	
	CONTINUOUS CYCLE	ON when the CONTINUOUS CYCLE function is activated. Flashes if the activation of the function is prevented due to external disabling or procedures in progress (E.g.: minimum compressor OFF time).	CONTINUOUS CYCLE operation activated	CONTINUOUS CYCLE function not activated	CONTINUOUS CYCLE operation requested	

Summary Table of Alarm and Signals: Display, Buzzer and Relay

Code	Icon on the display	Alarm relay	Buzzer	Reset	Description
rE	flashing	on	on	automatic	virtual control probe fault
E0	flashing	off	off	automatic	room probe S1 fault
E1	flashing	off	off	automatic	defrost probe S2 fault
E2	flashing	off	off	automatic	probe S3 fault
E3	flashing	off	off	automatic	probe S4 fault
E4	flashing	off	off	automatic	probe S5 fault
	No	off	off	automatic	probe not enabled
LO	flashing	on	on	automatic	low temperature alarm
HI	flashing	on	on	automatic	high temperature alarm
AFr	flashing	on	on	manual	antifreeze alarm
IA	flashing	on	on	automatic	immediate alarm from external contact
dA	flashing	on	on	automatic	delayed alarm from external contact
dEF	on	off	off	automatic	defrost running
Ed1	No	off	off	automatic/manual	defrost on evaporator 1 ended by timeout
Ed2	No	off	off	automatic/manual	defrost on evaporator 2 ended by timeout
Pd	flashing	on	on	automatic/manual	maximum pump down time alarm
LP	flashing	on	on	automatic/manual	low pressure alarm
AtS	flashing	on	on	automatic/manual	autostart in pump down
cht	No	off	off	automatic/manual	high condenser temperature pre-alarm
CHT	flashing	on	on	manual	high condenser temperature alarm
dor	flashing	on	on	automatic	door open too long alarm
EE	flashing	off	off	automatic	E2prom error, unit parameters
EF	flashing	off	off	automatic	E2prom error, operating parameters
ccb	Signal				start continuous cycle request
ccE	Signal				end continuous cycle request
dFb	Signal				start defrost call
dFE	Signal				end defrost call
On	Signal				switch ON
off	Signal				switch OFF
rES	Signal				reset alarms w/manual reset / reset HACCP alarms / reset temp. monitoring

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Summary Table of Operating Parameters

CODE	PARAMETER	UOM*	TYPE	MINIMUM	MAXIMUM	DEFAULT
/5	Select Celsius (°C) or Fahrenheit (°F)	flag	C	0	1	For Case Specific Defaults See Serial Label Located Near Electrical Access On Your Case. For Additional Technical Information Call Structural Concepts Technical Service Dept. at 1(800) 433.9489
/c1	Calibration of probe 1	°C/°F	C	-20	20	
/c2	Calibration of probe 2	°C/°F	C	-20	20	
St	Temperature set point	°C/°F	F	r2	r1	
rd	Control delta	°C/°F	F	20	0.1	
dl	Interval between defrosts	hours	F	0	250	
dt1	End defrost temperature, evaporator	°C/°F	F	-50	200	
dP1	Maximum defrost duration, evaporator	min	F	1	250	
d6	Display on hold during defrost	-	C	0	2	
dd	Dripping time after defrost	min	F	0	15	
d/1	Display of defrost probe 1	°C/°F	F	-	-	

* Unit Of Measure

STRUCTURAL CONCEPTS CORPORATION TECHNICAL SERVICE
PHONE NUMBER: 1.800.433.9490 or For Your Master Service Agent See
WWW.STRUCTURALCONCEPTS.COM/Contact/Master_Service_Agents.asp

LIMITED WARRANTY

All sales by Structural Concepts Corporation (SCC) are subject to the following limited warranty. "Goods" refers to the product or products being sold by SCC.

Warranty Scope: Warranty is for equipment sold in the United States, Canada, Mexico and Puerto Rico. Equipment sold elsewhere may carry modified warranty.

Warranty; Remedies; Limitations. The limit of liability of SCC toward the exchange cost of the original compressor motor (and/or any other components) is one year parts and labor. If any Goods are found to be of faulty material or workmanship within one year of the original F.O.B. unit shipment, SCC will, at its option (after inspection by an authorized representative), replace or pay the reasonable cost of replacement of the faulty Goods. If warranty claim is not made within this one year time period, SCC is not bound to warrant Goods. A motor-compressor (and/or any other components) replaced during the warranty shall not exceed manufacturer's current established wholesaler's exchange price. If replacement motor-compressor (and/or other components) is available via storage facility, parts truck, etc., SCC mandates that readily accessible replacement components be used toward repair of Goods; in such instances, SCC will replace such equipment (at its own expense) after confirmation of its use/placement on defective unit. SCC shall not be charged an additional fee, up-charge or expense for such replacement Goods. If SCC is unable to repair or replace the defective Goods, SCC shall issue a credit to the Purchaser for full or partial purchase price, as SCC shall determine. The replacement or payment in the manner described above shall be the sole and exclusive remedy to Purchaser for a breach of this warranty. If any Goods are defective or fail to conform to this warranty, SCC will furnish instructions for their disposition. No Goods shall be returned to SCC without its prior consent.

