READ AND SAVE THESE INSTRUCTIONS

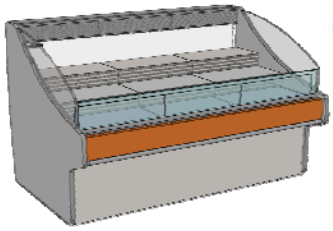
G-SERIES

INSTALLATION & OPERATING MANUAL

PN 5-7277

SELF-SERVICE REFRIGERATED SINGLE DECK MERCHANDISERS - LOW CAPACITY

GLDSS10R.5240



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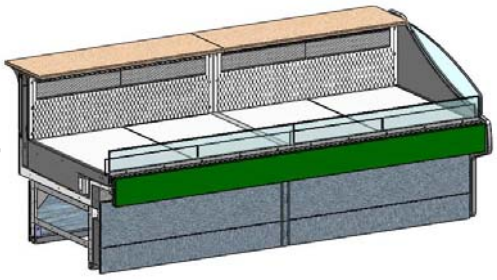

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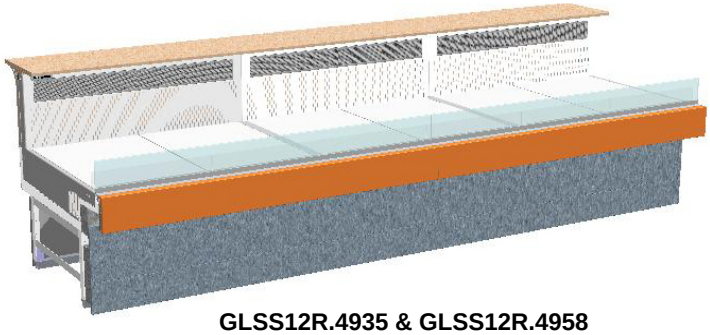

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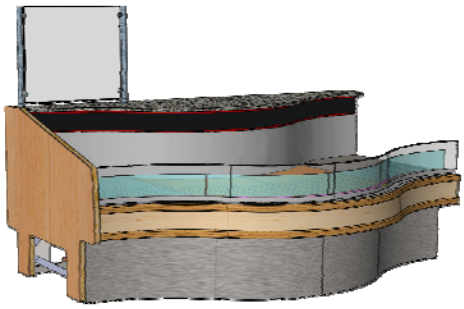

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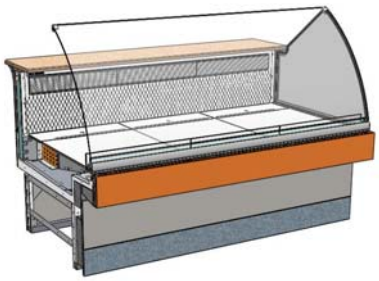
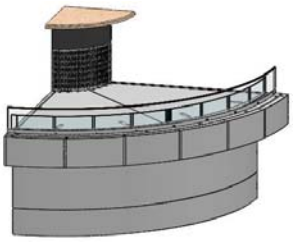
GLDSSX239R



GLSS6R.4957 (Service Case)



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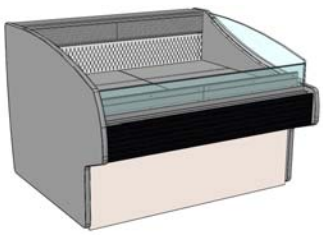

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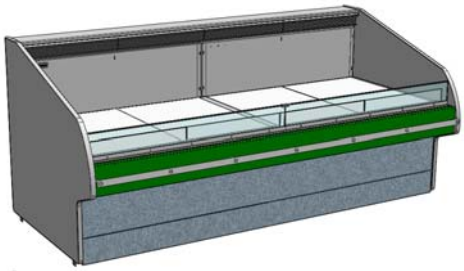

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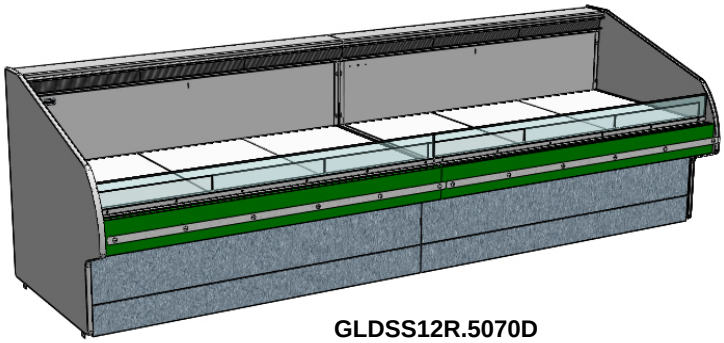

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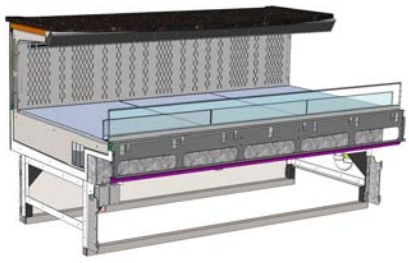

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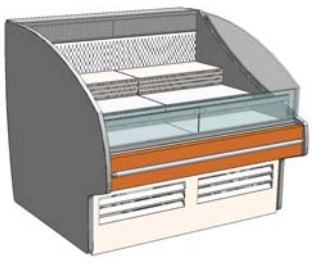

GLDSS443R

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Note: See next page for a complete list of models represented by this manual.

TABLE OF CONTENTS / MODEL APPLICABILITY

This Operating Manual is Applicable To The Following G-Series Self-Service Refrigerated Single Deck Merchandiser Models:

GLDSSN2R GLDSSN4R GLDSSN9R GLDSS439R GLDSS443R GLDSS443R.5951 GLDSS639R GLDSS643R GLDSS839R GLDSS9036RG.5655 GLDSS1039R GLDSS1043R GLDSS1043R.5951D GLDSS1239R GLDSS4R GLDSS4R.5070 GLDSS4R.5322B GLDSS4R.5454 GLDSS6R GLSS6R.4933 GLSS6R.4957 GLDSS6R.5069 GLDSS6R.5070 GLDSS6R.5179 GLDSS6R.5238 GLDSS6R.5322 GLDSS6R.5454A GLDSS8R GLDSS8R.5070B GLDSS8R.5178 GLDSS8R.5245 GLDSS8R.5322A GLDSS8R.5454B GLDSS8R.5454SB GLDSS12R.5070D GLDSS12R.5375 GLDSS12R.5454D GLDSS843R GLDSS843R.5440 GLDSS1243R GLDSSN943R.5951H GLDSSX2R GLDSSX4R GLDSSX9R GLDSSX9R.5239 GLDSSX9R.5323 GLSS8R.4960 GLDSS10R.5454C GLSS12R.4935 GLSS12R.4958 GLDSS12R.5454D GLDSSX239R GLSSX9R.4934 GLSSX9R.4959 GLSSX9R.5177 GLDSSX9R.5239 GLDSSX9R.5454AA GLDSSX943R GLDSSX940R.5570 GMDS6R.5241 GMDS10R.5243 GMDS10R.5255 SO96R.5440

OVERVIEW

- These Structural Concepts merchandisers are designed to merchandise packaged products at 41 °F (5 °C) or less product temperatures (unless custom cases with wire rack shelving).
- Products must be pre-chilled to 41 °F (5 °C) or less prior to being placed in merchandiser.
- Cases should be installed and operated according to this operating manual's instructions to ensure proper performance.
- Improper use will void warranty.

TYPE 1 vs. TYPE 2 CONDITIONS

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

- For Type 1 Conditions (most cases): ambient conditions are to be at 55% maximum humidity and maximum temperatures of 75 °F (24 °C).
- Type 2 Conditions: ambient conditions are to be at 60% maximum humidity and maximum temperatures of 80 °F (27 °C).
- If unsure if unit is Type 1 or 2, 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

- This page contains important warnings to prevent injury or death.
- Please read carefully!

PRECAUTIONS and WIRING DIAGRAMS

- See next page for ***PRECAUTIONS*** and ***WIRING DIAGRAM*** information.

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

Condensate Pan is Hot!
Disconnect and allow to cool before cleaning or removing from case.

PRECAUTIONS

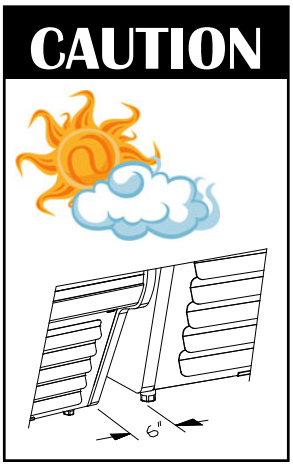
- Following are important precautions to prevent damage to unit or merchandise.
- Please read carefully!
- See previous page for specifics on ***OVERVIEW, CONDITION TYPE, COMPLIANCE*** and ***WARNINGS***.

WIRING DIAGRAM

- 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.

CAUTION! GFCI BREAKER 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.

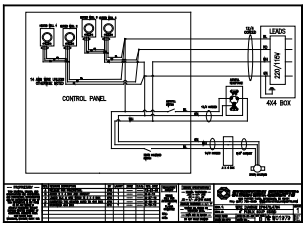


CAUTION! ADVERSE CONDITIONS / SPACING ISSUES

- **Performance issues caused by adverse conditions are NOT covered by warranty.**
- **End panels must be tightly joined or 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).**

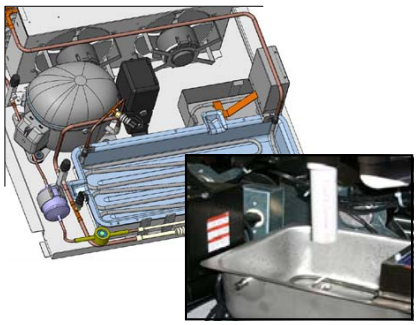
CAUTION! POWER CORD AND PLUG MAINTENANCE

Risk of electric shock. If cord or plug becomes damaged, replace only with cord and plug of same type.



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.**



CAUTION! CHECK CONDENSATE PAN POSITION & PLUG

Water on flooring can cause extensive damage!

Before powering up unit, check and confirm the following:

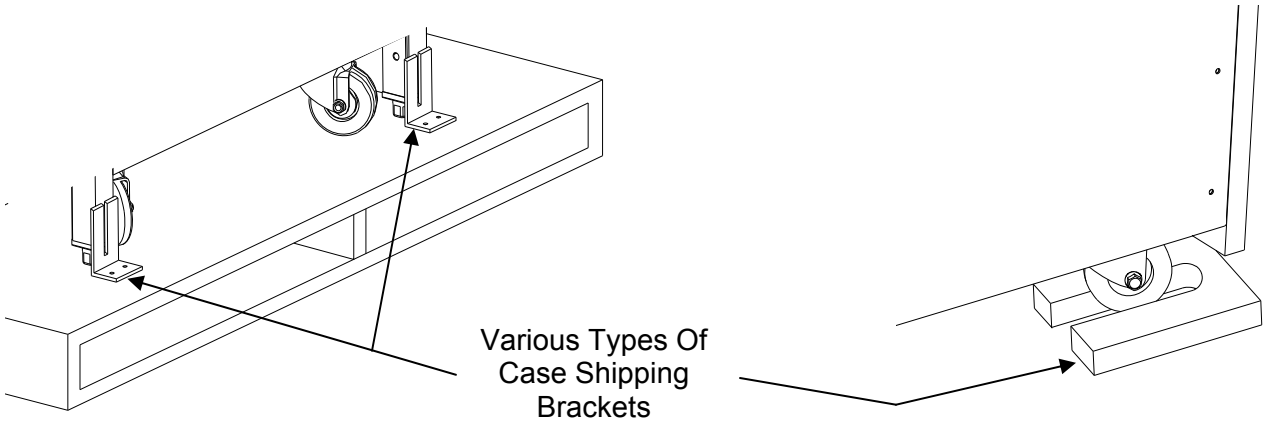
- **Condensate pan must be DIRECTLY UNDER condensate drain.**
- **Condensate pan plug must be securely plugged into receptacle.**
- **Overflow pan must have plug connected to its box. Units with optional Clean Sweep™ MUST HAVE 2 plugs connected.**

CASE REMOVAL FROM SKID (CASTERS, LEVELERS OR FRAME SUPPORT RAILS)

1. Removing Case Shipping Brackets That Are Attached To Skid

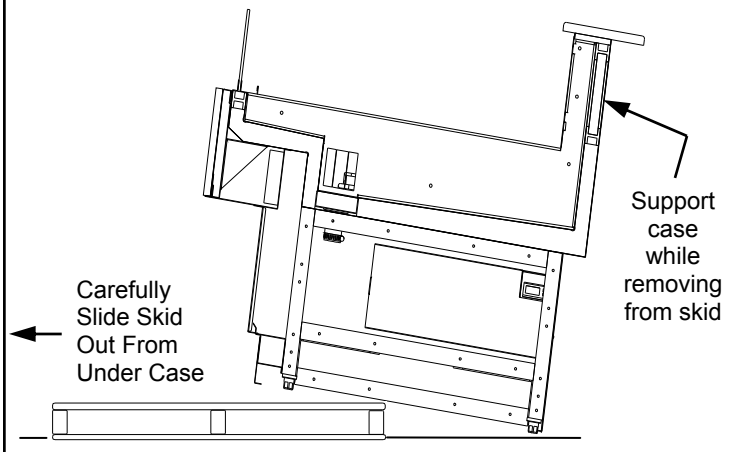
- Remove screws holding Case Shipping Brackets to skid.
- Remove Case Shipping Brackets from Skid.
- See illustrations below.
- Note: Shipping Brackets will vary in size, shape, material and location depending upon case type and model.

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



2. Remove Case (With Levelers or Frame Support Rails) From Skid

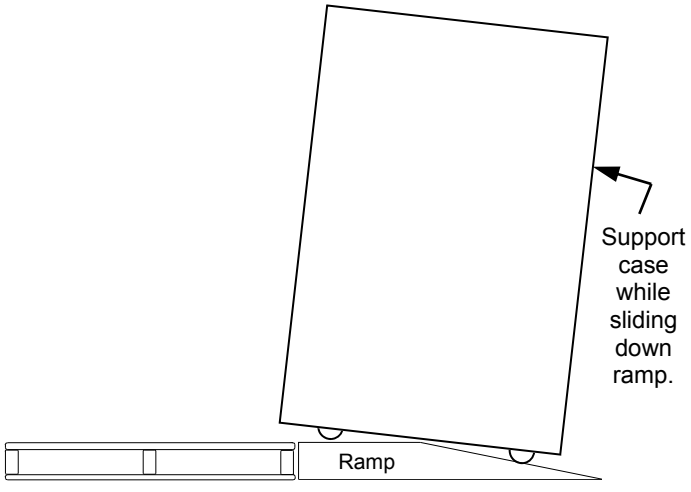
- To prevent damage, support case while sliding it toward edge of skid.
- When case is at edge of skid, carefully lower to floor so that two levelers (or one frame support rail) rests on floor.
- Carefully slide skid out from under case.
- After case is off skid, place into position.
- *Note: Illustration below reflects general outline of sample case and does not reflect any particular model or options).*



3. Remove Case (With Casters) From Skid

A. Place ramp up against skid (to allow case to smoothly slide off from skid).
B. Maintain support of case at all times or center of gravity may cause case to fall.
C. Unlock Casters. Slide unit to rear of skid. Slide down ramp and off from skid.

