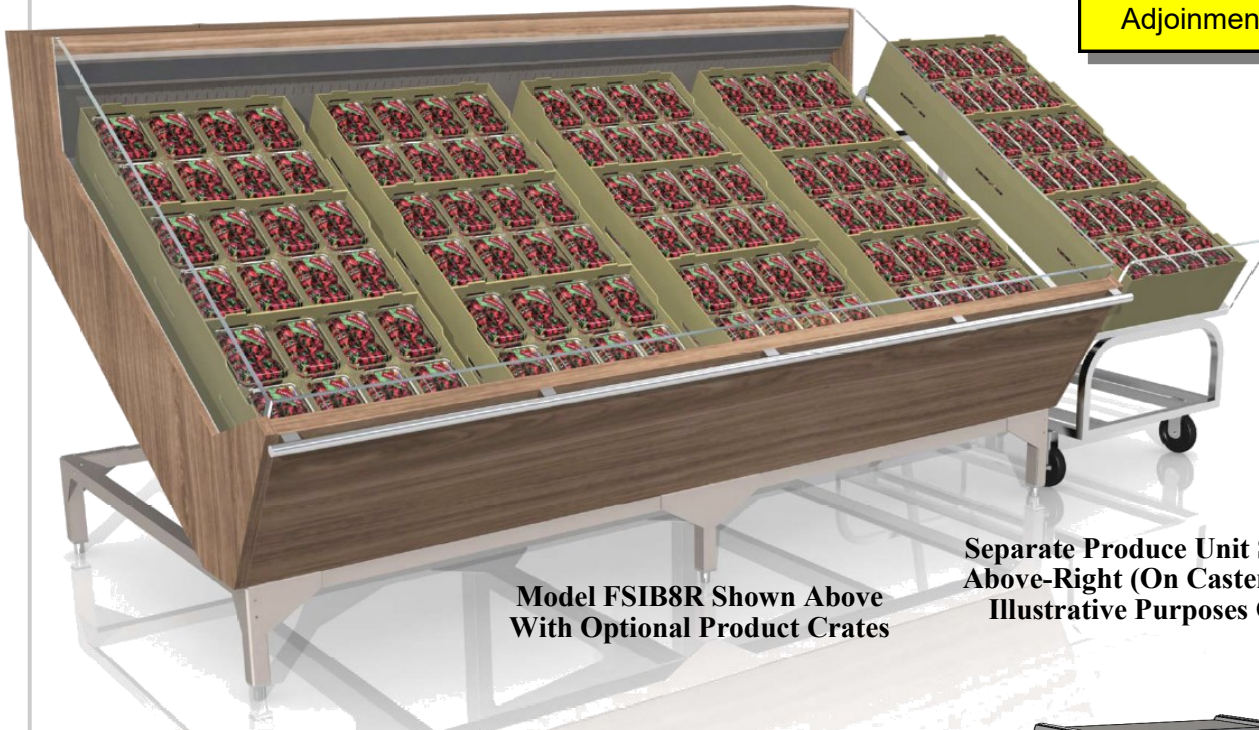


Oasis[®] USER MANUAL

SCC P/N
20-45803

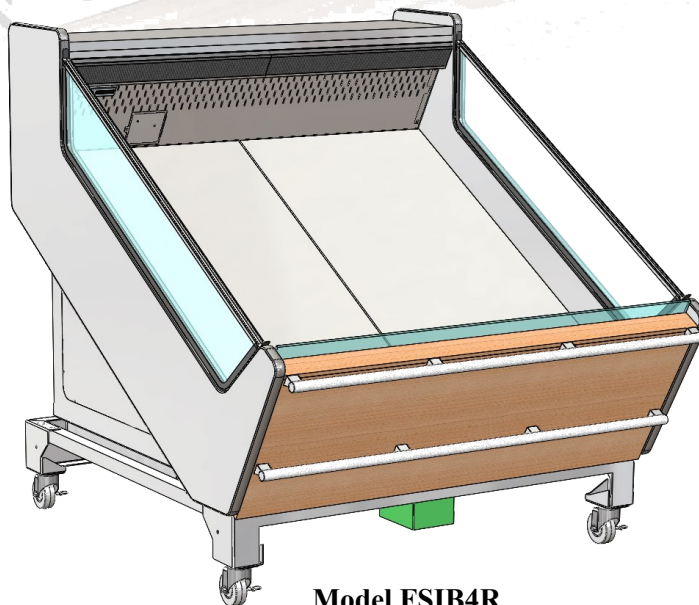
SELF-SERVICE REFRIGERATED CASES (BOTH SELF-CONTAINED & REMOTE)
>> DESIGNED FOR BERRY MERCHANDISING

Note: See Page 8 Of This Manual For Case-To-Case Adjoinment Instructions.

