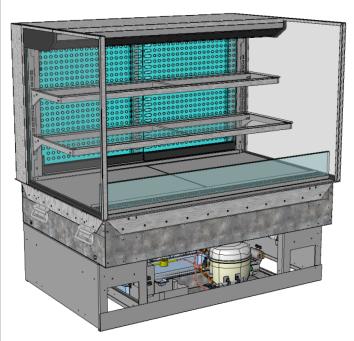
# Reveal Manual

# User

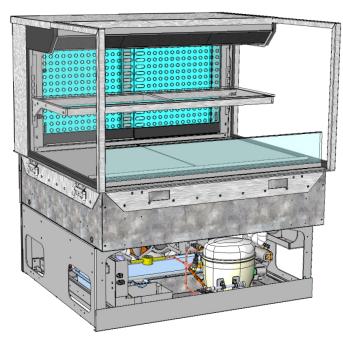
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REVEAL® SLIDE-IN, SELF-SERVICE REFRIGERATED MERCHANDISERS

- > REAR SLIDING DOORS WITH PERFORATED PLENUMS
- > SELF-CONTAINED OR REMOTE UNITS
- > CAUTION! DO NOT PUSH OR PULL ON GLASS END PANELS!
- > ONLY USE HANDLES (AT EACH END OF CASE) TO PUSH OR PULL CASE INTO POSITION!

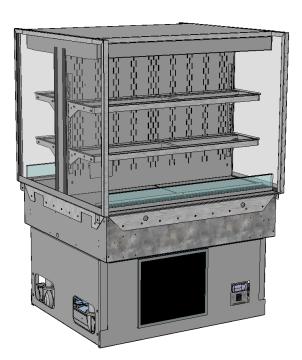


Model NE4827RSSV With Dual Shelves and Acrylic Perforated Plenums



Model NE3620RSSV With Single Shelf and Acrylic Perforated Plenums

Model NE3627RSSV2 Dual Access Model With Perforated Back-To-Back Plenums and Dual Shelves



### Structural Concepts

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#### **TABLE OF CONTENTS**

TABLE OF CONTENTS	2
REVEAL® SLIDE-IN, REFRIGERATED SELF-SERVICE MODEL APPLICABILITY AND INDIVIDUAL MODEL DIMENSIONS	3
OVERVIEW / DISPLAY TYPE I vs. II / COMPLIANCE / WARNINGS / PRECAUTIONS	4-5
INSTALLATION: TOE-KICK & AIR INTAKE GRILLE REMOVAL / CASE DISCONNECTION & PALLET REMOVAL	6
INSTALLATION, CONT'D: POSITIONING CASE / SIDE HANDLES / SHIPPING BRACE / GRILLE	7
GRILLE INSTALLATION, CONT'D: SHELVING ASSEMBLY COMPONENTS	8 9
PANELINSTALLATION, CONT'D: OPTIONAL ACRYLIC SECURITY COVER	10
INSTALLATION, CONT'D: OPTIONAL REAR VENTED PANEL ASSEMBLY	11
CASE DESIGN: FRONT VIEW OF SLIDE-IN, SELF-SERVICE MERCHANDISERS	12
CASE DESIGN, CONT'D: REAR VIEW OF SLIDE-IN, SELF-SERVICE MERCHANDISERS	13
CONDENSER COIL FILTER	14
CASE DESIGN, CONT'D: NIGHT CURTAIN ACCESS AND OPERATION	15
CASE DESIGN, CONT'D: TUB AREA (AFTER DECK PAN REMOVAL)	16 17
CONTROL  CASE DESIGN, CONT'D: CONDENSER PACKAGE (SELF-CONTAINED UNITS ONLY)	18 19
PRODUCT PLACEMENT / HONEYCOMB AIRFLOW CONSIDERATION / LOAD LINES	20
CLEANING SCHEDULE (TO BE PERFORMED BY STORE PERSONNEL)	21
PREVENTIVE MAINTENANCE (TO BE PERFORMED BY TRAINED SERVICE PROVIDER)	22-24
TROUBLESHOOTING (TO BE PERFORMED BY STORE PERSONNEL ONLY)	25-26
TROUBLESHOOTING (TO BE PERFORMED BY TRAINED SERVICE PROVIDERS ONLY)  TROUBLESHOOTING (TO BE PERFORMED BY TRAINED SERVICE PROVIDERS ONLY) -	27-30
CONDENSING SYSTEM TROUBLESHOOTING (TO BE PERFORMED BY TRAINED SERVICE PROVIDERS ONLY) - EVAPORATOR SYSTEM	31 32
SERIAL LABEL INFORMATION & LOCATION	33
PROGRAMMABLE CONTROLLER INFORMATION	34
TECHNICAL SERVICE CONTACT INFORMATION / WARRANTY INFORMATION	35

#### REVEAL® SLIDE-IN, REFRIGERATED SELF-SERVICE MODEL APPLICABILITY & DIMSENSIONS

Model	Upper Display Case Height	Overall Case Height	Case Depth x Length
NE3613RSSV	13 5/8"UDH	32 7/8"OCH	33"D* x 35 3/4"L
NE3620RSSV	20 3/8"	39 5/8"OCH	33"D* x 35 3/4"L
NE3627RSSV	27 7/8"	47 1/8"OCH	33"D* x 35 3/4"L
NE3627RSSV2*	27 7/8"	51 1/8"OCH	33"D* x 35 3/4"L
NE3635RSSV	35 1/4"	54 5/8"OCH	33"D* x 35 3/4"L
NE4813RSSV	13 5/8"	32 7/8"OCH	33"D* x 47 3/4"L
NE4820RSSV	20 3/8"	39 5/8"OCH	33"D* x 47 3/4"L
NE4827RSSV	27 7/8"	47 1/8"OCH	33"D* x 47 3/4"L
NE4827RSSV2*	27 7/8"	47 1/8"OCH	33"D* x 47 3/4"L
NE4835RSSV	35 1/4"	54 5/8"OCH	33"D* x 47 3/4"L
NE6013RSSV	13 5/8"	32 7/8"OCH	33"D* x 59 3/4"L
NE6020RSSV	20 3/8"	39 5/8"OCH	33"D* x 59 3/4"L
NE6027RSSV	27 7/8"	47 1/8"OCH	33"D* x 59 3/4"L
NE6035RSSV	35 1/4"	54 5/8"OCH	33"D* x 59 3/4"L
NE7213RSSV	13 5/8"	32 7/8OCH	33"D* x 71 3/4"L
NE7220RSSV	20 3/8"	39 5/8"OCH	33"D* x 71 3/4"L
NE7227RSSV	27 7/8"	47 1/8"OCH	33"D* x 71 3/4"L
NE7235RSSV	35 1/4"	54 5/8"OCH	33"D* x 71 3/4"L

<sup>\*</sup>V2 Models = Dual Access Models. See Cover Sheet For Dual Access Merchandiser Illustration.

#### **OVERVIEW**

- These Structural Concepts Reveal® cases are designed to merchandise packaged products at 40 °F (4 °C) or less product temperatures.
- Cases should be installed and operated according to this operating manual's instructions to insure proper performance. Improper use will void warranty.
- NSF/ANSI Type II Conditions: Product is displayed in store conditions with maximum ambient temperature of 80 °F (27 °C) and maximum relative humidity of 55%.
- If you are unsure if your unit is classified as NSF/ ANSI Type I or Type II, see tag next to serial label on your case.

#### NSF/ANSI TYPE I vs. II ENVIRONMENTAL CONDITIONS

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

 NSF/ANSI Type I Conditions: Product is displayed in store conditions with maximum ambient temperature of 75 °F (24 °C) and maximum relative humidity of 55%.

#### **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.



#### **COMPLIANCE**

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

# WARNING ELECTRICAL HAZARD

#### **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.

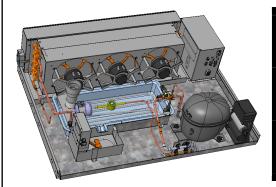
## WARNING

KEEP HANDS CLEAR



#### **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.



CAUTION! IF YOUR UNIT IS SELF-CONTAINED, <u>YOU MUST</u> CHECK CONDENSATE PAN POSITION & PLUG!
Water on flooring can cause extensive damage!
Before powering up unit, check and confirm that:

- Condensate pan is DIRECTLY UNDER condensate drain.
- Condensate pan plug is securely plugged into receptacle.
- Overflow pan has plug connected to its box. Units with optional Clean Sweep® MUST HAVE two plugs connected.



