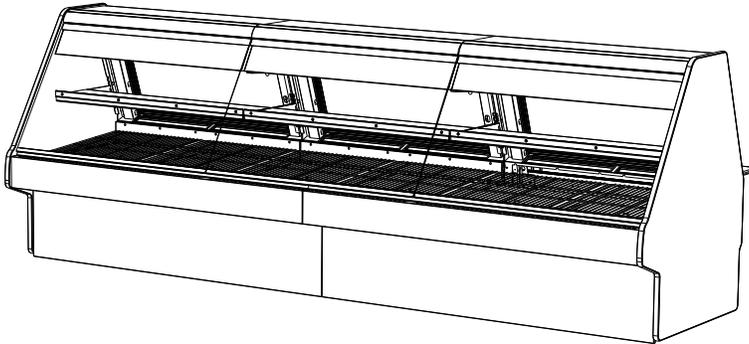


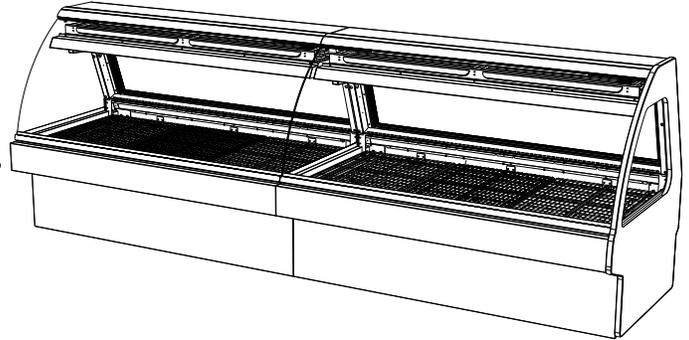
# FUSION USER MANUAL

SCC P/N  
5-4467

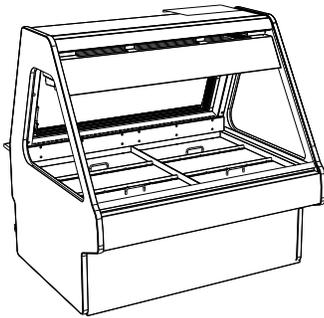
## FUSION GMG GRAVITY & BLOWER COIL MEAT & SEAFOOD REFRIGERATED SERVICE UNITS



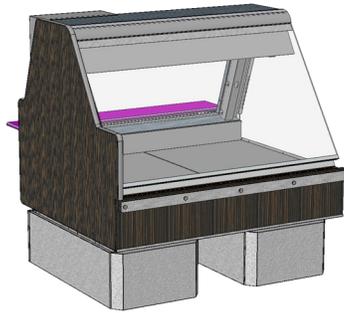
Model GMG12 Hybrid Unit Meat Case: Remote Unit / Gravity Coil (Upper), Evaporator Coil (Lower) and Shelf / Rear Sliding Doors Removed. Wire Racks Used (Instead of Ice Pans as used in Seafood Model GMG4)



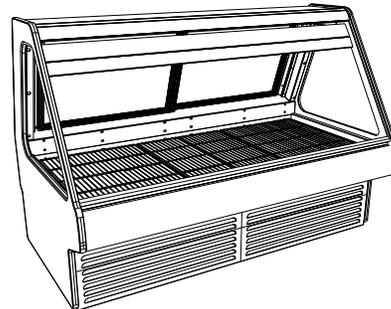
Model GMG12 Meat Case: Remote Unit / Rear Sliding Doors Removed. Wire Racks Used (Instead of Ice Pans As Used in Seafood Model GMG4)



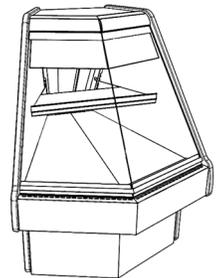
Model GMG4 Seafood Case: Remote Unit ||| Rear Sliding Doors Removed. Ice Pans Used (Instead of Wire Racks as used in Meat Case Models GMG6, GMG8 and GMG12)



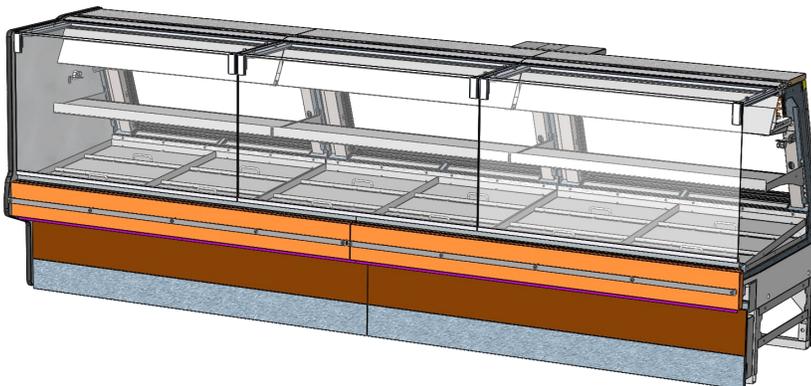
Model GMG4.6552: Remote Unit Mid-Volume Angled Back Deli Case With Gravity Coil and Scale Stand



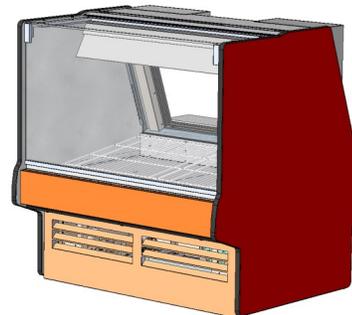
Model GMG6 Meat Case: Self-Contained Unit ||| Rear Sliding Doors Intact / Wire Racks Used (Instead of Ice Pans Used In Meat Case Models GMG4)



Model GMGX4 Blower Coil Wedge Case: Remote Unit / Single Rear Hinged Door / Ice Pans Used (Instead of Wire Racks as used in Meat Case Models GMG6, GMG8 and GMG12)



Model GMGV12: Remote Service Unit / Mid-Volume Angled Back With Gravity Coil and Vertical "Lift-Up" Front Glass / Rear Sliding Doors (Shown Removed) / Ice Pans Used (Instead of Wire Racks as used in Meat Case) / Optional Paper Roller



Model GMGV4 Blower Coil Case: Self-Contained Unit / Wire Racks

Manual Is Applicable To The Following Models\*  
GMGX4, GMG4, GMG6, GMG8, GMG8.6552,  
GMG12, GVG4, GMGV8 and GMGV12

\*Note: This manual may also be applicable to models NOT listed herein.

**Structural Concepts®**

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**Note:** This Manual Is Applicable To The Following Models: GMGX4, GMG4, GMG6, GMG8, GMG8.6552, GMG12, GVG4, GMGV8 and GMGV12. It May Also Be Applicable To Models NOT Listed Herein.

**OVERVIEW**

- These Structural Concepts cases are designed to merchandise packaged products at 41 °F (5 °C) or less product temperatures (unless custom cases with wire rack shelving).
- Product must be pre-chilled to 41 °F (5 °C) or less before 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.

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

This unit is designed for the display of products in ambient environmental conditions where temperatures and 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%.
- 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.

**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**  
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](http://P65Warnings.ca.gov).



**WARNING**  
Condensate pan and overflow condensate pans are **HOT!** Disconnect and allow to cool before cleaning or removing from case.

**PRECAUTIONS**

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

**WIRING DIAGRAM**

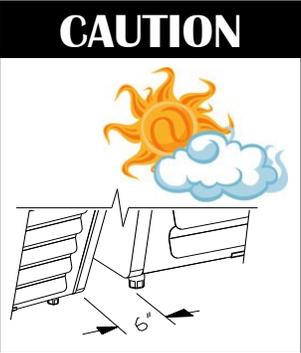
- Each case has its own wiring diagram folded and in its own packet. It may be placed near ballast box, field wiring box, raceway cover, or other related location.

**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! 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** 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.
- Self-contained case clearance: 6" min. air intake / 6" min. air discharge.

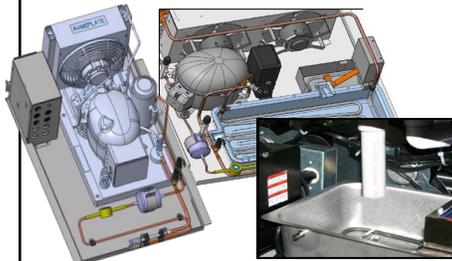


**CAUTION! POWER CORD AND PLUG MAINTENANCE**  
 Risk of electric shock. If cord or plug becomes damaged, replace only with cord and plug of same type.



**CAUTION! DO NOT RELY ON THERMOMETERS OR THERMOSTATS FOR PRODUCT (FOOD) TEMPERATURES.**

- Thermometers & thermostats reflect air temperatures **ONLY**.
- For **ACTUAL** product (food) temperatures, use a calibrated food probe thermometers **ONLY**.
- For accurate readings, **DO NOT** use infrared food thermometers.



**CAUTION! CHECK CONDENSATE PAN, ITS POSITION & PLUG!**  
 Water on flooring can cause extensive damage!

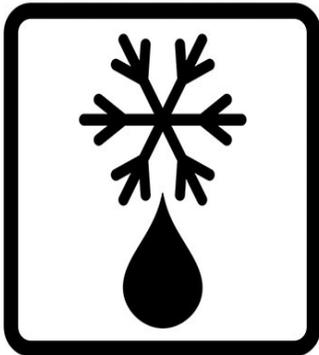
- Before powering up case, check that condensate pan is positioned directly under case's condensate drain.
- Before powering up case, check that condensate pan's electrical plug is **SECURELY** connected to condensate system's receptacle.
- If wicking material is used in condensate pan, check that it is **secure**.

**PRECAUTIONS**

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

**WIRING DIAGRAM**

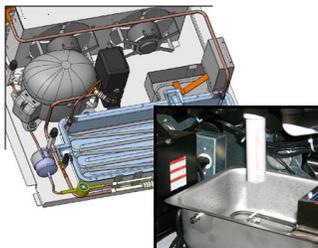
- Each case has its own wiring diagram folded and in its own packet.
- Wiring diagram placement may vary; it may be placed near ballast box, field wiring box, or raceway cover.



**CAUTION! IF YOUR MERCHANDISER HAS AN UPPER REFRIGERATION SYSTEM, IT MUST BE TURNED OFF, THOROUGHLY DEFROSTED AND CLEANED AT LEAST WEEKLY!**

For optimum performance, maintenance is required at least weekly.

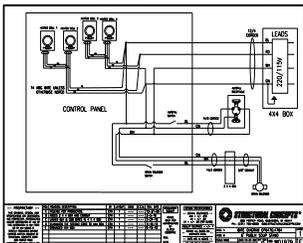
1. Cleaning controls switch is NOT supplied by SCC, but it may be provided by others. If a switch is accessible, flip to "OFF" position. If not, contact facility manager to turn off upper refrigeration system.
2. Allow upper refrigeration system to thoroughly defrost.
3. Clean its interior by washing and sanitizing.



**CAUTION! CHECK BOTH CONDENSATE PAN AND OVERFLOW PAN**

Water on floor can cause extensive damage! Before powering up unit:

- Position condensate pan **DIRECTLY UNDER** the condensate drain.
- Overflow pan **MUST HAVE** single plug connected to its box. Units with optional Clean Sweep™ **MUST HAVE** two plugs connected.



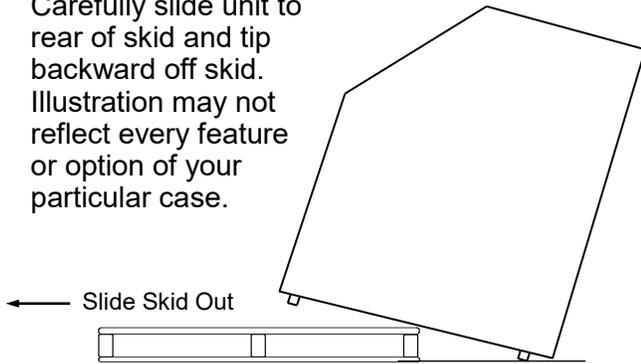
**WIRING DIAGRAM FORMAT & LOCATION**

- 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.
- See sample wiring diagram at left (for illustrative purposes only).

## INSTALLATION: REMOVAL FROM SKID, REMOVING LOWER FRONT PANEL / REAR PANEL

### **1. Remove Case From Skid (Rails)**

- Remove shipping brace that may be securing case to skid.
- Support case to prevent tipping.
- **Caution! Rails can be damaged if case hits floor with heavy force!**
- Carefully slide unit to rear of skid and tip backward off skid.
- Illustration may not reflect every feature or option of your particular case.

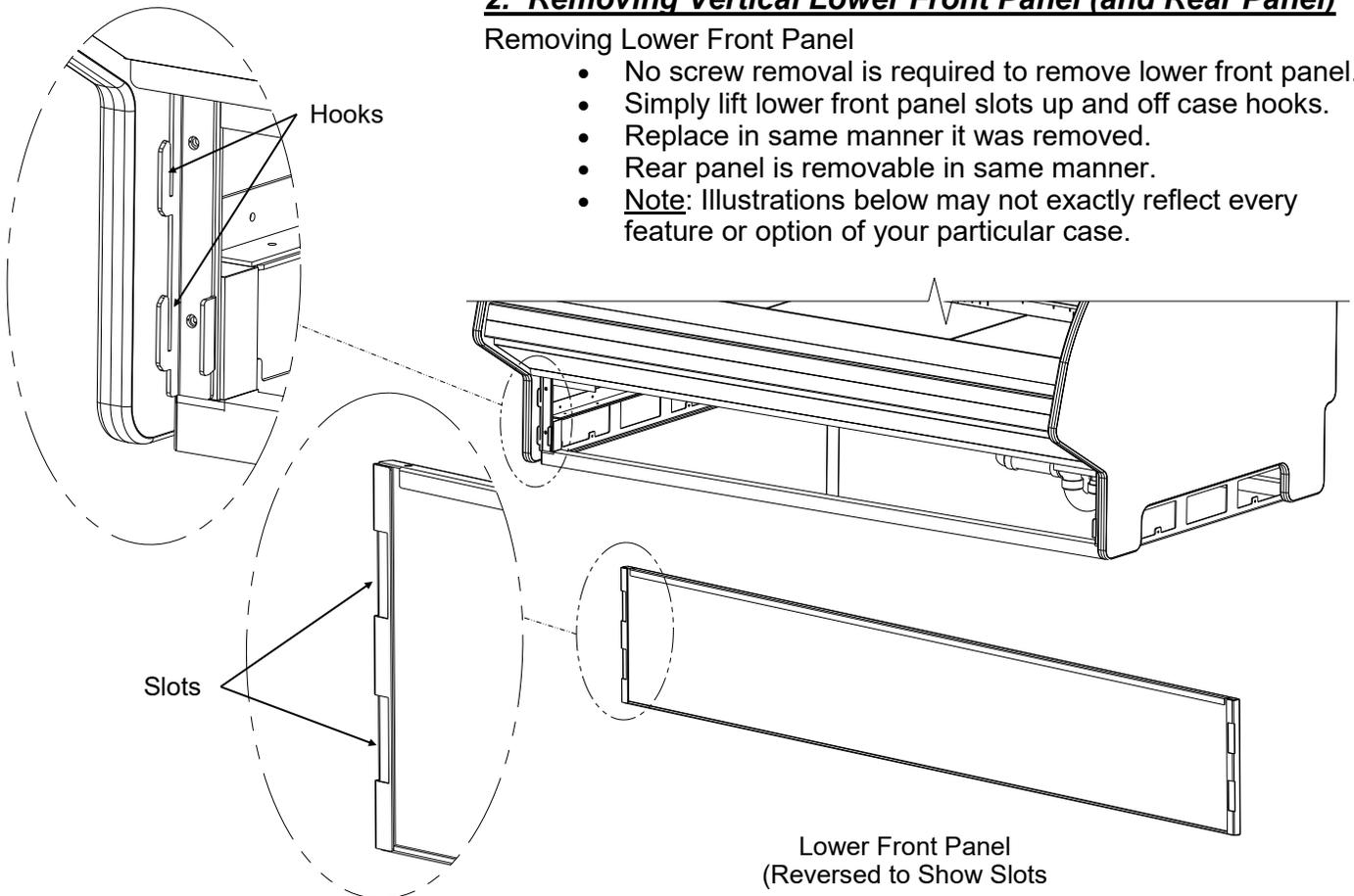


Case can be repositioned with pallet truck when front lower panel is removed. Blocking may be necessary to obtain adequate height.

### **2. Removing Vertical Lower Front Panel (and Rear Panel)**

#### Removing Lower Front Panel

- No screw removal is required to remove lower front panel.
- Simply lift lower front panel slots up and off case hooks.
- Replace in same manner it was removed.
- Rear panel is removable in same manner.
- **Note:** Illustrations below may not exactly reflect every feature or option of your particular case.



### 3. Position & Align Case Alongside Other Cases

- Before adjusting levelers (or shimming frame support rails), make certain that 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.

### 4A. Bolting and Caulking Units Together (Non-Vertical Glass Case Style)

> Model GMG4 shown for illustrative purposes only.  
 > Follow these steps to assure a secure, level lineup.

- Begin lineup leveling from highest point of floor.
- After '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). See caulk/silicone illustrations at lower-left.
- Form Two (2) Caulk/Sealant Lines: (Sanitation and Refrigeration). See illustration at mid-right for outline of caulk/sealant lines.
- Line up 'second' case bolt-hole to bolt-hole to 'first' case.
- Using SCC-supplied bolts (and/or screws) found in installation packet, insert bolts in bolt hole locations (shown below). You may need to remove decking to access lower bolt holes.
- Caution! Front of cases MUST be flush with each other! After leveling, cases are to be same height.
- 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!
- After the cases are bolted together, level the 'second' case. Repeat this process for each case to be adjoined.
- After all lined-up cases are level, seal all seams with industrial grade silicone sealant.

Sanitation Bead



Refrigeration Bead

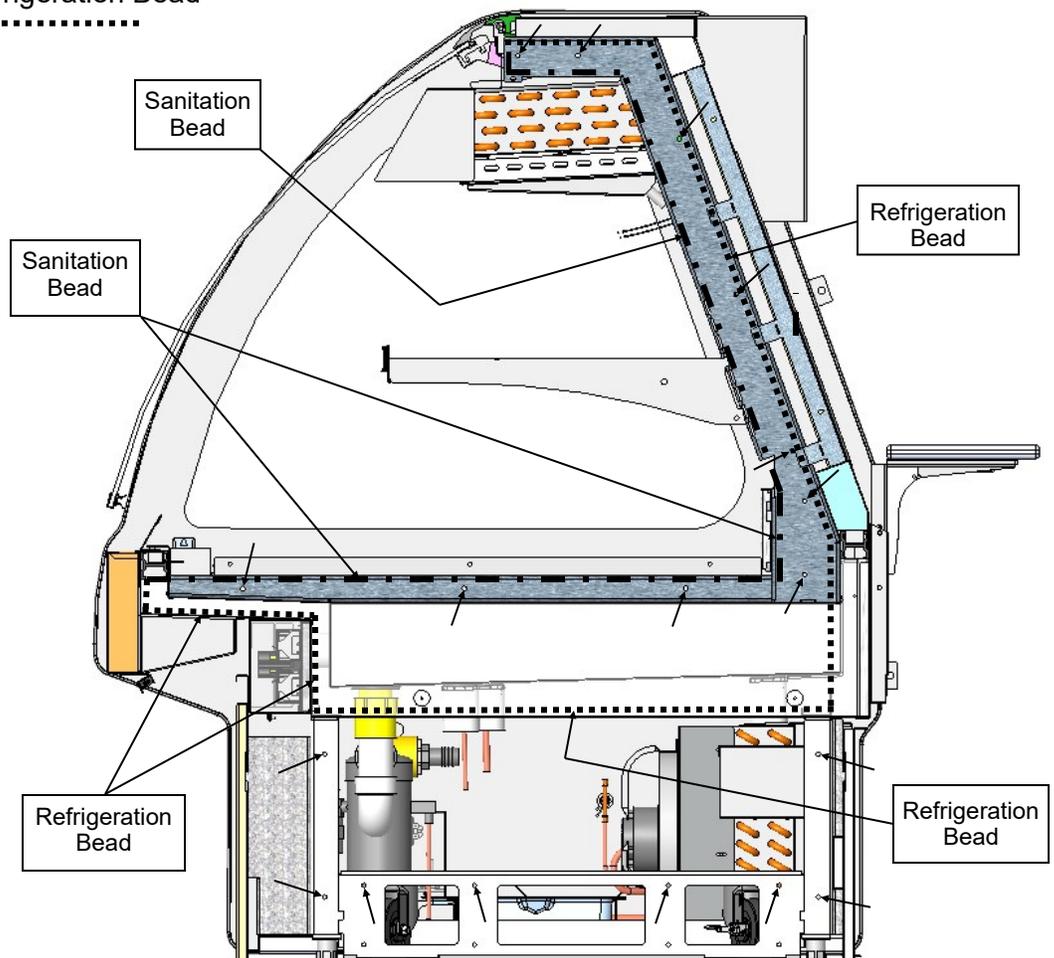


Approximate hole locations pointed at with arrows ( ← ) for bolting units together.