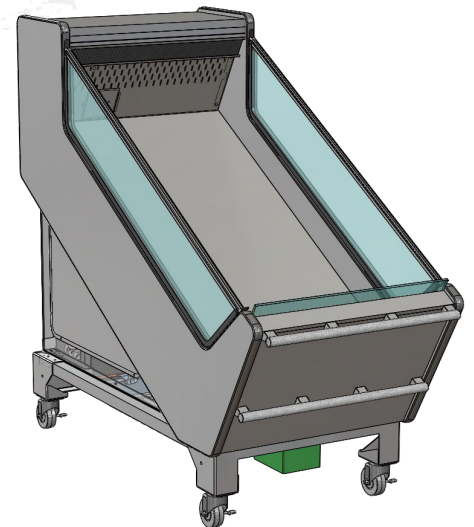


Model FSIB8R Shown Above
With Optional Product Crates

Separate Produce Unit Shown
Above-Right (On Casters) For
Illustrative Purposes Only



Model FSIB4R



Model FSIB2R

Structural Concepts[®]

DELIVERING FRESH. ALWAYS.™ Structural Concepts Corp. · 888 E. Porter Rd · Muskegon, MI 49441 Phone: 231.798.8888 Fax: 231.798.4960 · www.structuralconcepts.com

TABLE OF CONTENTS

OVERVIEW / TYPE / COMPLIANCE / WARNINGS / PRECAUTIONS / WIRING / CORDS / PLUGS.	3-4
SHIPPING BRACKETS / CASE REMOVAL FROM SKID - REMOTE UNITS	5
SHIPPING BRACKETS / CASE REMOVAL FROM SKID - SELF-CONTAINED UNITS	6
POSITIONING & ALIGNING / ADJUSTING LEVELERS / LOCKING CASTERS IN PLACE	7
ADJOINING CASES - MODEL FSIB8R SHOWN FOR ILLUSTRATIVE PURPOSES ONLY	8
MERCHANDISER START-UP / THERMOMETER / DISCHARGE AIR PROBES	9
HONEYCOMB AIR DIFFUSER / AIR RETURN DUCT / REFRIGERATED AIRFLOW PATH	10
EVAPORATOR AREA: DECK PAN REMOVAL / REFRIG. COMPONENTS FOR FSIB8R	11
EVAPORATOR AREA: DECK PAN REMOVAL / REFRIG. COMPONENTS FOR FSIB2R	12
ELECTRICAL LAYOUT: MODEL FSIB8R REMOTE & SELF-CONTAINED UNITS	13
ELECTRICAL LAYOUT: MODEL FSIB4R SELF-CONTAINED UNITS ONLY	14
ELECTRICAL LAYOUT: MODEL FSIB2R SELF-CONTAINED UNITS ONLY	15
CONDENSER PACKAGE LAYOUT: MODEL FSIB8R SELF-CONTAINED UNITS ONLY	16
CONDENSER PACKAGE LAYOUT: MODEL FSIB4R SELF-CONTAINED UNITS ONLY	17
CONDENSER PACKAGE LAYOUT: MODEL FSIB2R SELF-CONTAINED UNITS ONLY	18
GENERAL CLEANING SCHEDULE - TO BE PERFORMED BY STORE PERSONNEL (EXTERIOR)	19
GENERAL CLEANING SCHEDULE - TO BE PERFORMED BY STORE PERSONNEL (INTERIOR)	20
GENERAL CLEANING SCHEDULE - TO BE PERFORMED BY TRAINED SERVICE PROVIDERS ONLY	21
GENERAL CLEANING SCHEDULE - HONEYCOMB AIR DIFFUSERS - TO BE PERFORMED BY TRAINED SERVICE TECHNICIANS ONLY	22
TROUBLESHOOTING (TO BE PERFORMED BY TRAINED SERVICE PROVIDERS ONLY)	23-25
TROUBLESHOOTING - CONDENSING SYSTEM (BY TRAINED SERVICE PROVIDERS ONLY) ...	26
TROUBLESHOOTING - EVAPORATOR SYSTEM (BY TRAINED SERVICE PROVIDERS ONLY) ...	27
SERIAL LABEL INFORMATION & LOCATION	28
PROGRAMMABLE CONTROLLER INFORMATION.....	29
TECHNICAL SERVICE CONTACT INFORMATION / WARRANTY INFORMATION	30

This Manual Is Applicable To The Following Models*:
FSIB2R.6031B, FSIB4R, FSIB4R.6031A, FSIB8R, and FSIB8R.6031
Note: This manual may also be applicable to certain models not listed above.

OVERVIEW

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

TYPE 1 vs. TYPE 2 CONDITIONS

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

- Type 1 conditions: ambient conditions are to be 75 °F (24 °C) max. temperature and 55% max. humidity.
- Type 2 conditions: ambient conditions are to be 80 °F (27 °C) max. temperature and 60% max. humidity.

- If unsure if unit is Type 1 or 2, see tag next to serial label. See **SERIAL LABEL LOCATION & INFORMATION LISTED / TECH INFO & SERVICE** section in this manual for sample serial labels).