- *Note: Illustrations reflect general outline of sample case and may not reflect your particular model or options).*



INSTALLATION: POSITIONING / ALIGNING / FRAME SUPPORT RAILS / LEVELERS

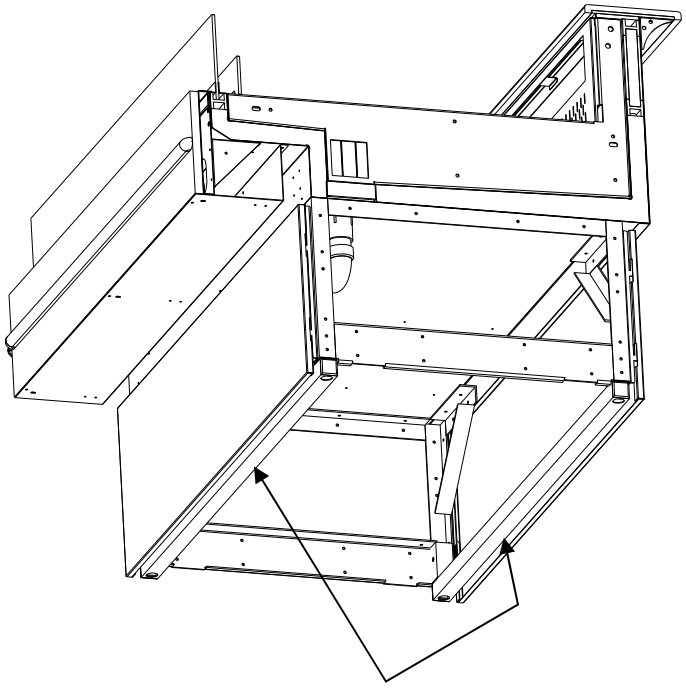
Note: Units shown may not depict an exact representation of your particular unit being installed.

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.
- This may require the repositioning of the case you are installing or the already positioned case.

2. Cases With Frame Support Rails: Shim

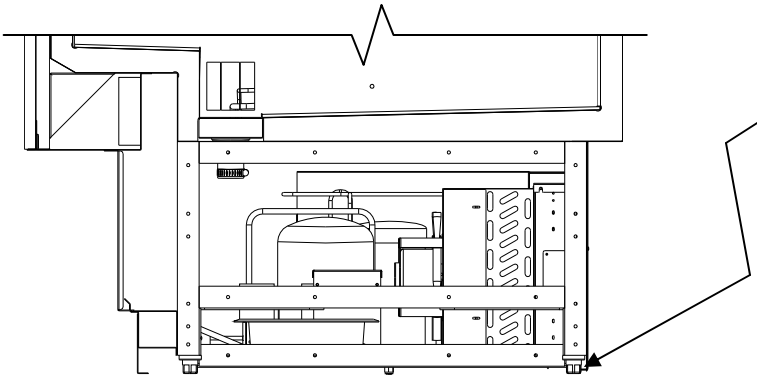
- Illustration at top right shows case with frame support rails.
- Shims will be provided with all cases that have frame support rails.
- Use shims to level case.
- ***Note: After case is in position, it must be sealed to floor to prevent entry or leakage of liquid or moisture.***

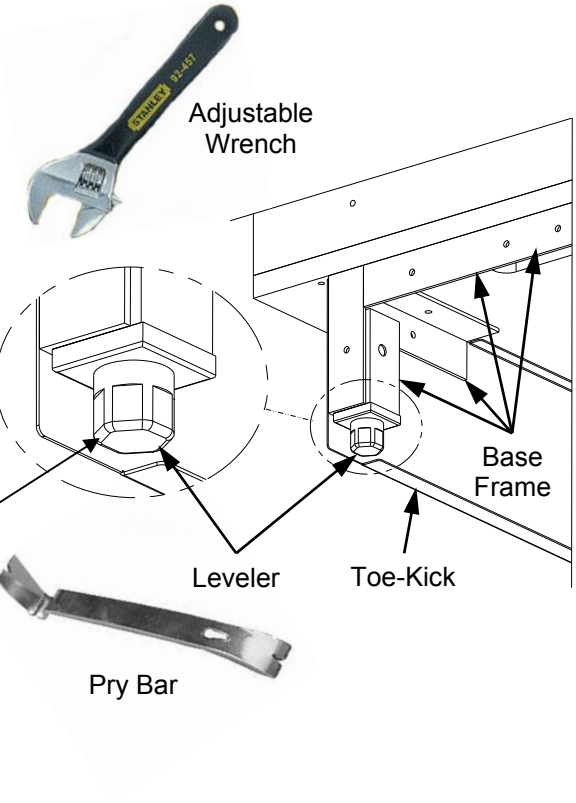


Frame Support Rails

3. Cases With Levelers: Adjust Levelers

- After case is in position, adjust case so it is level and plumb (see illustration 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 as it may chip.
- Use Pry Bar ONLY on Base Frame to avoid damaging case.
- See illustration and photos below and at lower right.



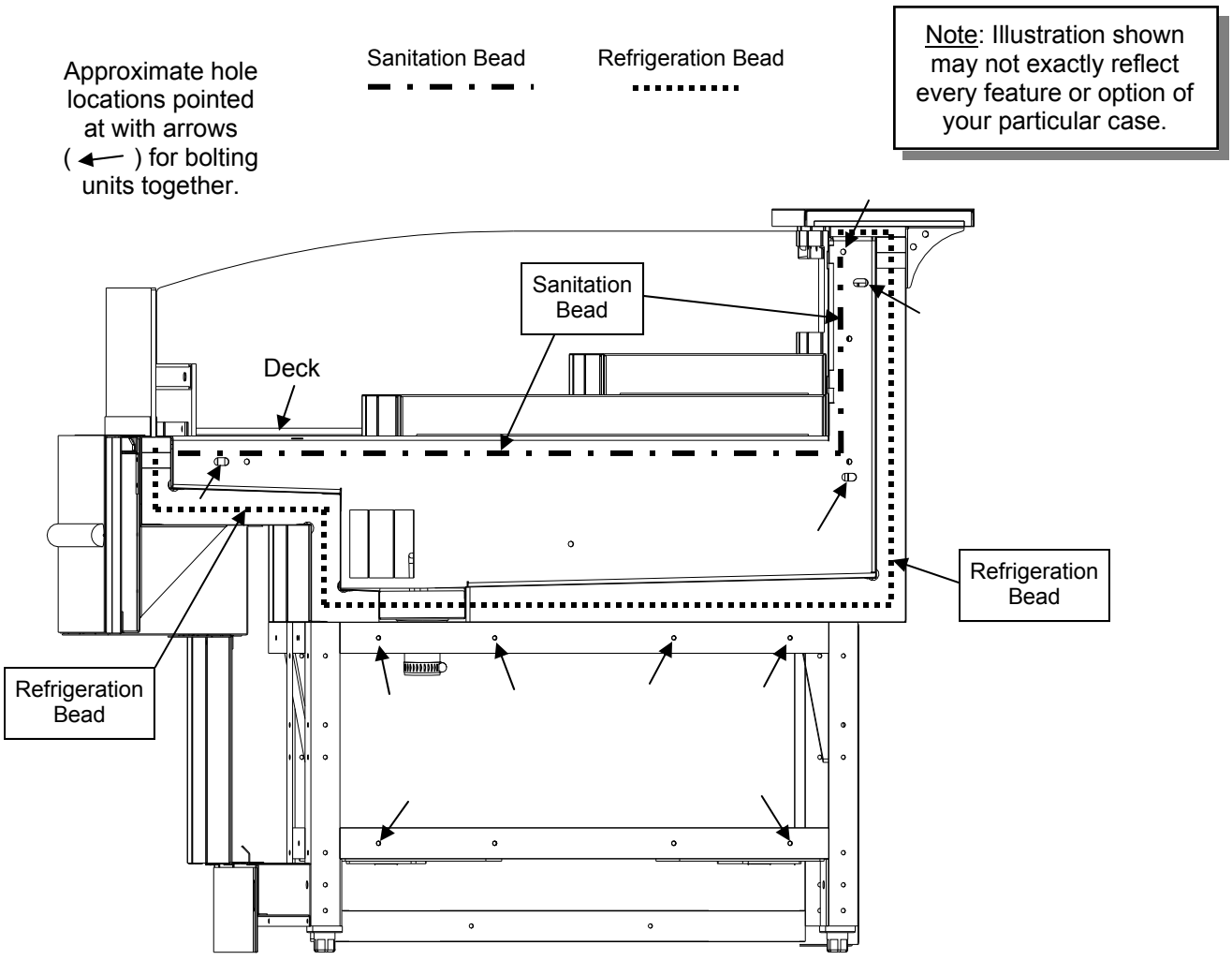


4. Bolting & Caulking Units Together

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

Follow these steps to assure a secure, level lineup.

A. Begin all lineups leveling from highest point of floor.
B. After the 'first' case is level, apply industrial grade butyl caulk on non-visible areas (at case end). Use industrial grade silicone sealant on visible areas (at case end).
C. Form Two (2) Caulk/Sealant Lines: (Sanitation and Refrigeration). See illustration below for outline of caulk/sealant lines.
D. Line up 'second' case bolt-hole to bolt-hole to 'first' case.
E. Using SCC-supplied bolts (found in packet), insert bolts in bolt hole locations (shown below). You may need to remove decking to access lower bolt holes.
F. Caution! Front of cases MUST be flush with each other! After leveling, all cases to be same height.
G. Using SCC-supplied nuts & bolts, **lightly tighten** each of the 5 to 8 bolts in a cross-wise pattern. Work your way around the pattern, tightening more firmly at each pass. Do not firmly tighten one bolt and then start on the next!
H. After the cases are bolted together, level the 'second' case. Repeat this process for each case to be adjoined.
I. After all lined-up cases are level, seal all seams with industrial grade silicone sealant.

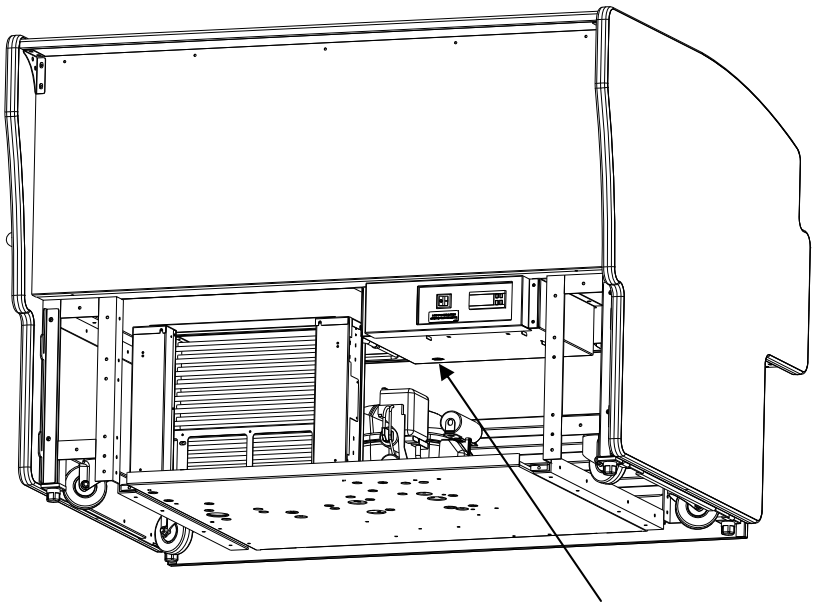


ELECTRICAL CONNECTIONS (SELF-CONTAINED vs. REMOTE UNITS)

1. Electrical Connections (Self-Contained Units)

Field wiring hook-up/electrical access locations are shown in illustrations below (may not exactly reflect your particular unit).

- Single phase leads are provided.
- See Technical Information Sheet for more information.



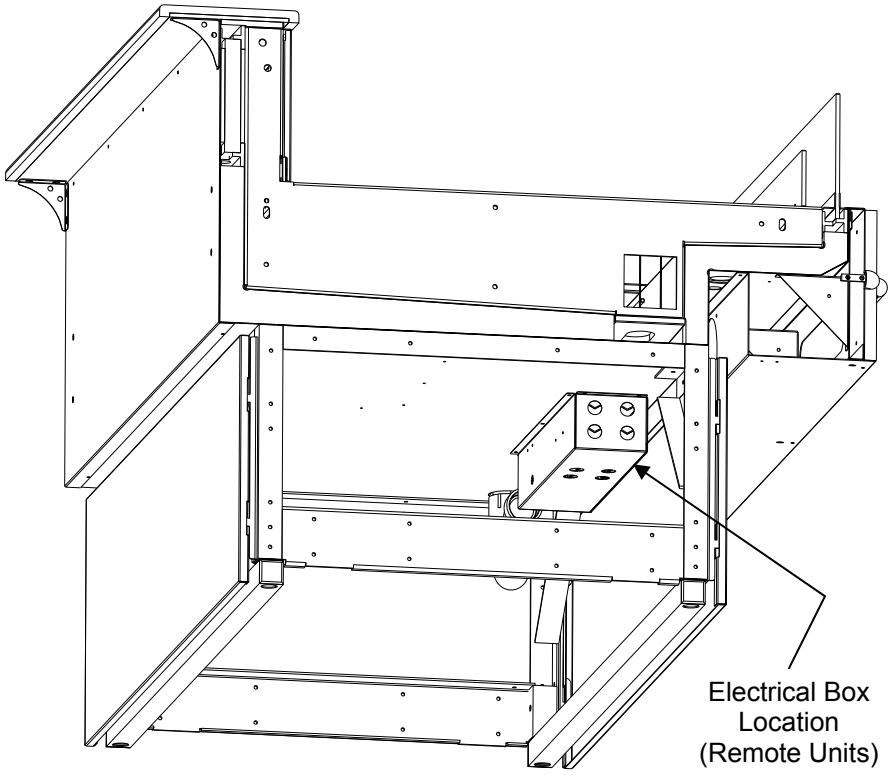
Note: Rear of case is shown with rear grille lifted up and off.

Field Wiring Hookup (for Self-Contained Cases)

2. Electrical Connections (Remote Units)

Field wiring hook-up / electrical access locations are shown in illustrations below (may not reflect your particular unit).

- Single phase leads are provided.
- See Technical Information Sheet for more information.
- Note: Illustration at right may not exactly reflect your particular unit.