**Note:** Model GMG4 is shown for illustrative purposes only.



Butyl is to be used on non-visible areas.  
 Silicone is to be used on visible areas.



**4B. Bolting and Caulking Units Together**  
**(Vertical Glass Case Style)**

Follow these steps to assure a secure, level lineup.

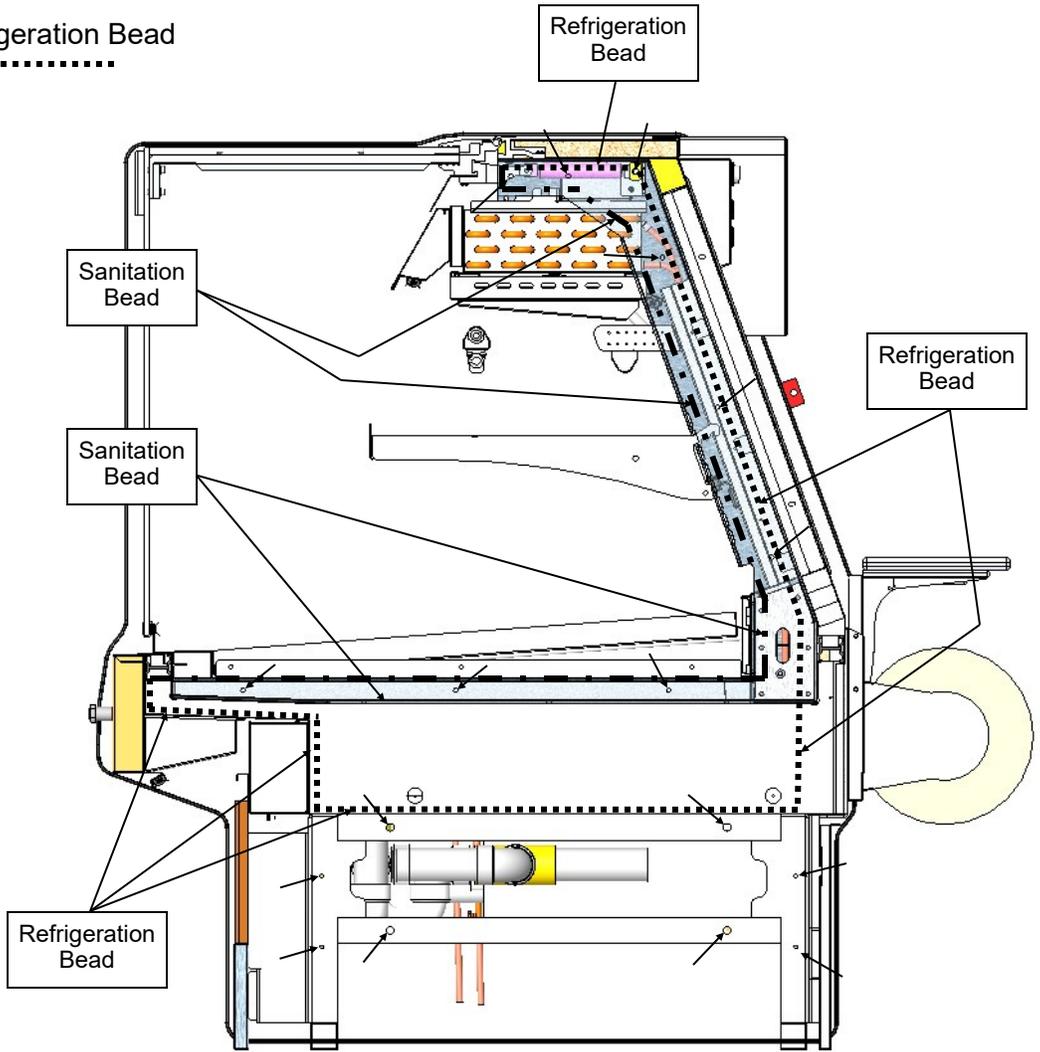
- A. Begin lineup leveling from highest point of floor.
- B. After 'first' case is level, apply industrial grade butyl caulk on non-visible areas (at case end). Use industrial grade silicone sealant on visible areas (at case end). See caulk/silicone illustrations at lower-left.
- C. **Form Two (2) Caulk/Sealant Lines:** (Sanitation and Refrigeration). See illustration at mid-right for outline of caulk/sealant lines.
- D. Line up 'second' case bolt-hole to bolt-hole to 'first' case.
- E. Using SCC-supplied bolts (and/or screws) found in installation 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, cases are 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.

Sanitation Bead  
 - - - - -

Refrigeration Bead  
 .....  
 .....

Approximate hole locations pointed at with arrows ( ← ) for bolting units together.

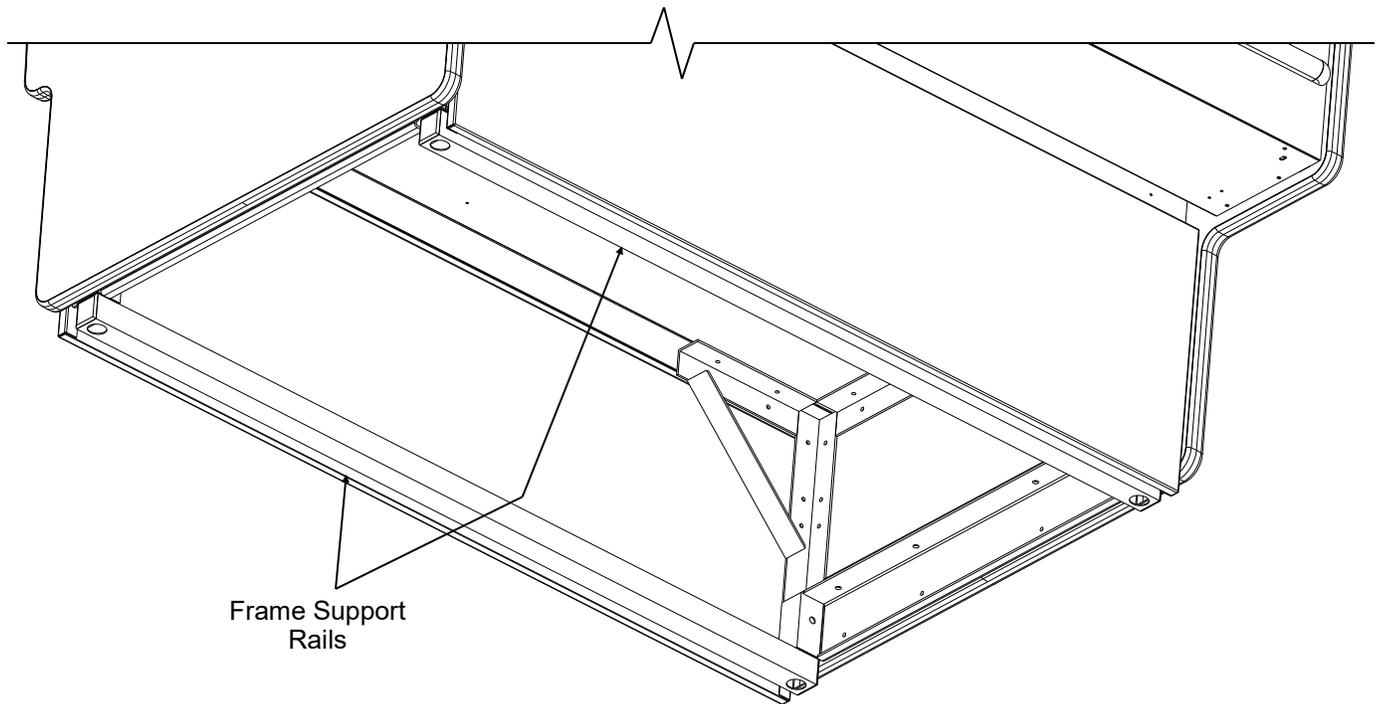
**Note:** Model GMGV12 is shown for illustrative purposes only.



**Note:** Unit shown may not exactly reflect every feature or option of your particular unit.

**5. Frame Support Rails Must Be Shimmed**

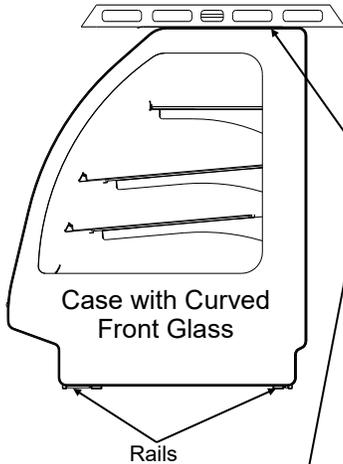
- Illustration below shows case with frame support rails.
- Shims will be provided with all cases that have frame support rails.
- Use shims to level case.
- **Note:** After case is in position (and, if required, adjoined) it must be sealed to floor to prevent entry or leakage of liquid or moisture.



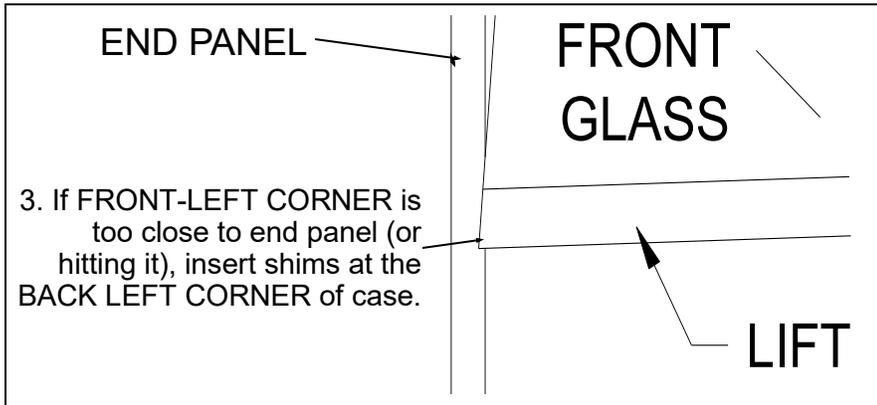
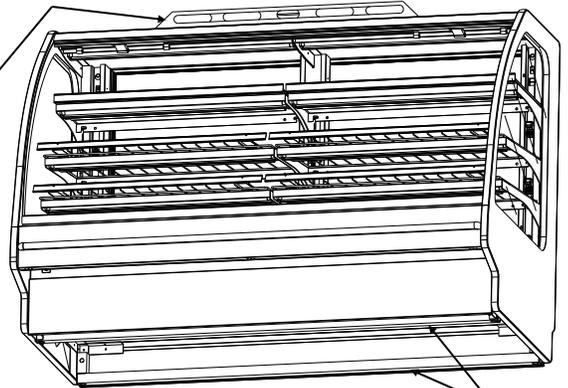
**6. Front Glass Alignment & Adjustment via Rail System (For Curved and Flat Front Glass)**

- Proper alignment of the front glass is important to create and maintain a seal inside the case.
- Improper alignment can cause air leaks compromising the environment inside the case and create condensation.
- Follow the five steps listed below to assure proper front glass alignment.
- Illustrations shown may not exactly reflect every feature or option of your particular case.

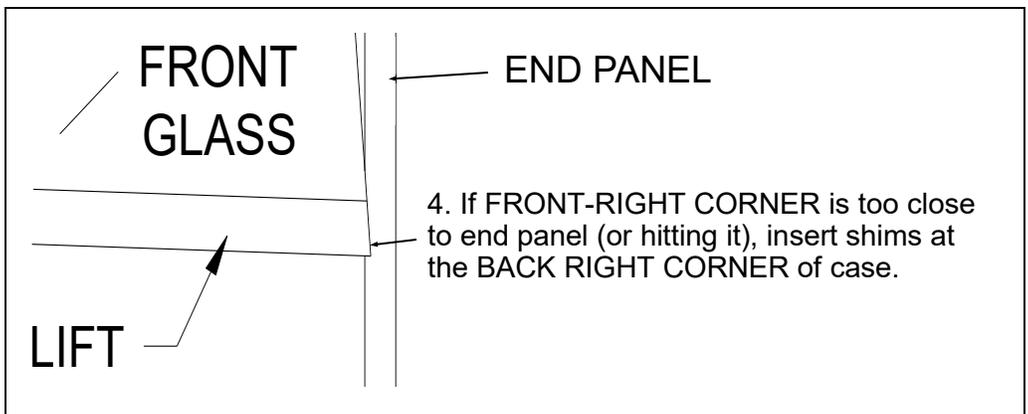
1. **Side-to-Side Leveling:** Place a level on top of display case (parallel to front glass). Raise or lower either side of case by inserting shims under the rails to level the case (following steps 3 and 4 below).



2. **Front-to-Back Leveling:**
- Place a level on top of case, perpendicular to the front glass.
  - Raise or lower either side of case by shimming under the rails (following steps 3 & 4 below).
  - Double-check the side-to-side level.



3. If FRONT-LEFT CORNER is too close to end panel (or hitting it), insert shims at the BACK LEFT CORNER of case.



4. If FRONT-RIGHT CORNER is too close to end panel (or hitting it), insert shims at the BACK RIGHT CORNER of case.

5. **Verification:**

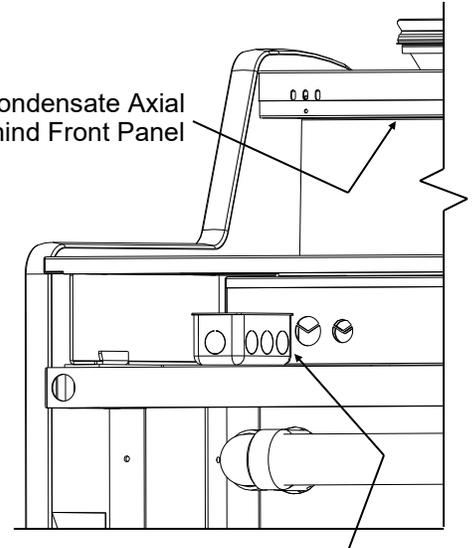
- After inserting shims, open and shut the front glass.
- Verify (again) that the front glass is properly aligned at both left-hand and right-hand side of the case.
- If not, repeat the shimming procedure until the front glass is properly aligned along both sides of the case.

**5-4580**

**7. Probe Leads Box / Field Wiring Box / Ballast (or Optional LED Driver) / Terminal Strip / Axial Fans**

- Probe leads are in probe leads box. It is located at customer front-left of case (behind front panel).
- Field wiring box is also located at front left of case (behind front panel)
- Ballast (or optional LED driver) and terminal strip is also located behind front electrical cover (shown removed for illustrative purposes).
- Screws hold front electrical cover in place. Unscrew and drop electrical cover down & out.
- Anti-condensate axial fans may be accessed (behind of front panel) by simply removing four (screws), and dropping fans down.
- ***Caution! Only certified electricians are to access electrical components!***

Anti-Condensate Axial Fans Behind Front Panel

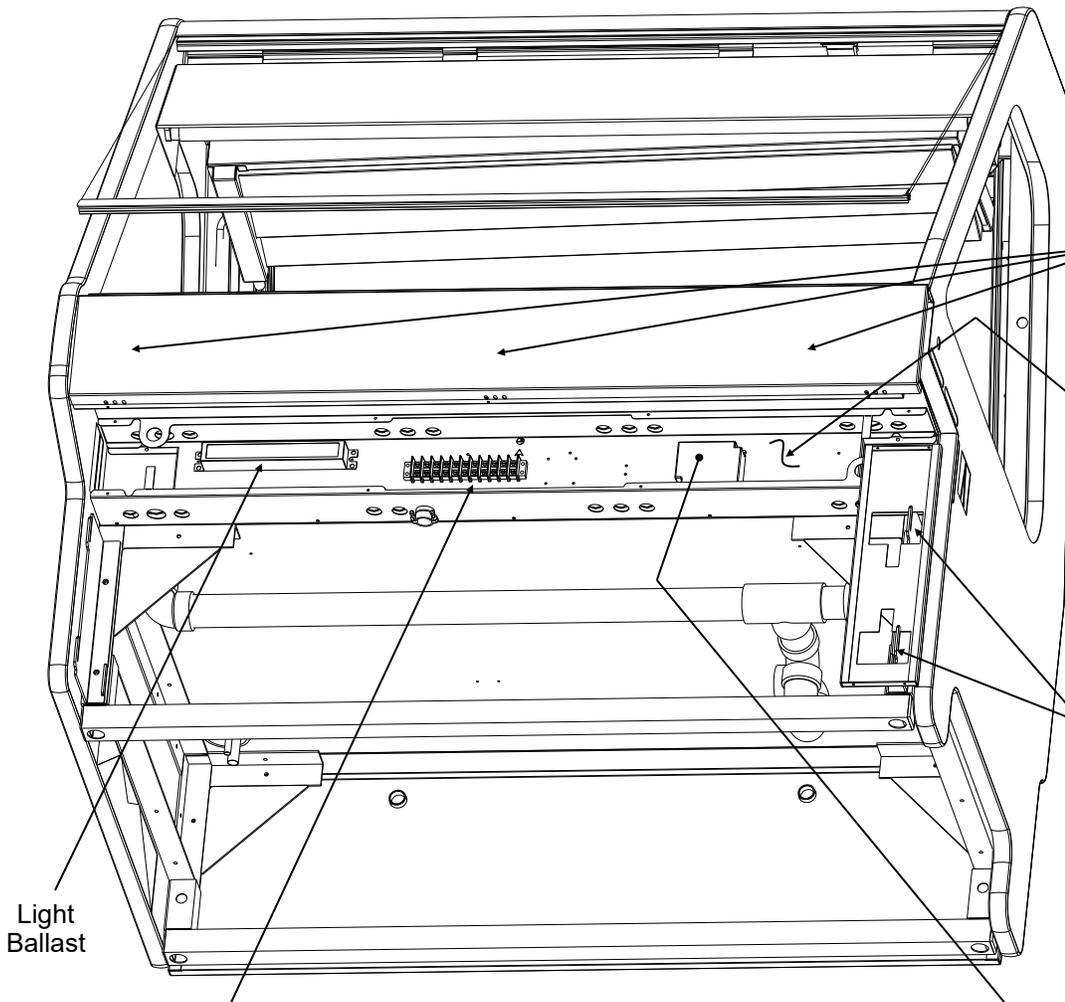


Probe Leads Box (at Customer Front-Left)

Anti-Condensate Axial Fans (For Front Glass) Are Behind Upper Front Panel

Front Electrical Cover Removed for Illustrative Purposes

(2) Hooks at Each End for Front Panel Slots



Light Ballast

Terminal Strip

View of Case With Front Panel and Electrical Cover Removed

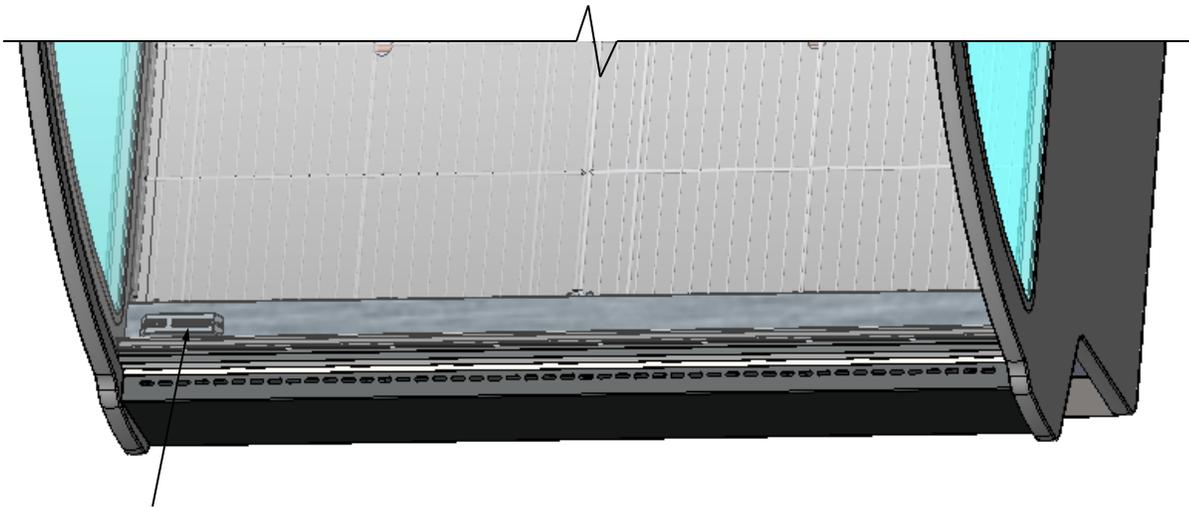
LED Driver (Optional, Dependent Upon Lighting)

**8. Thermometer Placement & Purpose**

- Thermometers are usually located behind front glass. However, locations may vary depending upon model.
- Thermometers may be either spirit-filled or digital. They reflect internal air temperature only (not actual food temperature).
- Use probe thermometers to determine actual product temperatures.