COMPLIANCE

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



**ATTENTION
CONTRACTORS**

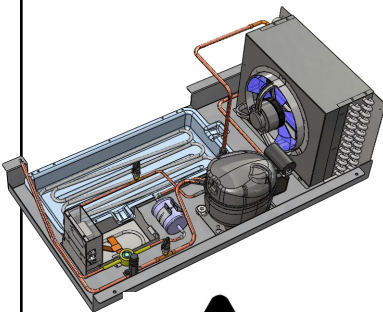
WARNING

**ELECTRICAL
HAZARD**



WARNING

**KEEP
HANDS
CLEAR**



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.**

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.

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!
- See previous page for specifics on **OVERVIEW**, **TYPE**, **COMPLIANCE** and **WARNINGS**.

WIRING DIAGRAM

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

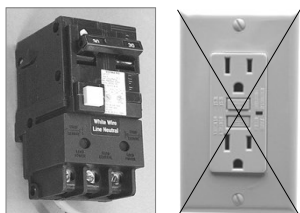
REFRIGERANT DISCLOSURE STATEMENT

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

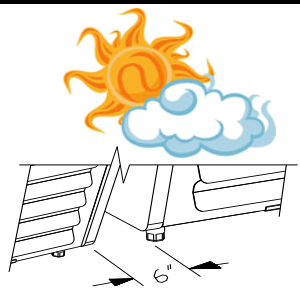
- Thermometers & thermostats reflect air temperatures ONLY.
- For ACTUAL product (food) temperatures, use a calibrated food probe thermometers ONLY.
- For accurate readings, DO NOT use infrared food thermometers.



CAUTION! GFCI BREAKER USE REQUIREMENT

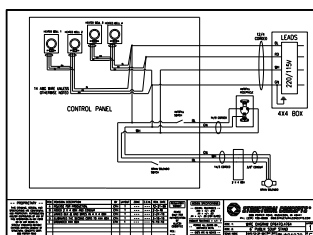
If N.E.C. (National Electric Code) or your local code requires GFCI (Ground Fault Circuit Interrupter) protection, you MUST use a GFCI breaker in lieu of a GFCI receptacle.

CAUTION



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 and 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.



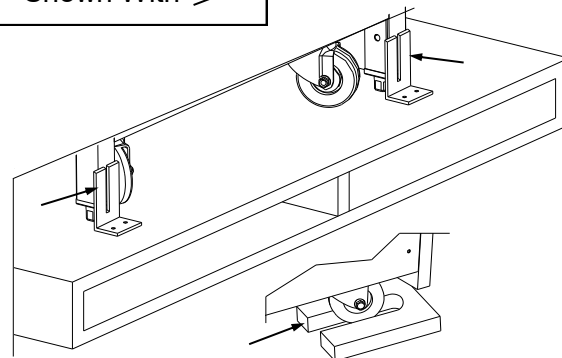
WIRING DIAGRAM FORMAT & LOCATION

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

1. Removing Case Shipping Brackets That Are Attached To Skid

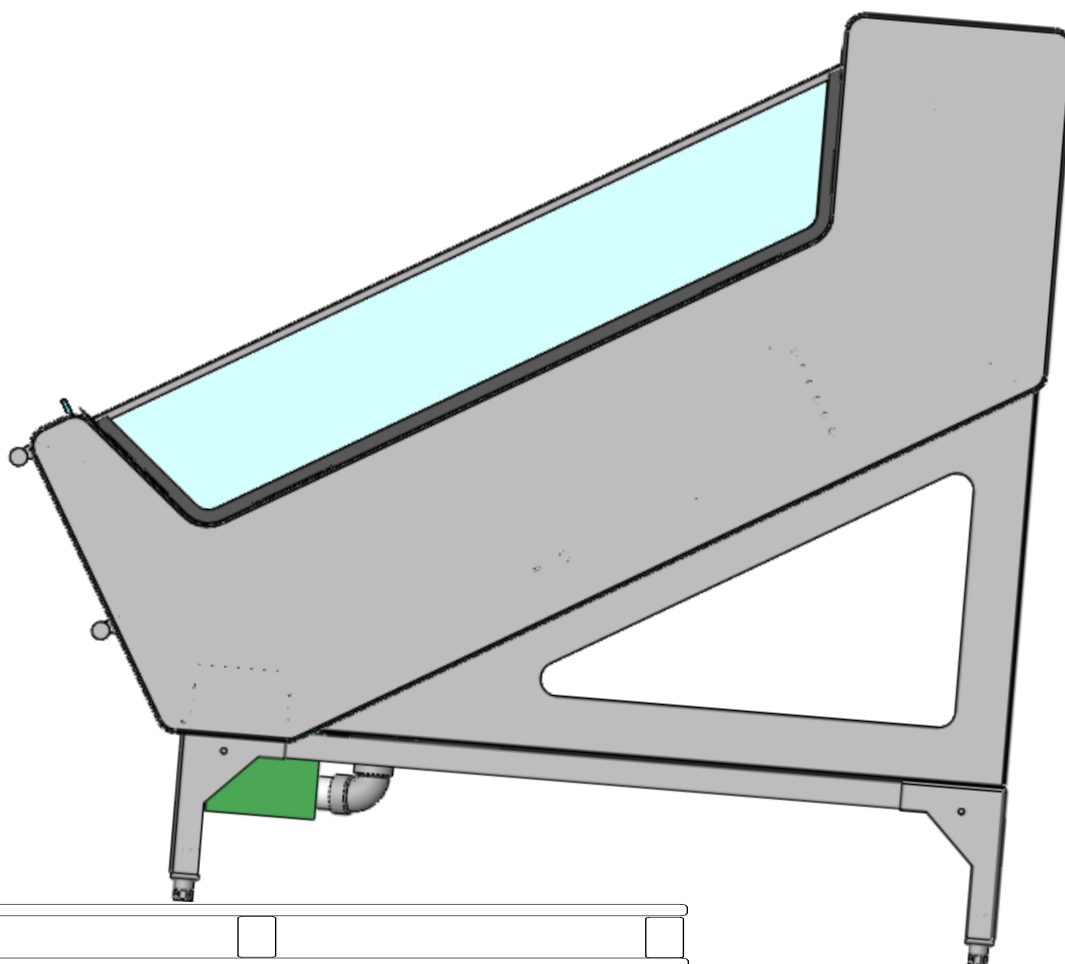
- Remove screws holding case shipping brackets to skid.
- Remove case shipping brackets from skid.
- Note: Shipping brackets will vary in size, shape, material and location depending upon case type and model. See illustration at right.