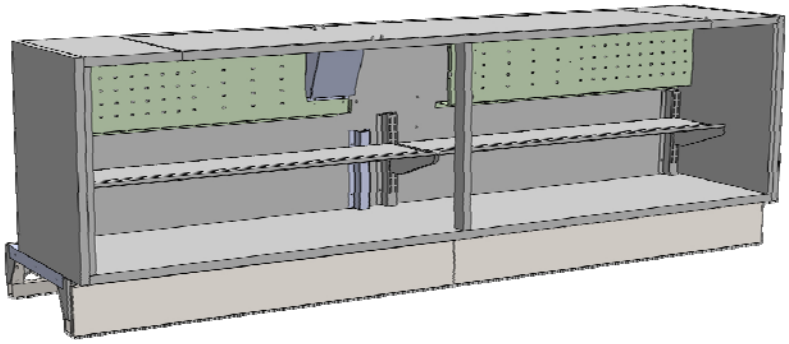


Electrical Box Location (Remote Units)

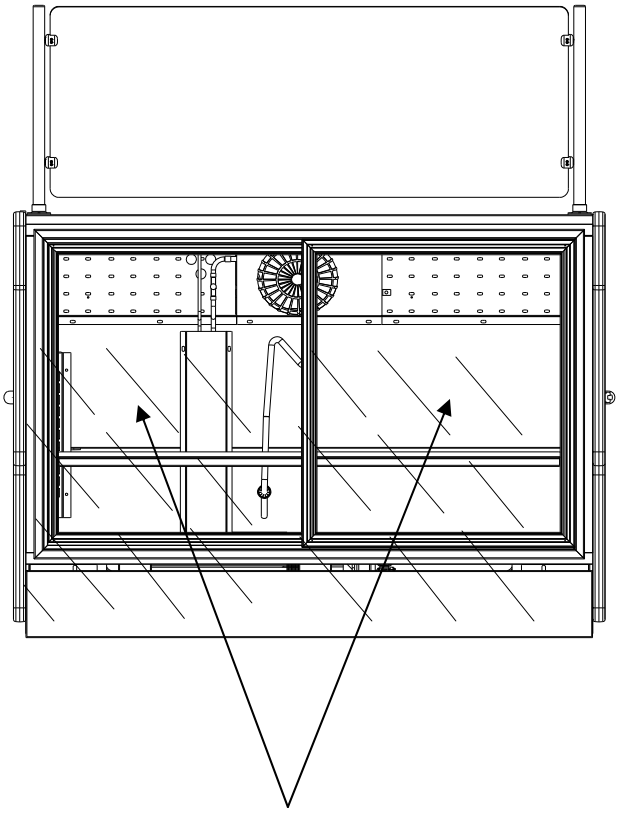
Note: Illustration shown may not exactly reflect every feature or option of your particular case.

Refrigerated Rear Storage Areas (Not on All Models)

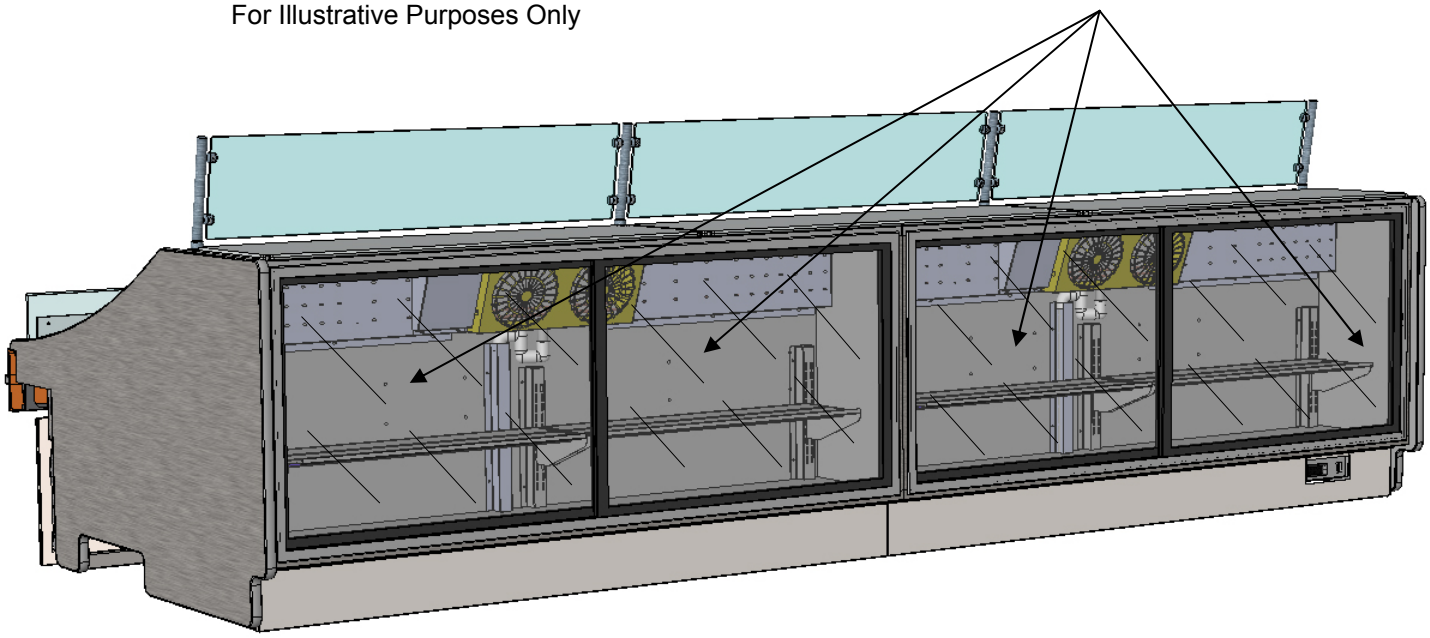
- Refrigerated rear storage area illustrations show transparent doors (or removed doors) for illustrative purpose only.
- Most models have rear refrigerated storage part of standard model.
- Optional: Customer specified rear refrigerated storage units are entirely separate from merchandiser (as shown directly below).
- Adjustable shelves and cooling fan(s) are inside storage area.
- See ***CLEANING SCHEDULE (TO BE PERFORMED BY STORE PERSONNEL)*** section in this manual for cleaning schedule and procedure.



Optional Refrigerated Supplies Organizer (SO96R.5440)
To Attach to Rear of Customer Specific Cases Only
(e.g. GLDSS843R). Rear Sliding Doors Removed
For Illustrative Purposes Only



Sliding doors on these models are shown transparent. Depending upon model, some cases may be opaque.



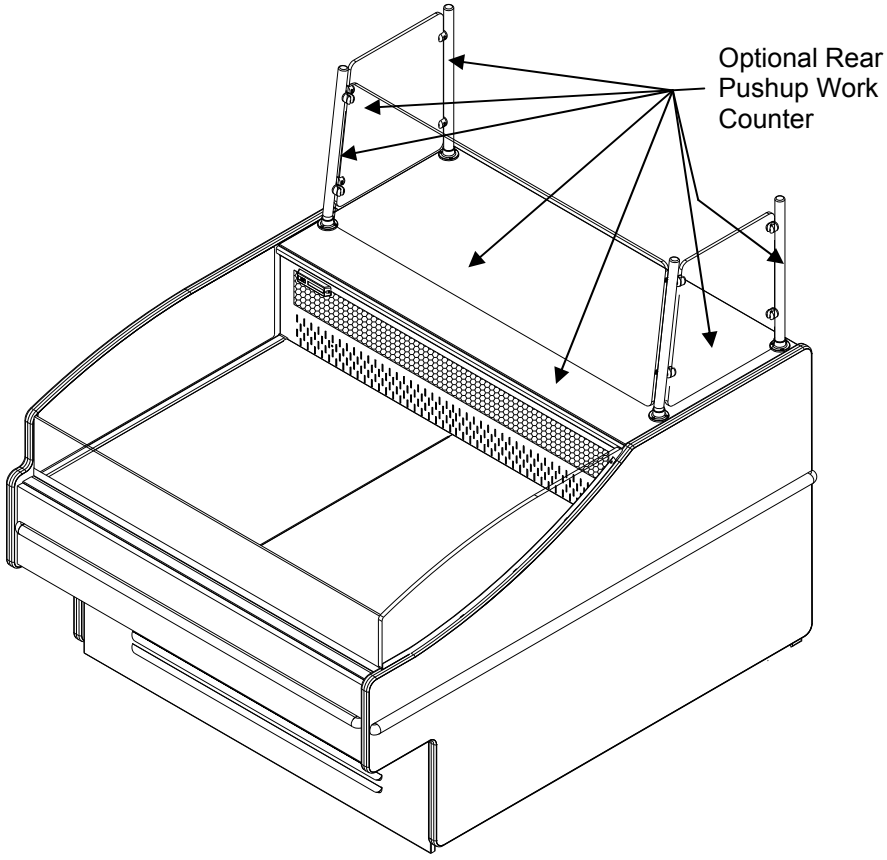
Model GLDSS12R.5375
Is Shown Above

OPTIONAL REAR 'PUSH-UP' WORK COUNTER

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

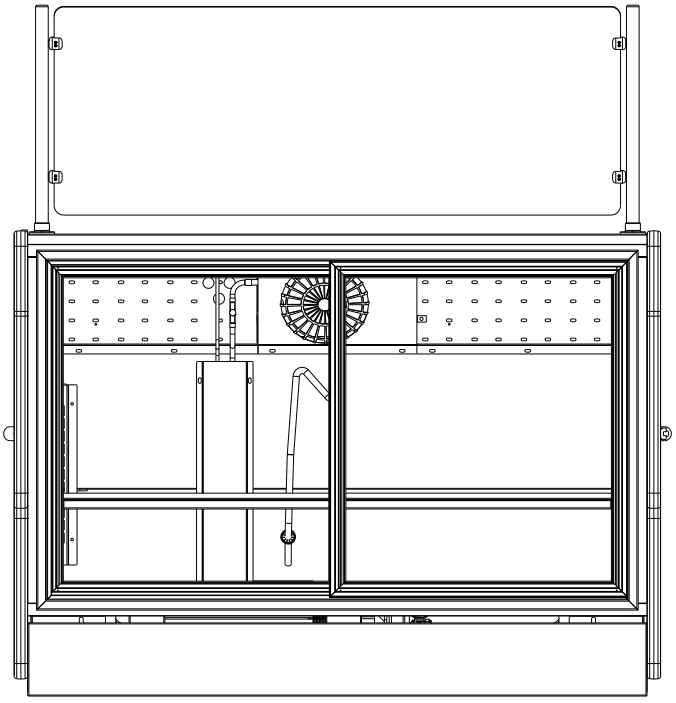
1. Optional Rear 'Push-up' Work Counter (And Its Accompanying Sneeze Guard') - ISO View

- View shown at right is illustrated with optional rear pushup work counter.
- Note: Illustration at right is of sample model. Your model will vary in appearance.



2. Optional Rear 'Push-up' Work Counter (And Its Accompanying 'Sneeze Guard') - Rear View

- View shown at right is of self-contained unit with optional rear 'push-up' work counter in place.
- Sliding doors will allow access to storage shelf and allow for refrigeration maintenance.



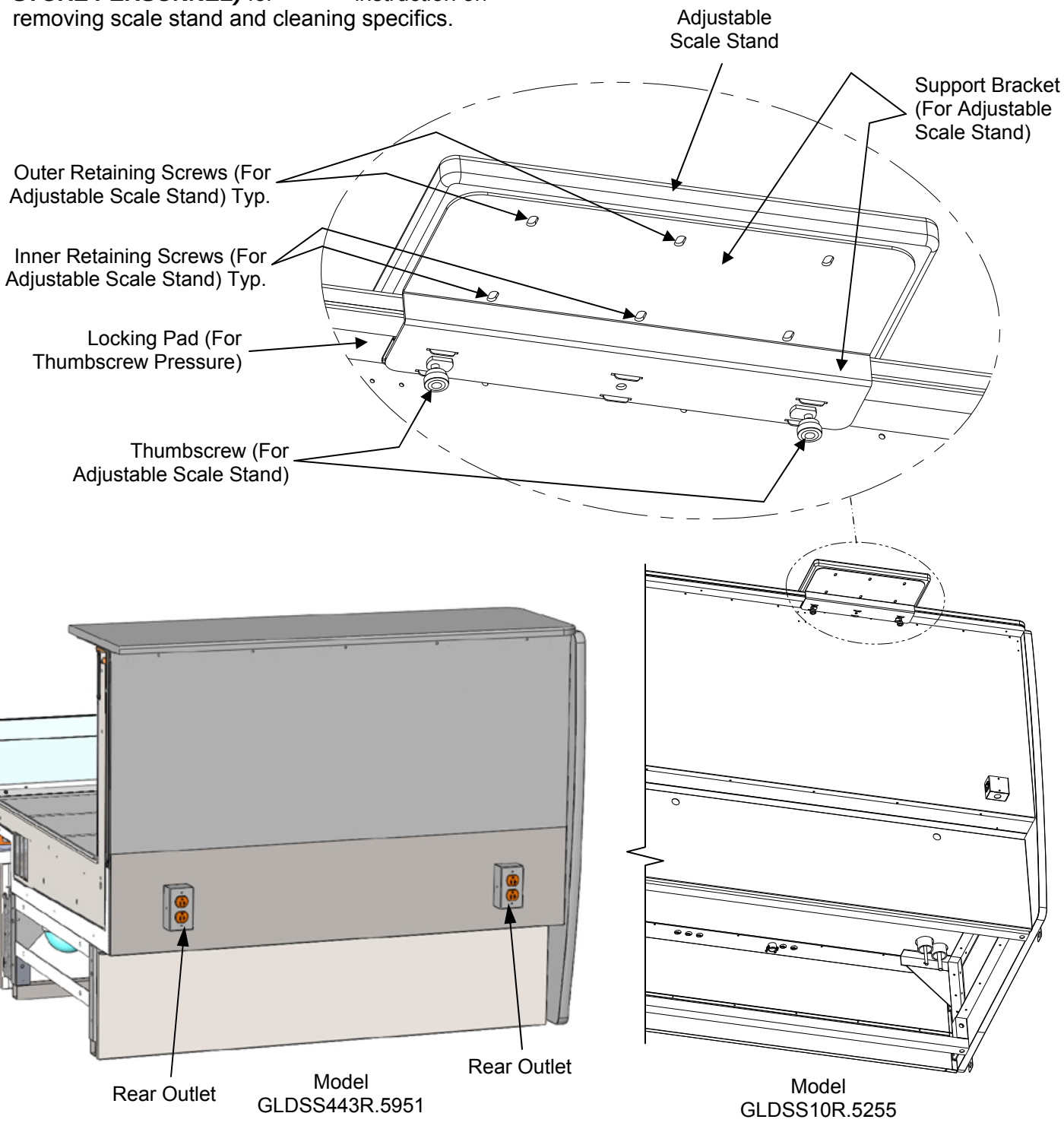
Above view shown with sliding doors transparent (for illustrative purposes only). Sliding doors are not transparent.

Note: Illustrations shown may not exactly reflect every feature or option of your particular case.

ADJUSTABLE SCALE STAND (GLDSS10R.5255) / REAR OUTLETS (GLDSS443R.5951)

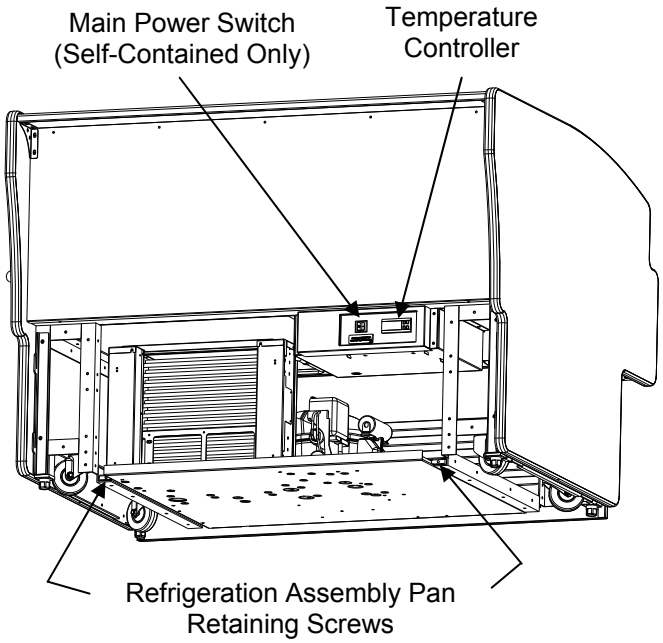
Adjustable Scale Stand

- View shown below is illustrated with optional rear pushup work counter.
- Entire adjustable scale stand may be removed from case for cleaning purposes. See ***CLEANING SCHEDULE (TO BE PERFORMED BY STORE PERSONNEL)*** for instruction on removing scale stand and cleaning specifics.
- If adjustable scale stand material is butcher block, see ***BUTCHER BLOCK CLEANING INSTRUCTIONS*** section in this manual.