SCC's liability for any defect in the Goods shall not exceed the purchase price of the Goods. SCC SHALL HAVE NO LIABILITY TO PURCHASE FOR CONSEQUENTIAL DAMAGES OF ANY KIND WHATSOEVER, INCLUDING, BUT NOT LIMITED TO, PERSONAL INJURY, PROPERTY DAMAGE, LOST PROFITS, OR OTHER ECONOMIC INJURY DUE TO ANY DEFECT IN THE GOODS OR ANY BREACH OF SCC, SCC SHALL NOT BE LIABLE TO THE PURCHASER IN TORT FOR ANY NEGLIGENT DESIGN OR MANUFACTURE OF THE GOODS, OR FOR THE OMISSION OF ANY WARNING THEREFROM.

SCC shall have no obligation or liability under this warranty for claims arising from any other party's (including Purchaser's) negligence or misuse of the Goods or environmental conditions. This warranty does not apply to any claim or damage arising from or caused by improper storage, handling, installation, maintenance, or from fire, flood, accidents, structural defects, building settlement or movement, acts of God, or other causes beyond SCC's control.

Except as expressly stated herein, SCC makes no warranty, express, implied, statutory or otherwise as to any parts or goods not manufactured by SCC. SCC shall warrant such parts or Goods only (I) against such defects, (II) for such periods of time, and (III) with such remedies, as are expressly warranted by the manufacturer of such parts of Goods. Notwithstanding the foregoing, any warranty with respect to such parts of Goods and any remedies available as a result of a breach thereof shall be subject to all of the procedures, limitations, and exclusions set forth herein.

THE WARRANTIES HEREIN ARE IN LIEU OF ALL WARRANTIES, EXPRESS, IMPLIED, STATUTORY, OR OTHERWISE. IN PARTICULAR, SCC MAKES NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

No representative, agent or dealer of SCC has authority to modify, expand, or extend this Warranty, to waive any of the limitations or exclusions, or to make any different or additional warranties with respect to Goods.

Period of Limitations. No claim, suit or other proceeding may be brought by Purchaser for any breach of the foregoing warranty or this Agreement by SCC or in any way arising out of this Agreement or relating to the Goods after one year from the date of the breach. In the interpretation of this limitation on action for a breach by SCC, it is expressly agreed that there are no warranties of future performance of the goods that would extend that period of limitation herein contained for bringing an action.

Indemnifications. Purchaser agrees to indemnify, hold harmless, and defend SCC if so requested, from any and all liabilities, as defined herein, suffered, or incurred by SCC as a result of, or in connection with, any act, omission, or use of the Goods by Purchaser, its employees or customers, or any breach of this Agreement by Purchaser. Liabilities shall include all costs, claims, damages, judgments, and expenses (including reasonable attorney fees and costs).

Remedies of SCC. SCC's rights and remedies shall be cumulative and may be exercised from time to time. In a proceeding or action relating to the breach of this Agreement by Purchaser, Purchaser shall reimburse SCC for reasonable costs and attorney's fees incurred by SCC. No waiver by SCC of any breach of Purchaser shall be effective unless in writing nor operate as a waiver of any other breach of the same term thereafter. SCC shall not lose any right because it has not exercised it in the past.

Applicable Law. This Agreement is made in Michigan and shall be governed by and interpreted according to Michigan law. Any lawsuit arising out of this Agreement or the Goods may be handled by a federal or state court whose district includes Muskegon County, Michigan, and Purchaser consents that such court shall have personal jurisdiction over Purchaser.

Miscellaneous. If any provision of this Agreement is found to be invalid or unenforceable under any law, the provision shall be ineffective to that extent and for the duration of the illegality, but the remaining provisions shall be unaffected. Purchaser shall not assign any of its rights nor delegate any of this obligations under this Agreement without prior written of SCC. This Agreement shall be binding upon and inure to the benefit of SCC and Purchaser and each of their legal representatives, successors and assigns.

SCC warrants its products to be free of defects in materials and workmanship under normal use and service for a period of one (1) year from the date of delivery.

This warranty is extended only to the original purchaser for use of the Goods. It does not cover normal wear parts such as plastic tongs, tong holders, tong cables, bag holders, or acrylic dividers.

General Conditions. All service labor and/or parts charges are subject to approval by SCC. Contact the Customer Service Department in writing or call 231-798-8888.

All claims must contain the following information: (1) model & serial code number of equipment; (2) the date and place of installation; (3) the name and address of the agency which performed the installation; (4) the date of the equipment failure; and (5) a complete description of the equipment failure and all circumstances relating to that failure.

Once the claim has been determined to be a true warranty claim by SCC's Customer Service Department, the following procedure will be taken: (1) replacement parts will be sent at no charge from SCC on a freight prepaid basis; (2) reimbursement for service labor will be paid if the following conditions have been met - (a) prior approval of service agency was awarded from the Customer Service Department; and (b) an itemized statement of all labor charges incurred is received by the Customer Service Department. The cost of the service labor reimbursement will be based on straight time rates and reasonable time for the repair of the defect.

If problems occur with any compressor, notify SCC's Customer Service Department immediately. Any attempt to repair or alter the unit without prior consent from the Customer Service Department will render any warranty claim null and void. This warranty and protection plan does not apply to any condensing unit or any part thereof which has been subject to accident, negligence, misuse, or abuse, or which has not been operated in accordance with the manufacturer's recommendations or if the serial number of the unit has been altered, defaced, or removed.

One Year Limit of Liability. After SCC's one-year parts and labor warranty on the original F.O.B. unit has expired, SCC is not liable for either the equipment or labor costs of repairing or replacing the motor compressor, nor any other components that were included in the original F.O.B. unit.