WARNING: This product can expose you to chemicals, including Urethane (Ethyl Carbamate), which are known to the state of California to cause cancer and birth defects or other reproductive harm. For more information go to P65Warnings.ca.gov.

#### **PRECAUTIONS**

- Following are important precautions to prevent damage to unit or merchandise.
- Please read carefully!

#### **WIRING DIAGRAM**

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

#### REFRIGERANT DISCLOSURE STATEMENT

- This equipment is prohibited from use in California with any refrigerants on the "List of Prohibited Substances" for that specific end-use, in accordance with California Code of Regulations, title 17, section 95374.
- This disclosure statement has been reviewed and approved by Structural Concepts and Structural Concepts attests, under penalty of perjury, that these statements are true and accurate.



#### **CAUTION! LAMP REPLACEMENT GUIDELINES**

LED lamps reflect specific size, shape and overall design.
Any replacements must meet factory specifications.





#### **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 warranted.
- To prevent damage to end panels due to condensation, apply industrial grade silicone sealant and tightly join to opposite end panels. When not adjoining cases, keep end panels at least 6" away from walls/structures. Rear panels must also be kept at least 6" from walls and structures.
- Case must not be exposed to direct sunlight or any heat source.
- To maintain proper case temperature, keep case at least 15-feet from exterior doors, overhead HVAC vents or any air curtain disruption.



#### **CAUTION!**

DO NOT RELY ON THERMOMETERS OR THERMOSTATS FOR ACTUAL PRODUCT (FOOD) TEMPERATURES.

- Thermometers and thermostats reflect air temperatures ONLY.
- For PRECISE food temperatures, use calibrated food thermometers ONLY.



#### **CAUTION!**

- To prevent sagging or breakage, do not exceed 5 LBS (2.3 KG) weight load per top glass section (between vertical supports).
- To prevent scratching or marring, do not place ANY items on glass.

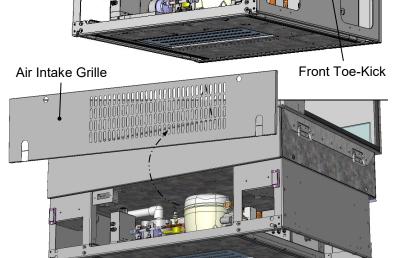
#### INSTALLATION: TOE-KICK & GRILLE REMOVAL / CASE DISONNECTION & PALLET REMOVAL

#### 1. Remove Front Toe-Kick From Case

- To prevent damage to case, remove front toe-kick from case before removing from pallet.
- Toe-kick is held in place by magnets only. No screw removal is required.
- Place front toe-kick in secure location while removing case from pallet.

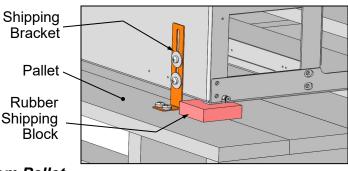
#### 2. Remove Air Intake Grille From Case

- To prevent damage to case, lift air intake grille UP and OFF case.
- Air intake grille is held in place by magnets.
   No screw removal is required.
- Place air intake grille in secure location while removing case from pallet.



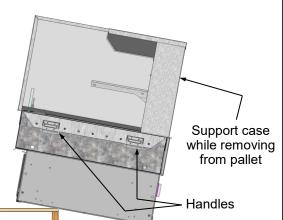
#### 3. Disconnect Case From Pallet

- Remove screws from shipping brackets. Remove and discard shipping brackets from pallet.
- Place J-bar/pry under base frame.
   Raise case up from pallet; remove rubber shipping blocks.



#### 4. Carefully Remove Case From Pallet

- Use handles to carefully slide case to rear of pallet (see illustration at right).
- Caution! 4 people are required for this task!
- Carefully lower to floor. Slide pallet from under case.
- Maintain support of case at all times or center of gravity may cause case to fall.



Pallet

#### 5. Prepare Case For Counter: Rear Panels

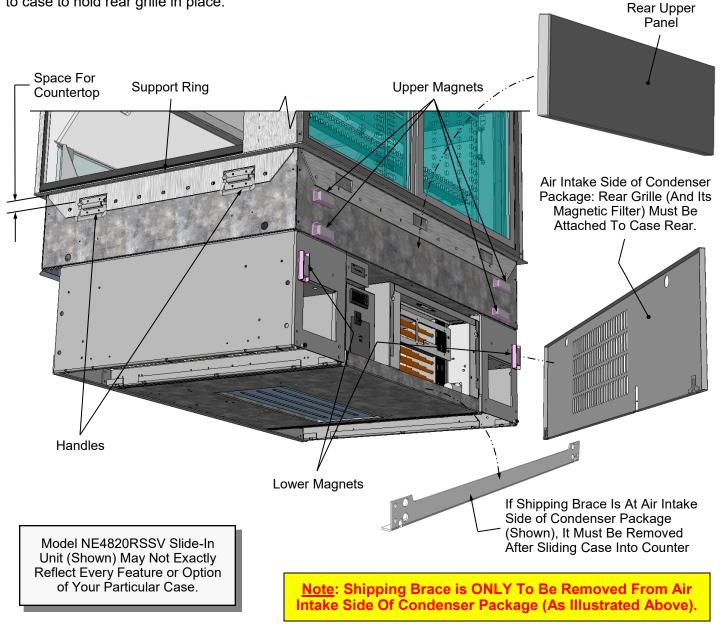
- Upper rear panel and rear grille must remain OFF case while it is slid in (or dropped into) counter.
- Panel and grille may be damaged if they remain on the case while placed in counter.

#### 6. Prepare Case For Counter: Magnets

- > <u>Slide-In Units</u>: All rear magnets may remain on case while SLIDING INTO counters.
- > <u>Drop-In Units</u>: Due to space restraints, rear magnets MAY NEED TO BE REMOVED from case for case to fit into counter. Measure carefully!
- > Lower set of magnets MAY BE REATTACHED to case to hold rear grille in place.

#### 7. Prepare Case For Counter: Side Handles

- > <u>Slide-In Units</u>: Side handles MAY remain on case if space allows. Otherwise, remove them.
- See "Space For Countertop" shown in illustration below.
- Keep handles in safe place for future possible relocation use.
- > <u>Drop-In Units</u>: Due to space restraints, REMOVE SIDE HANDLES to allow case to fit into counter.
- Keep handles in safe place for future possible relocation use.
- See illustration below.

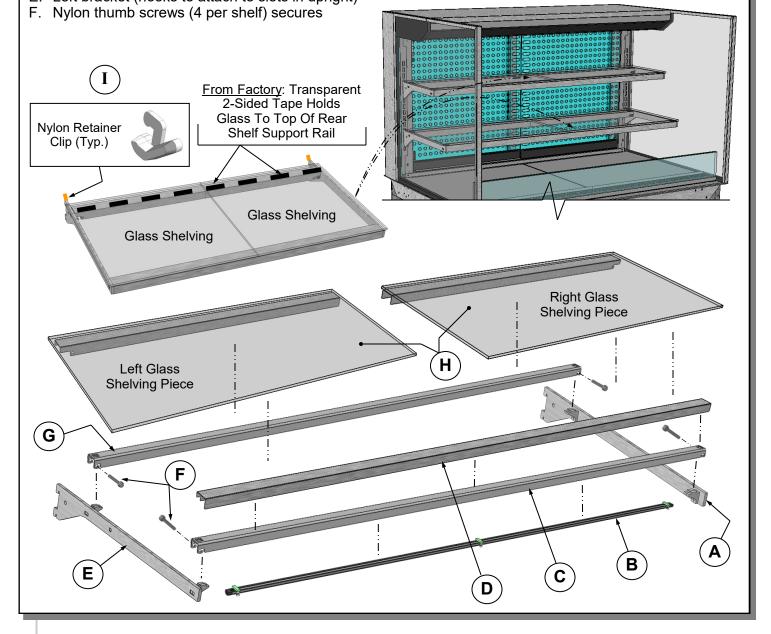


#### INSTALLATION, CONT'D: SHELVING ASSEMBLY COMPONENTS

#### 8. Shelving Assembly Components

- Check that glass shelving is in proper position before placing product in case
- Shelves may be adjusted vertically or entirely removed from merchandiser.
- Metal shelving brackets ARE NOT able to be angled. They are at a fixed 90° position.
- There are 12 components comprising each shelf assembly:
- A. Right bracket (with hooks to attach to slots in upright)
- B. LED light with magnets
- C. Front shelf support rail (LED light attaches to its inner cavity via magnets)
- D. Cover (rests atop front shelf support rail)
- E. Left bracket (hooks to attach to slots in upright)

- shelving during shipment. <u>Note</u>: Remove (using pliers, if necessary) and discard thumbscrews after case is installed so shelves can be disassembled (to clean or service).
- G. Rear shelf support rail
- H. Left and right glass shelf/cover assemblies (glass is affixed to covers with 2-sided tape from factory).
   <u>Caution!</u> Glass pieces ARE NOT IDENTICAL!
   Notches on underside metal covers determine placement in case.
- I. Nylon retainer clips (2 per shelf) secure brackets during shipment. Note: To adjust or remove shelves, you must remove retainers; pliers may be required to accomplish this task.