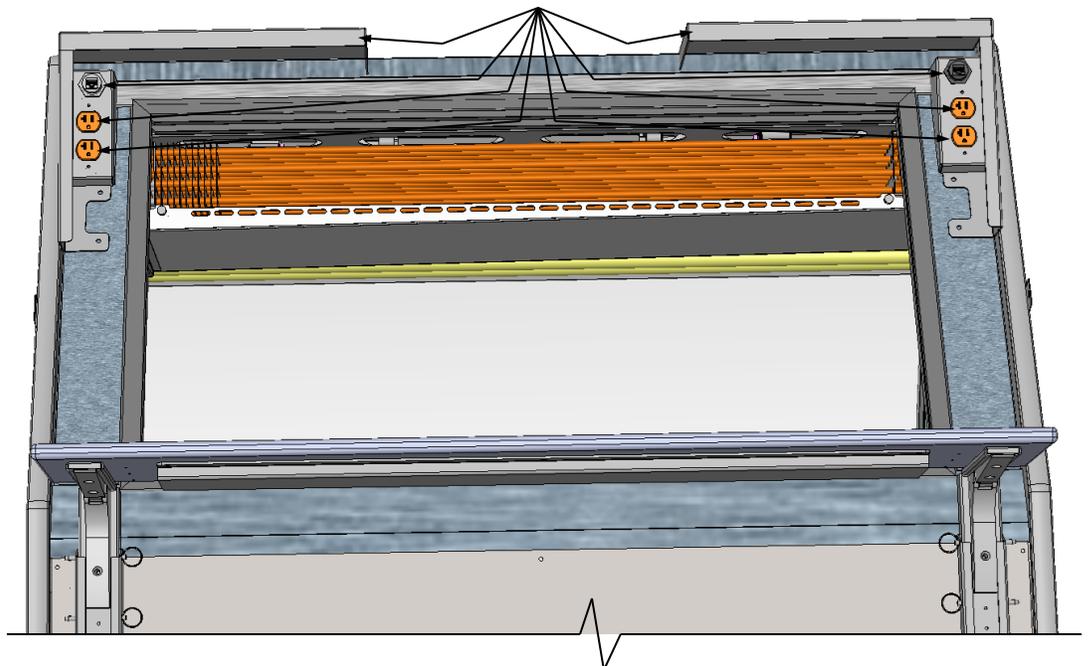
**9. Scale Stand / CAT-5 Connector / Outlets**

- Scale stands are optional. Location and number of scale stands may vary depending upon model.
- See illustration below.



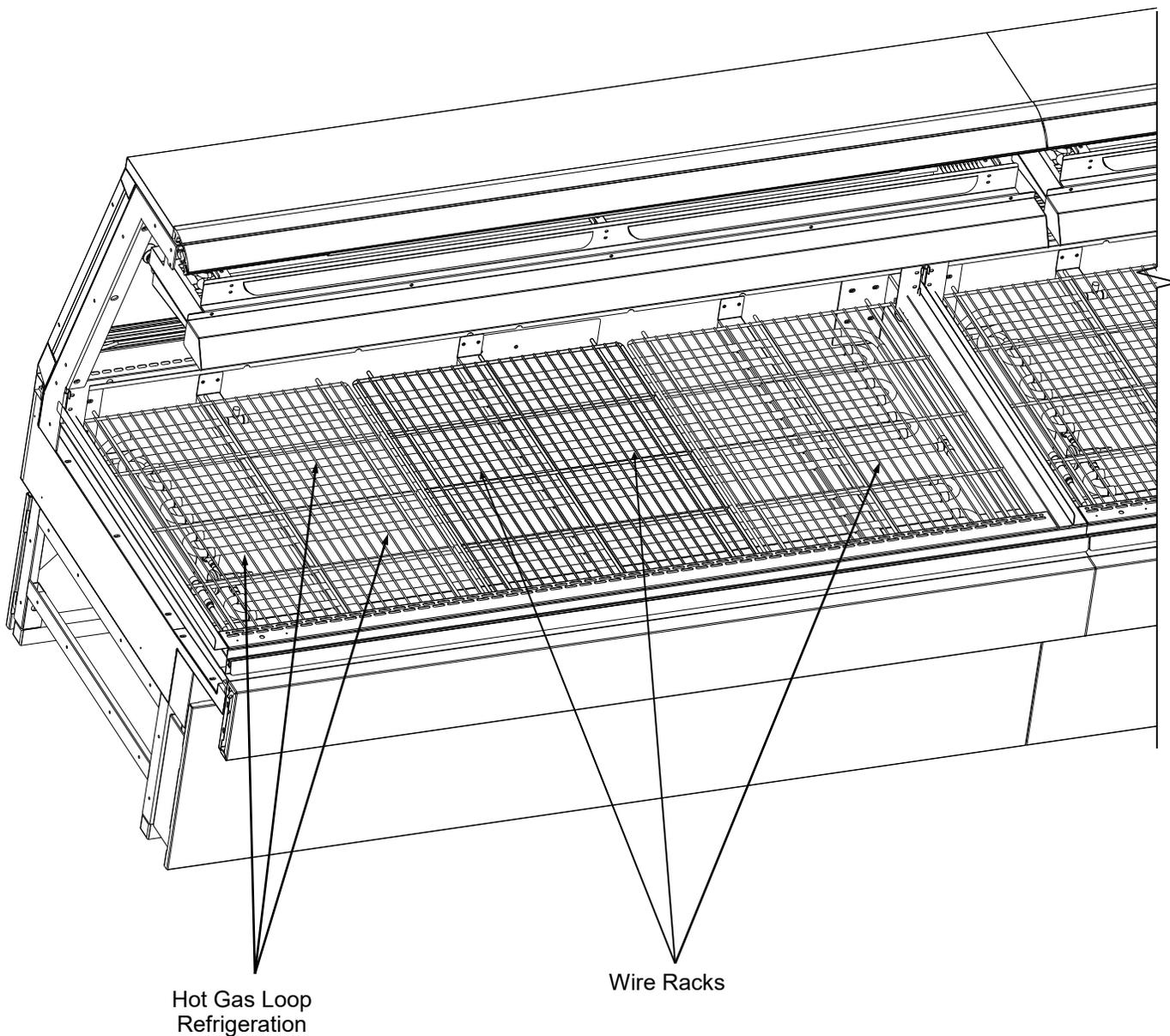
Thermometer At Front Of Case

Scale Stands, CAT-5 Connectors and 120V Outlets at Case Rear



**1. Wire Racks Access and Removal (Meat Cases Only)**

- Wire racks are placed directly over hot gas loop refrigeration system (including TXV valves).
- There are no separate deck pans.
- See next page for view of unit after removal of wire racks.



**Model GMG12 Shown Above.  
Your Case May Differ**

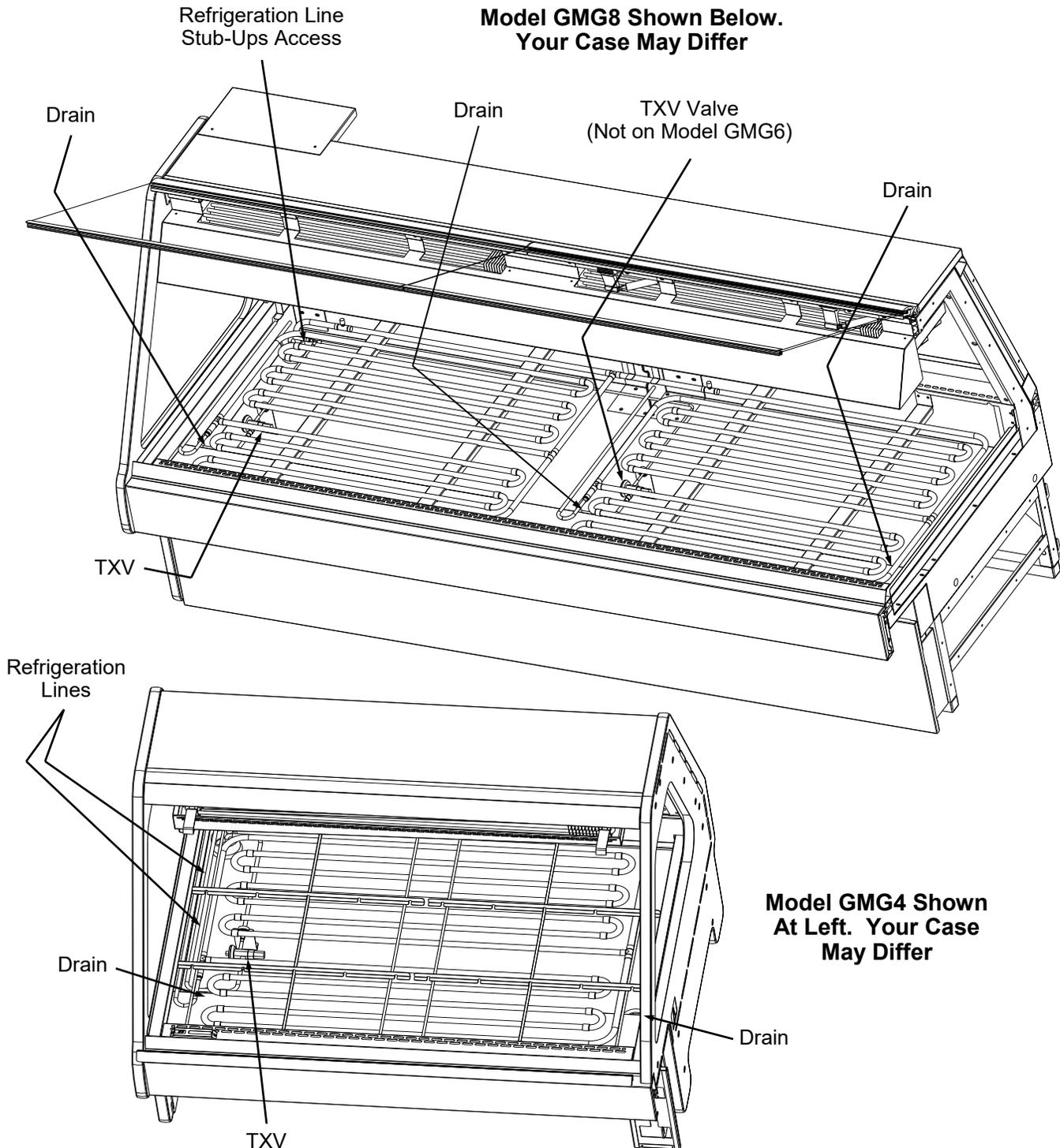
> Case is Shown After Removal of Wire Racks

**2. Refrigeration Line Routing**

- Refrigerant line routing location is shown below.
- Illustration below may not reflect every feature or option of your particular case.

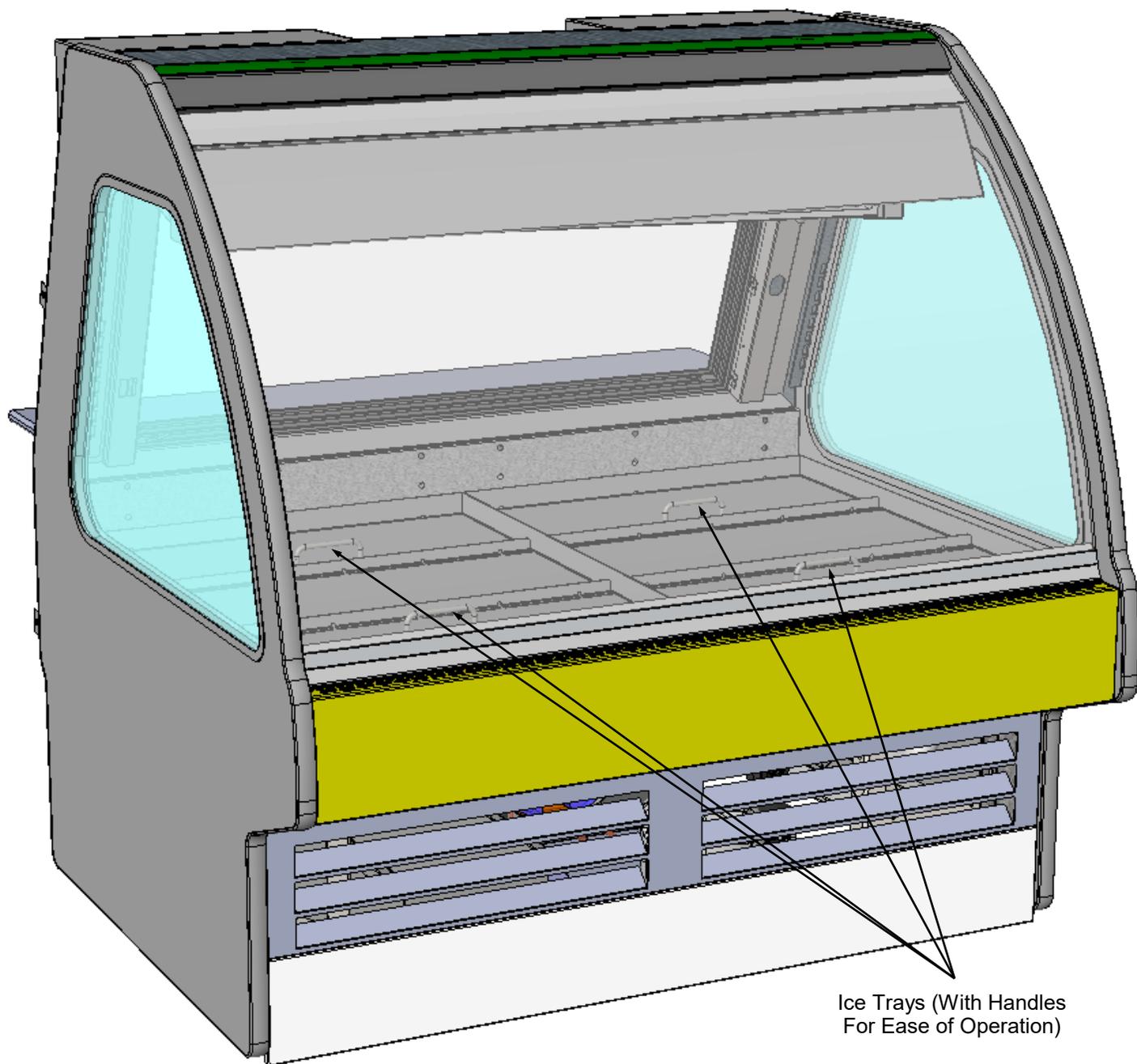
**3. Drains and TXV Valve**

- Cases have drains at left and right hand sides.
- Longer cases also have drain at case center.
- Illustration below may not reflect every feature or option of your particular case.



**1. Ice Trays Access and Removal (Seafood Cases Only)**

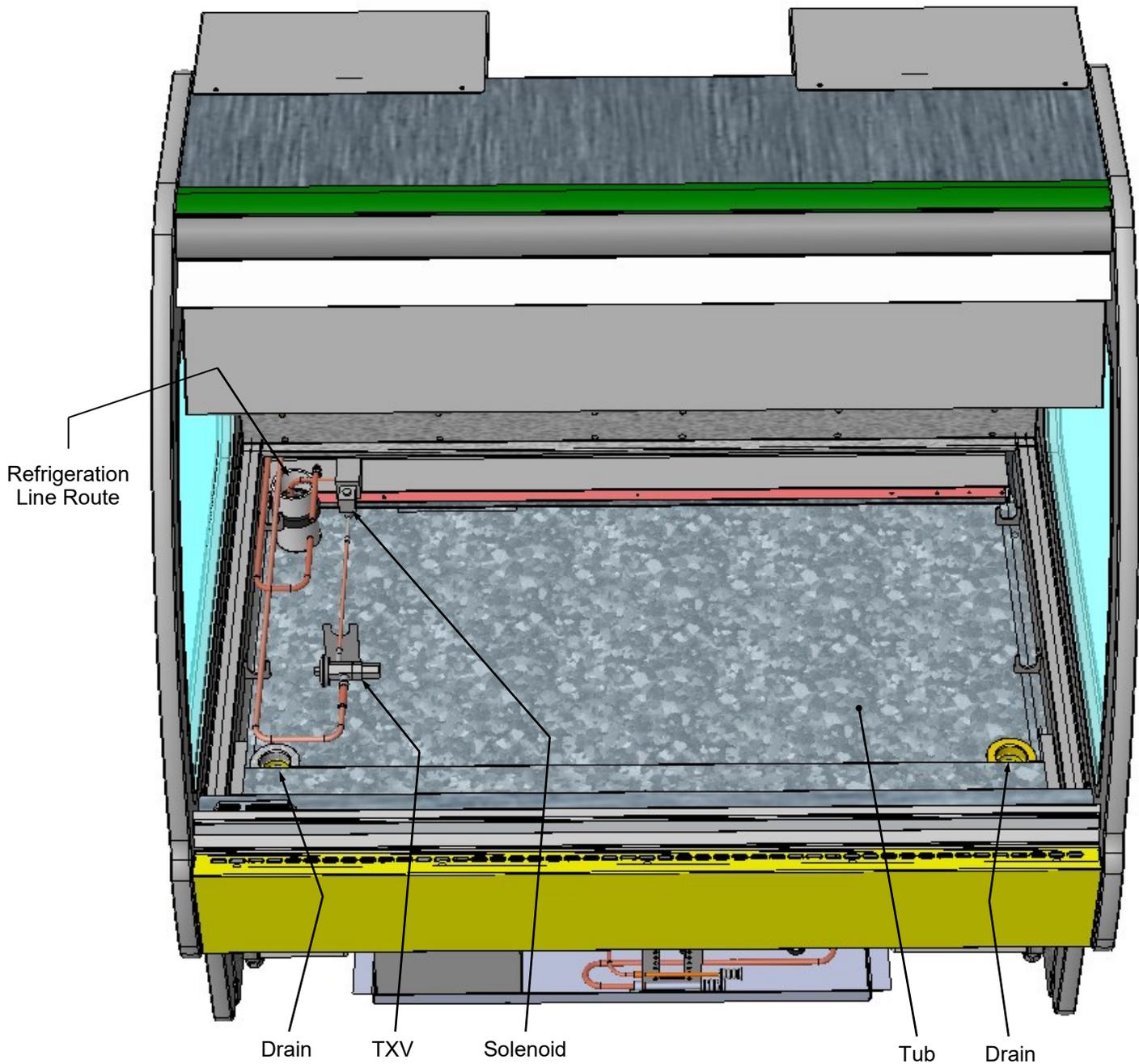
- Ice trays have handles for ease of lifting in and out of case.
- There are no separate deck pans.
- Ice trays may be removed for cleaning and service. Simply lift front glass to access.
- Ice trays are placed directly over tub (with TXV, refrigeration lines, drains, etc.).
- See illustration on next page for internal component breakdown.