1. Merchandiser Refrigeration Assembly Pan Slide-Out Feature

- Retaining screws must be removed to allow refrigeration assembly to be slid out (for servicing and/or cleaning).
- See illustration at top-right.
- *Note: Two addition screws must be removed from top of rails for pan to slide out allowing refrigeration assembly access. See illustration at mid-right.*

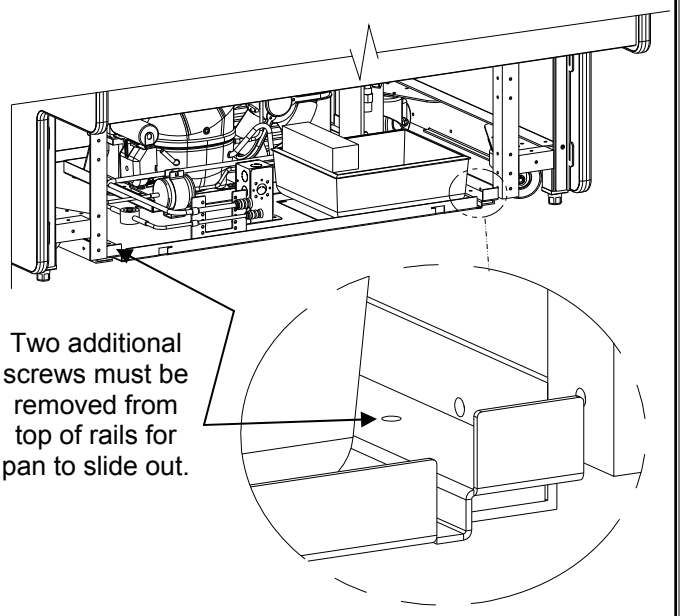


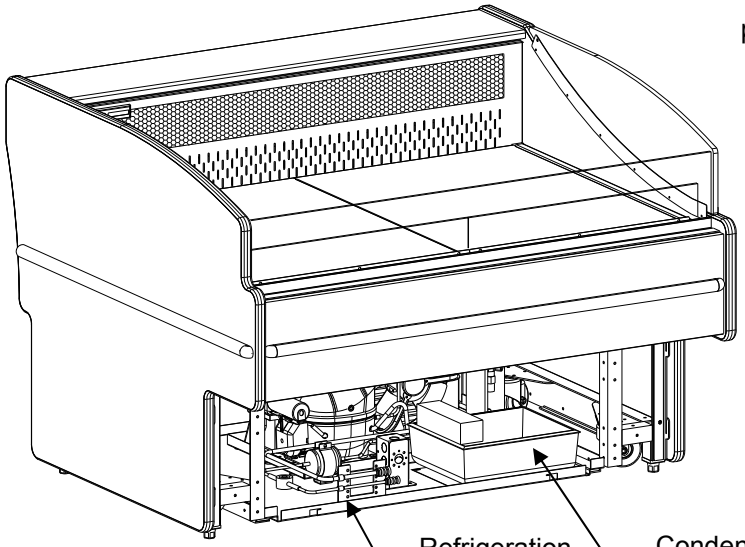
2. Merchandiser Start-Up - Refrigeration

- Self-Contained Only: Before turning on Main Power switch, remove front panel (by lifting up and off; no screw removal required).
- *Caution! Check that the condensate pan is positioned directly under the drain BEFORE turning on Main Power!*
- Return front panel to the case in same manner it was removed. See below illustration.

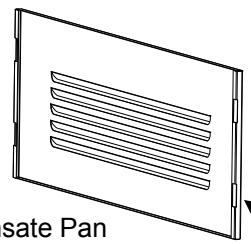
3. Merchandiser Start-Up - Electrical

- Remote Units: Case is hard-wired. When power is supplied, case will power-up.
- Self-Contained: Main Power switch is located at case rear-right. See illustration at top right (rear panel is removed to show main power switch and temperature controller).
- Rear panel is designed to be lifted up and off without screws.





View of Case Front



Note: Illustrations shown may not exactly reflect every feature or option of your particular case.

1. Evaporator Fans, TXV and Drain Access

- Caution! Turn Main Power off and disconnect from outside power source.
- Remove Decking and Sub-Deck
- Perform maintenance, service or cleaning as required.
- Return Decking and Sub-Deck to unit in reverse order in which they were removed.

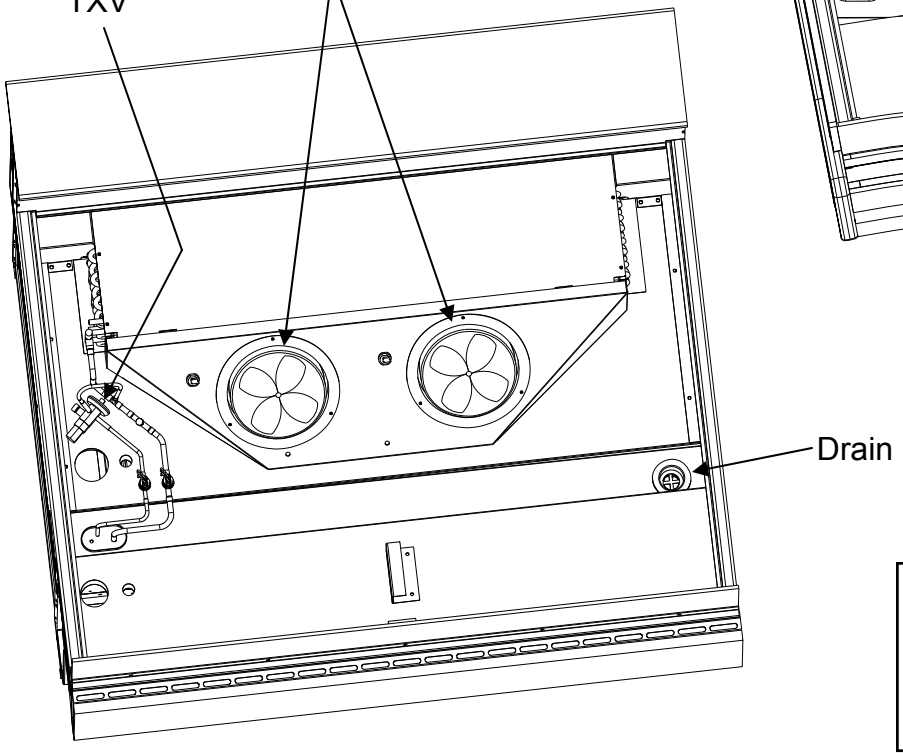
2. Evaporator Coil Fan Discharge

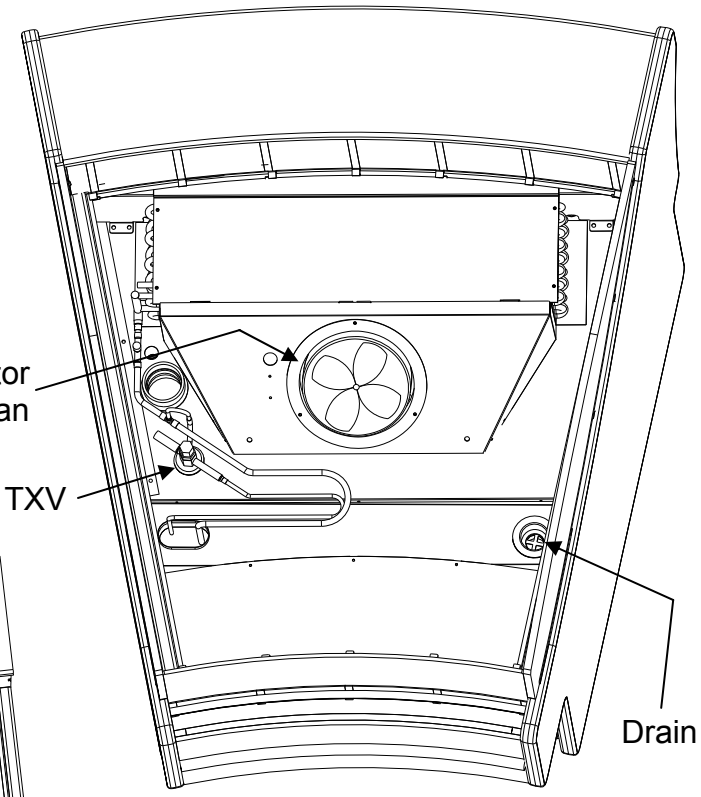
When main power switch is on, refrigeration assembly will energize (see **START-UP AND OPERATION** section in this operating manual.

- Coil fans should turn on. From inside of the case, check for discharge air from front baffle, to confirm that the fans are 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.

3. TXV (Thermostatic Expansion Valve)

- TXV is under TXV access panel (at customer front-left of case).
- Decking must be removed for access.
- See below-right illustration for general location of TXV.



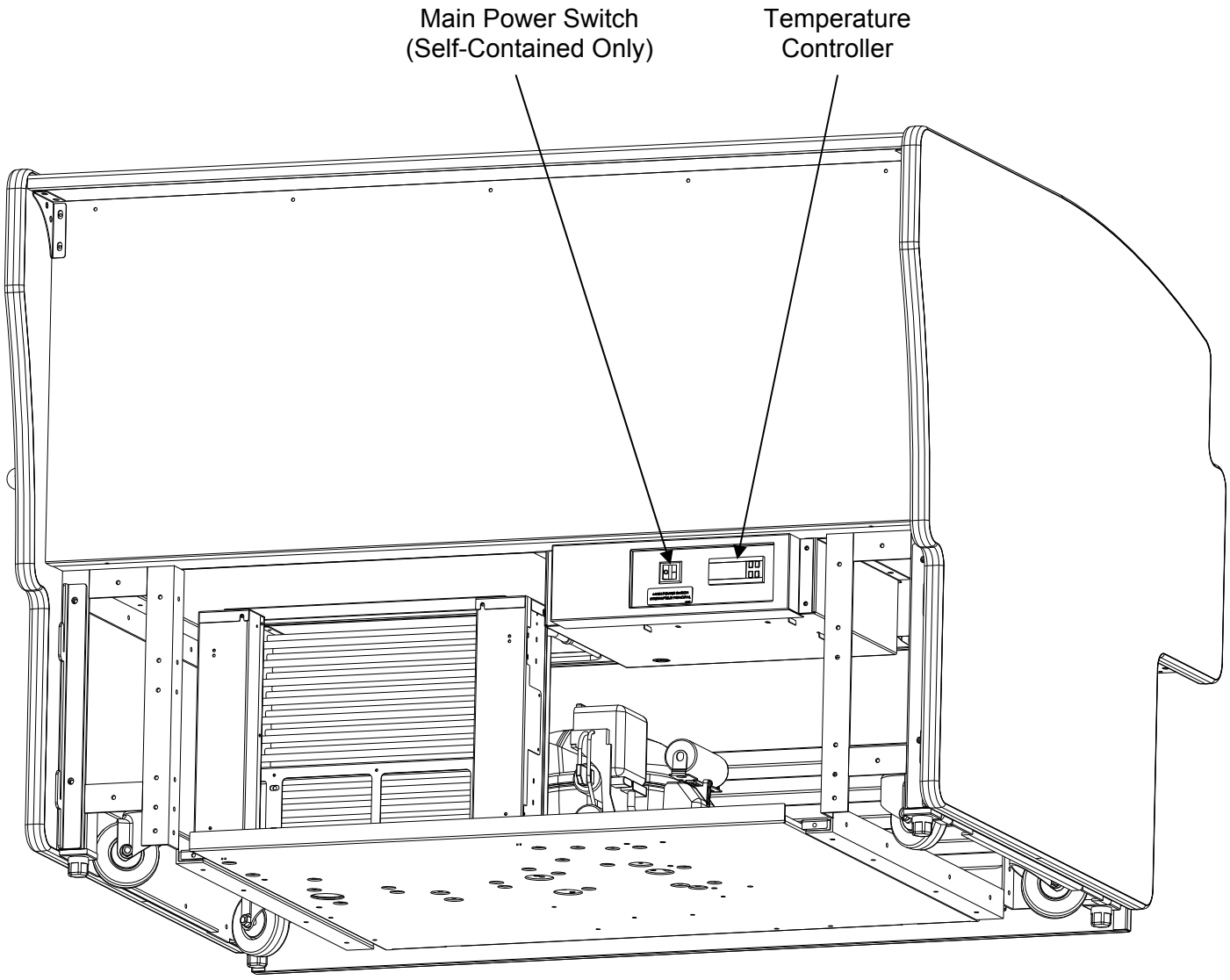


Note: Illustrations shown may not exactly reflect every feature or option of your particular case.

4. Temperature Controller and Main Power Switch (Self-Contained Units Only)

- Self-Contained units have Temperature Controller in location shown below.
- Access by removing rear panel. Simply lift up and off (no screw removal is required).
- See Temperature Controller section of this manual for specifics on settings & parameters.
- Illustration below has rear panel lifted up and off unit (to allow access to Main Power Switch and Temperature Controller).

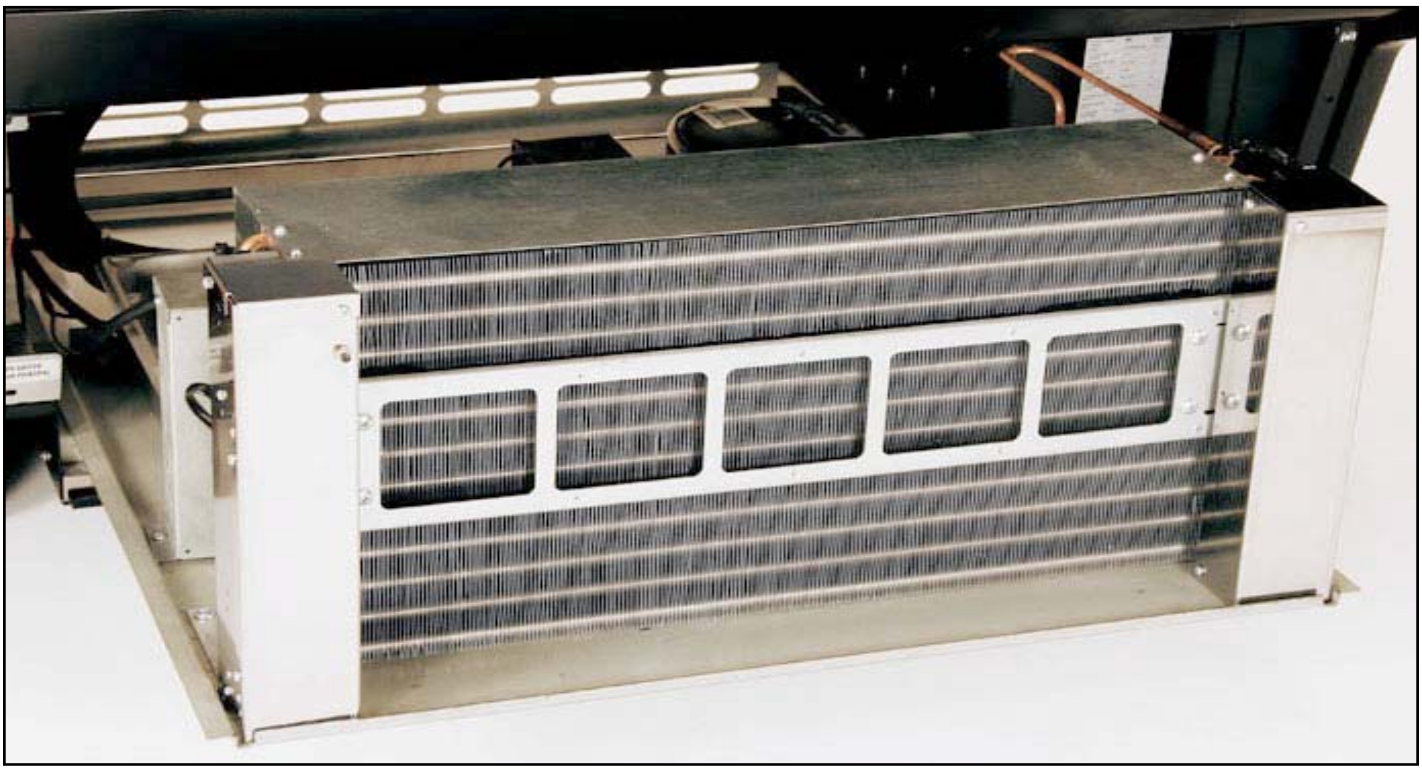
Note: Illustration shown may not exactly reflect every feature or option of your particular case.