#### INSTALLATION, CONT'D: PLUG CASE IN & TURN ON / AIR INTAKE GRILLE / UPPER REAR PANEL

#### 9. Remove Shipping Brace

- Shipping brace keeps condenser package secure during shipment and while moving case into position.
- After case is ready to slide in counter, remove shipping brace that is just below condenser package by removing (2) screws.
- <u>Note</u>: Shipping Brace Is <u>ONLY</u> To Be Removed From Air Intake Side of Condenser Package!

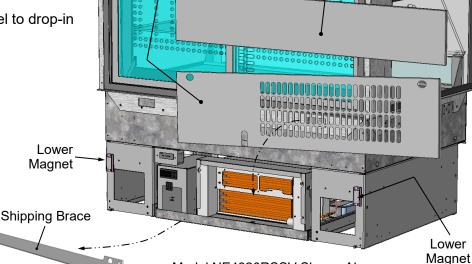
#### 10. Plug Case In/Turn Main Power Switch On

- Power cord with plug is factory-supplied.
- Plug case into customer-supplied electrical outlet.
- <u>Note 1</u>: Partially-disassembled view at right is shown with casters removed for illustrative purposes only. View/location of floor receptacle is for illustrative purposes only.
- Note 2: Due to space constraints, it may be necessary to pull out condenser package to maneuver power cord plug around components and into receptacle.
- Turn main power switch on.
- Check that case is energized. Lift deck pans to confirm that evaporator fans are rotating).
- Turn on LED light switch at front-left header.

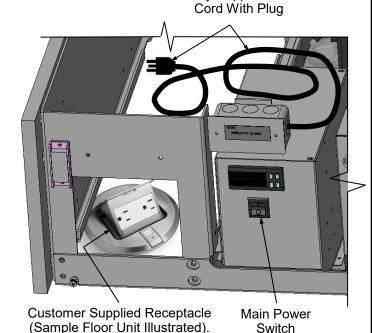
#### 11. Air Intake Grille / Upper Rear Panel

- If rear magnets were removed (due to unit being placed in drop-in counters) you must reattach LOWER magnets to case.
- Air intake grille (and magnetic air filter) must now be reattached to case.
- Rear upper panel may be reattached for units placed in slide-in counters (as upper magnets would not have been removed from case).
- Do not reattach upper rear panel to drop-in case.

Shipping Brace Is ONLY To Be Removed From Air Intake Side Of Condenser Package (Shown).



--- Model NE4820RSSV Shown Above ---



Factory-Supplied Power

Upper Rear Panel

Air Intake

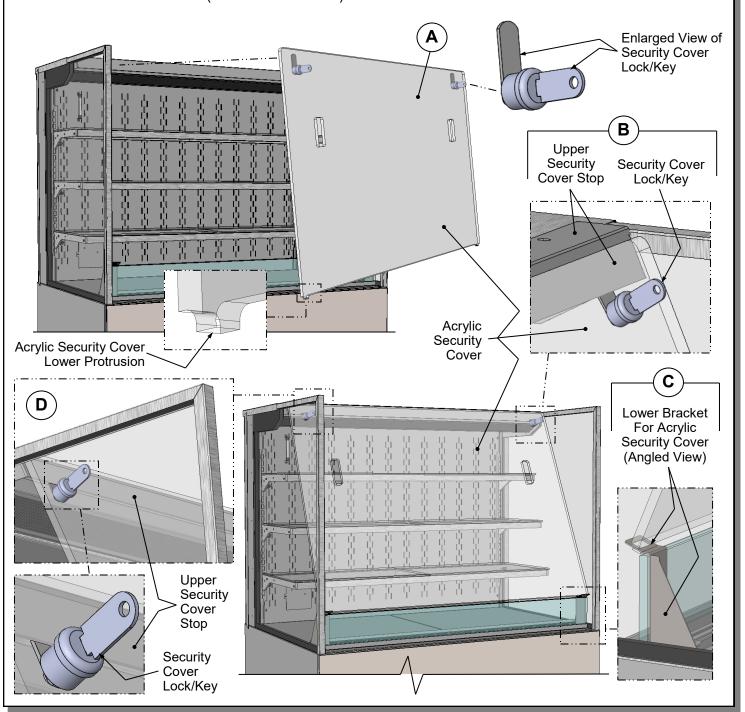
Grille

#### INSTALLATION, CONT'D: OPTIONAL ACRYLIC SECURITY COVER

#### 12. Optional Acrylic Security Cover

<u>Note</u>: Illustrations reflects random model; it may not reflect every feature or option of your case.

- A. View of optional acrylic security cover with holes for grasping (for removing and replacing), enlarged lock/key and lower protrusion.
- B. Acrylic security cover rests against upper security cover stop.
- C. Acrylic security cover's lower protrusions are to rest in lower bracket slots (one in each bracket).
- D. Upper acrylic security cover must rest against upper security cover stop. Lock at both ends of cover with locking mechanism.
- > Important! After locking in place, store keys in safe yet accessible place.
- > If removing acrylic security cover, store in safe location away from foot traffic or work areas that could lead to scratching or marring of acrylic surfaces.
- > See CLEANING SCHEDULE (TO BE PERFORMED BY STORE PERSONNEL) for cleaning information.

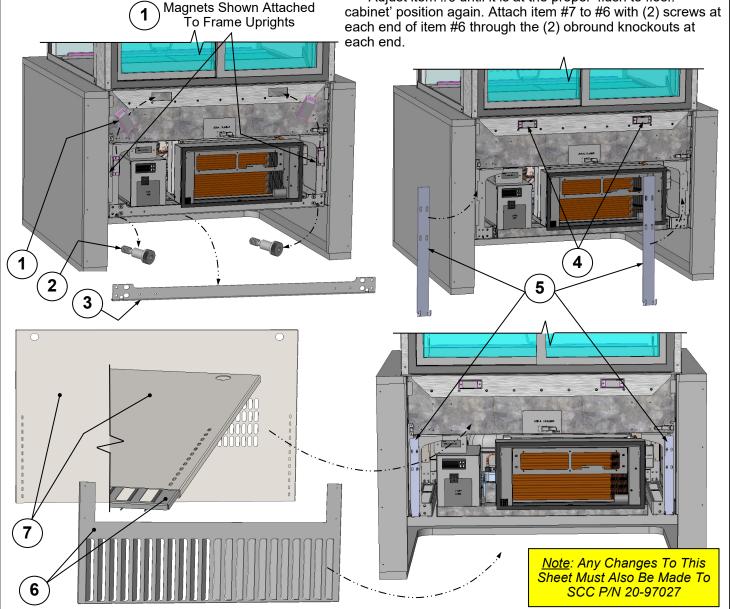


#### INSTALLATION, CONT'D: OPTIONAL REAR VENTED PANEL ASSEMBLY

#### 13. Optional Rear Vented Panel Assembly

- >> Important! Carefully follow these step-by-step instructions for proper component attachment.
- >> This document depicts Model NE3635RSSV with rear vented panel option; it is applicable to both NEXXXXRSV and NEXXXXRSSV models.
- 1. If magnet assemblies are attached to frame uprights, relocate them to openings in upper plate (item #4). To attach, drill pilot holes and use self-tapping screws.
- 2. Remove (2) Allen® head standoff screws.
- 3. Remove shipping brace (and its screws).
- 4. View of magnet assemblies at proper location.
- 5. Attach SCC-supplied side brackets to case where shown with screws into pre-tapped holes:

- prongs facing out; edge of brackets must line up with outside Edges of frame.
- 6. Insert lower vented panel into upper vented panel.
- 7. Attach upper vented panel to case rear via side bracket hooks (item #5) and upper magnets (item #4).
- >> Adjust (item #6) until flush to floor/cabinet. Remove item #6 AND #7 (holding item #6 in 'flush to floor/cabinet' position).
- >> Rotate item #6 and #7 assembly so screw locations of item #6 are viewable. Mark (4) locations onto item #7's knockouts.
- >> Separate item #7 from item #6. Use screwdriver or similar instrument to remove all four (4) marked knockouts (to allow proper lineup with screws of item #6).
- >> Insert item #6 back into item #7.
- >> Reattach item #7 (with #6 inserted at underside) to case via side bracket hooks (item #5) & upper magnets (item #4).
- >> Adjust item #6 until it is at the proper 'flush to floor/ each end of item #6 through the (2) obround knockouts at

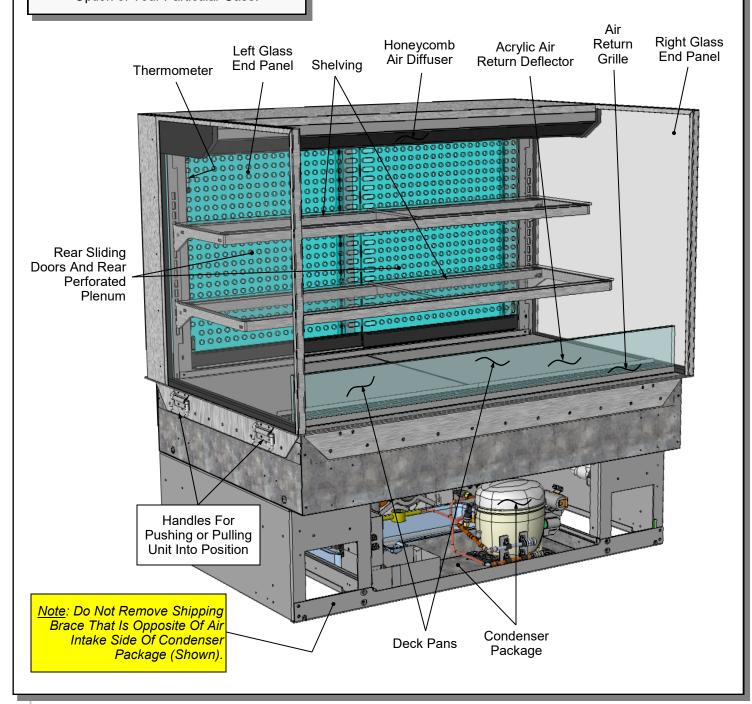


#### CASE DESIGN: FRONT VIEW OF SLIDE-IN, SELF-SERVICE MERCHANDISERS

#### 1. Front View Of Slide-In, Self-Service Merchandisers

- Model NE4827RSSV illustrated below may not reflect every feature or option of your particular case.
- Front toe-kick has been removed for viewing purposes only.
- Dual-sided cases (V2) are similar to standard cases but have product access at both case front and rear.
- See next page for rear view of merchandiser.

Model NE4827RSSV Slide-In Unit (Shown) May Not Exactly Reflect Every Feature or Option of Your Particular Case.

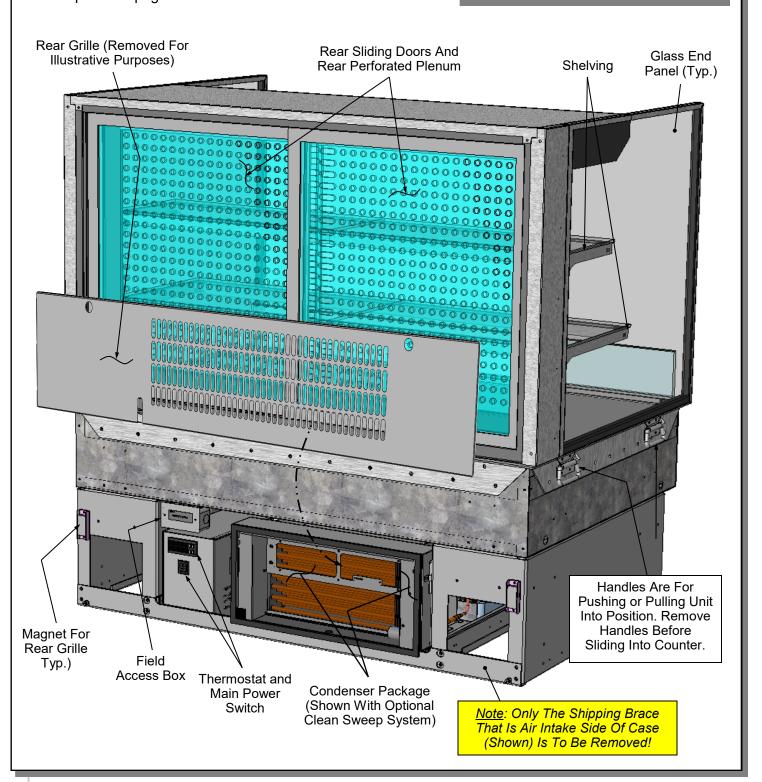


#### CASE DESIGN, CONT'D: REAR VIEW OF SLIDE-IN, SELF-SERVICE MERCHANDISERS

#### 2. Rear View Of Slide-In, Self-Service Merchandisers

- Model NE4827RSSV slide-in unit is illustrated below.
- Handles (at both ends of case) are for pushing/pulling into position.
- Remove handles before sliding into counter.
- See previous page for front view.

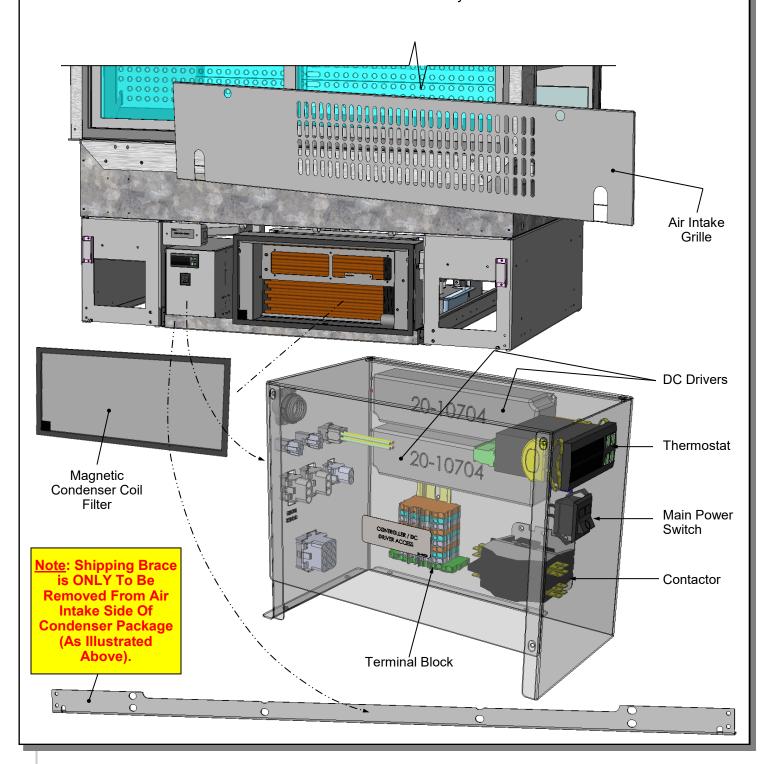
Model NE4827RSSV Slide-In Unit (Shown) May Not Exactly Reflect Every Feature or Option of Your Particular Case.