**Model GMG4 Shown Above.  
Your Case May Differ**

**2. Internal Layout of Tub Area After Removal of Ice Trays (Seafood Cases Only)**

- Ice trays are removed to show component layout.
- Illustration below shows drains, TXV, Solenoid, Tub, Refrigeration Line Route, etc.



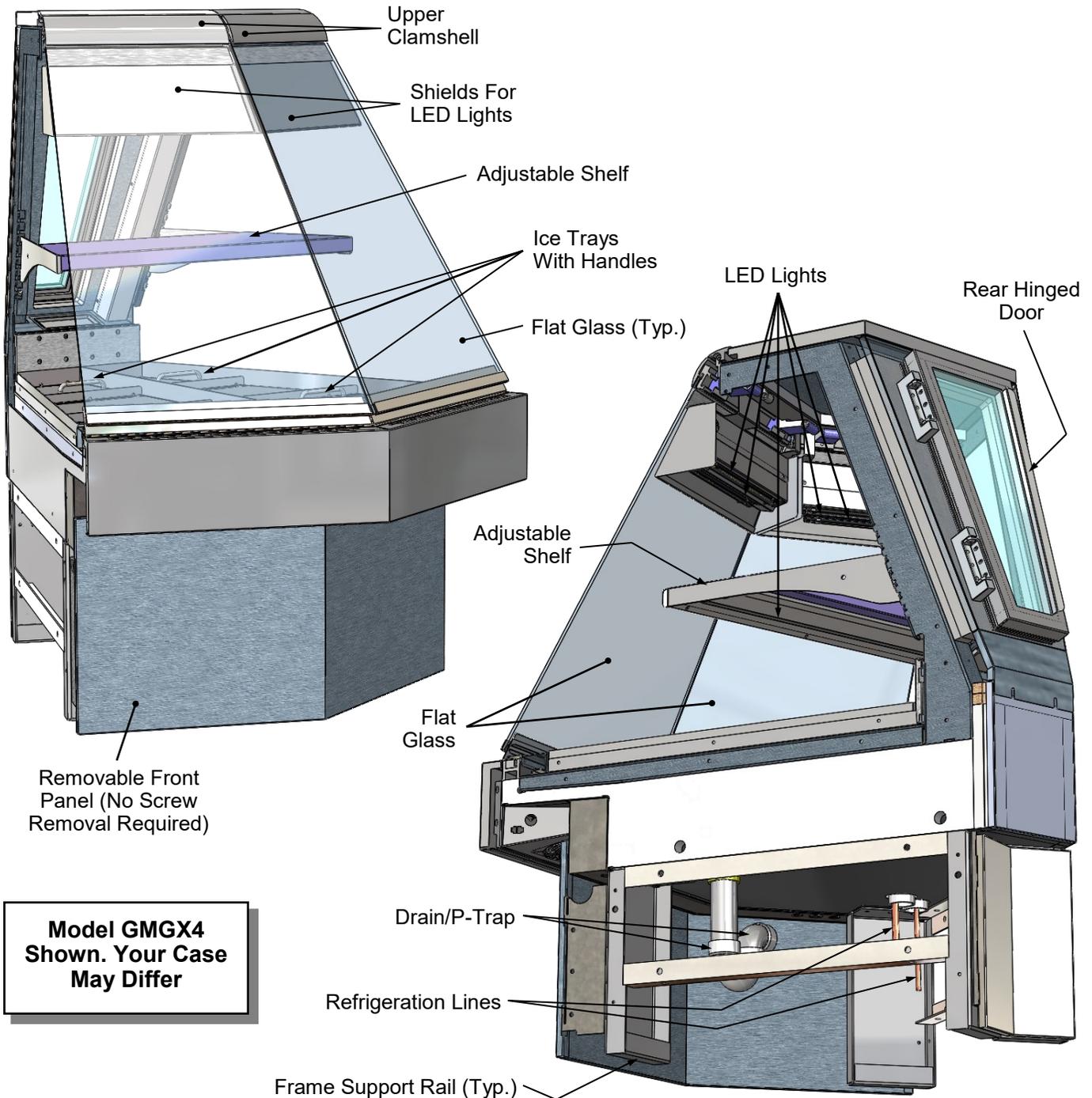
**Model GMG4 Shown Above.  
Your Case May Differ**

### 1. Flat Glass / Shelf / Front Panel / Drain

- Upper gravity coil is NOT available on this model.
- **Caution! Due to its design, only ONE flat glass piece may be raised at a time.**
- Shelf is removable (but not adjustable).
- Front panel is removable (no screw removal req'd).
- Underside of case (remote unit shown) displays drain/P-trap and refrigeration lines.

### 2. Humidification Feature (Optional)

- Optional humidification feature prevents the “drying effect” of refrigeration allows case to retain proper humidity levels without ‘wetting’ the product.
- Ultrasonic nozzles produces a fine vapor fog (“mist”) that permeates product in the case .



### 3. Axial Fans

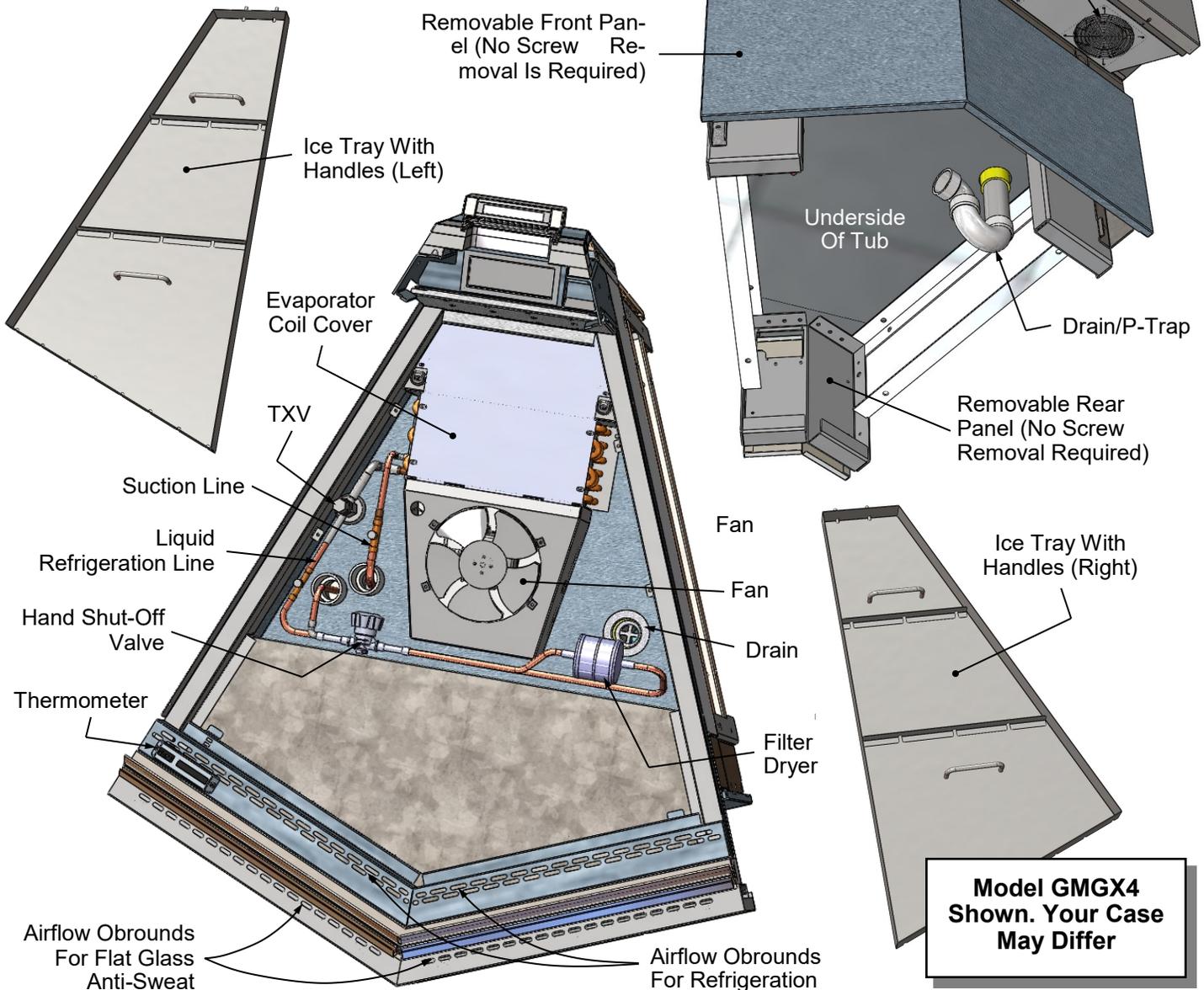
- Front-underside of case has axial fans to help prevent condensation from forming on outside of front flat glass (as shown at top-right).
- Below-left view is shown partially disassembled for illustrative purposes only. It shows ice trays, TXV, refrigeration lines, hand shut-off valve, airflow obrounds, filter dryer, evaporator fan, drain, thermometer, etc.

- Ice trays may be removed for cleaning and service. Simply lift front glass to access.
- Ice trays are placed directly over tub (with TXV, refrigeration lines, drains, etc.).

### 4. Ice Trays

- Ice trays (shown below-left and below-right) have handles for ease of lifting trays in and out of case.
- There are no separate deck pans.

Axial Fans For Flat Glass  
(Note: Number of Fans May Vary Depending Upon Model, Options Chosen, Etc.)



### 1. Refrigeration Line Stub-Up Connections

- Refrigerant stub-up access is at underside of case.
- Stub-up connections are accessed by removing rear panel (no screws required).
- Run case-to-case connections through cutouts in base.
- Sweat the high and low pressure connections.
- Fill access hole with suitable filler to insure watertight integrity of tub.
- Note: Illustration below may not reflect every feature or option of your particular case.

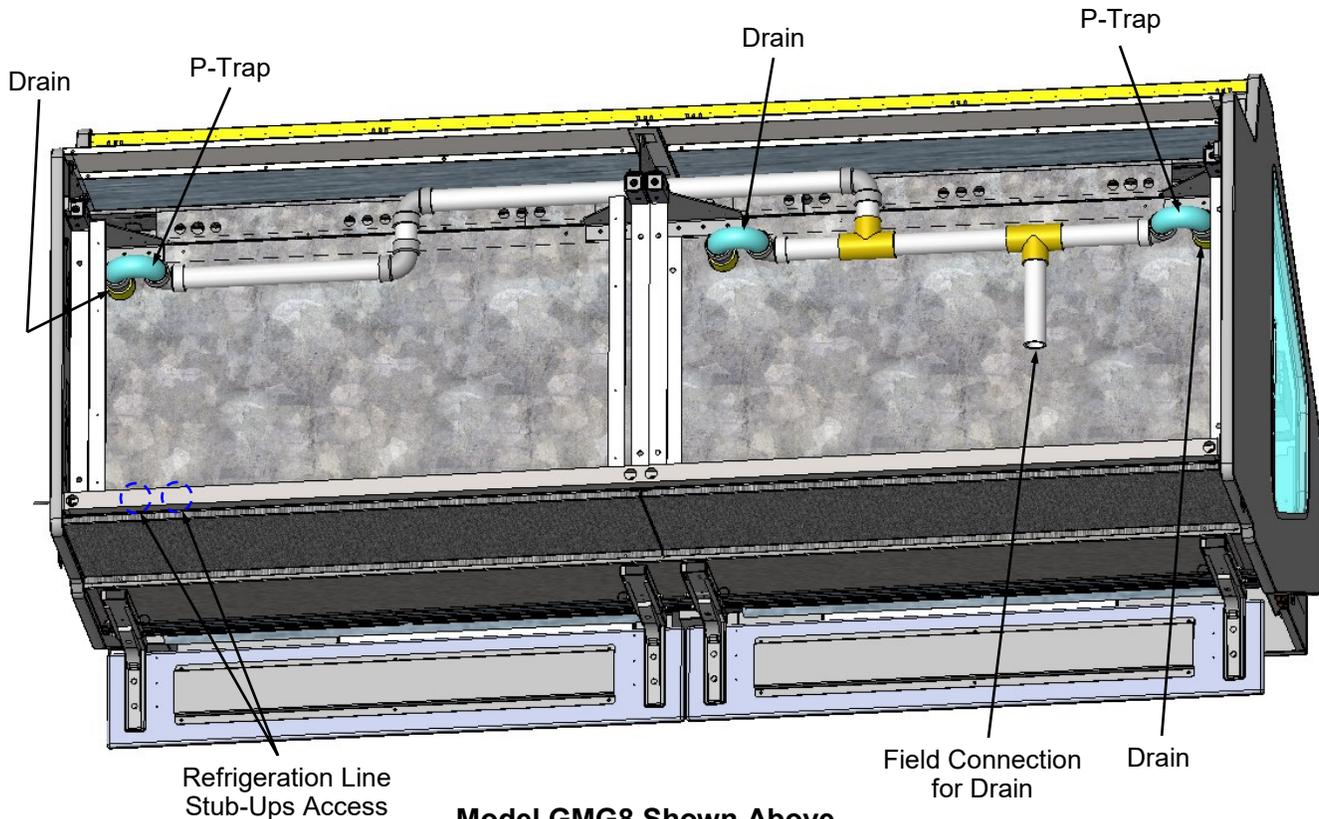
### 2. Drains

- GMG8 cases have drains at left and right hand sides.
- Longer cases also have drain at case center.
- Drain field connection location is shown below.
- See **INSTALLATION: REFRIGERATION LINES ROUTING / DRAINS / TXV VALVE (MEAT CASES)** for illustration of TXV Valve, Drains, Refrigeration Line Stub-Ups Access, etc.
- Depending upon drain access needs, either front or rear panel may be removed to gain access to drain stub-up.

- 1.5" male PVC stub-up connection is under case.
- Drain stub-up may be at case center in extended length cases.
- Connect tub drain to floor drain. Maintain 1/4"-fall per foot to provide proper drainage.
- Note: Illustration below may not reflect every feature or option of your particular case.

### 3. Caution! Check Proper Drainage Before Turning on Case!

- If case runs without proper connection, water will drain onto floor causing damage!
- For remote cases, check that field connection for drain is properly connected.
- For self-contained cases, check that power cord from condensate pan is properly plugged in before turning on case.
- See **TROUBLESHOOTING** section in operating manual for additional information.



**Model GMG8 Shown Above.  
Your Case May Differ**

#### **4. Refrigeration Line Stub-Up Connections**

- Refrigerant stub-up access is at underside of case.
- Stub-up connections are accessed by removing rear panel (no screws required).
- Run case-to-case connections through cutouts in base.
- Sweat the high and low pressure connections.
- Fill access hole with suitable filler to insure watertight integrity of tub.
- Note: Illustration below may not reflect every feature or option of your particular case.

#### **5. Drains**

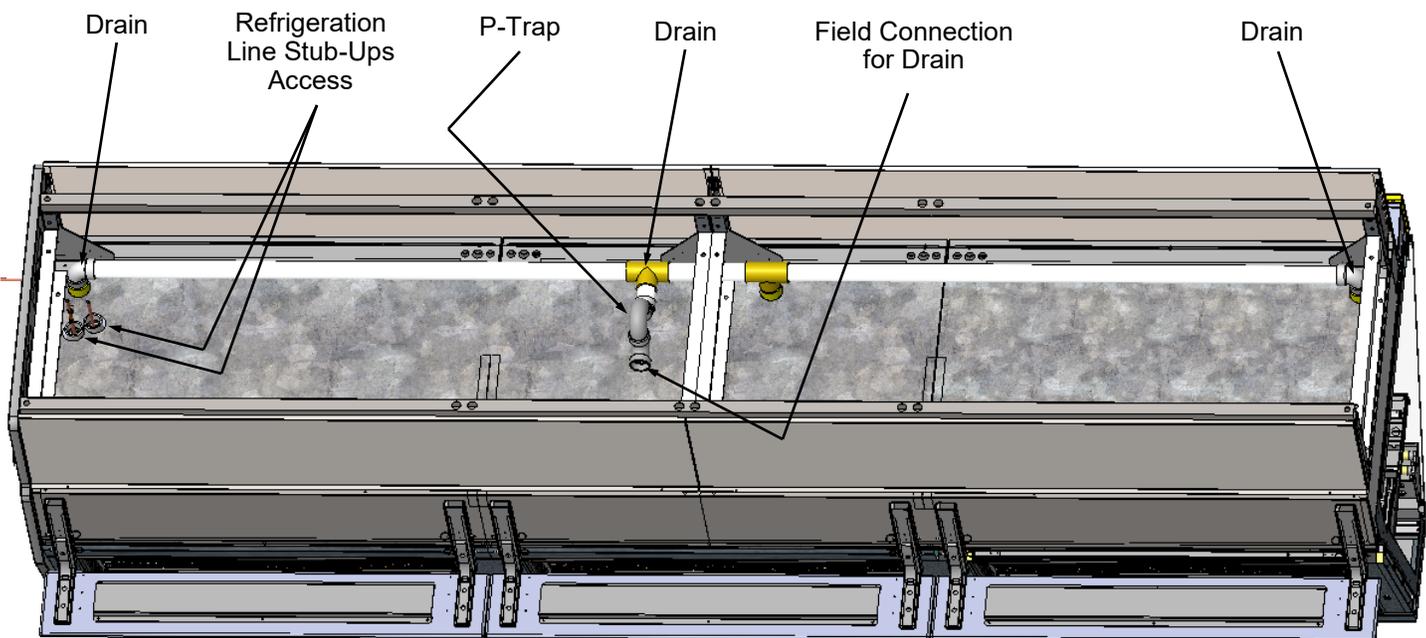
- GMG12 cases have drains at left and right hand sides AND at center (see illustration below).
- Longer cases also have drain at case center.
- Drain field connection location is shown below.
- See **INSTALLATION: REFRIGERATION LINES ROUTING / DRAINS / TXV VALVE (MEAT CASES)** for illustration of TXV Valve, Drains,

Refrigeration Line Stub-Ups Access, etc.