Various Types Of Shipping Brackets Shown With →



2. Remove Case From Skid - Remote Units

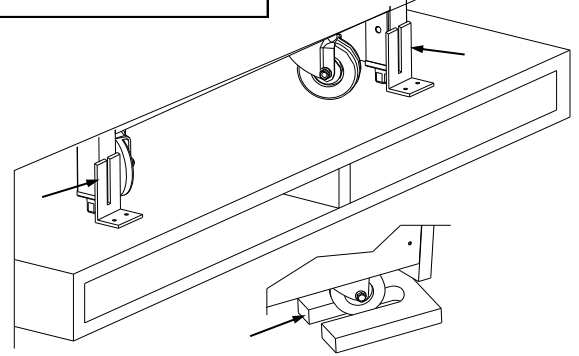
- To prevent damage, support case while sliding it toward edge of skid.
- When case is at edge of skid, carefully lower to floor so that two levelers (or one frame support rail) rests on floor.
- Carefully slide skid out from under case.
- After case is off skid, place into position.
- See next page for instructions on self-contained unit skid removal.



1. Removing Case Shipping Brackets That Are Attached To Skid

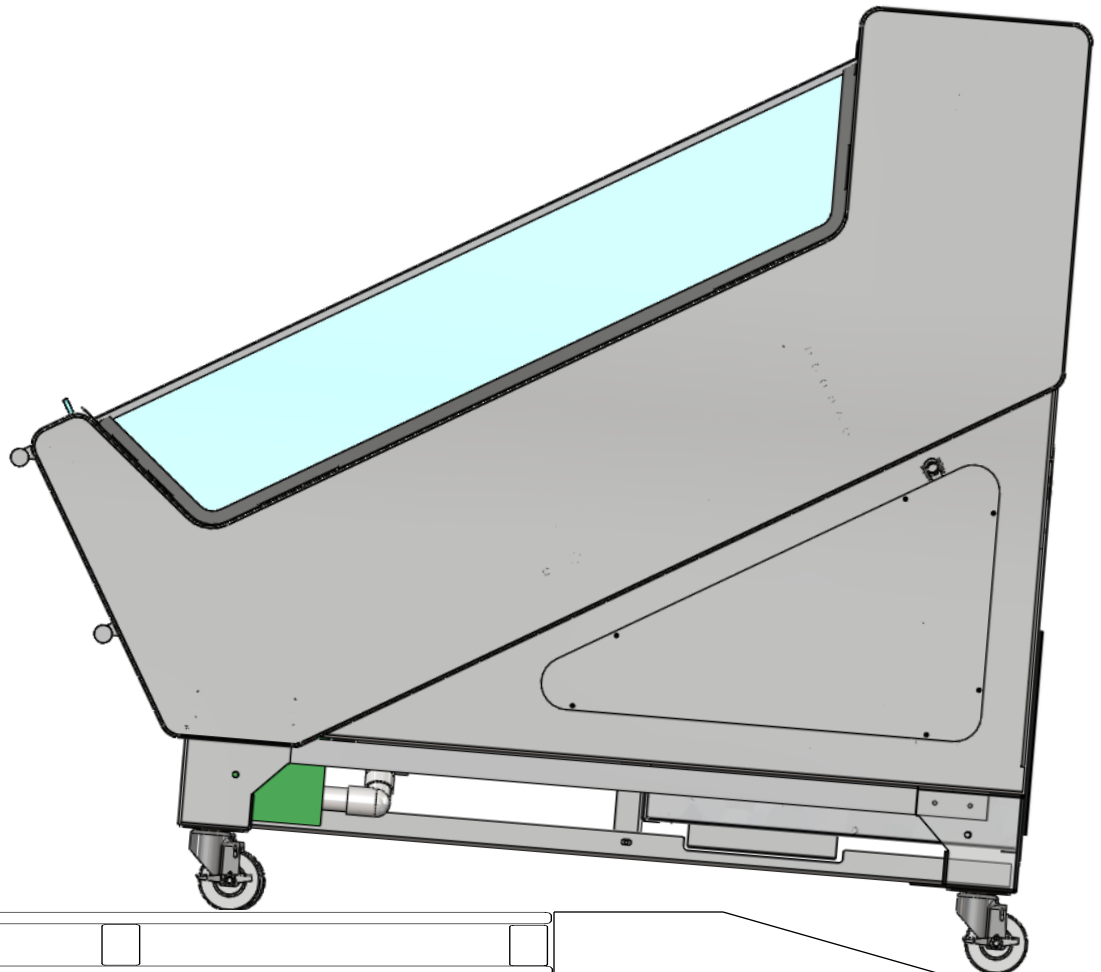
- Remove screws holding case shipping brackets to skid.
- Remove case shipping brackets from skid.
- Note: Shipping brackets will vary in size, shape, material and location depending upon case type and model. See illustration at right.