Above illustration is shown with rear panel removed for illustrative purposes only.

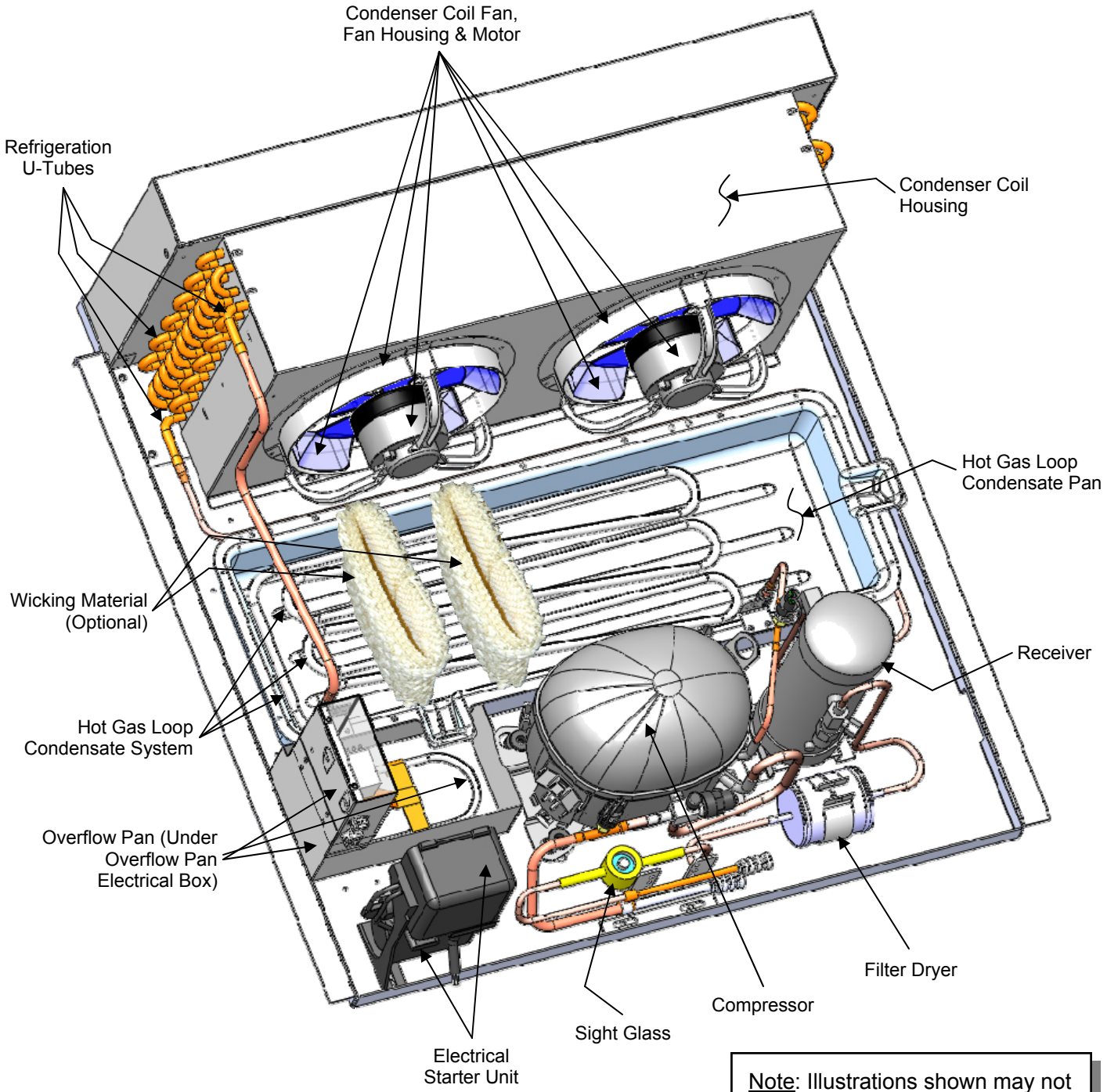
5. Optional Clean Sweep Condenser Coil (Self-Contained Units Only)

- Clean Sweep Condenser Coil (photo below) is accessible by removing rear grille.
- See *Preventive Maintenance (To Be Performed By Trained Service Provider)* for cleaning instructions.
- Photo below is after rear grille has been removed case



6. Refrigeration Package Layout (Hot Gas Loop) on Model GLDSS443R (and Possibly Others)

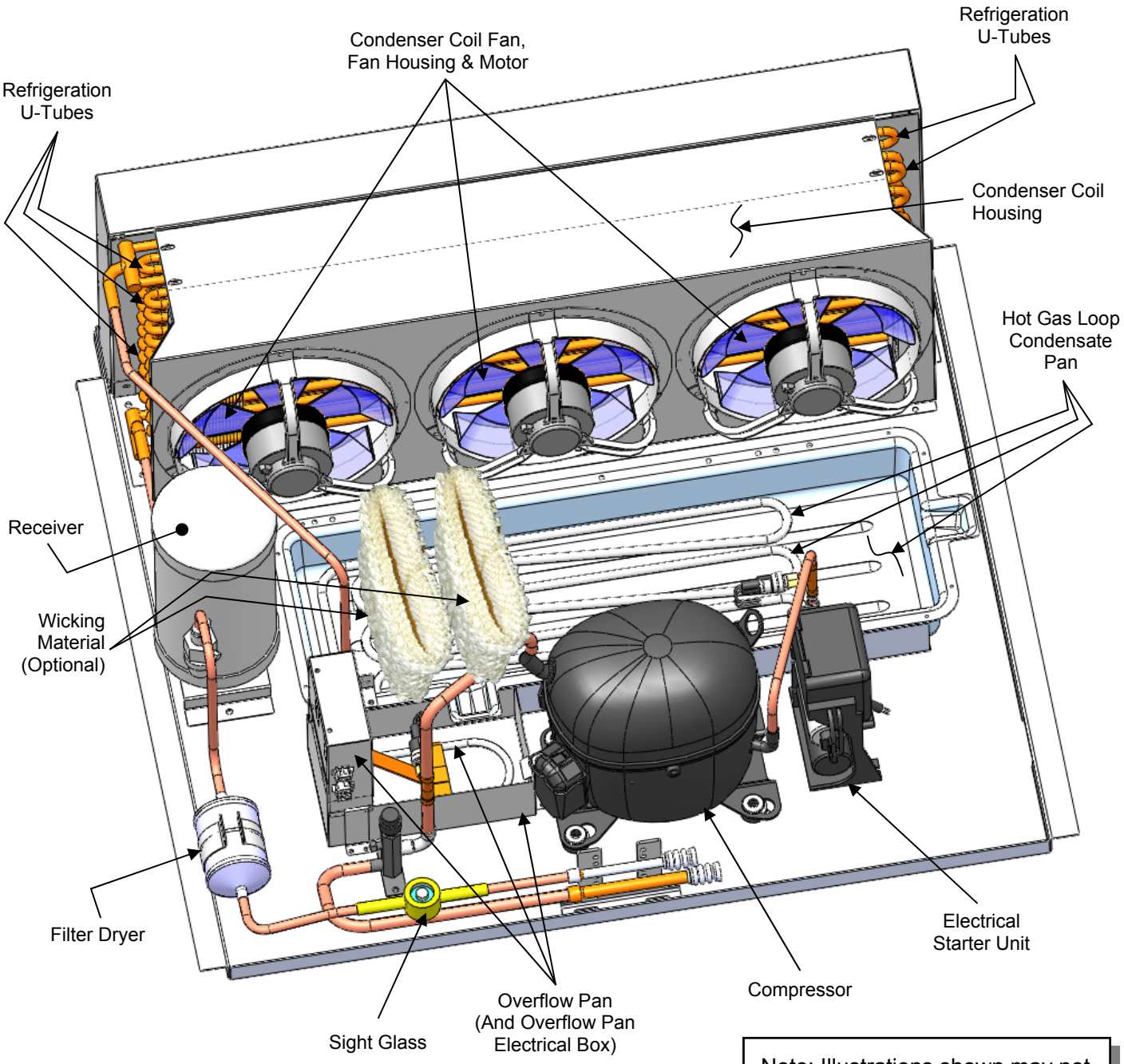
- ***Note: Due to design variables, refrigeration package component layout can slightly vary in size and location.***
- Refrigeration package shown below reflects model GLDSS443 (hot gas loop condensate unit).
- See next page for larger hot gas loop condensate



Note: Illustrations shown may not exactly reflect every feature or option of your particular case.

7. Refrigeration Package Layout (Hot Gas Loop) on Model GLDSS443R (and Possibly Others)

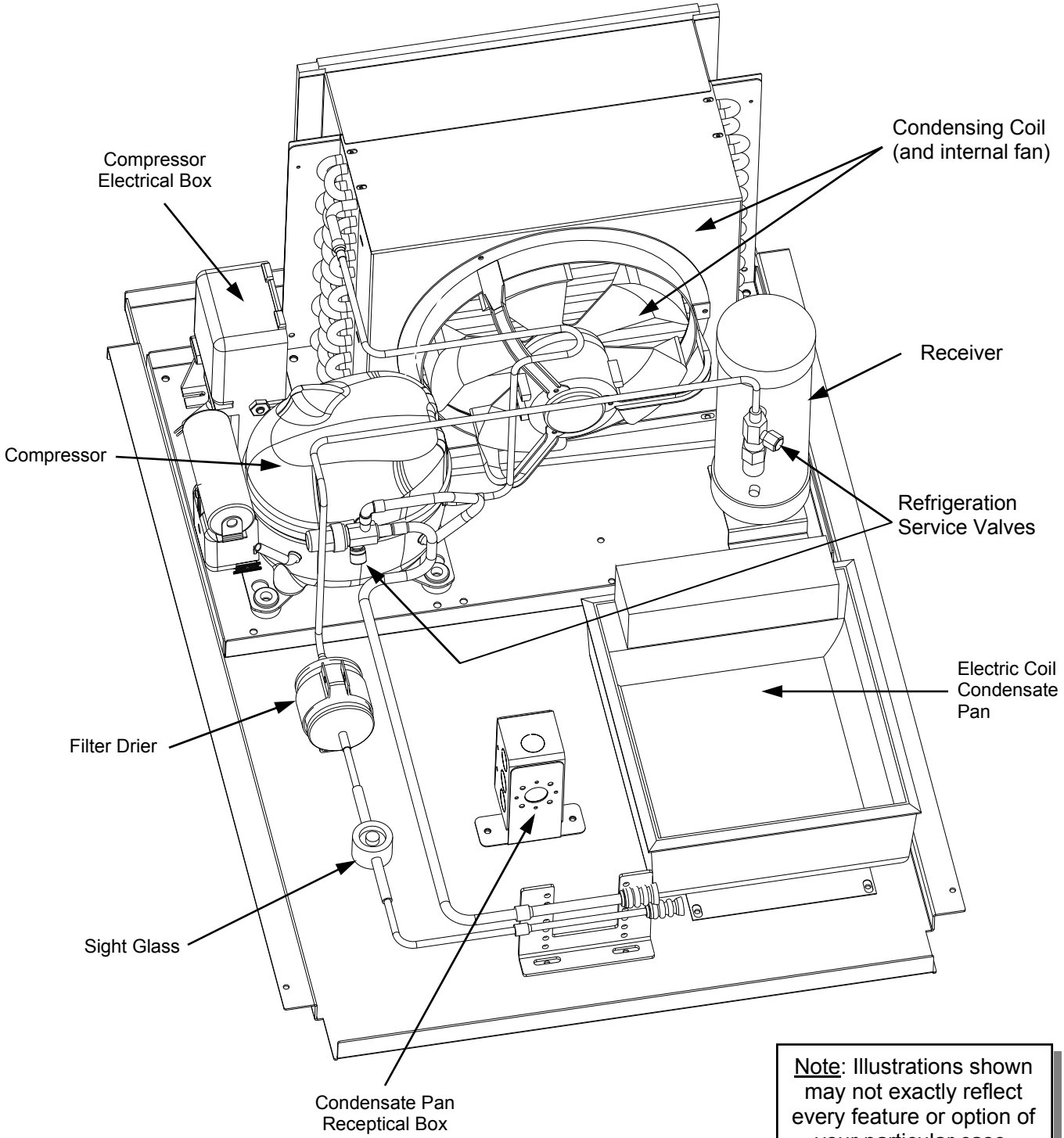
- ***Note: Due to design variables, refrigeration package component layout can slightly vary in size and location.***
- Refrigeration package shown below reflects model GLDSS1243R (hot gas loop condensate unit).
- See next page for sample illustration of electric coil condensate unit.



Note: Illustrations shown may not exactly reflect every feature or option of your particular case.

8. Refrigeration Package Layout (Electric Coil)

- ***Note: Due to design variables, refrigeration package component layout can slightly vary in size and location.***
- Refrigeration package shown below reflects model MI4R (electric coil condensate unit) for sample illustrative purposes only.
- See previous page for illustration of hot gas loop condensate unit.



Note: Illustrations shown may not exactly reflect every feature or option of your particular case.

1. Flat Case Honeycomb Air Diffuser Removal

See ***PREVENTIVE MAINTENANCE (TO BE PERFORMED BY TRAINED SERVICE PROVIDER)*** section in this manual for cleaning frequency.

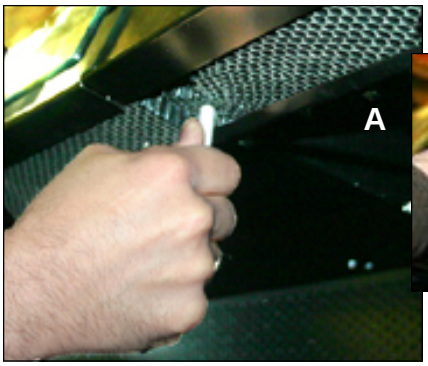
A. Wedge a non-metallic device of suitable strength (such as a ballpoint pen) between the honeycomb and the end panel.
Caution! Use care not to dislodge the heating wire (that prevents condensation on the lamp assembly).
B. Apply pressure to collapse the honeycomb to allow it to be pulled out of honeycomb retainer.
C. Carefully pry downward and away from the honeycomb retainer.