- Depending upon drain access needs, either front or rear panel may be removed to gain access to drain stub-up.
- 1.5" male PVC stub-up connection is under case.
- Drain stub-up may be at case center in extended length cases.
- Connect tub drain to floor drain. Maintain 1/4"-fall per foot to provide proper drainage.
- Note: Illustration below may not reflect every feature or option of your particular case.

#### **6. Caution! Check Proper Drainage Before Turning on Case!**

- If case runs without proper connection, water will drain onto floor causing damage!
- For remote cases, check that field connection for drain is properly connected.
- For self-contained cases, check that power cord from condensate pan is properly plugged in before turning on case.
- See **TROUBLESHOOTING** section in operating manual for additional information.



**Model GMG12 Shown Above.  
Your Case May Differ**

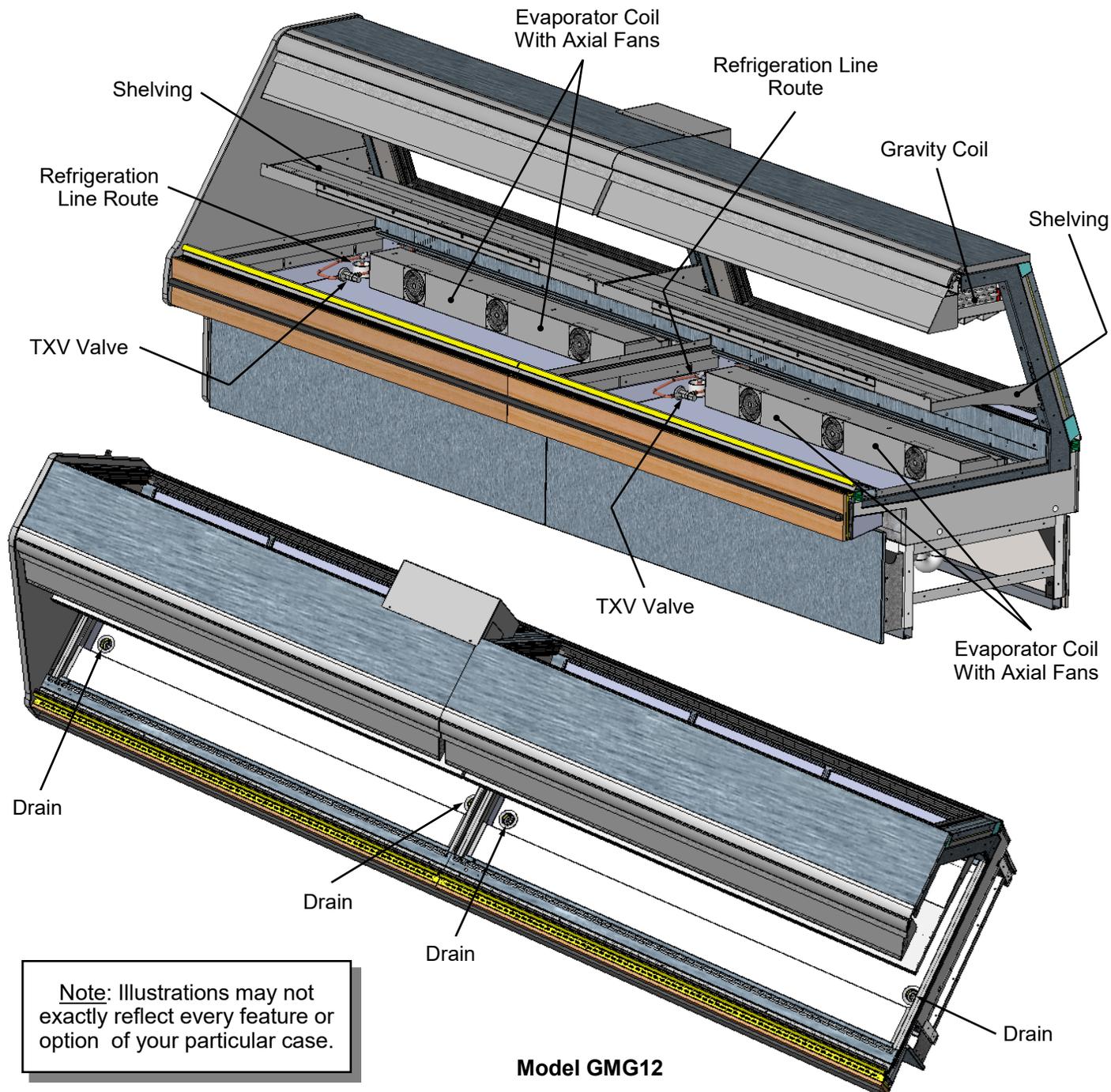
## OPERATION: HYBRID CASE GRAVITY COILS, EVAPORATOR COILS, SHELVING / LAYOUT

### 1. Hybrid Cases

- Hybrid cases have gravity coils, shelving AND evaporator coils.
- Illustration below is shown partially disassembled for illustrative purposes only.

### 2. Hybrid Case Layout (Model GMG12 Shown)

- Each section has its own refrigerant line routes, TXVs, evaporator coils (lower section), drains and gravity coils (upper section).
- See illustrations below for general layout (your hybrid case layout may slightly differ).



# OPERATION: SELF-CONTAINED MODEL MEAT CASE REAR DRAIN/TEMPERATURE CONTROLLER

## 1. Rear 'Ball Valve' Drain System

Certain Self-Contained Meat units have a drain systems that routes water to a drain spout (bypassing evaporator pan) by using a drain 'ball valve' handle. This drain can flow to a bucket, hose or floor drain.

This feature allows more thorough cleaning of tub area. See **CLEANING SCHEDULE TO BE PERFORMED BY STORE PERSONNEL** for additional instructions on cleaning unit.

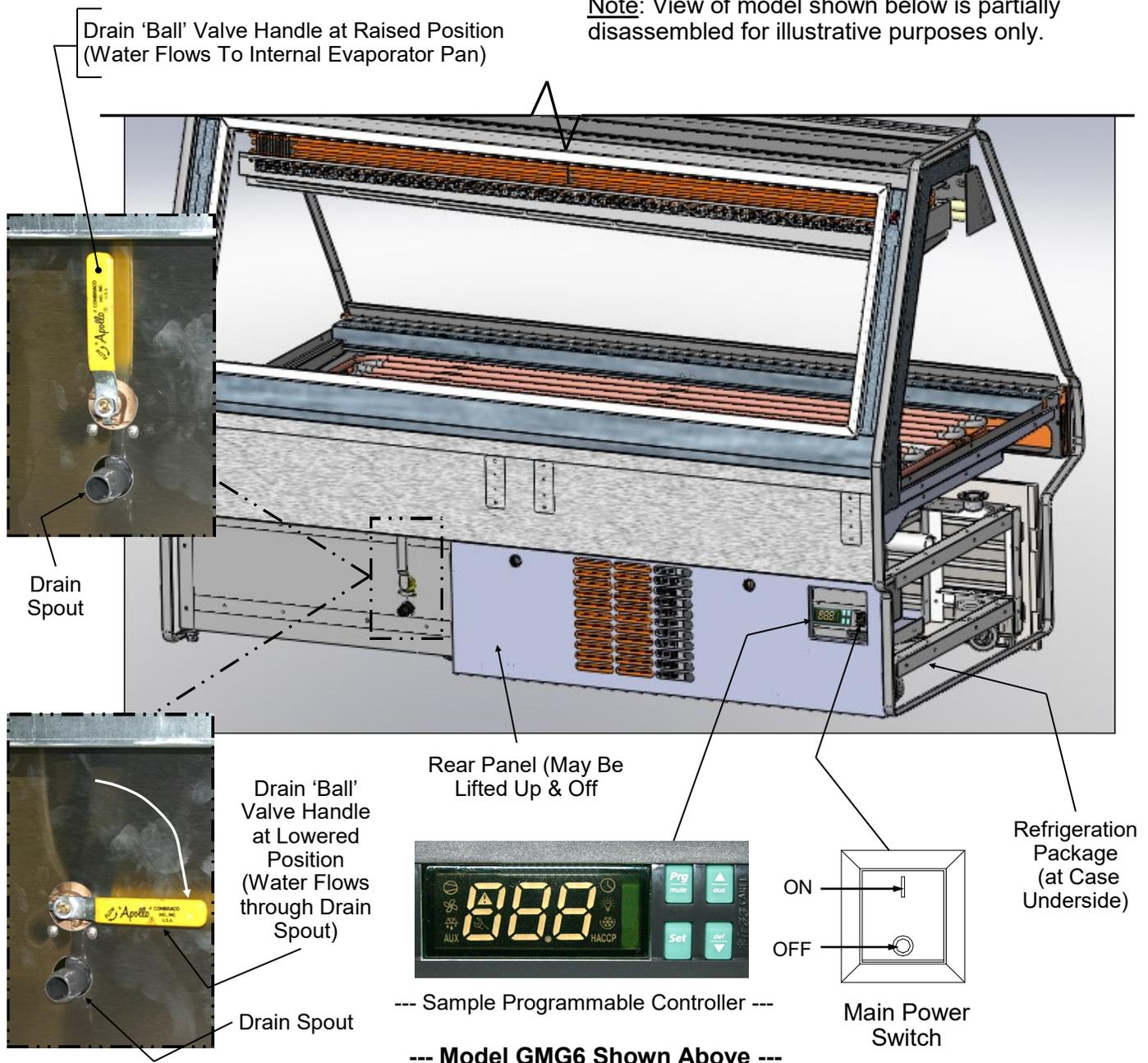
- Raised position of drain 'ball valve' handle allows water to flow to internal evaporator pan.

- Lowered position of drain 'ball valve' handle allows water to flow through rear drain spout.
- See illustrations on this page.
- **Caution! Make certain you have a bucket or hose connected to drain (routed to floor drain) prior to re-routing water flow!**

## 2. Temperature Controller

- The Programmable Controller maintains proper case temperature.
- See **PROGRAMMABLE CONTROLLER** section in this manual for specifics.

**Note:** View of model shown below is partially disassembled for illustrative purposes only.



## OPERATION: SELF-CONTAINED MODEL SEAFOOD CASE DRAIN/TEMPERATURE CONTROLLER

### 1. Seafood Case Drain 'Handle' and Water Bin

Seafood Self-Contained units have a drain systems that routes water to a water bin by using an ice pan drain handle. This water bin can be removed (and dumped into a sink) or a hose can be connected to the bin's spout or simply routed to a floor drain.

See **CLEANING SCHEDULE TO BE PERFORMED BY STORE PERSONNEL** for additional instructions on cleaning unit.

- Horizontal "Open" position of PVC 'ball valve' handle (as shown in illustration below) allows water to flow to water bin.
- Vertical "Closed" position of PVC 'ball valve' handle PREVENTS water from flowing to water bin.
- When water is allowed to flow from upper section and into water bin, there are TWO WAYS to dispense the water in the bin:

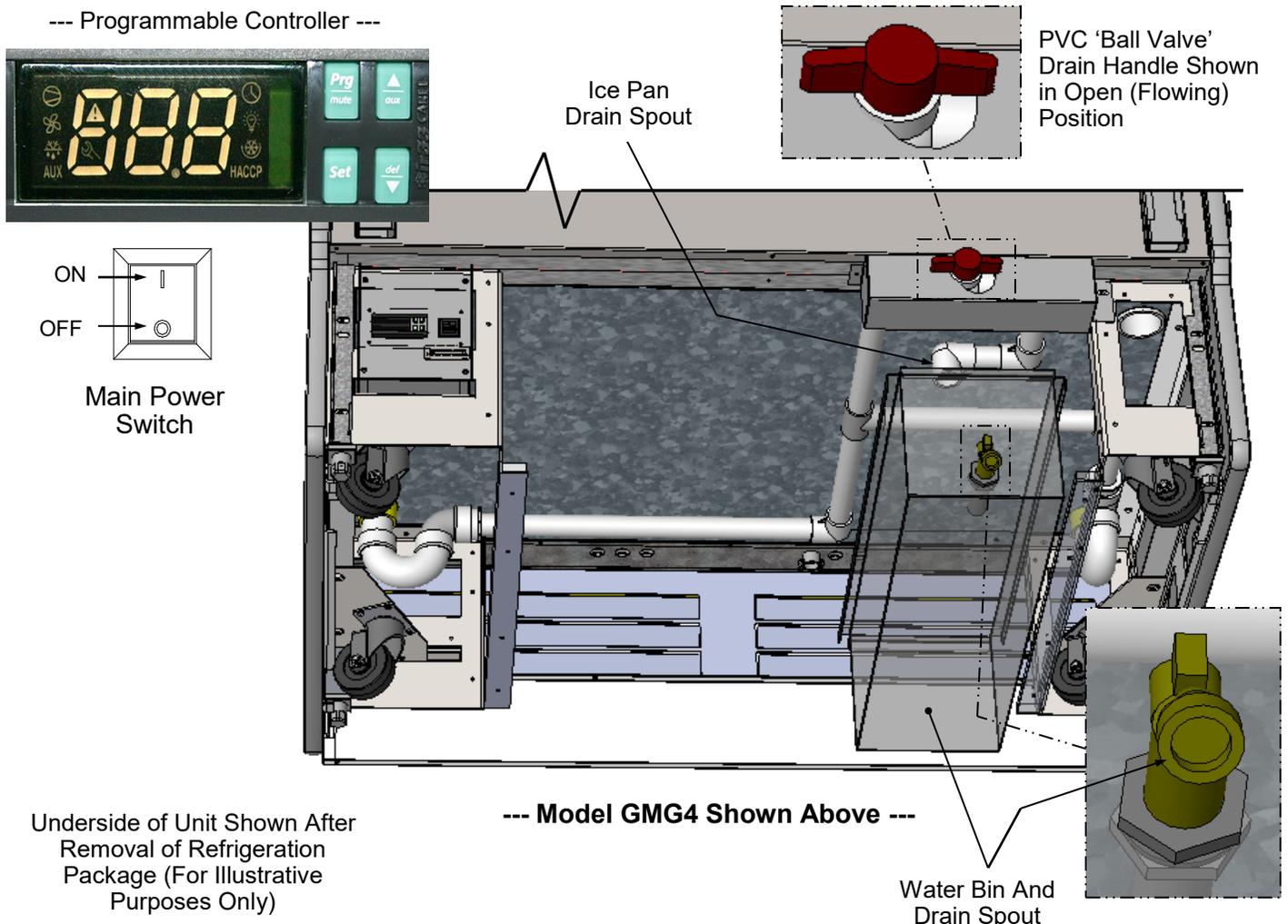
1. Slide water bin out from under unit and dump in sink or drain.

2. Connect hose to drain spout and run to floor drain.

### 2. Temperature Controller

- The Programmable Controller maintains proper case temperature.
- See **PROGRAMMABLE CONTROLLER** section in this manual for specifics.

**Note:** View of model shown below is partially disassembled for illustrative purposes only.



## 2. Display Case Start-Up

### A Case

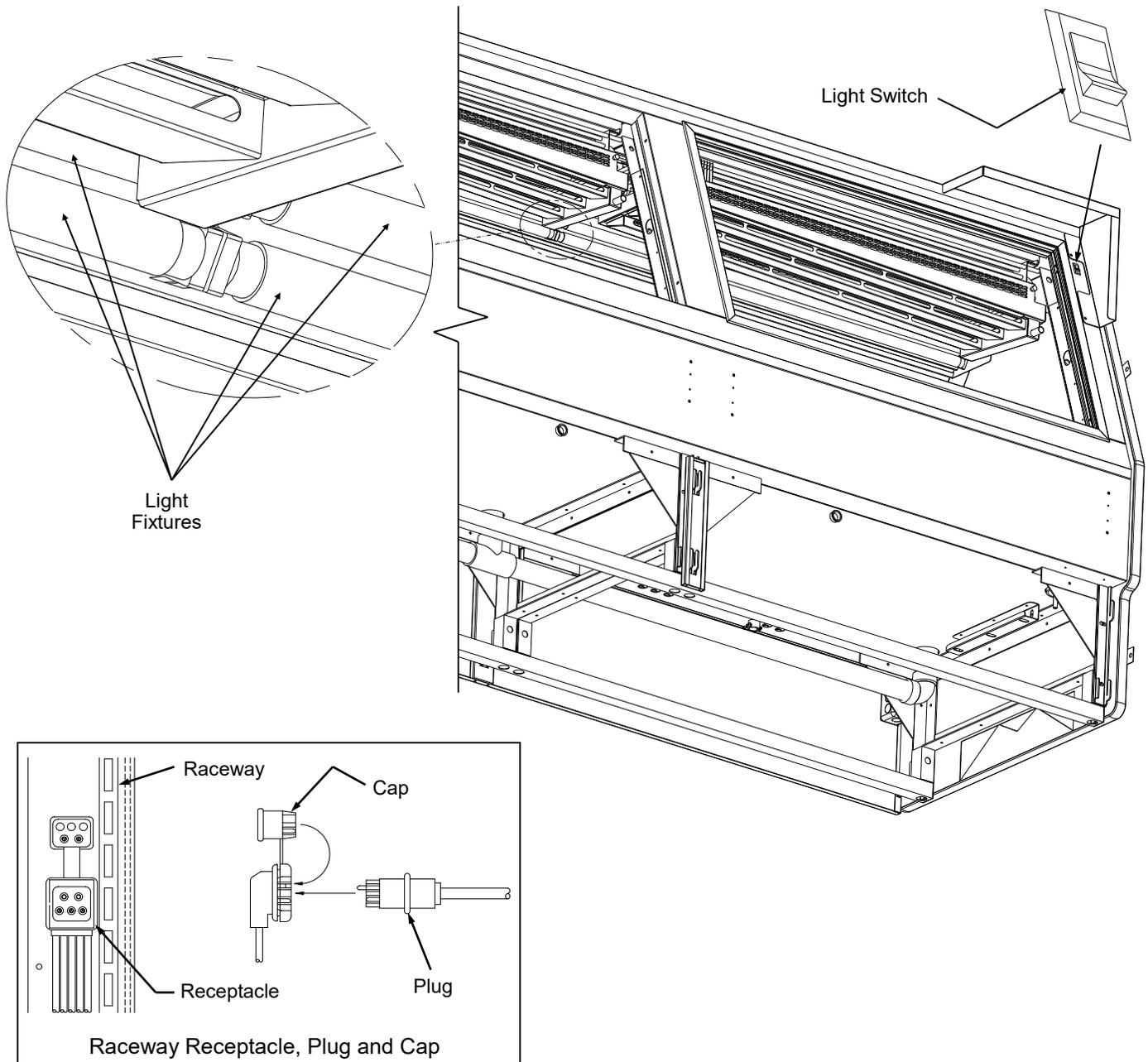
- Unit will begin operating when field wired.
- Front glass fans will begin to operate.
- Receptacle for scale stand receptacle will be energized.

### B. Light Switch

- Light switch for is at case rear on right upright (as shown in illustration below).

### C. Lights

- Lights will turn on when light switch is flipped.
- All lights should come on at the same time.
- First time lighting may require a short warm-up period.
- Slightly dim / flickering of new bulbs is normal. If lights do not turn on, check raceway plugs.
- Lighting is wired in series so **all lights must be plugged in or receptacles capped** for case lights to be on. See illustration below-left.