Various Types Of
Shipping Brackets
Shown With →



2. Remove Case From Skid - Self-Contained Units

- To prevent damage, support case while sliding it toward edge of skid.
- When case is at edge of skid, carefully slide down ramp to floor so that two casters rest on floor.
- Carefully slide unit the rest of the way, down ramp and onto the floor
- skid out from under case.
- After case is off skid, roll into position.
- Lock casters in place.



POSITIONING & ALIGNING / ADJUSTING LEVELERS / LOCKING CASTERS IN PLACE

1. Position & Align Case Alongside Others

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

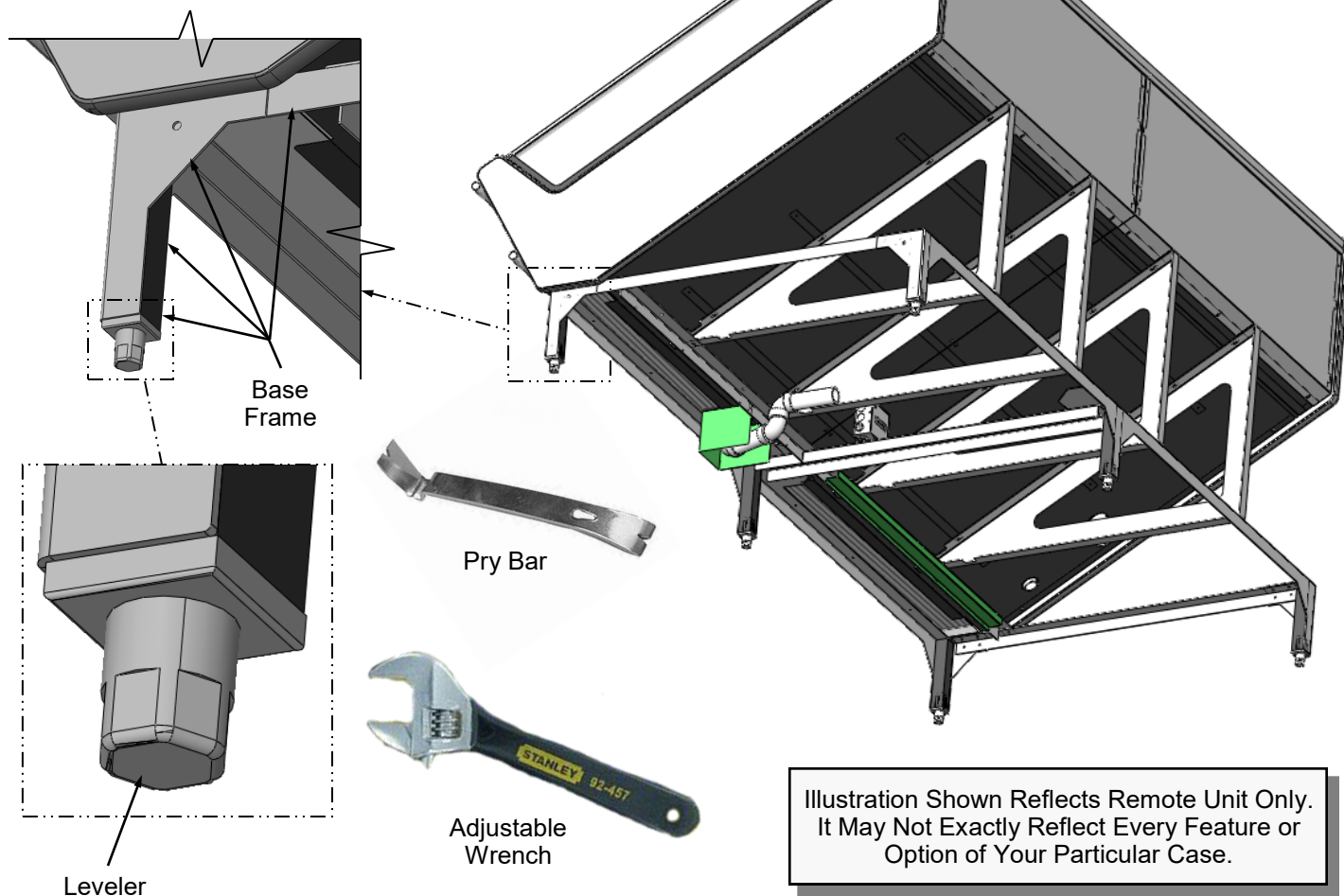
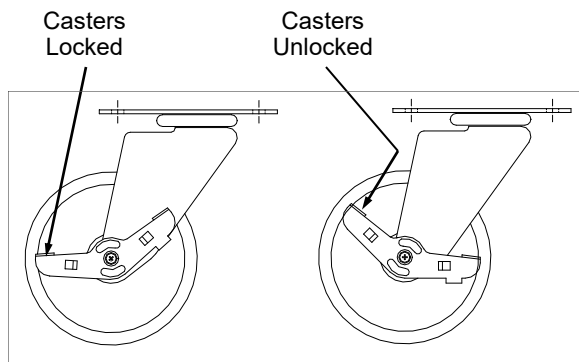
2. Adjust Levelers