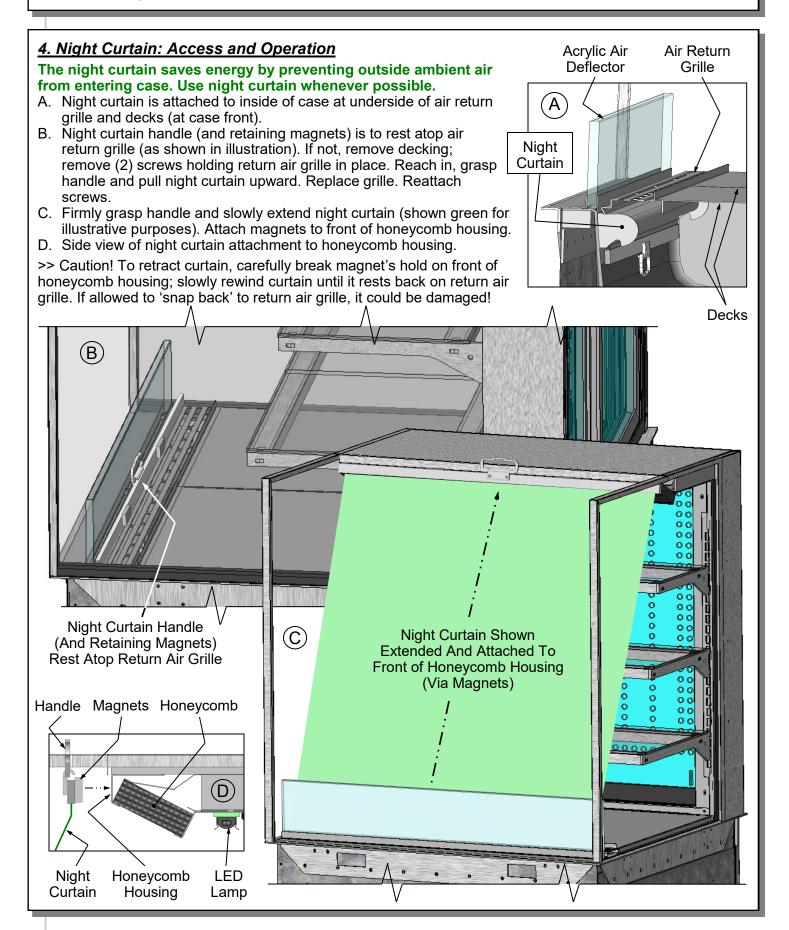
#### CASE DESIGN, CONT'D: CONTROLLER / DC DRIVERS / MAIN POWER SWITCH / COIL FILTER

#### 3. Controller / DC Driver Access / Components

- Remove air intake grille with slot/hook method; no screw removal is required.
- Magnetic condenser coil filter is directly accessible.
   See CLEANING SCHEDULE (TO BE PERFORMED BY STORE PERSONNEL) for cleaning instructions.
- Remove shipping brace by removing 4 screws.
- Remove 4 screws from the controller/DC driver box cover to access electrical components.
- <u>Note</u>: Only certified electricians are to access electrical components in case.
- After accessing controller and/or DC drivers, return components to case in reverse order they were removed.



#### CASE DESIGN, CONT'D: NIGHT CURTAIN ACCESS AND OPERATION



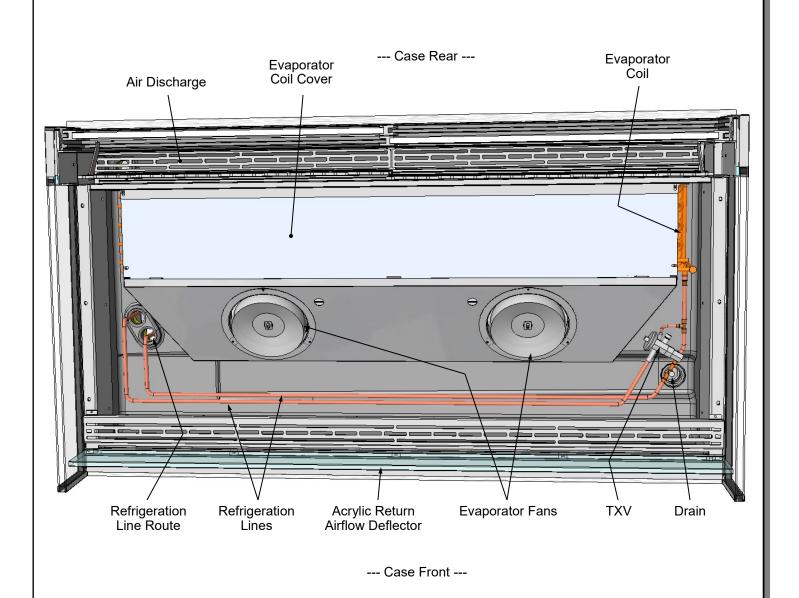
#### CASE DESIGN, CONT'D: TUB AREA (AFTER DECK PAN REMOVAL)

#### 5. Tub Area After Deck Pan Removal

**Note:** Refrigeration service to be accomplished by refrigeration / electrical contractors only.

#### <u>Caution!</u> Turn main power off before accessing tub area.

- Illustration below shown after removal of deck pans.
- After cleaning or servicing in tub area, return deck pans to case and return power to case.



#### CASE DESIGN, CONT'D: LED LIGHT SWITCH / LED LIGHTS / THERMOMETER

#### 6. LED Light Switch Locations

- Cases with rear sliding doors have light switch in column cover (for easy access at case rear).
- Cases with solid back rear plenums have light switch in header.
- See illustrations below.

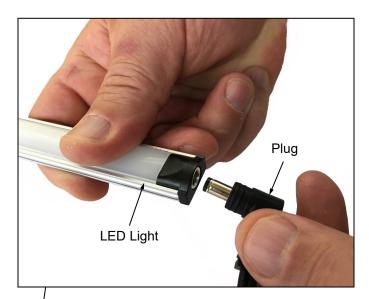
#### 7. LED Lights

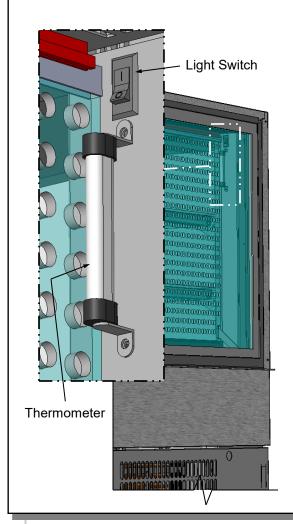
- LED lights are located at both header and shelving of case (as shown below-right).
- Check that ALL of the light plugs are properly connected to the LED light.
- Plug must be inserted ALL THE WAY into the LED light orifice (with no gap) to work properly.
- See TROUBLESHOOTING section in manual if LED lights malfunction.

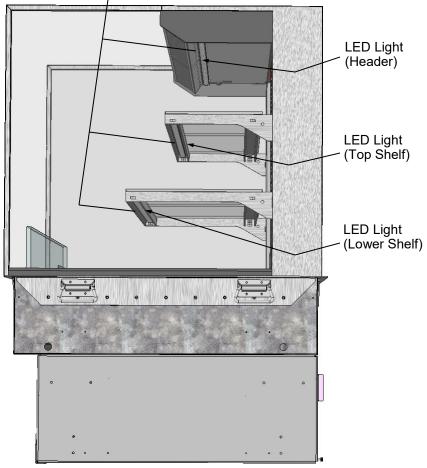
#### 8. Thermometer Function & Placement

 Thermometer provides temperature of refrigerated section of case.

- Thermometers reflect warmest air temperature in merchandiser. They do not provide actual food temperature.
- Use probe thermometers to determine actual product temperatures.







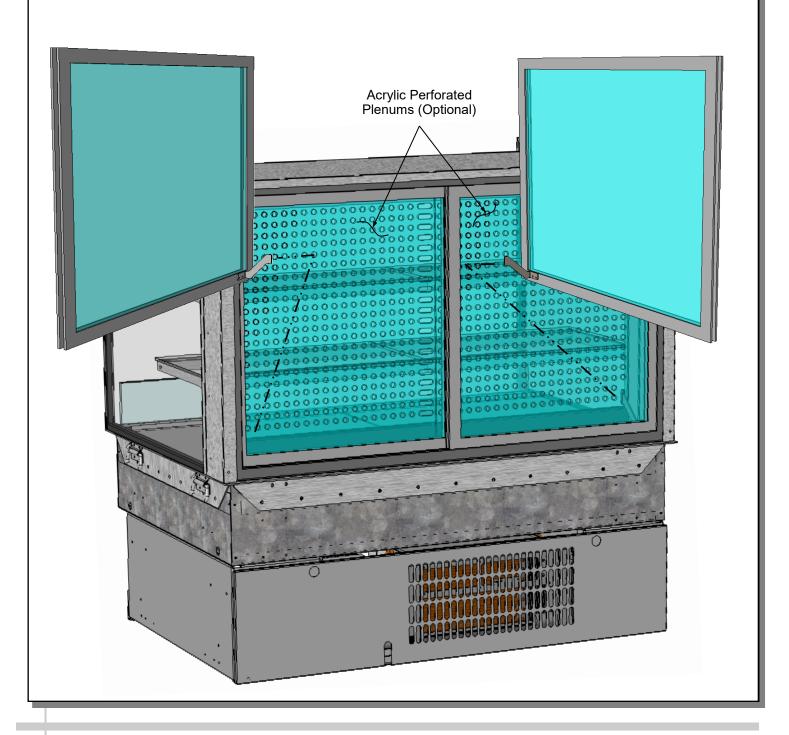
#### CASE DESIGN, CONT'D: REAR SLIDING DOOR REMOVAL / REAR PERFORATED PLENUM CONTROL

#### 9. Rear Sliding Door Removal

- To remove rear sliding doors, move rear doors toward center of the case.
- Individually lift each door up toward the top of the case; pivot the bottom of the door out.
- Return doors to case in reverse order they were removed.