**A. Stocking**

1. Product must always be maintained at a constant and proper temperature. Thus, from the time product is received, through storage, preparation and display, product temperature must be controlled to maximize life of the product.
2. These units are not “rapid cool-down cases”; they are “holding cases.” Thus, product must be in its fully-refrigerated state (at 41 °F or less) PRIOR to being placed in cases to help maintain maximum shelf life of product.
3. When stocking, never allow the product to extend beyond the recommended load limit.
4. Air discharge and return air flow must be unobstructed at all times to provide proper refrigeration.
5. Product must be consistently rotated (older product rotated to front of display) per your store’s stocking protocol.

**B. Maintaining Proper Product Condition**

1. Improper temperature and lighting will cause serious product loss. Discoloration, dehydration and spoilage can be controlled with proper use of the equipment and handling of product.
2. To prevent product dehydration, do not allow temperature to drop below range specified in **OVERVIEW** section of this manual.
3. Minimize processing time to avoid damaging temperature rise to the product. Product should be kept at proper temperature.
4. Keep the air in and around the case area free of foreign gasses and fumes or food will rapidly deteriorate.
5. Do not place any product into these refrigerators until all controls have been adjusted and they are operating at the proper temperature. Allow merchandiser to operate at a minimum of 6 hours before stocking with any product.
6. There are vents located at the base of the front of the glass, just above the front rail.

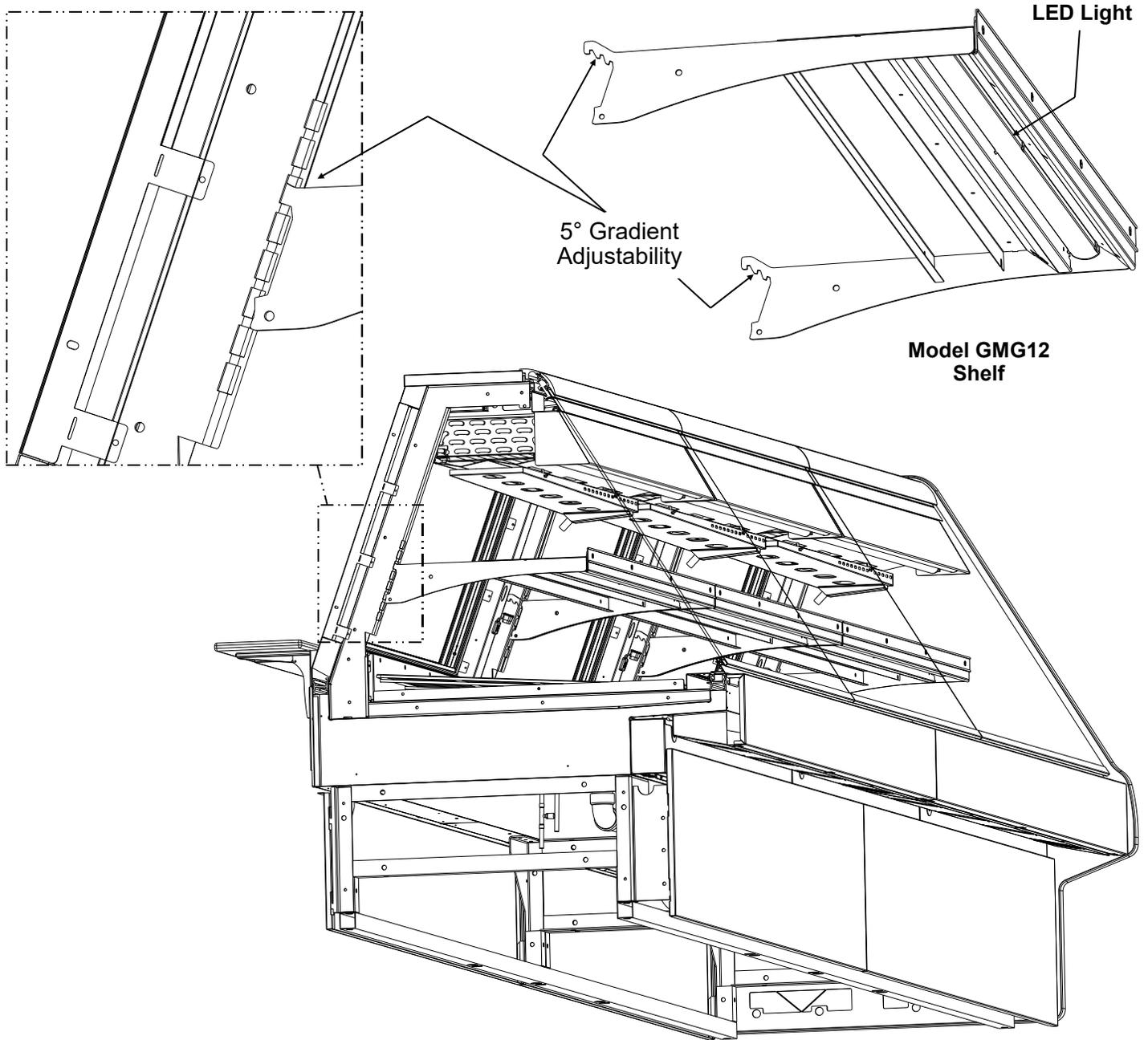
These vents supply a continuous, gentle flow of air across the front glass which inhibits condensation. Do not place any signs, product or other restrictive objects on the front of the refrigerator that will block these vents.

7. Keep the service doors closed (when applicable). Refrigeration performance will be seriously affected if left open for a prolonged period of time.
8. Avoid the use of supplemental flood or spot lighting. Display light intensity has been designed for maximum visibility and product life at the factory. The use of higher output fluorescent lamps (H.O. and V.H.O.), will shorten the shelf life of the product.
9. Turn off case lights at night.
10. In the deli, meat and fish cases, completely cover the product each night with a clean damp cloth or butcher paper (never use plastic, as it does not allow for proper circulation). Make sure the cloth or paper is in direct contact with the product.
11. Turn and rotate the meat fairly often. The blood (which gives the pink color) works its way downward with time.
12. Cold coils remove heat and moisture from the case and deposit this as frost onto the coil. Thus, you must thoroughly clean and defrost the upper refrigeration system/gravity coil drip tray assembly at least weekly. See **CLEANING SCHEDULE (INTERIOR) - TO BE PERFORMED BY STORE PERSONNEL** section in this manual for cleaning and defrosting specifics.
13. Understand product quantity and how it effects dehydration. The only other moisture within the case is that of the product itself. Thus, a single level of meat will dry out faster than a fully loaded case of 3-4 levels of meat.

## MAINTENANCE FUNDAMENTALS: DISPLAY SHELVES AND BRACKETS

### 1. Display Shelves and Brackets (Not All Cases)

- Certain models may have display shelves.
- Display shelves/brackets are adjustable to allow greater visibility of product.
- Shelves are adjustable, up or down, on 1" centers.
- Shelves are also able to be adjusted, angle-wise.
- To adjust, lift upward on brackets and rotate front of brackets downward.
- **Caution! Do not dislodge LED plugs from light sockets while adjusting shelving.**
- Each notch the bracket is adjusted will change angle by 5°.
- See illustrations below.



Model GMG12 Shown Partially Disassembled

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

**Caution:** Lamps are treated to resist breakage and must be replaced with similarly treated lamps.

**Note:** Warranty will be void if claims arise from negligence, misuse of goods, extreme environmental conditions or improper maintenance. See Overview And Warnings section in manual.

## **2. Rear Sliding Doors**

**Note:** Doors are not interchangeable. There is an inner and outer door. Outer door must be removed first and replaced last.

- The outer door is the right hand door (from service side or rear of case).
- Move doors toward the center of the case.
- Individually lift each door up toward the top of the case; pivot the bottom of the door out.
- Replace rear sliding doors in reverse order they were removed.

## **3. Light Fixtures**

**Note:** Depending upon model and options, light fixtures can have either single or dual lamps.

Light fixtures are located on underside of shelf assemblies and at the top inside of case. See illustration at upper right for locations.

Removal of lamps:

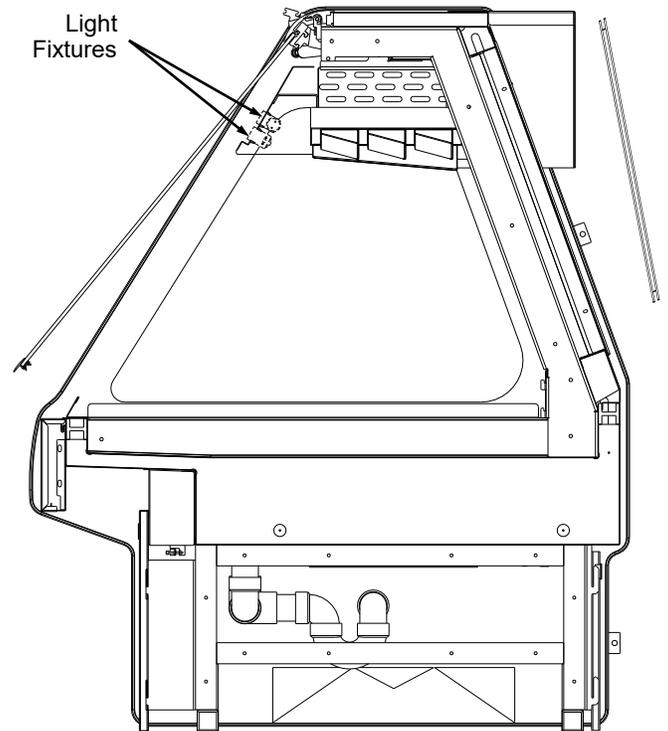
- Rotate lamp (1/4-turn) to disengage (upper or lower) pins/contacts from mounting sockets.
- Remove bulb by applying even pressure from back side at the bulb ends and pulling the remaining contact from sockets.
- See illustrations at mid and lower-right.

Installation of lamps:

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

## **4. Supplemental Flood Lighting / Food Lighting Specifics / Cautionary Note**

- Avoid using supplemental flood or spot lighting.
- Display light intensity has been designed for maximum visibility and product life at the factory.



- **Caution!** The use of higher output fluorescent lamps (H.O. and V.H.O.), will shorten the shelf life of the product, causing 'product browning.'
- Bulbs must be replaced with similar wattage, output and design as those in which the unit was equipped with from the factory.

**>> See next page for LED light fixture information.**

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

**Caution:** Lamps are treated to resist breakage. Replace with similarly treated lamps.

**5. LED Style Light Fixtures**

**Removal of Faulty LED Lights:**

- LED lights rarely require change-out.
- Contact Structural Concepts' Technical Service Department for replacement LED lights.
- Turn off LED light switch.
- To remove faulty LED light, follow these steps:
  - A. Disconnect plug from LED light.
  - B. Using both hands, grasp LED light assembly (with its magnetic mounting clips). Pull downward and off its shelf (or header).
  - C. Remove magnetic mounting clips from LED light by pressing against flange part of clip with thumb.

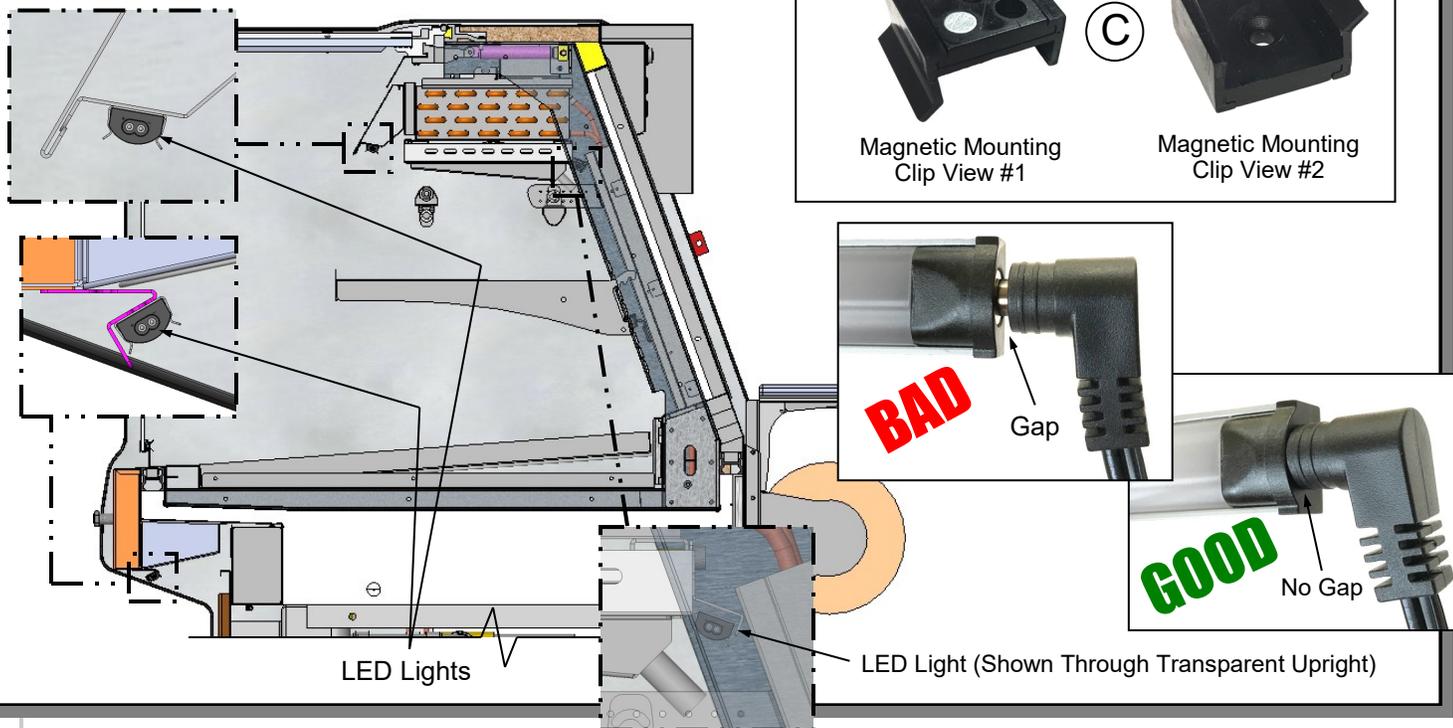
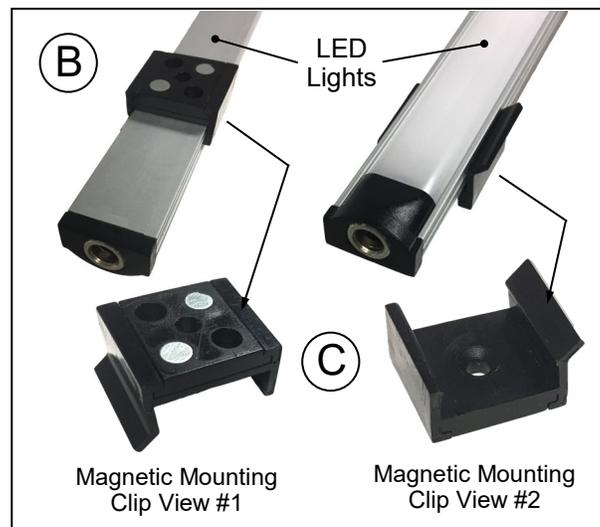
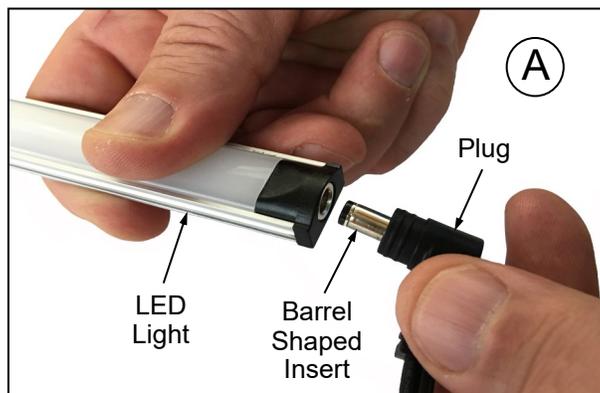
>> **Note:** Mounting clips MAY be riveted to shelf or header. In such instances, simply remove LED light from mounting clips by pressing against flange part of clips with thumb.

**Replacement of LED lights:**

- Attach magnetic mounting clips onto LED light.
- Adjust magnetic mounting clips so they are equally spaced on LED light.
- Reattach LED light assembly to its shelf/header.
- Position properly in shelf/header.

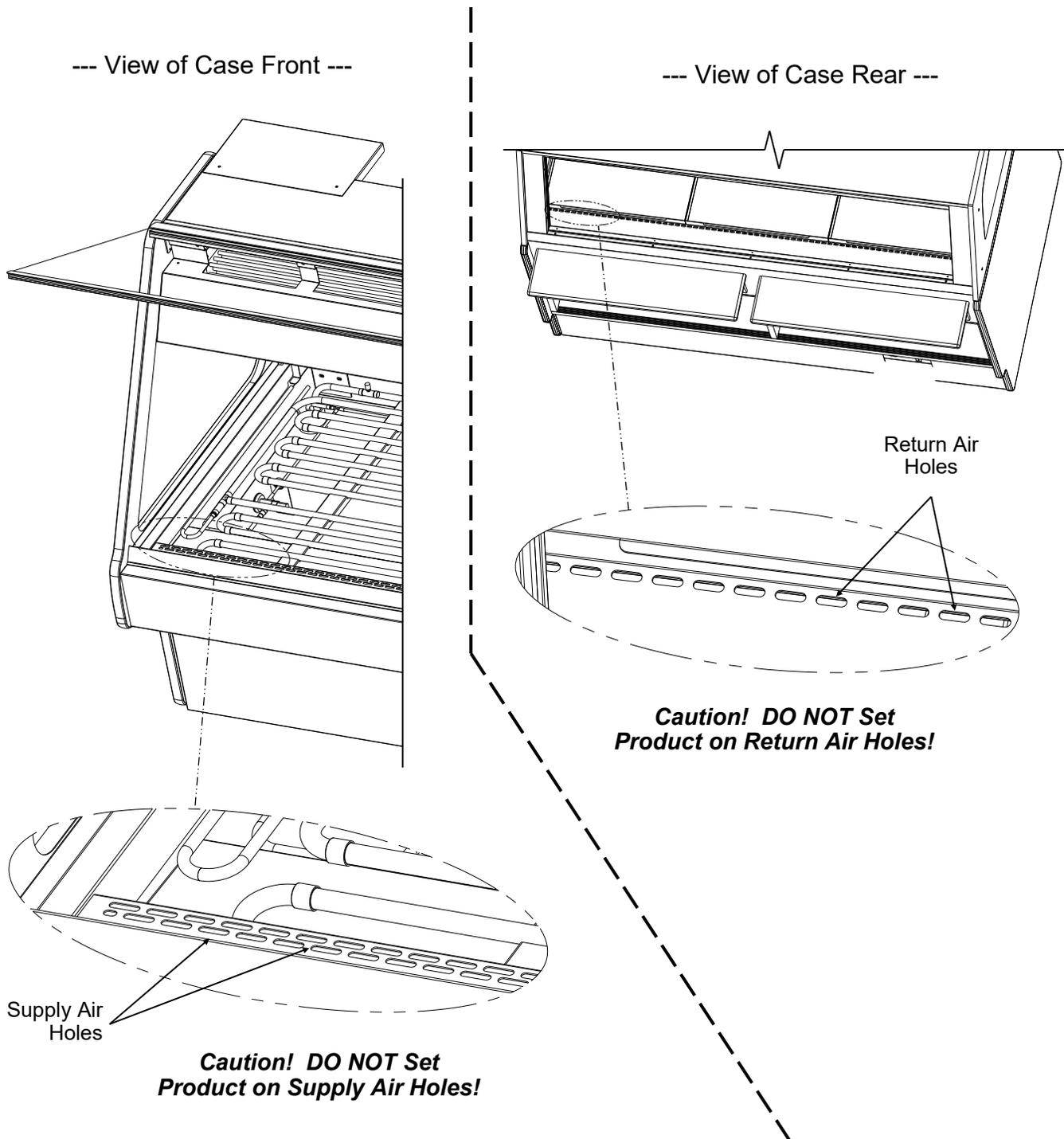
>> **Note:** If mounting clips are riveted to shelf (or header), attach by placing LED in base of clip and then snapping into clip at FLANGE SIDE.