- After case is in position, adjust case so it is level and plumb.
- Use adjustable wrench (and/or a pry bar) to adjust leveler.
- Do not use pry bar on end panel. It may chip.
- Use pry bar **ONLY** on base frame to avoid damaging case.

3. Caster Locking / Unlocking Operation

- To lock casters (from the unlocked position), press down on each **RAISED** caster lever (as shown top-right). Casters are now locked.

- To unlock casters (from the locked position), press down on the **RAISED** caster lever (as shown in illustration below).
- Casters are now in unlocked position.



ADJOINING CASES - MODEL FSIB8R SHOWN FOR ILLUSTRATIVE PURPOSES ONLY

Adjoinment - Urethane/Silicone Application

- >> Warranty is void if improper urethane/sealant is used.
- >> Lay generous beads of urethane/sealant as specified.

A. Prior To Adjoinment - Apply Industrial Grade Urethane at Center of Uprights

- Apply a generous bead (approximately $\phi 3/8"$) of industrial grade urethane at center of uprights (not-visible to the naked eye).
- Proper urethane application prevents refrigerated air from escaping between cases (causing condensation and reducing refrigeration efficiency) as well as preventing insects from entering case.
- See illustration below.

B. Adjoining Cases - Using Nuts, Bolts and Washers

- Use appropriately sized nuts, bolts and washers for each hole.
- #1 - Holes are accessible by removing honeycomb air diffuser.
 - #2 - Holes are accessible at tabs just below honeycomb air diffuser.
 - #3 - Holes are accessible at underside of decking. Decking must be removed to attach bolts/nuts.
 - #4 - Holes are accessible at tabs just below air intake grilles.
 - #5 - Holes are accessible by reaching into opening just below air intake grilles.

#6 - Holes are accessible at tabs just above air intake grilles.

- Tighten nuts securely (be careful to NOT over-tighten)!
- See illustration below.