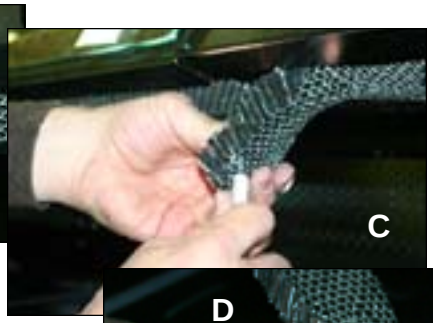
Clean honeycomb with warm water and soap solution. Submerse if necessary. Use brush to dislodge stubborn or sticky residue. Dry by using vacuum's blow mode (vs. suction mode).

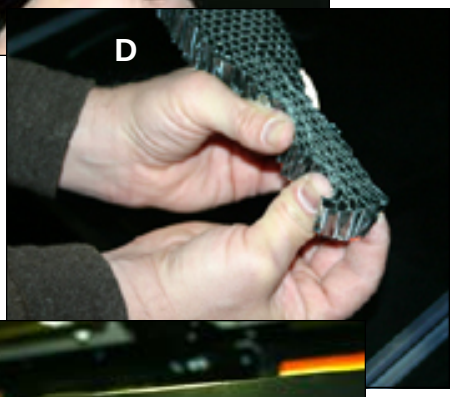
Honeycomb Air Diffuser Installation

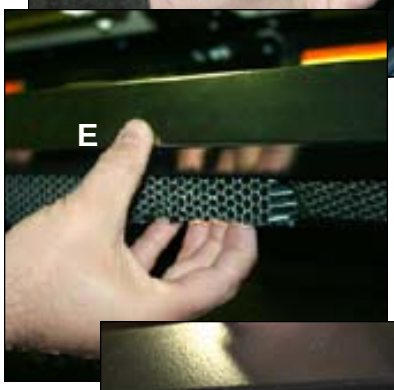
D. Squeeze honeycomb to allow it to fit into the honeycomb retainer.
E. Carefully slide honeycomb into place.
F. Adjust honeycomb so that it fits flat against retainer. It must not be wavy or out of position.

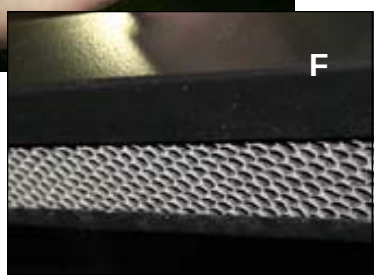
Note: See next page for honeycomb air diffuser information pertaining to oval cases.

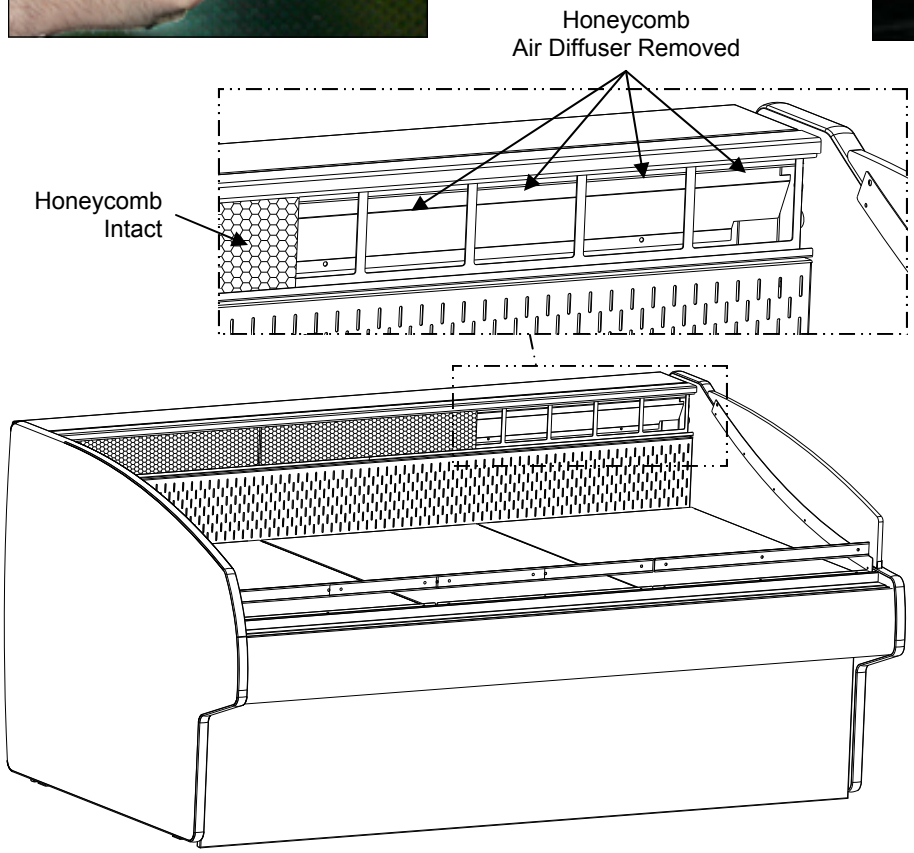












Model GLDSS6R is Shown Above

2. Oval Case Honeycomb Air Diffuser Removal

See ***PREVENTIVE MAINTENANCE (TO BE PERFORMED BY TRAINED SERVICE PROVIDER)*** section in this manual for cleaning frequency.

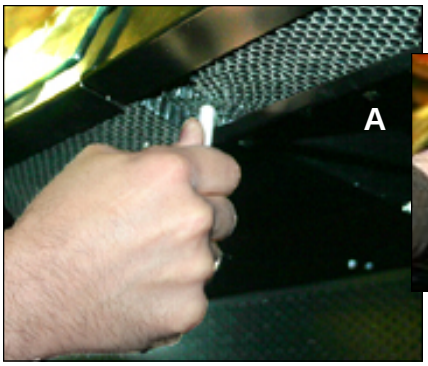
A. Wedge a non-metallic device of suitable strength (such as a ballpoint pen) between the honeycomb and the end panel.
Caution! Use care not to dislodge the heating wire (that prevents condensation on the lamp assembly).
B. Apply pressure to collapse the honeycomb to allow it to be pulled out of honeycomb retainer.
C. Carefully pry downward and away from the honeycomb retainer.

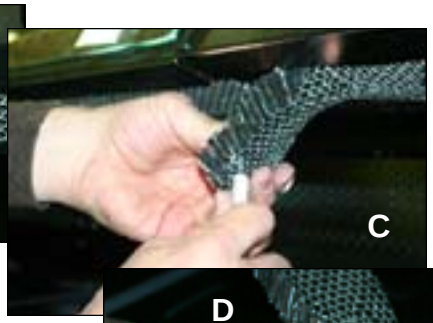
Clean honeycomb with warm water and soap solution. Submerse if necessary. Use brush to dislodge stubborn or sticky residue. Dry by using vacuum's blow mode (vs. suction mode).

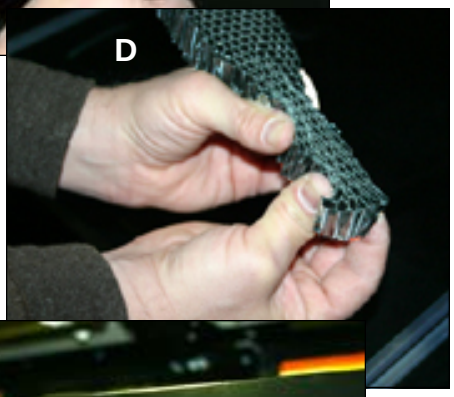
Honeycomb Air Diffuser Installation

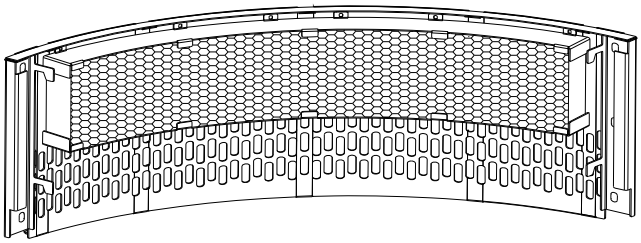
D. Squeeze honeycomb to allow it to fit into the honeycomb retainer.
E. Carefully slide honeycomb into place.
F. Adjust honeycomb so that it fits flat against retainer. It must not be wavy or out of position.

Note: See previous page for honeycomb air diffuser information pertaining to straight/flat cases.



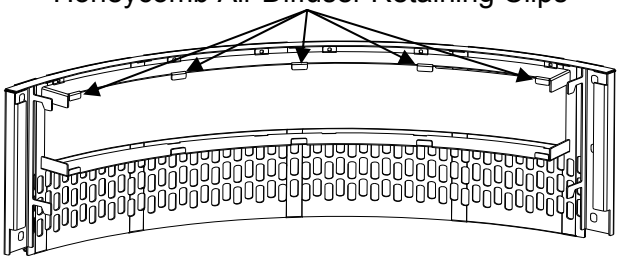




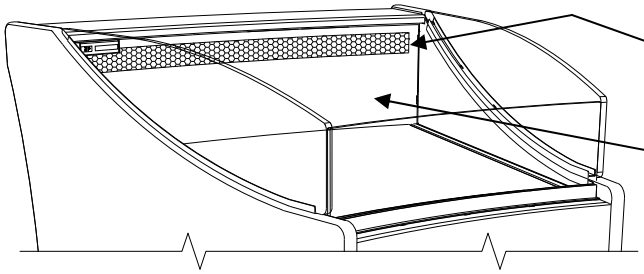


View of Panel Back Assembly with Honeycomb Air Diffuser Intact

Honeycomb Air Diffuser Retaining Clips

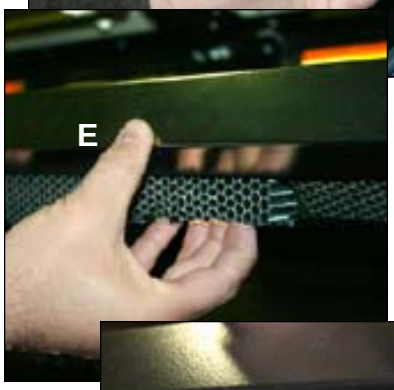


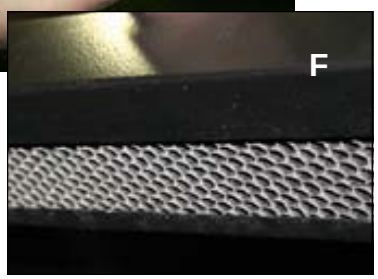
View of Panel Back Assembly with Honeycomb Air Diffuser Removed



Honeycomb Air Diffuser

Panel Back Assembly





Thermo-Simple 2 (TS.2)

The Thermo-Simple 2 (TS.2) is an advanced communicating digital thermometer alarm with preprogrammed settings for many low, medium and hot temperature applications. Alert functionality can be as simple as "no light, no problem" to full color display effects for conditions such as defrost, frozen, fresh, normal operation, high temperature alarm, freeze warning and hot food case alarms.

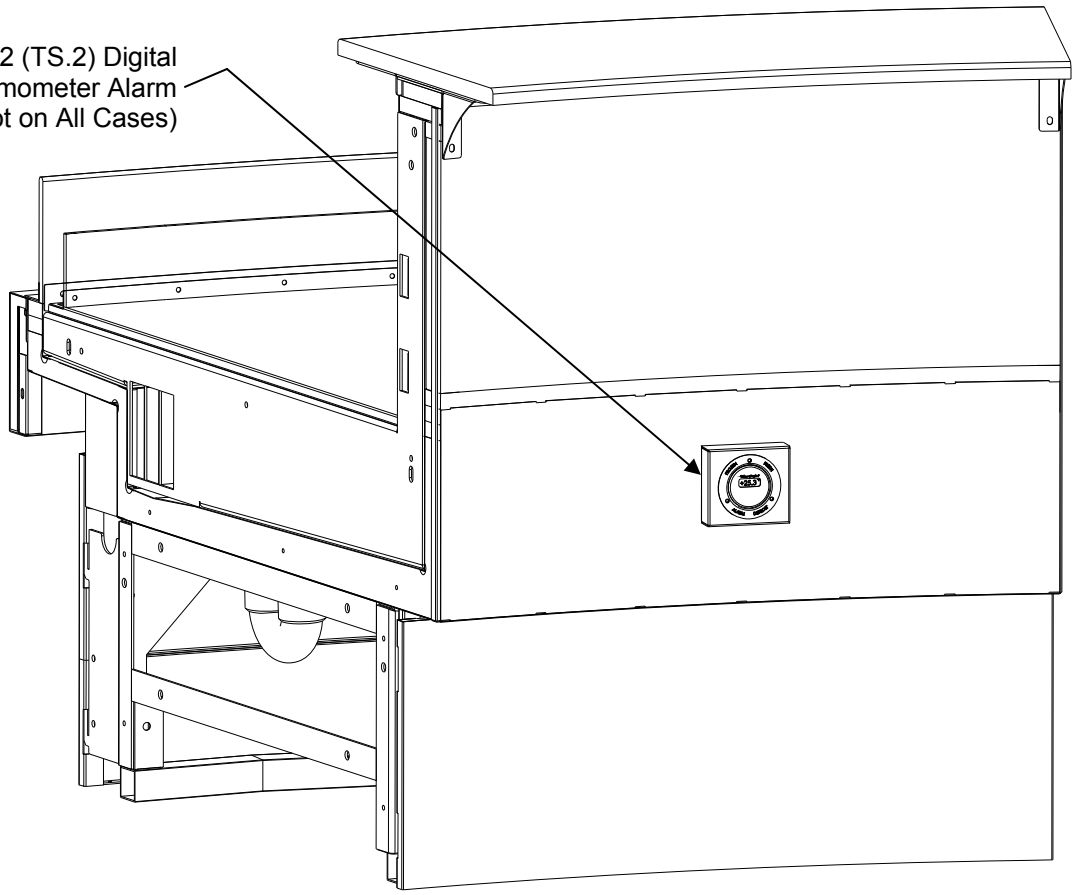
Thermo-Simple 2 (TS.2) Colors Schemes / Flashing / Alarm Status

The general LED states are solid and flashing colors. Please note that there are slight differences in LED color schemes at different set-points. For more detail refer to the Set-points section.

Solid color states mean good status (whether it is for frozen product (Blue) or for fresh product (Green)). Solid color states also indicate the state of the case using various colors (i.e. case in defrost cycle).

Flashing LED states indicate an alarm status, where attention is needed. Flashing blue signifies that the case temperature has dipped below the freezing set point (33.5°F freeze alarm). Flashing amber/yellow signifies that the case has been above set point temperature for at least 60 minutes (70 minutes for walk-in cooler set-points). Flashing red signifies that the case has been above set point temperature for at least 120 minutes (140 minutes on walk-in cooler set-points).