- Press plug's barrel-shaped insert all the way into LED light.
- **Important:** If plug is not inserted ALL THE WAY IN the LED light's orifice, the light may not energize. See "BAD" vs. "GOOD" insertion illustrations below-right.
- Turn LED light switch back on.



### **6. Prohibited Product Placement**

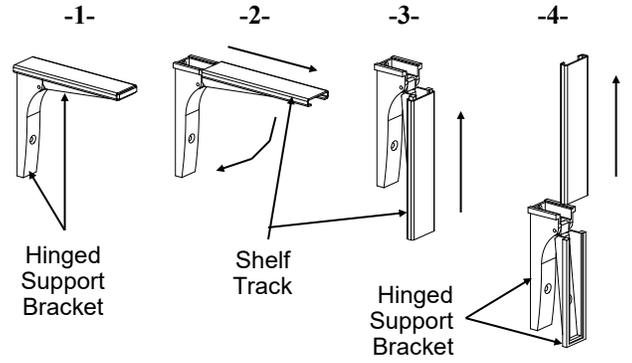
- **Caution! DO NOT set product on supply air at case front.** Doing so can impede proper convection air current which is required to maintain seafood and/or meat at proper color and proper condition.
- **Caution! DO NOT set product on return air holes at case rear.** Doing so can impede proper convection air current which is required to maintain seafood and/or meat at proper color and proper condition.
- See illustration below for locations of rear and front return air holes.



**7. Cutting Board (Rear Ledge) Removal Steps**

The illustrations at right and below reflect step-by-step removal method.

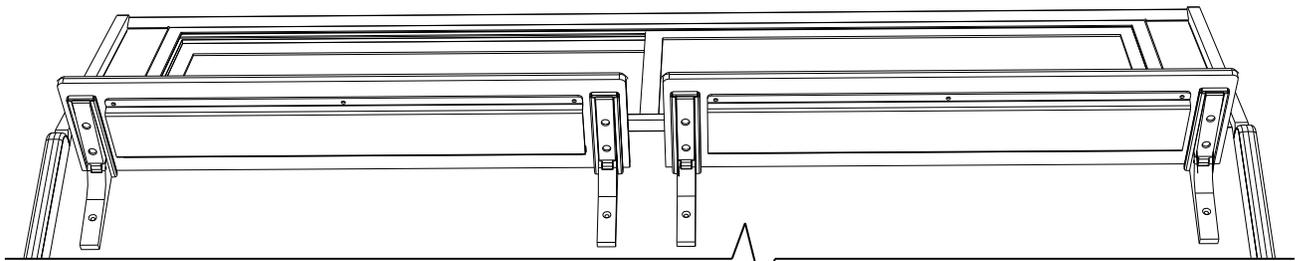
1. Hinged support bracket is shown in its standard upright position.
- 2 & 3. While upright, rear ledge (cutting board) must be slid away from case and then rotated downward to vertical position.
- 3 & 4. From the shelf's lowered position, lift from bottom edge upward to disengage shelf track; attached rear ledge (cutting board) from bracket.



**8. Rear Ledge Raising and Lowering**

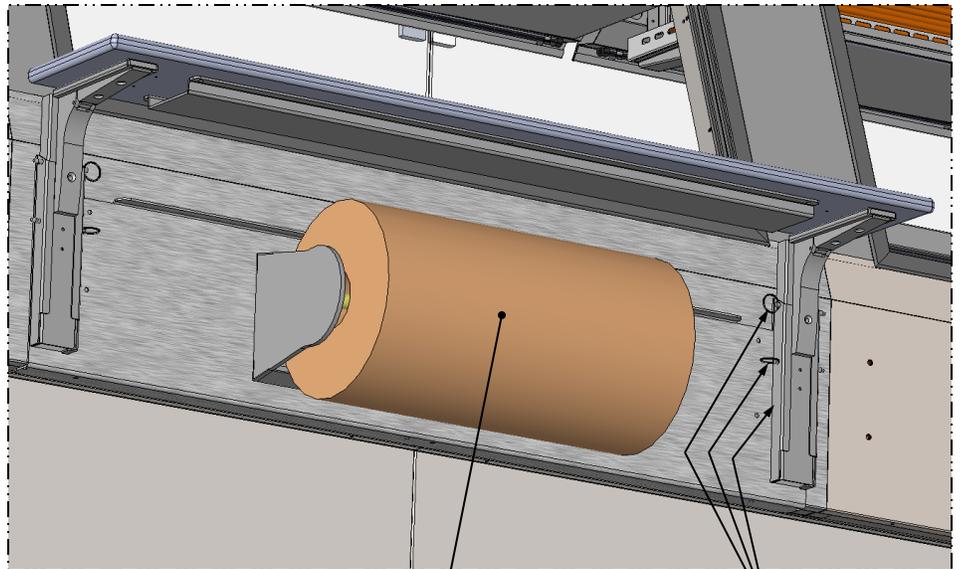
- Illustration below shows rails and pins at underside of rear ledge (cutting board).
- Pull pins and adjust ledge height. Replace pins.

————— Rear Ledge Removal Steps —————  
Note: For clarity, only Shelf Track is shown being removed. Rear Ledge is attached to Shelf Track.



**9. Paper Rollers (Optional)**

- Paper roller unit is usually positioned under rear ledge (cutting board).
- See illustration at right for general location.



Paper Roller (Optional)

Rail/Pin Mechanism For Raising & Lowering Rear Ledge (Typ.)

## CONDENSER PACKAGE (HEATER ROD EVAPORATOR PAN)

The following images show the various parts pertaining to the condenser package (that is slid directly out from under display case) to be cleaned and serviced.

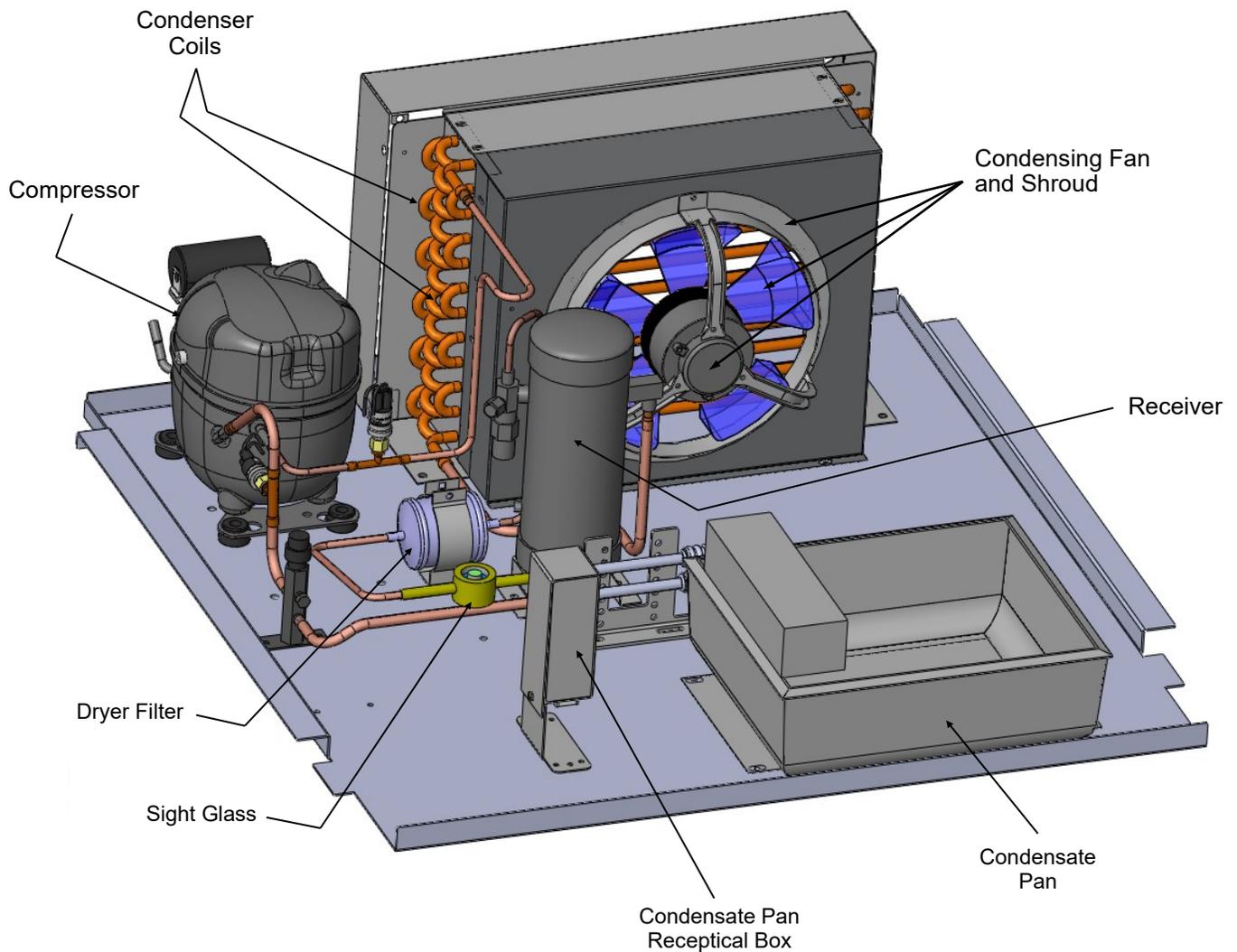


Illustration shown may not reflect every feature or option of your particular case.

## CONDENSER PACKAGE (HOT GAS LOOP EVAPORATOR PAN / HEATER ROD OVERFLOW PAN)

The following images show the various parts pertaining to the condenser package (that is slid directly out from under display case) to be cleaned and serviced.

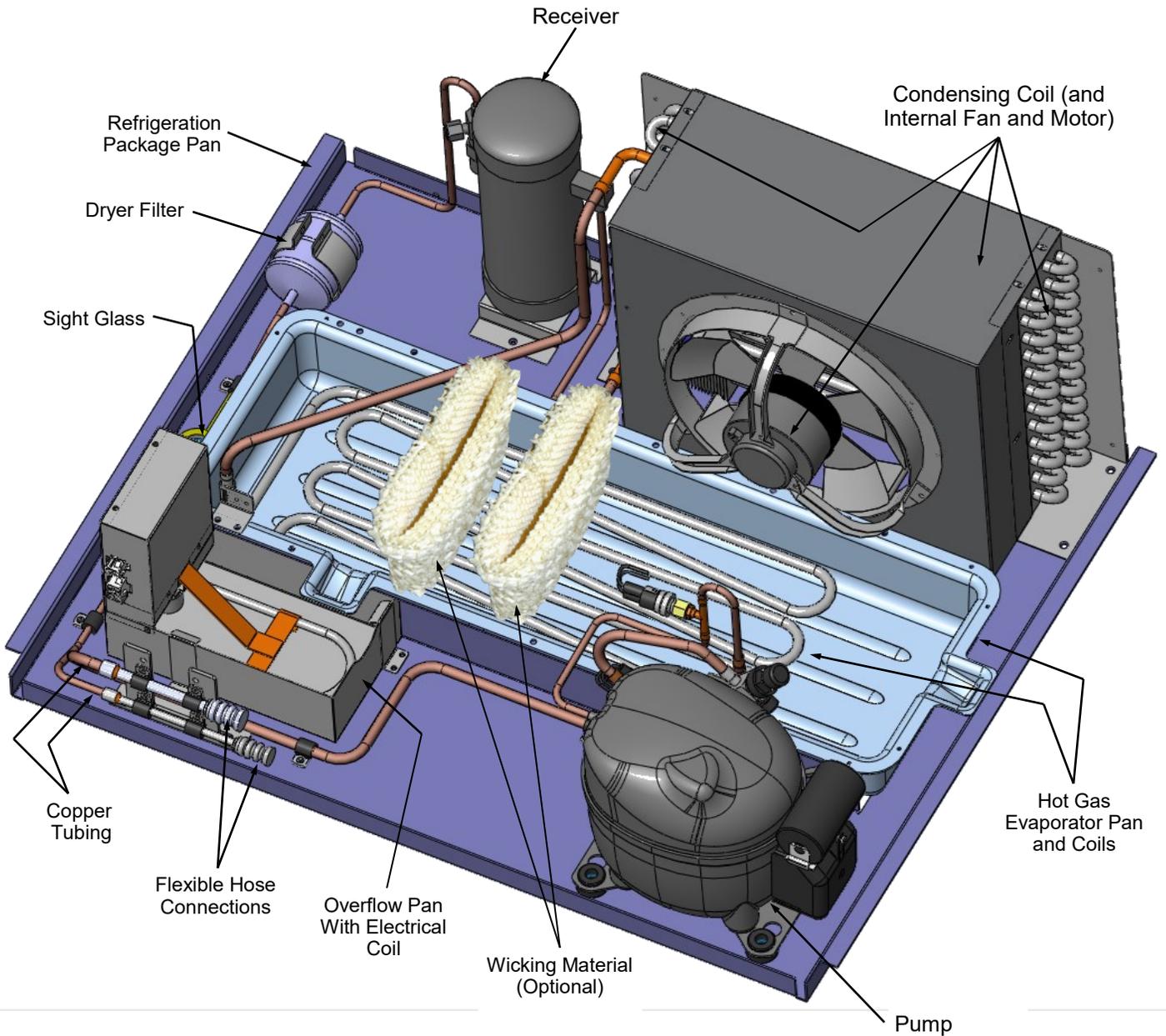


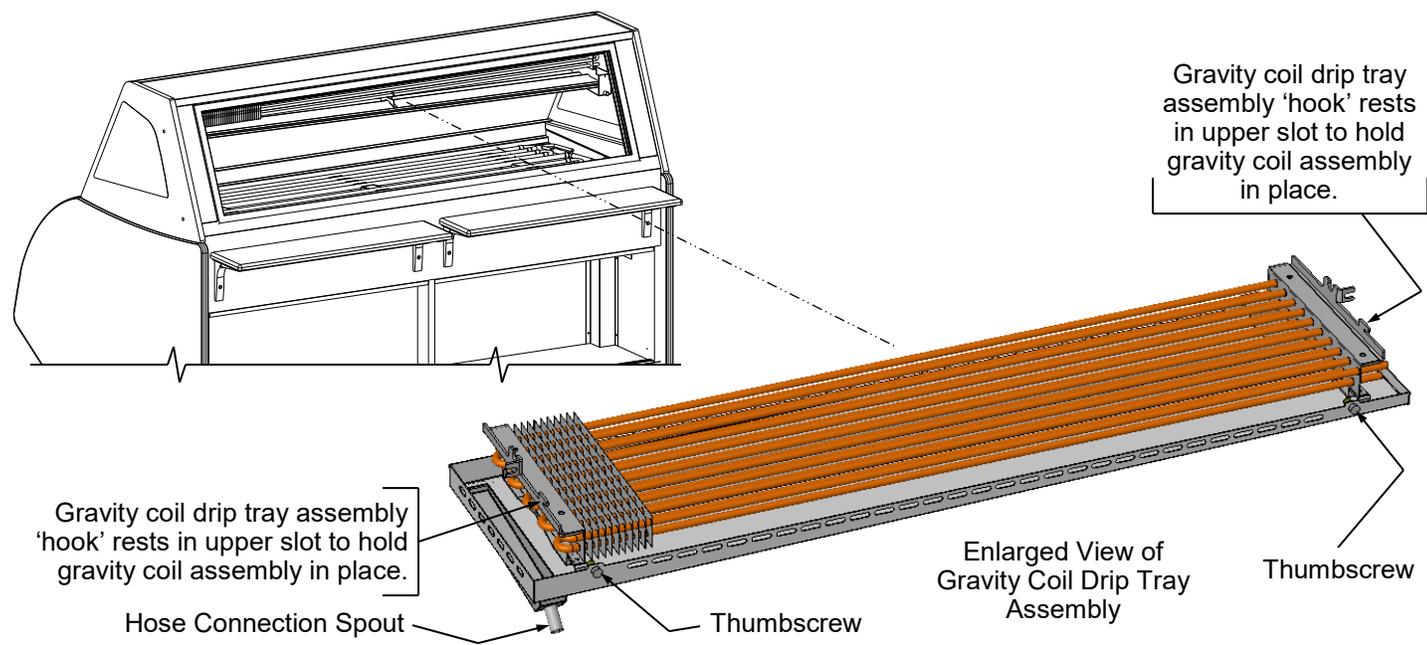
Illustration shown may not reflect every feature or option of your particular case.