C. After Adjoinment - Apply Food Grade Silicone Sealant To Inner Seams

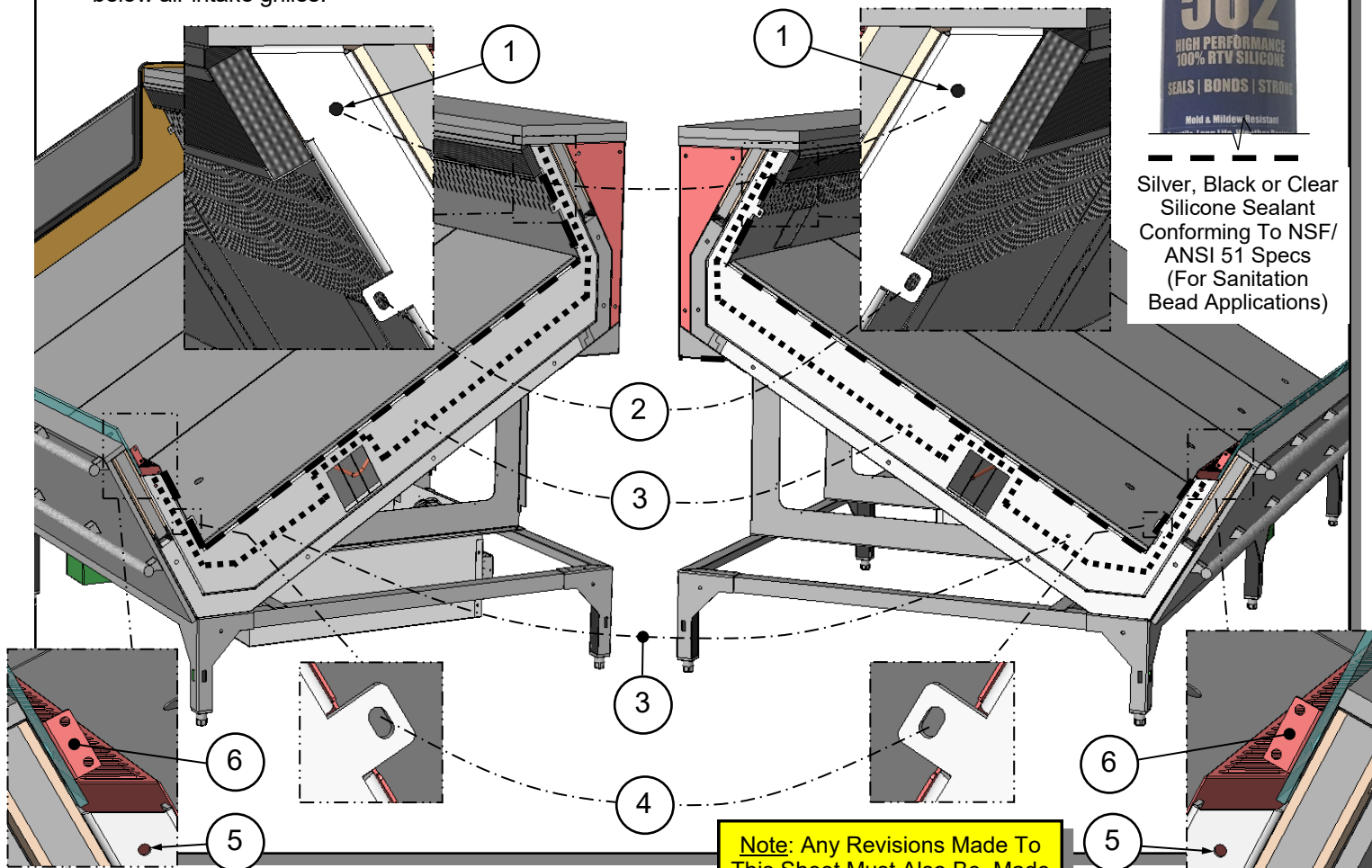
- After all nuts, bolts and washers are securely attached to case, apply a generous bead of food grade silicone sealant to inner seams.
- Decking must be removed to apply sealant to certain inner seam areas.
- When properly applied, this food grade silicone sealant will prevent water from seeping between cases (into the case or to the floor) as well as crumbs or other residue from entering between case seams.



Industrial Grade Urethane Adhesive (For Refrigeration Bead Applications)



Silver, Black or Clear Silicone Sealant Conforming To NSF/ANSI 51 Specs (For Sanitation Bead Applications)



1. Start-Up

- When case is properly field wired, it will start operating.
- Supply power will start evaporator coil fans and the compressor motor.
- From the front of the case, raise the deck pans and check to see that the evaporator coil fans are all functioning properly (see next page).
- *When the case is in a start up mode (or has been idle for a long period of time), the unit will require approximately 30 minutes runtime in order to pull down temperature.*