#### 10. Rear Perforated Plenum Control

- Optional acrylic perforated plenums are shown.
   Your unit may have solid back panel.
- Units with acrylic perforated plenums have sliding doors with angled brackets that insert into acrylic perforated plenum slots (as shown below).
- As doors open and close, acrylic perforated plenums follow.



#### CASE DESIGN, CONT'D: CONDENSER PACKAGE (SELF-CONTAINED UNITS ONLY)

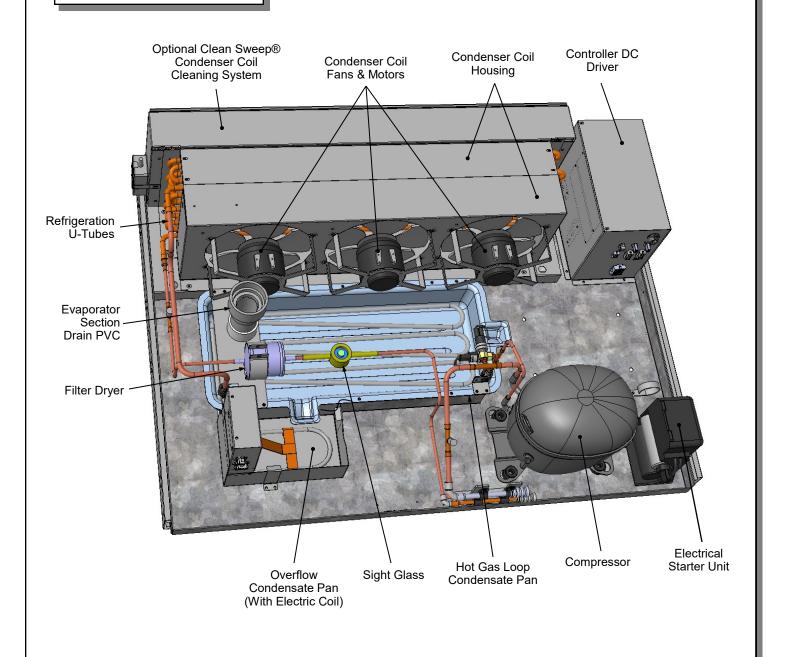
#### 11. Condenser Package (Self-Contained Units Only)

Assembly/disassembly and servicing to be performed by licensed refrigeration contractor.

#### **Condensate Package Configuration**

• Illustration below may not reflect every feature or option of your particular merchandiser.

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



#### PRODUCT PLACEMENT / HONEYCOMB AIRFLOW CONSIDERATION / LOAD LINES

#### 1. Product Placement

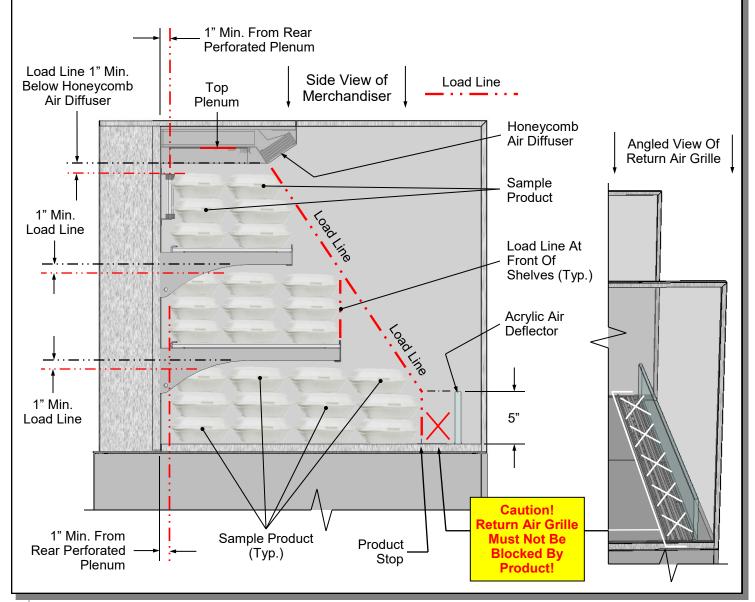
- Product can be placed on decking or steps (risers) within self-service display area.
- A wide range of product may be displayed.

#### 2. Honeycomb Airflow Consideration

- Airflow from honeycomb air diffuser is designed to flow over (and around) product to return air grille at case front.
- Caution! You must keep the honeycomb air diffuser unblocked by product for airflow to reach return air grille.
- Caution! You must ALSO keep product OFF return air grille at case front (as illustrated below).

#### 3. Load Lines

- Load lines limit where product can be placed and/ or stacked in case.
- Do not allow product to break load line between honeycomb air diffuser and return air grille.
- Do not stack product nearer than 1" to underside of honeycomb air diffuser.
- Do not stack product nearer than 1" to underside of shelves.
- Do not stack product nearer than 1" from rear plenum.
- Do not stack product on return air grille.
- Do not allow product to hang over front of shelves.
- Do not allow product on decks to hang over product stop.
- See illustration below.



### CLEANING SCHEDULE (TO BE PERFORMED BY STORE PERSONNEL)

FREQ.	INSTRUCTIONS
Daily	Glass Surfaces: Clean side glass and shelves with household or commercial glass cleaner.
Daily	Rear Sliding Door Exterior Glass: Clean with household or commercial glass cleaner. Clean out rear door track with moist cloth.
Daily	Rear Panels, Toe-Kick, etc.: Wipe off all surfaces with warm water and mild soap solution and non-abrasive cloth.
Daily	<u>Decks</u> : Wipe off decks with moist cloth dipped in mild soap and water solution.
Daily	<ul> <li>Acrylic Surfaces (Sneeze Guard/Optional Security Cover and/or Perforated Plenums):</li> <li>Clean: Use soft, clean cloth dipped in solution of warm water and small amount of mild, liquid soap. Apply light pressure while wiping away all smudges and residue.</li> <li>Rinse: Use pure water in spray bottle to rinse.</li> <li>Dry: Use soft, clean cloth (rather than abrasive paper towel).</li> <li>Avoid: Never use window or household cleaners such as Windex®, Formula 409®, or fantastik®. Never use scouring compounds or solvents such as acetone, gasoline, alcohol, 111 trichloroethylene, WD-40® or lacquer thinner.</li> <li>Polishing: Buff with light coat of automobile paste wax or plastic cleaner/polish.</li> <li>Scratches: Use high quality buffing compound. Carefully follow instructions.</li> </ul>
Daily	<ul> <li>Stainless Steel Surfaces:</li> <li>Wash with a solution of hand dishwashing liquid detergent and water or a solution of baking soda and water. Rinse and polish dry with paper towel or soft cloth.</li> <li>Never use scouring powders or steel wool as they will scratch stainless steel.</li> <li>Brighten by polishing with a cloth dipped in vinegar or in ammonia; sprinkle baking soda on sponge and rub gently; rinse. Polish dry with paper towel.</li> <li>Remove streaks or heat stains from stainless steel by rubbing with club soda.</li> </ul>
Weekly	<ul> <li>Magnetic Condenser Coil Filter (Self-Contained Units Only):</li> <li>This filter helps prevent dust particles from entering condenser coil.</li> <li>It is accessible at air intake side of case.</li> <li>Clean magnetic condenser coil filter by following either step 1 or 2; then follow step 3:</li> <li>Magnetic condenser coil filter is dishwasher safe; remove from case (no screw removal required) and use a rag or soft-bristled brush to wipe off excess dust particles from filter. Run in normal dishwasher cycle. Remove from dishwasher. Dry with soft cloth or paper towel. Return to case.</li> <li>If dishwasher is used, remove magnetic condenser coil filter from case. Use a rag or soft-bristled brush to wipe off excess dust particles from filter. Submerse in warm, soapy water. Use soft-bristled brush to remove dust, dirt, grease and grime that may collect on filter. Rinse thoroughly.</li> <li>Dry with soft cloth or paper towel (as shown below) or allow to air dry. Replace.</li> </ul>
Quarterly	<ul> <li>Under Case Cleaning:</li> <li>If there is adequate space between underside of case and floor (or base of cabinetry), thoroughly clean as directed below.</li> <li>If there is NOT adequate space between underside of case and floor (or base of cabinetry) to thoroughly clean, remove lower rear grille (held to case by magnets).</li> <li>If unit is remote, clean as directed below.</li> <li>If unit is self-contained, slide condenser package out from under case for greater access and clean as directed below.</li> <li>Use vacuum with brush to remove all dust, dirt, food particles or residue from underside of case.</li> <li>Replace lower rear grille when cleaning process is complete.</li> </ul>