Thermo-Simple 2 (TS.2) Digital Thermometer Alarm
(Note: Alarm is Not on All Cases)

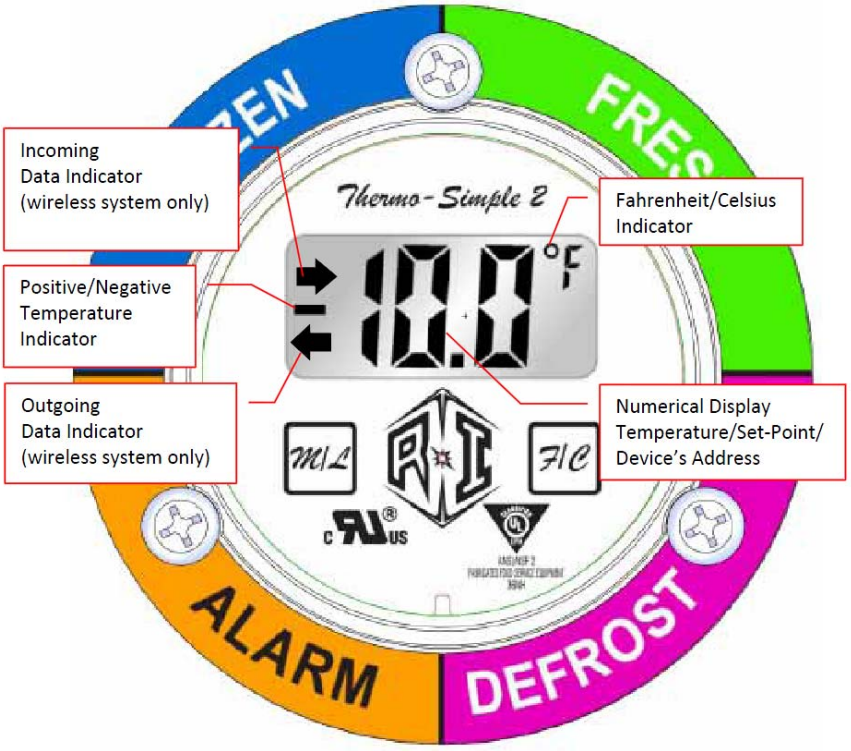


NOTE: THESE TWO PAGES PROVIDE A GENERAL OVERVIEW OF THE ***Thermo-Simple 2 (TS.2)*** DIGITAL THERMOMETER ALARM.

SEE THE ***Thermo-Simple 2 (TS.2)*** Manual (SCC P/N 20-16086) FOR MORE SPECIFIC INFORMATION.

--- Model GLDSSX239R Case Rear Shown Above ---

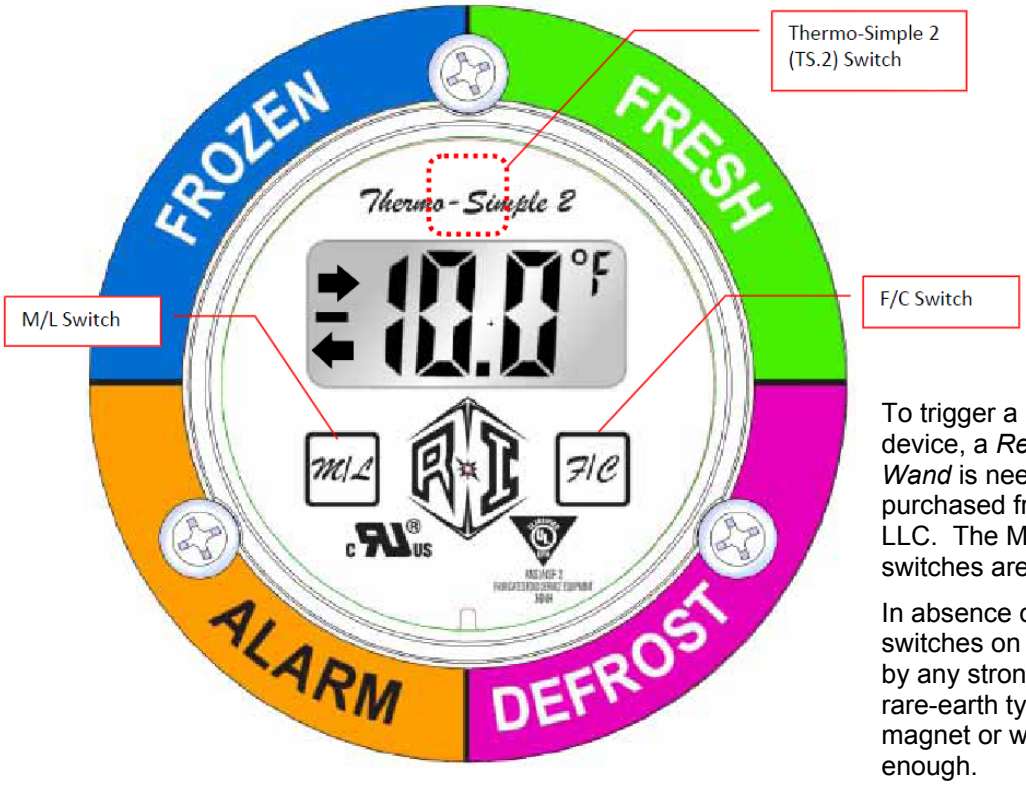
Thermo-Simple 2 (TS.2) Display



NOTE: THESE TWO PAGES PROVIDE A GENERAL OVERVIEW OF THE ***Thermo-Simple 2 (TS.2)*** DIGITAL THERMOMETER ALARM.

SEE THE ***Thermo-Simple 2 (TS.2)*** Manual (SCC P/N 20-16086) FOR MORE SPECIFIC INFORMATION.

Thermo-Simple 2 (TS.2) Magnetic Switches

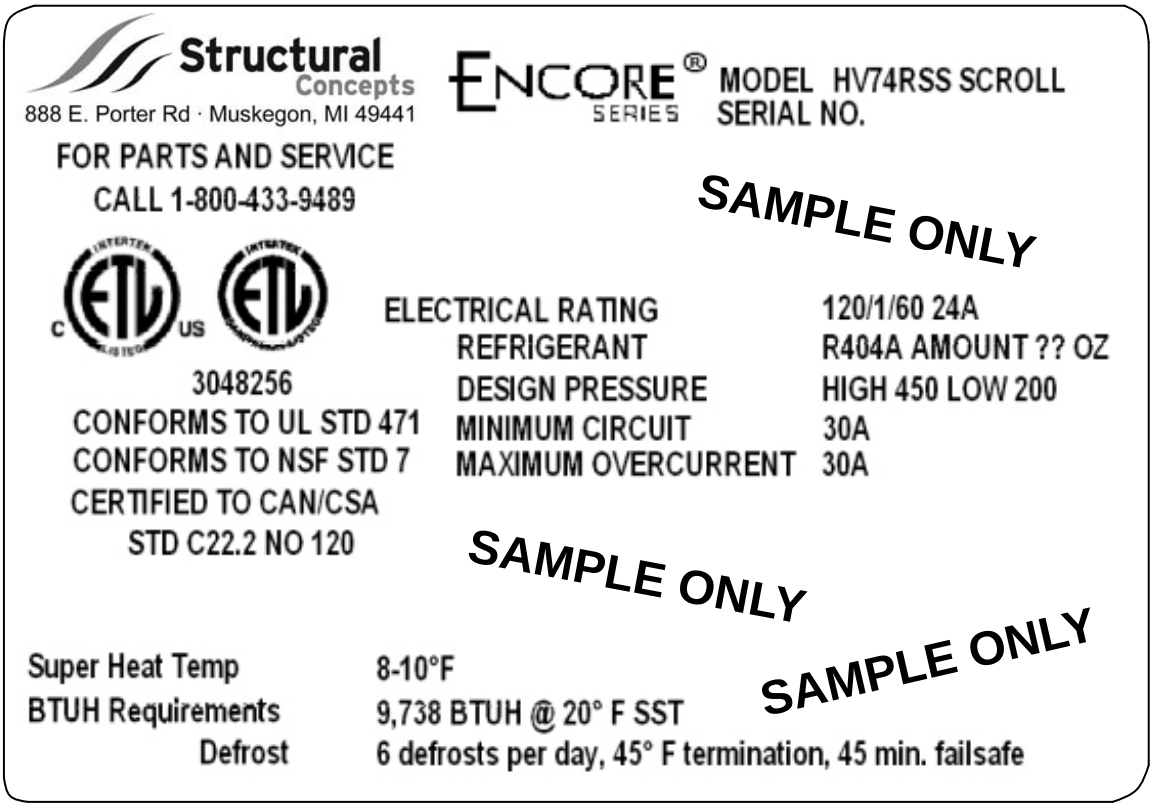


To trigger a magnetic switch on the TS.2 device, a *Refrigeration Innovation Magik Wand* is needed. The Magik Wand can be purchased from Refrigeration Innovation, LLC. The Magik Wand will ensure that the switches are triggered properly.

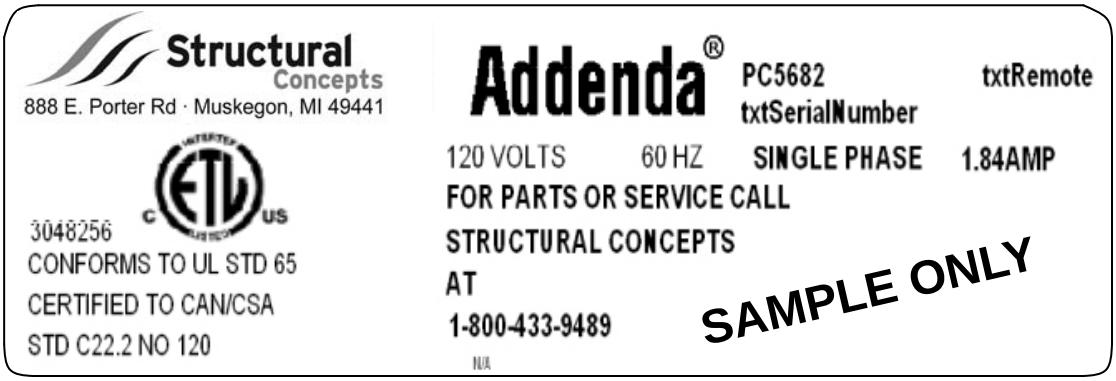
In absence of a Magik Wand, the magnetic switches on a TS.2 device can be triggered by any strong magnet (Neodymium rare-earth type). A typical refrigerator door magnet or whiteboard magnet is not strong enough.

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.



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



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

CLEANING SCHEDULE (TO BE PERFORMED BY STORE PERSONNEL)

AREA TO BE CLEANED	FREQUENCY	INSTRUCTIONS
Case Exterior	**Daily**	**Condenser Coil:** Vacuum or brush condenser coil at case rear (after removing rear grille).
	Daily	**Top Board or Work Counter (Optional in Rear 'Push-Up' Work Counter):** Clean with a warm water and mild soap solution and soft cloth.
	Daily	**End Glass / Glass Sneeze Guard on Rear 'Push-Up' Work Counter(Optional):** Clean with a household or commercial glass cleaner. Wipe dry with clean, dry cloth or paper towel.
	Daily	**Butcher Block:** See next page for cleaning specifics.
	Daily	Stainless Steel: ***CLEANING SCHEDULE: STAINLESS STEEL (TO BE PERFORMED BY STORE PERSONNEL)*** section in this manual for specifics.
	Weekly	**Acrylic Sneeze Guard:** Clean with a warm water and mild soap solution and soft cloth. Never use ammonia-based cleaners on acrylic.
	Monthly	**Rear Sliding Doors (For Storage Area):** >> Door: Wipe down with warm water and mild soap solution and soft cloth. >> Door Tracks: Use vacuum to remove dust, dirt and other residue that is in door tracks. Then wipe down with warm water and mild soap solution and soft cloth.
	Quarterly	**Adjustable Scale Stand:** See ***ADJUSTABLE SCALE STAND*** section in this manual. • To clean butcher block, see next page. • Remove adjustable scale stand by loosening thumbscrews, loosening all six (6) retaining screws and lifting off merchandiser. • ***Caution! Use only hand-held Phillips™ screw driver to loosen retaining screws (at underside of adjustable scale stand). Do not use power driver!*** • If unable to lift off merchandiser, it may be necessary to entirely remove inner retaining screws. • Submersed in warm, soapy water. Use nylon bristled brush and/or soft cloth to remove residue. • Rinse. Dry thoroughly before returning to merchandiser.
Case Interior	**Weekly**	**Decks and Shelf Area (Optional in Rear 'Push-Up' Work Counter:** Wipe off decks with moist cloth.
	Monthly	**Air Return Grille and Fan Shroud Area:** 1) Turn off power. 2) Remove decks from case. 3) Clean with moist cloth. See Maintenance Fundamentals that pertain to ***Evaporator Fans, TXV and Drain Access*** for illustration.

CLEANING SCHEDULE: STAINLESS STEEL (TO BE PERFORMED BY STORE PERSONNEL)

General Stainless Steel Surface Cleaning (To Be Performed As Often As Needed):

- Certain grades of stainless steel, and some are more prone to corrosion than others.
- Stainless steel can become exposed to a wide variety of contaminants, which if left untreated can cause stains and rust.
- Stainless steel requires a specific cleaning procedure to maintain its sheen and remain rust-free.
- Wash with a solution of liquid dishwashing detergent and hot water.
- Rinse with pure hot water from spray bottle. Wipe with clean sponge. This will remove soap residue that can lodge in stainless steel's microscopic grooves, causing rust.
- Dry with clean, soft cloth or paper towel.
- *Caution! To prevent rust, you MUST rinse with pure hot water from a spray bottle while wiping with clean sponge after EACH cleaning.*
- *Caution! Never clean with scouring powder or steel wool as they can mar, scratch and/or erode the surface of stainless steel. When the surface properties of stainless steel have been compromised, rust can form.*

Brightening:

- Method 1: Brighten by polishing with a soft cloth or sponge with a solution of one part vinegar to 2 parts water in a spray bottle.
- Method 2: Sprinkle baking soda on sponge and rub gently with soft cloth or sponge.
- *Caution! To prevent rust, you MUST rinse with pure hot water from a spray bottle while wiping with clean sponge after EACH cleaning.*
- Dry with clean, soft cloth or paper towel.

Removing Streaks or Stains:

- Method 1: Place two teaspoons of rubbing alcohol on a microfiber cloth or pad. Rub the cloth along the grain of the appliance until the entire area has been wiped. The rubbing alcohol will air dry itself.
- Method 2: Dip soft cloth or sponge in club soda and rub gently over area of concern.
- *Caution! To prevent rust, you MUST rinse with pure hot water from a spray bottle while wiping with clean sponge after EACH cleaning.*
- Dry with clean, soft cloth or paper towel.

Polishing:

- Place a dab of olive oil onto clean soft cloth. Spread over area until a light sheen is observed. Use pressure to "work the oil" into the small grooves in the surface. Apply firm, steady pressure using small circular motions.
  > Dry buff: Remove excess oil with clean cloth or paper towel using small circular motions.
  > Wet buff: Use an ounce or white vinegar with clean cloth or paper towel using small circular motions.
  > Continue wiping until oily finish has been removed.
- *Caution! To prevent rust, you MUST rinse with pure hot water from a spray bottle while wiping with clean sponge after EACH cleaning.*
- Dry with clean, soft cloth or paper towel.