**CLEANING SCHEDULE (INTERIOR) - TO BE PERFORMED BY STORE PERSONNEL (PAGE 1 of 3)**

FREQ.	INSTRUCTIONS
Daily	<b>Seafood Case: Ice Pans. Meat Case: Wire Racks:</b> Remove from case. Submerge in hot water while using an anti-bacterial soap solution. Rinse thoroughly, dry. Return to case. For seafood case, new batch of ice required.
Daily	<b>Open Unit Area (With Hot Gas Loops Exposed):</b> While pans/racks are being cleaned, wipe down open area (including copper tubing, tub and drain area) with hot water solution and anti-bacterial soap solution. Rinse thoroughly.
Daily	<b>Hybrid Case Shelving:</b> Reach through rear openings to clean shelves with warm water, mild detergent and soft cloth. Dry with paper towel or clean cloth when done.
Weekly	<p><b>Tub, Trough and Drain (Remote Units):</b></p> <ul style="list-style-type: none"> <li>&gt;&gt; Keep clean and free of debris which could clog tub and drain. To access drain area, remove ice pans (for seafood case) / wire racks (for meat cases).</li> <li>&gt;&gt; Remote units have drain systems that flows DIRECTLY INTO floor drain.</li> <li>&gt;&gt; To clean tub, trough and drain, follow these instructions: <ul style="list-style-type: none"> <li>• Case may remain ON while performing tub cleaning process!</li> <li>• Use hose with warm or hot water, sponge and either a bucket with warm, soapy water or spray bottle with anti-bacterial soap.</li> <li>• Wipe down tub with hot water and anti-bacterial soap solution.</li> <li>• If cleaning a hybrid case, wipe down evaporator coil unit. Caution! Do not splash water into axial fans while cleaning!</li> <li>• Dry with clean cloth or chamois when done.</li> <li>• Return pans and dividers to case.</li> </ul> </li> </ul>
Weekly	<p><b>Tub, Trough and Drain (Self-Contained Units):</b></p> <ul style="list-style-type: none"> <li>&gt;&gt; Keep clean and free of debris which could clog tub and drain. To access drain area, remove ice pans (for seafood case) / wire racks (for meat cases).</li> <li>&gt;&gt; Self-Contained units have drain systems that flows DIRECTLY INTO evap. pan. <ul style="list-style-type: none"> <li>• DO NOT use a hose (with flowing water) to clean tub area.</li> <li>• This may cause water to flow through drain, into evaporator pan, and possibly overflow, damaging flooring.</li> <li>• Structural Concepts is not liable for such damages!. See <b>TROUBLESHOOTING - GENERAL ISSUES</b> section in this manual should an overflow occur.</li> <li>• At case rear is a drain 'ball valve' handle that may be rotated (see label on case rear for direction) to allow water to flow through drain spout (below handle).</li> <li>• See <b>INSTALLATION: SELF-CONTAINED MODEL GMG6 MEAT CASE REAR DRAIN/ TEMP. CONTROLLER</b> section in this manual for the location of the 'ball valve' handle and drain spout.</li> <li>• If cleaning a hybrid case, wipe down evaporator coil unit. Caution! Do not splash water into axial fans while cleaning!</li> <li>• Caution! Make certain you have a bucket or hose connected to drain (routed to floor drain) prior to re-routing water flow!</li> <li>• Remove pans and dividers from case. While pans and dividers are being cleaned, use sponge and anti-bacterial soap solution in bucket or spray bottle to wipe down tub, trough and drain with sponge or clean cloth.</li> <li>• Dry with clean cloth or chamois when done.</li> <li>• Return pans and dividers to case.</li> </ul> </li> </ul>

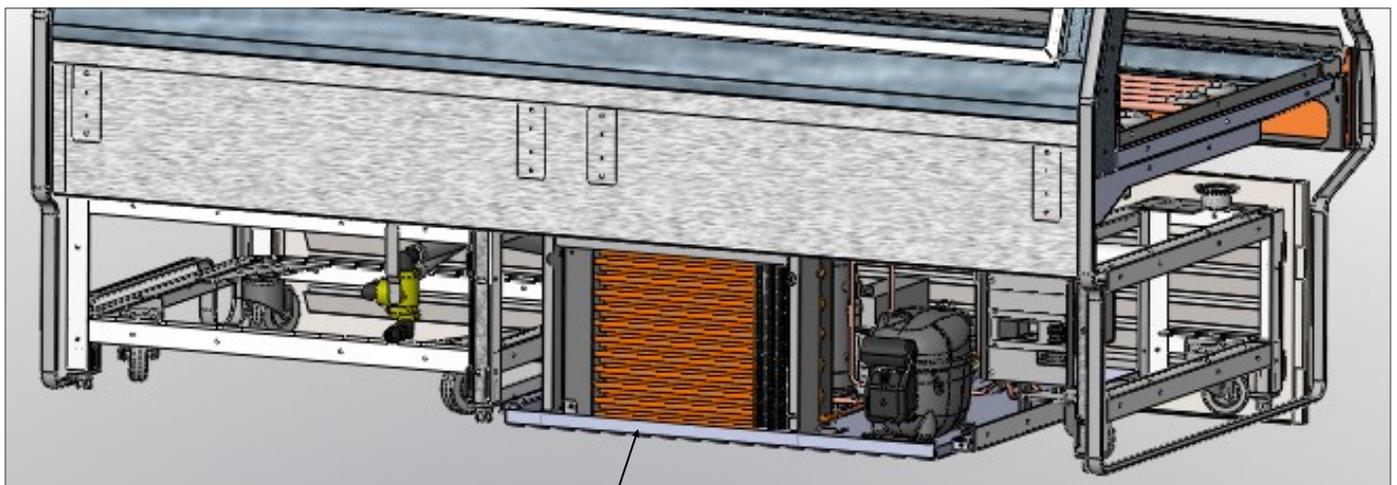
**CLEANING SCHEDULE (INTERIOR) - TO BE PERFORMED BY STORE PERSONNEL (PAGE 2 of 3)**

FREQ.	INSTRUCTIONS
At Least Weekly	<p><b>Upper Refrigeration System/Gravity Coil Drip Tray Assembly:</b></p> <p><i>Caution! To insure proper case performance, you must thoroughly clean and defrost this merchandiser at least WEEKLY.</i></p> <ul style="list-style-type: none"> <li>• If optional humidification (“misting” system) is on unit, it must be turned off while thoroughly cleaning and defrosting!</li> <li>• Cleaning controls switch is NOT in unit, but it may be provided by others. If a switch is accessible, flip to “OFF” position. If not, you must contact your facility manager to turn off upper refrigeration system. Allow upper system to thoroughly defrost.</li> <li>• Lift rear sliding doors up and out from unit. See <b>MAINTENANCE FUNDAMENTALS - REAR SLIDING DOORS</b> section for these instructions.</li> <li>• Disconnect hose from connection spout (may require removal of hose clamp). Remove thumbscrews holding gravity coil tray drip assembly in place. Drop tray drip assembly downward. Lift ‘hooks’ on each end of gravity coil assembly off upper slots inside case.</li> <li>• Remove from unit. Submerge in hot water using an anti-bacterial soap solution. Rinse thoroughly and dry. Return to case. Reattach thumbscrews. Return rear sliding doors to case. Turn case back on.</li> <li>• <u>Note:</u> Depending upon unit, defrost timer MAY need to be reset.</li> </ul>
Quarterly	<p><b>Axial Fans:</b></p> <ul style="list-style-type: none"> <li>• <i>Caution! Turn off main power switch to case and unplug from outlet before starting!</i></li> <li>• See <b>OPERATION, CONTINUED: MODEL GMGX4 BLOWER COIL WEDGE UNIT ONLY - PAGE 2 of 2</b> section in manual for axial fan location.</li> <li>• Remove protective grilles that may be preventing access to the axial fans.</li> <li>• Wipe axial fan blades with moist cloth dipped in warm, soapy water.</li> <li>• Wipe dry with clean cloth or paper towel.</li> <li>• Return protective grille to axial fans. Fasten securely.</li> </ul>
Quarterly	<p><b>Optional Humidification (“Misting”) System:</b> Clean at least quarterly to prevent malfunction and/or inferior performance. Follow your system’s cleaning instructions for specifics.</p>



**CLEANING SCHEDULE (INTERIOR) - TO BE PERFORMED BY STORE PERSONNEL (PAGE 3 of 3)**

FREQ.	INSTRUCTIONS
Monthly	<p><b><u>Condenser Coil (Self-Contained Units Only):</u></b></p> <ul style="list-style-type: none"> <li>• Note: If desired, refrigeration package may be slid out from under case.</li> <li>• Cleaning: Remove rear grille. Use air pressure if available (or an industrial strength vacuum), clean the dust and dirt that collects on the condenser coil.</li> <li>• Caution! Be careful not to damage the fins on the coil!</li> </ul>
Quarterly	<p><b><u>Condensing Unit (including Evaporator Pan):</u></b></p> <ul style="list-style-type: none"> <li>• <i>Condenser package may be slid out from under case for greater access.</i></li> <li>• <i>Warning! Evaporator pan may be hot.</i></li> <li>• <i>Allow evaporator pan to cool approximately 30-minutes before cleaning.</i></li> </ul> <ol style="list-style-type: none"> <li>1. Turn off power. Disconnect case from power source.</li> <li>2. To JUST ACCESS EVAPORATOR PAN, front toe-kick may be removed by simply lifting up and off. No screw removal required.</li> <li>3. To FULLY ACCESS REFRIGERATION PACKAGE, remove rear grille by simply lifting up and off. No screw removal required.</li> <li>4. Disconnect evaporator pan electrical connection from receptacle box.</li> <li>5. Remove evaporator pan mounting screws from compressor pan.</li> <li>6. Remove evaporator pan from unit.</li> <li>7. Thoroughly clean evaporator pan with de-scaling solution, such as <b>CLR®</b>. Rinse thoroughly. <i>DO NOT</i> submerge in water.</li> <li>8. Use clean towel dipped in soap and water solution to wipe down all fans, motor, refrigeration lines, cords, knobs, sight glass, connectors and all other surfaces.</li> <li>9. Wipe dry.</li> <li>10. Reposition evaporator pan on compressor pan.</li> <li>11. Reattach mounting screws to evaporator pan.</li> <li>12. Reconnect evaporator pan electrical connections.</li> <li>13. Slide back under case.</li> <li>14. Replace rear grille.</li> </ol>



Refrigeration Package  
(Rear Grille Removed For  
Illustrative Purposes Only)

**CLEANING SCHEDULE (EXTERIOR) - TO BE PERFORMED BY STORE PERSONNEL**

AREA	FREQ.	INSTRUCTIONS
Exterior	Daily	<b>All Glass / Mirrors:</b> Clean side glass, front glass and mirrors (if any) with household or commercial glass cleaner.
	Daily	<b>Rear Sliding Door Exterior Glass:</b> <ul style="list-style-type: none"> <li>• Clean rear sliding doors with household or commercial glass cleaner.</li> <li>• Doors can be completely removed from case for more thorough cleaning. See <b>MAINTENANCE FUNDAMENTALS: REAR SLIDING DOORS / STANDARD LIGHT FIXTURES</b> section in this manual for specifics.</li> <li>• Wipe out door tracks with mild soap solution and sponge or clean cloth.</li> <li>• Dry thoroughly.</li> </ul>
	Daily	<b>End Panels, Front Panel / Rear Panel, Toe-Kicks, Rear Ledge Cutting Board, etc.:</b> Wipe off all surfaces with warm water and mild soap solution and non-abrasive cloth. Dry thoroughly.
	Daily	<b>Stainless Steel Surfaces:</b> <ul style="list-style-type: none"> <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	<b>Wood, Laminate and Painted Surfaces (Including Rear Storage Area):</b> Clean with mild soap and water solution and a soft cloth .
	Monthly	<b>Under Case Cleaning:</b> Remove front toe-kick (or rear grille). Vacuum under case to remove all dust and dirt. Replace front toe-kick (or rear grille) when complete.

CONDITION	TROUBLESHOOTING
<p><b>Case Not Lining Up</b></p>	<p>Cases must be level and plumb. See <b>INSTALLATION: FRAME SUPPORT RAIL SHIMMING</b> section in this manual for instructions on properly aligning case (alongside other cases) and shimming rails.</p>
<p><b>Water Is On The Floor</b></p>	<p><b>Caution!</b> Water on flooring can cause much damage! Until cause is determined (and repaired), following these procedures:</p> <ul style="list-style-type: none"> <li>• Use wet-dry vacuum (or mop &amp; bucket) to remove standing water.</li> <li>• Use 'catch pans' for water to drain into. Swap out regularly until case has completely drained.</li> <li>• Contact Structural Concepts Technical Service. See telephone number on final page in this manual.</li> </ul>
	<p>Check that the drain trap is free of debris.</p>
	<p>Check that the drain hose is correctly connected to drain piping to floor drain.</p>
	<p>Check store conditions.</p> <ul style="list-style-type: none"> <li>• To prevent condensation in NSF/ANSI Type I environments, maximum conditions are to be 55% relative humidity / 75° Fahrenheit.</li> <li>• For NSF/ANSI Type II environments, maximum conditions are to be 55% relative humidity / 80° Fahrenheit.</li> <li>• 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.</li> </ul>

CONDITION	TROUBLESHOOTING
<b>Fans (For Front Glass Condensation) Emitting Excessive Noise</b>	Check that the case is aligned, level and plumb.
	Check fans for cleanliness. <i>Note: You must remove front panel by removing screws along lower section to access fans.</i>
	Unplug fan motors; check motor shaft for excessive 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.
<b>Fans Are Not Working</b>	Check that the MAIN power switch (if present) is on.
	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.
<b>System Is Not Operating</b>	Check that the utility power is on.
	Check the circuit breaker box for tripped circuits.
<b>Case Is Not Holding Temperature</b>	If a large amount of warm product was added to the case, it will take time for the temperature to adjust. Product should be pre-chilled before placing in case.
	Check <b>PROGRAMMABLE CONTROLLER</b> section in this manual to access your particular thermostat to confirm that proper settings are being maintained.
	Check that the case is not in the sun or near a heat or air conditioning vent.
	Check that case is not located near outside doors: ambient temperature fluctuation can hinder unit's ability to maintain proper case temperature.
	<p>Units with upper refrigeration system/gravity coil with drip tray assembly:</p> <ul style="list-style-type: none"> <li>• Check that upper refrigeration system has been defrosted, and its gravity coil with drip tray assembly thoroughly cleaned and its interior washed.</li> <li>• This process must be performed at least weekly. See <b>CLEANING SCHEDULE (INTERIOR) - TO BE PERFORMED BY STORE PERSONNEL</b> section in this manual for step-by-step instructions.</li> </ul>

CONDITION	TROUBLESHOOTING
<b>Case Lights Are Not Working</b>	Check that light switch is in the <b>ON</b> position.
	Check bulbs for proper installation and connection.
	Check that light switch (if any) is in the <i>on</i> position.
	Check for burned out bulbs. Turn lights off & replace.
	Clean dirt and dust from the bulbs to prevent flickering.
	<u>Certified electricians only:</u> Check voltage flow at ballasts. If voltage is entering but not exiting the ballast, ballast is faulty.
	<p>&gt;&gt; <u>T-8 fluorescent lights:</u> Check that <b>ALL</b> lights are connected properly and receptacles capped. See <b>MAINTENANCE FUNDAMENTALS: REAR SLIDING DOORS / T-8 LIGHT FIXTURES</b> section in manual for illustrations and in-depth instructions.</p> <p>&gt;&gt; <u>LED lights:</u> Check that LED lights are connected properly. See <b>MAINTENANCE FUNDAMENTALS: LED LIGHT FIXTURES</b> section in manual for illustrations and in-depth instructions.</p>

**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<sup>®</sup>**  
888 E. Porter Rd - Muskegon, MI 49441

# Fusion

MODEL NRS3648RXV-SAMPLE  
SERIAL NO. 12345X30DZ098765



Intertek



Intertek

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

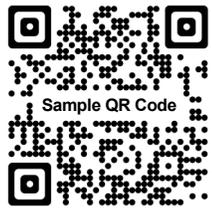
6-8 °F  
6 defrosts per day, 45 °F

ELECTRICAL RATING  
REFRIGERANT  
DESIGN PRESSURE  
MINIMUM CIRCUIT AMPACITY  
MAXIMUM OVERCURRENT

120/1/60 16 A  
R513A AMOUNT 50 OZ  
HIGH 186 LOW 88  
20A  
20A

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

SCAN FOR PRODUCT LITERATURE



Sample QR Code

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

40



**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® ir33 Platform**



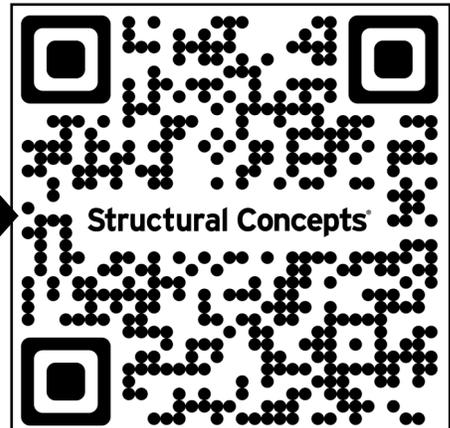
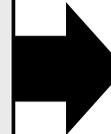
**Carel® iJF Platform**



**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.



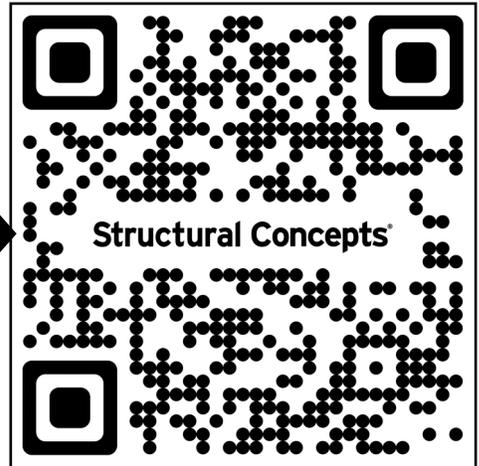
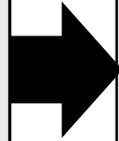
**STRUCTURAL CONCEPTS TECHNICAL SERVICE CONTACT INFORMATION & LIMITED WARRANTY**

**TECH SERVICE/WARRANTY CONTACT INFO:**  
1 (800) 433-9490 / EXTENSION 1  
**DAYS/HOURS AVAILABLE:**  
MONDAY - FRIDAY (CLOSED HOLIDAYS)  
8:00 A.M. to 8:00 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.



**ROUTINGS / SIGNOFF**

ROUTED TO:	DEPARTMENT	INITIALS	SIGNOFF DATE	COMMENTS
BERT OGBORN	TECHNICAL WRITER	BRO	07/06/2023	
KARL ROSENCRANTS	PROJECT MANAGER			
JASON PAQUETTE	REFRIGERATION ENG.			
JIM ARCHBOLD	ELECTRICAL ENGINEER			
JON MURRAY	REFRIGERATION			
WHOMEVER	PROD. MANAGEMENT			

**REVISIONS**

REV.	DATE	BY	REVISION(S)
A	8.3.2010	BRO	RELEASE FOR PRODUCTION. Used P/N 63293 Meat/Seafood Gravity Coil Operating Manual as template. P/N 5-0173 was that manual's corresponding G-Series Installation Sheet.
B	1.20.2011	BRO	Added model GMG 6 (self-contained unit) to operating manual, its rear drain configuration & Carel Controller. All others are remotes. Added adverse conditions/spacing issues warning.
C	3.25.2011	BRO	Added full length GMG12 (rather than two GMG6's adjoined) to manual. Added cautionary note (in Installation Section) to check proper drainage.
D	11.30.2011	BRO	Added matting and updated overview and warnings sheet. Added exploded view of refrigeration package (on self-contained units only).
E	6.27.2013	BRO	Added GMG12 Hybrid Meat Case (With Shelf and Gravity Coil and Evaporator Coil). Limited Warranty was "Warranty Information Sheet". GFCI now mandated.
F	12.20.2013	BRO	Added proper hybrid blower gravity coil illustrations.
G	5.5.2015	BRO	Added Model GMG8.6552. Revised O/W Sheet and Warranty Sheet. Revised cleaning process (per Jon Murray due to trip to Mehmert's Green's Grocery Café in 3/2015. Added Model GMGX4 to Manual (cover and internal illustrated parts breakdown); also mentioned optional misting system.
H	5.22.2015	BRO	Specified that upper refrigeration system/gravity coil drip tray assembly is to be thoroughly cleaned and defrosted at least weekly.
I	5.26.2016	BRO	Unspecified revisions.
J	10.1.2016	BRO	Added Model GMGV12 (Vertical Glass) to cover; Revised to show both LEDs & fluorescent, etc. Showed vertically adjustable rear ledge / rear cutting board. Showed optional paper roller. Revised warranty sheet. Replaced existing bolting/caulking instruction side view (inapplicable model) with model GMG4. Added second bolting/caulking instruction sheet with new vertical model (GMGV12).
K	12.1.2016	BRO	Added Model GMG4.6552.
L	1.29.2020	BRO	Added Model GMGV4 to manual. Added CA Prop 86 and CA-Mandated RDS information. Revised Warranty Sheet and Carel Thermostat Controller Documentation. Revised LED Light Sheet to show latest designs.
M	10/27/22	CTG	REVISED O/W SHEET INFO, SERIAL LABEL, SCC LOGO, PRODUCT FAMILY LOGO & FILE NAME. REPLACED CONTROLLER AND WARRANTY SHEET INFO W/SINGLE SHEETS (WITH QR CODES) PER QR CODE IMPLEMENTATION PROTOCOL.
N	7/6/2023	BRO	ADDED "...FRESH. ALWAYS," LOGO TAGLINE. TYPE II COND NOW 55%RH. TECH SVC HRS NOW 8 TO 8. REMOVED COVER SHT SPECKLES.