#### WARNING! TURN OFF CASE BEFORE PERFORMING PREVENTIVE MAINTENANCE!

FREQ.	INSTRUCTIONS
Quarterly	<ul> <li>Condensing Coil:</li> <li>Remove rear grille to access area. Simply lift up and off.</li> <li>Roll/slide out condenser package. Note: At initial slide-out, it may be necessary to remove two (2) compressor pan shipment screws to slide it out from under case.</li> <li>Warning! Coil fins are sharp. Handle with care!</li> <li>Caution! Airborne dust can contaminate food! Use wet rags to cover area where air pressure is blowing.</li> <li>Use air pressure or industrial strength vacuum; clean dust and dirt that may collect on condenser coil.</li> <li>Slide/roll condensing package back under case.</li> <li>Return air intake grille to case.</li> </ul>
Quarterly	<ul> <li>Condenser Package: Caution! Disconnect power from case before cleaning!</li> <li>See CASE DESIGN, CONT'D: CONDENSER PACKAGE (SELF-CONTAINED UNITS ONLY) section in manual for illustrations.</li> <li>Warning! Condensate pan may be HOT! Disconnect power from case and allow to cool before cleaning condensate pan!</li> <li>Remove rear grille from case (no screw removal is required).</li> <li>Slide/roll condenser package out from under case.</li> <li>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.</li> <li>If electric coil overflow condensate pan is dirty, clean it (and in same manner) while cleaning rest of condenser package.</li> <li>After thoroughly cleaning condensate pan with scrub-brush and solution, rinse thoroughly with clean water (in spray bottle) and wipe dry with sponge or paper towel.</li> <li>Use moist cloth to wipe off dust &amp; debris that collects on various parts (fans, sight glass, overflow pan, etc.).</li> <li>Slide condenser package back under case.</li> <li>Replace rear grille to case (no screws required).</li> </ul>
Quarterly	<u>Under Case Cleaning</u> : See previous page for instructions.
Quarterly	<ul> <li>Tub Area (Evaporator Coil, Drain, Fans, Brackets, Etc.):</li> <li>Caution! Disconnect power from case before cleaning tub area.</li> <li>See CASE DESIGN, CONT'D: TUB AREA (AFTER DECK PAN REMOVAL) section in manual for illustration.</li> <li>Use vacuum to clean entire area.</li> <li>After vacuuming, clean area with warm water, clean cloth, and mild soap solution.</li> <li>Remove any debris that may clog drain.</li> <li>Wipe down fan blades, motors and brackets with moist cloth.</li> </ul>
Quarterly	Honeycomb: Check honeycomb air diffuser to determine if it is dirty. If dirty, remove from case. See next page for cleaning specifics.

#### PREVENTIVE MAINTENANCE (TO BE PERFORMED BY TRAINED SERVICE PROVIDER) - PAGE 2 OF 3

<u>NOTE</u>: PREVENTIVE MAINTENANCE IS TO BE PERFORMED BY TRAINED SERVICE PROVIDERS ON-LY.

Preventive maintenance should be performed quarterly (unless conditions warrant a more frequent replacement cycle).

#### **Honeycomb Air Diffuser Removal**

A. Wedge non-metallic device of suitable strength (such as a ballpoint pen or stylus) between honeycomb and end panel.

<u>Caution!</u> Use care not to dislodge the heating wire (that prevents condensation on the honeycomb retainer).

B. Apply pressure to collapse the honeycomb to allow it to be pulled out of honeycomb retainer.

C. Pry downward & away from honeycomb retainer.

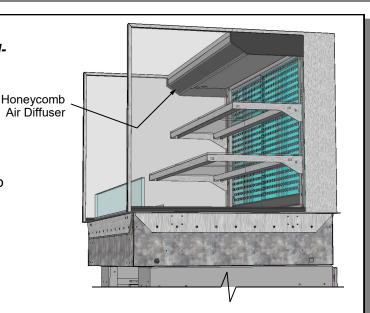
Clean honeycomb with warm water and soap solution. Submerse if necessary. Use brush to dislodge stubborn or sticky residue. Dry by using vacuum's 'blow mode'.

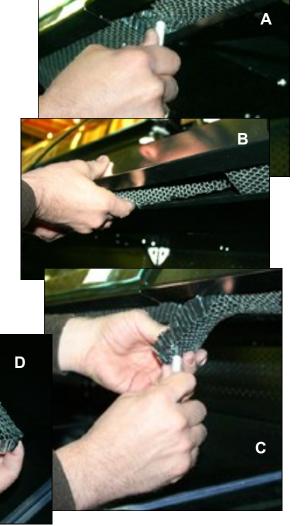
#### **Honeycomb Air Diffuser Installation**

- D. Squeeze honeycomb into the honeycomb retainer.
- E. Carefully slide honeycomb into place.
- F. Adjust honeycomb so that it fits <u>flat</u> against retainer. It must not be wavy or out of position.

F

E

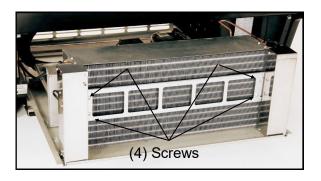


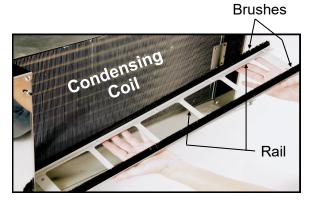




#### PREVENTIVE MAINTENANCE (TO BE PERFORMED BY TRAINED SERVICE PROVIDER) - PAGE 3 OF 3

FREQUENCY	INSTRUCTIONS
Quarterly	INSTRUCTIONS  Optional Clean Sweep™ Condensing Coil Cleaner: Disconnect power from case before servicing the Clean Sweep™ Condenser Coil Cleaner!  Remove rear grille (by lifting up and off); no screw removal is required.  Slide/roll out condensing package from underside of case assembly.  Remove the four (4) screws holding the Clean Sweep™ rail 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 condensing 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 package back under case.  Replace rear grille to case (4 screws).
	See photos below.





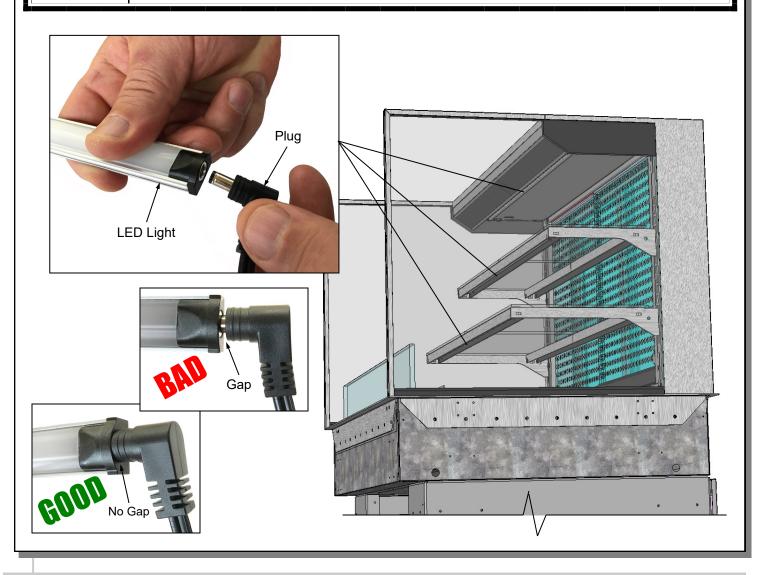
--- Above photos are taken after rear grille has been removed from case ---

#### TROUBLESHOOTING (TO BE PERFORMED BY STORE PERSONNEL) - PAGE 1 OF 2

CONDITION	TROUBLESHOOTING
Water Is On The Floor	Call service provider.
water is On The Floor	Call service provider.
Fan Emits Excessive Noise	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 outside doors, temperature fluctuation can hinder unit's ability to maintain temperature.
	<ul> <li>Check air return grilles (area at front of decking) for obstructions.</li> <li>DO NOT set product on air grilles as this will prevent proper airflow!</li> </ul>
	If case still is not holding proper temperature, call service provider.