Removing Rust:

- If rust has begun to form, there are a variety of products that can treat it.
- Among these are CLR® (calcium, lime and rust remover) and Chemetall Oakite 33 (rust, oxides and scale remover).
- ***Caution! To prevent food contamination, personal injury or further corrosion, carefully observe and follow the rust removing product's precautions and instructions.***

Butcher Block Cleaning Instructions

--- Recommended Cleaning Supplies ---

1. Dishwashing Liquid
2. Clean Sponge / Cotton Cloth / Paper Towel
3. Non-Toxic Wood Oil or Cream
4. Bleach (Optional)
5. Lemon Juice (Optional)
6. Steel Wool or Sandpaper (Optional)

Please Follow These Instructions To Properly Clean and Care for Your Butcher Block Surface

1. Wash the countertop with mild soap and water. Regular liquid dish washing detergent works well. As little as 2 to 3 drops of liquid dish soap to a quart of warm water is sufficient. Use a clean sponge or dish towel to clean surface. Caution! Never use an abrasive cleaning solution on ANY wood countertop!

2. Kill bacteria (often left behind by raw meat), with bleach. Add one tablespoon of bleach into one gallon of warm water. Do not use a higher concentration of bleach or wood will crack. Immediately rinse the countertop with this solution to kill any bacteria. This will help prevent food borne illnesses.

3. Remove tough stains from butcher block by pouring lemon juice on the surface and letting it soak for several seconds.

4. Dry the butcher block surface with a soft cloth immediately after cleaning. Do not allow standing water or moist surfaces to remain on the butcher block. Also, use the soft cloth to dry moist or wet crevices so that no moisture remains.

5. Varnished countertops do not need oil treatments. Just follow steps 1 through 4 above for varnished countertops. Maintain unvarnished surfaces with a non-toxic oil or warm mineral oil treatments on a weekly basis or whenever you notice the wood drying or color fading. Ironwood® Gourmet Butcher Block Oil (shown at left) is food safe. *Do not use vegetable oil or sunflower seed oil as the oil will become rancid and leave odor.* Apply mineral oil to the butcher block surface in thin coats. Allow the oil to permeate the surface for as little as 5 minutes and as long as six (6) hours. Blot excess oil off the countertop with a soft cloth. Wipe away the remainder with a paper towel or cotton cloth. Wait 12 hours before using the counter.

6. Stains on butcher block can be removed with steel wool or sandpaper. Rub on the surface until stains disappear. Then, coat the surface with mineral oil (see #5 for instructions).

7. Always use a plastic or metal cutting board on a wood surface when cutting. Cutting directly on the butcher block will leave behind knife marks that will be difficult to clean or repair.

CaesarStone® Care & Maintenance

TAKING CARE OF YOUR QUARTZ SURFACE

CaesarStone quartz surfaces blend modern sophistication and timeless luxury with unbeatable strength and durability. The ever-lasting finish requires only simple and routine care to maintain its good looks.

MINIMAL MAINTENANCE

Virtually maintenance-free, CaesarStone's hard, non-porous surfaces require no sealing to renew the luster and are simple to clean. In most cases, dip a clean, soft cloth into a solution of water and soap (or mild detergent) solution and wipe away dust, smudges and residue; then rinse with clean water to remove residue. This simple treatment is usually enough to keep your CaesarStone countertop looking like new. If necessary, use a non-abrasive soft soap along with a non-scratch or delicate scrub pad. Afterwards, thoroughly rinse with clean water to remove residue.

STUBBORN STAINS OR DRIED SPILLS

If needed, apply a non-abrasive household cleaners (a non-abrasive cleaner will not dull the surface shine); rinse to remove residue. To remove adhered material such as food, gum, nail polish or even dried paint, first scrape away excess material with a plastic putty knife and then use a damp cloth to remove any marks or residual dirt. For extra-stubborn stains, use a no-scratch Scotch-Brite® pad along with the non-abrasive cleaner recommended by your local CaesarStone® distributor.

HEAT TOLERANCE

CaesarStone is more heat resistant than other stone surfaces including most granite, marble and limestone; it is not affected by temperatures lower than 300 °F (149 °C). However, like all stone material, CaesarStone can be damaged by sudden and rapid temperature changes. Therefore, do not place hot pots or pans directly placed on the surface. Instead place a hot pad or trivet on the surface under cooking units such as electric frying pans, crock pots, or roaster ovens.

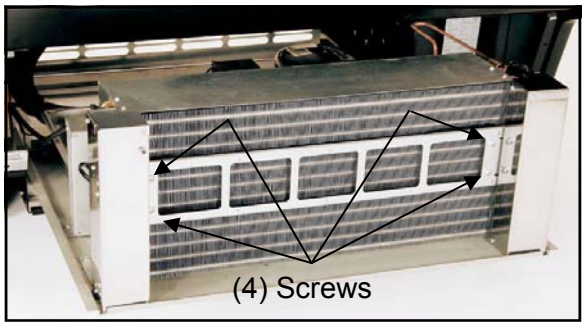
SCRATCH RESISTANT

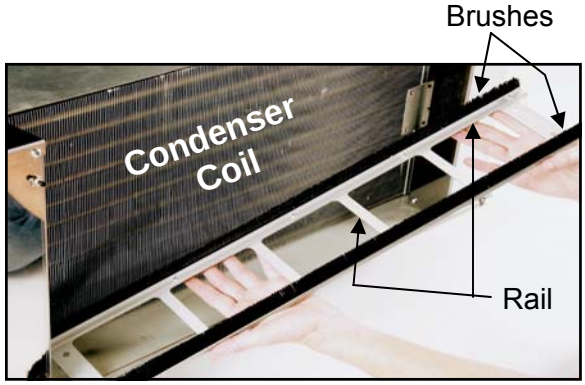
CaesarStone is a highly scratch resistant surface; however avoid abuse of the surface by refraining from using sharp objects such as sharp knives or screw drivers directly onto the surface.

CLEANING AGENTS TO AVOID

- It's important to be aware that like any other surface, CaesarStone can be permanently damaged if exposed to strong chemicals and solvents that can damage its physical properties.
- Never clean your CaesarStone surface with products that contain Trichlorethane or Methylene chloride, such as paint removers or strippers.
- Avoid the use of highly aggressive cleaning agents such as oven/grill cleaners and dishwasher polishing agents that have high alkaline/pH levels (pH 8.5 or higher).
- Products containing oils or powders may leave a residue and should be rinsed off thoroughly. Should your surface accidentally be exposed to any of these damaging products, rinse immediately with clean water to neutralize the effect.

PREVENTIVE MAINTENANCE	FREQUENCY	INSTRUCTIONS
Case Exterior	**Monthly**	**<u>Condenser Coil</u>:** *Disconnect power from case before cleaning the Condenser Coil!* • Remove Rear Grille (by removing 4 screws). • Roll / Slide out Refrigeration Assembly. <u>Note</u>: At initial slide-out, it may be necessary to remove two (2) Compressor Pan Shipment Screws for Refrigeration Assembly to slide out. • Use air pressure or industrial strength vacuum; clean dust and dirt that may collect on the Condenser Coil. See illustration below. • ***Caution! Coil fins are sharp. Handle with care!*** • Slide/Roll Condenser Unit Assembly back under case. • Replace Rear Grille to case (4 screws). • See illustration below.
	Quarterly	**<u>Optional Clean Sweep™ Condenser Coil</u>:** *Disconnect power from case before cleaning Clean Sweep™ Condenser Coil!* • Remove Rear Grille (by removing 4 screws). • Slide/Roll out condensing unit assembly. • Remove the four (4) screws holding the Clean Sweep™ rails intact. • Remove the Clean Sweep™ rail. • Wash rails' brushes in hot water and mild soap solution. • If brushes are worn, they must be replaced. Call Technical Service Department to replace. Toll-Free number is listed at end of manual. • Clean Condenser Coil: Use air pressure or industrial strength vacuum; clean the dust and dirt that may collect on the Condenser Coil. • ***Caution! Coil fins are sharp. Handle with care!*** • Reattach Clean Sweep rail to condensing unit (4 screws). • Slide/Roll Condensing Unit Assembly back under case. • Replace Rear Grille to case (4 screws). • See photos below.





--- Above photos are taken after rear grille has been removed from case ---

PREVENTIVE MAINTENANCE	FREQUENCY	INSTRUCTIONS
Case Exterior	**Quarterly**	**Compressor Area:** *Warning! Disconnect power from the case before cleaning Condenser Coil!* • Slide/Roll out from under case. • Use moist cloth to wipe off dust & debris that collects on various parts.
	Quarterly	**Condensate Pan:** Disconnect from receptacle box. Remove mounting screws from base. Use a de-scaling solution (such as CLR® that will prevent corrosion, lime and rust) to clean pan. Rinse thoroughly; do not submerse in water.
	Quarterly	**Under Case Cleaning:** Once refrigeration package is clear of unit, vacuum under case to remove all dust and dirt that may collect under case.
Case Interior	**Quarterly**	**Tub, Coil and Drain:** Remove Evaporator Fan Panel and clean Tub, Coil and Drain with warm water and mild soap solution. Remove any debris that may clog drain.
	Quarterly	**Fan Blades, Motor, and Bracket:** Wipe down each blade, motor and bracket with moist cloth.
	Quarterly	**Honeycomb:** Remove the honeycomb. Vacuum, then clean with warm water and soap. See specific instructions in the Maintenance Fundamentals section of this manual.

TROUBLESHOOTING (TO BE PERFORMED BY TRAINED SERVICE PROVIDERS ONLY) - PAGE 1 of 3

CONDITION	TROUBLESHOOTING
Case Not Lining Up	See Installation Section for instructions on properly aligning case (alongside other cases) and adjusting levelers.
Water Is On The Floor	***Caution!*** Water on flooring can cause much damage! Until cause is determined (and repaired), follow these procedures: • Use wet-dry vacuum (or mop & bucket) to remove standing water. • Use 'catch pans' for water to drain into. Swap out regularly until case has completely drained.
	Check that the drain trap is free of debris.
	Check that the drain hose is correctly positioned over condensate pan (or floor drain, for remote units).
	Check store conditions. To prevent condensation in Type 1 condition environments, maximum conditions are to be 55% humidity / 75 °Fahrenheit. For Type 2 condition environments, maximum conditions are to be 60% humidity / 80 °Fahrenheit. See serial label (at case rear near main power switch) for Type of your case.
	Check condensate pan float for proper operation (heat rod condensate system only).
	Check that condensate pan is properly plugged in or connected.
	Caution! Condensate pan may be malfunctioning (electrical heat rod condensate system). If so, water will overflow pan and seep onto flooring causing damage! Until condensate pan is functioning (or is replaced), follow these procedures: • Use wet-dry vacuum (or mop & bucket) to remove standing water. • Use 'catch pans' for water to drain into. Swap out regularly until case has completely drained.
	Caution! Disruption of power can cause water to overflow pan and seep onto flooring causing damage! Check that power to case is constant. Until power is restored, follow these procedures: • Use wet-dry vacuum (or mop & bucket) to remove standing water. • Use 'catch pans' for water to drainage. Swap out regularly until evaporation of case is complete (or until power is restored). • When power to case is restored, condensate pan should function properly and water will no longer overflow onto flooring.
	Caution! Wicking material may be dirty or worn and need replacement (hot gas condensate system only). • Slide refrigeration system out from under unit. • After refrigeration system has been carefully slid out from under unit, replace wicking material with new. If wicking material is not available, contact Structural Concepts®. See toll-free number at last page of this operating manual.

CONDITION	TROUBLESHOOTING
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 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.

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*** for label location, etc.
	See the Carel® Controller thermostat sheets in this manual for codes that may be displayed on controller identifying problem.
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. See ***OVERVIEW / TYPE / COMPLIANCE / WARNINGS / PRECAUTIONS / CORDS / WIRING*** section in manual for adverse conditions/spacing issue parameters.
	If case is located near front doors, temperature fluctuation can hinder unit's ability to maintain temperature. See ***OVERVIEW / TYPE / COMPLIANCE / WARNINGS / PRECAUTIONS / CORDS / WIRING*** section in manual for adverse conditions/ spacing issue parameters.
	Check that condenser coil air filter (attached to rear grille) has been cleaned. See ***GENERAL CLEANING (TO BE PERFORMED BY STORE PERSONNEL)*** section in operating manual for instructions.
	Check that condenser coil has been cleaned.
	Check air return 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 (BY TRAINED SERVICE PROVIDERS ONLY) - CONDENSING SYSTEM

CONDITION	TROUBLESHOOTING
Head Pressure Too High	Check that the Condenser Coil is not dirty or covered.
	Check that Condensing Fans are working.
	Check that refrigerant is not overcharged.
	Check to verify that a non-condensable is not in the system.
	Check that Liquid Line Drier is not plugged.
	Check that there are no close-offs around Condenser Coil.
	Check Set Point Temp.; it may be adjusted too high.
	Check System Operating Temperatures.
	Check that Store Ambient Temperature isn't above maximum allowed. See *Overview and Warnings* Section.
Head Pressure Too Low	Check that Refrigerant Charge isn't too low.
	Check that Suction Pressure isn't too low.
	Check to verify that Compressor Valves aren't bad.

TROUBLESHOOTING (BY TRAINED SERVICE PROVIDERS ONLY) - EVAPORATOR SYSTEM

CONDITION	TROUBLESHOOTING
Low Suction Pressure	Check that the Refrigerant doesn't have a low charge.
	Check that Thermostatic Expansion Valve (TXV) isn't restricted.
	Check that Liquid Line or Filter isn't restricted.
	Check that Evaporator Fan Motors are working.
	Check that High Superheat doesn't need adjusting.
	Check that the Thermostatic Element charge isn't depleted.
	Check that there is air no seepage of air around Condensing Coil.
	Check that the Coil is not iced up.
High Suction Pressure	Check that Refrigerant Charge isn't too high.
	Check that Compressor Valves aren't bad.
	Check that the Cooling Load isn't high.
	Check that Superheat Adjustment isn't low.
	Check TXV Bulb Installation a. Poor thermal contact. b. Warm location.
	Check Compressor: Low capacity means it is undersized for its application.

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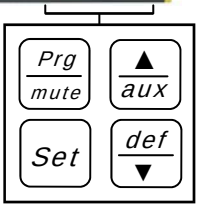

Programming The Instrument

To Modify The Setpoint

Set 1. 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.

Oper Manuals - PUB\Templates\Carel Controller\Carel Controller IR33.pub
This data derived from Carel Material: ir33 +030220441 - rel. 2.0 - 01.05.2006

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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	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	
dI	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: 1.800.433.9489 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. SCC warrants that if any Goods are found by an authorized representative of SCC not to be of good material or workmanship within one year of the date of shipments SCC will, at its option after inspection by an authorized representative, replace any defective Good or pay the reasonable cost of replacement for any such defective Goods, provided that written notice of the defect is given to SCC within 30 days of the appearance of such defect. If notice is not given within such period, any claim for breach of warranty shall be conclusively deemed to have been waived and SCC shall not be liable under this warranty. If SCC is unable to repair or replace the defective Goods, SCC shall issue a credit to the Purchaser for all or part of the purchase price, as SCC shall determine. The replacement or payment in the manner described above shall be the sole and exclusive remedy of 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 for or cause 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.

Limit of Liability. The limit of liability of SCC toward the exchange cost of the original condensing unit, F.O.B. SCC, Norton Shores, MI, of each motor-compressor assembly replaced during the warranty shall not exceed manufacturer's current established wholesaler's exchange price and in no case shall the labor of removing or replacing the motor-compressor or parts thereof be the responsibility of SCC.