#### TROUBLESHOOTING (TO BE PERFORMED BY STORE PERSONNEL) - PAGE 2 OF 2 $\,$

CONDITION	TROUBLESHOOTING
Case Lights Not Working	Check that light switch is in the <i>ON</i> position.  • See <i>CASE DESIGN, CONT'D: LED LIGHT SWITCH / LED LIGHTS / THERMOMETER</i> section in manual for switch location (regardless of case design).
	If case is not hard-wired, check that power cord is properly connected to wall outlet.
	<ul> <li>Check that ALL of the light plugs are properly connected to the LED light.</li> <li>Plug must be inserted ALL THE WAY into the LED light orifice (with no gap).</li> <li>See illustrations below-left.</li> </ul>
	Power may not be reaching the case.  Contact store management to have trained service provider perform troubleshooting.  Troubleshooting to be performed by trained service providers only is on next page.
	<ul> <li>If case light still do not come on, it may need to be replaced.</li> <li>Contact Structural Concepts' Technical Service Department for replacement light (see <i>TECHNICAL SERVICE</i> section of this manual for contact information).</li> <li>To replace, disconnect plug from existing LED light. Disconnect LED light from its brackets. Replace with new LED light. Insert plug ALL THE WAY into LED light orifice.</li> </ul>



#### TROUBLESHOOTING (TO BE PERFORMED BY TRAINED SERVICE PROVIDERS ONLY) - PAGE 1 OF 4

CONDITION	TROUBLESHOOTING
Water Is On The Floor	Caution! Disruption of power or malfunctioning condensate pan (or electric coil overflow condensate pan) may cause water to overflow pan and seep onto flooring causing damage! Until condensate pan(s) are functioning (or are replaced), follow these procedures:  Use wet vacuum (or mop & bucket) to remove standing water.  Use 'catch pans' for water to drain into. Swap out regularly until case has completely drained.  When power to case is restored, condensate pan should function properly and water will no longer overflow onto flooring.
	Check that the drain trap is free of debris.
	Check that the drain PVC is correctly positioned over condensate pan.
	Check store conditions. To prevent condensation in NSF/ANSI Type I environments, maximum conditions are to be 55% humidity / 75° Fahrenheit. For NSF/ANSI Type II environmants, maximum conditions are to be 55% humidity / 80° Fahrenheit. See serial label (at case rear near main power switch) for NSF/ANSI Type of your case.
	Check that electric coil overflow condensate pan is properly plugged in or connected.

#### TROUBLESHOOTING (TO BE PERFORMED BY TRAINED SERVICE PROVIDERS ONLY), PAGE 2 OF 4

CONDITION	TROUBLESHOOTING
Fans Emit Excessive Noise	Check that the case is aligned, level and plumb.
	Check evaporator fans 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.
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.

#### TROUBLESHOOTING (TO BE PERFORMED BY TRAINED SERVICE PROVIDERS ONLY), PAGE 3 OF 4

CONDITION	TROUBLESHOOTING
Case Lights Are Not Working	See TROUBLESHOOTING (TO BE PERFORMED BY STORE PERSONNEL) section in manual (previous sheet) for most common troubleshooting solutions.
	<ul> <li>Check power.</li> <li>If power is not supplied to the case, facility may have faulty power distribution.</li> <li>If power is supplied to the case but lights are not energized, case's power supply may be faulty.</li> </ul>
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 outside doors, temperature fluctuation can hinder unit's ability to maintain temperature.
	Check that condenser coil has been cleaned.
	Check that magnetic air filter (attached to rear grille) has been cleaned.  See CLEANING SCHEDULE (TO BE PERFORMED BY STORE PERSONNEL) section in operating manual for instructions.
_	Check return air grilles for obstructions.
	Check sight glass for flashing and/or low charge.
	Check set point temperature; it may be adjusted too high.

#### TROUBLESHOOTING (TO BE PERFORMED BY TRAINED SERVICE PROVIDERS ONLY), PAGE 4 OF 4

CONDITION	TROUBLESHOOTING
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.
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 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 contaminates 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 recirculating.
	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 (BY TRAINED SERVICE PROVIDERS ONLY) - EVAPORATOR SYSTEM

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 a. Poor thermal contact. b. Warm location.

#### SERIAL LABEL LOCATION & INFO LISTED / TECH INFO & SERVICE / REFRIGERATED CASES ONLY

### Serial Label Location & Information Listed / Technical Information & Service

- Serial labels are affixed at a wide range of places (on the header, near thermostat, at case rear, behind panels/toe-kicks, on electrical boxes, etc.).
- Serial labels contain electrical, temperature and refrigeration information, as well as regulatory standards to which the case conforms.
- Sample serial label shown below.
- For additional technical information and service, see the TECHNICAL SERVICE page in this manual for instructions on contacting Structural Concepts' Technical Service Department.

## Structural Concepts° 888 E. Porter Rd - Muskegon, MI 49441

epts Reveal

MODEL NRS3648RXV-SAMPLE SERIAL NO. 12345X30DZ098765

120/1/60 16 A

20A

20A





SAMPLE ONLY

SAMPLE ONLY

Intertek

Intertek

6-8 °F

SAMPLE ONLY

SAMPLE ONLY

R513A AMOUNT 50 OZ

HIGH 186 LOW 88

SAMPLE ONLY

3048256 Conforms to UL Std. 471 Conforms to NSF/ANSI Stds. 2 & 7 CERTIFIED TO CAN/CSA STD C22.2 NO 120

Super Heat Temp Defrost

Bellost

ELECTRICAL RATING
REFRIGERANT
DESIGN PRESSURE
MINIMUM CIRCUIT AMPACITY
MAXIMUM OVERCURRENT

FOR PARTS AND SERVICE CALL 1-800-433-9490

SAMPLE ONLY

SCAN FOR PRODUCT LITERATURE

**SAMPLE ONLY** 

SAMPLE ONLY

SAMPLE ONLY

6 defrosts per day, 45 °F

Sample QR Code

--- Sample Serial Label For Refrigerated Cases ---





Determine Which Programmable Controller Is On Your Case (Controllers That Are Commonly Used By Structural Concepts Are Shown Below).

Your Particular Programmable Controller May Differ.



Carel® PJEZ Platform



Carel® iJF Platform



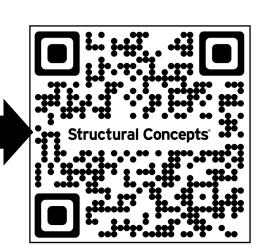
Carel® ir33 Platform



Dixell® XM670K-XM679K Platform

To Access Information About The Programmable Controller That Is Used On Your Case, Follow These Instructions:

- > If Viewing This Document on Smart Phone, Tablet or Computer, Select/Click On The QR Code at Right.
- > If Viewing This Document In Print (Hard Copy), Scan The QR Code at Right With Your Smart Phone or Tablet.



#### STRUCTURAL CONCEPTS TECHNICAL SERVICE CONTACT INFORMATION & LIMITED WARRANTY

TECH SERVICE/WARRANTY CONTACT INFO: 1 (800) 433-9490 / EXTENSION 1

DAYS/HOURS AVAILABLE: MONDAY - FRIDAY (CLOSED HOLIDAYS) 8:00 a.m. TO 5:00 p.m. EST YOU MUST HAVE THE FOLLOWING INFO AVAILABLE BEFORE CONTACTING STRUCTURAL CONCEPTS:

SERIAL NO. / MODEL NO. / STORE NO. / STORE ADDRESS / DETAILS (PHOTOS, LEAK LOCATIONS, DAMAGE, STORE'S AMBIENT CONDITIONS, ETC.)

## To Access The Limited Warranty To Your Case, Follow These Instructions:

- > If Viewing This Document on Smart Phone, Tablet or Computer, Select/Click On The QR Code at Right.
- > If Viewing This Document In Print (Hard Copy), Scan The QR Code at Right With Your Smart Phone or Tablet.