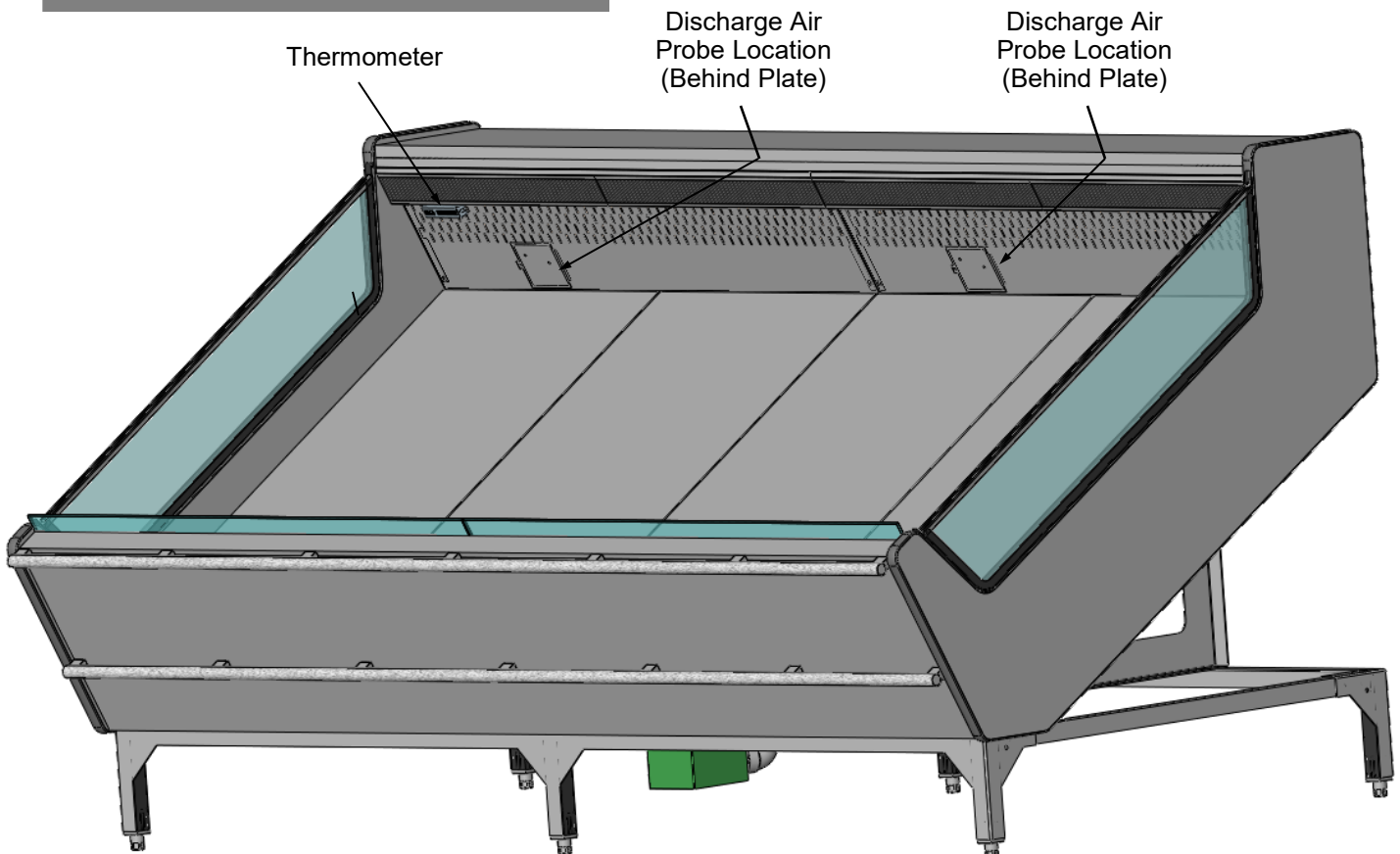
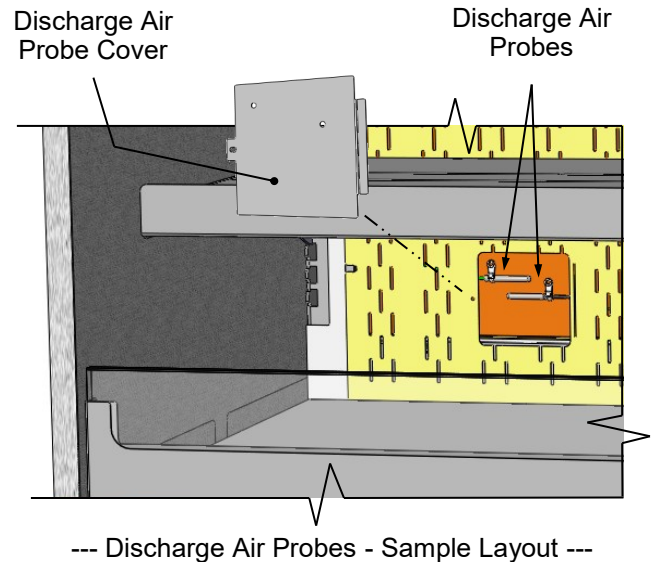
2. Thermometer

- Thermometer is located at rear plenum for monitoring warmest air temperature.
- Probe must be used to determine actual product temperature.
- See illustration below.

Illustration Shown Reflects Remote Unit Only.
It May Not Exactly Reflect Every Feature or
Option of Your Particular Case.

3. Discharge Air Probes

- Remove cover to access discharge air probes.
- General illustration of similar model shown below.
- Your model may differ in layout.



1. Honeycomb Air Diffuser

- Honeycomb air diffuser must remain unobstructed at all times.
- Blockage of air discharge can result in poor operating temperatures.
- See **PREVENTIVE MAINTENANCE - HONEYCOMB AIR DIFFUSERS** section in this manual for additional honeycomb information.

2. Air Return Duct

- Air return ducts must be open and free of obstruction at all times.
- Blockage of air return duct can result in poor operating temperatures.

3. Refrigerated Airflow Path

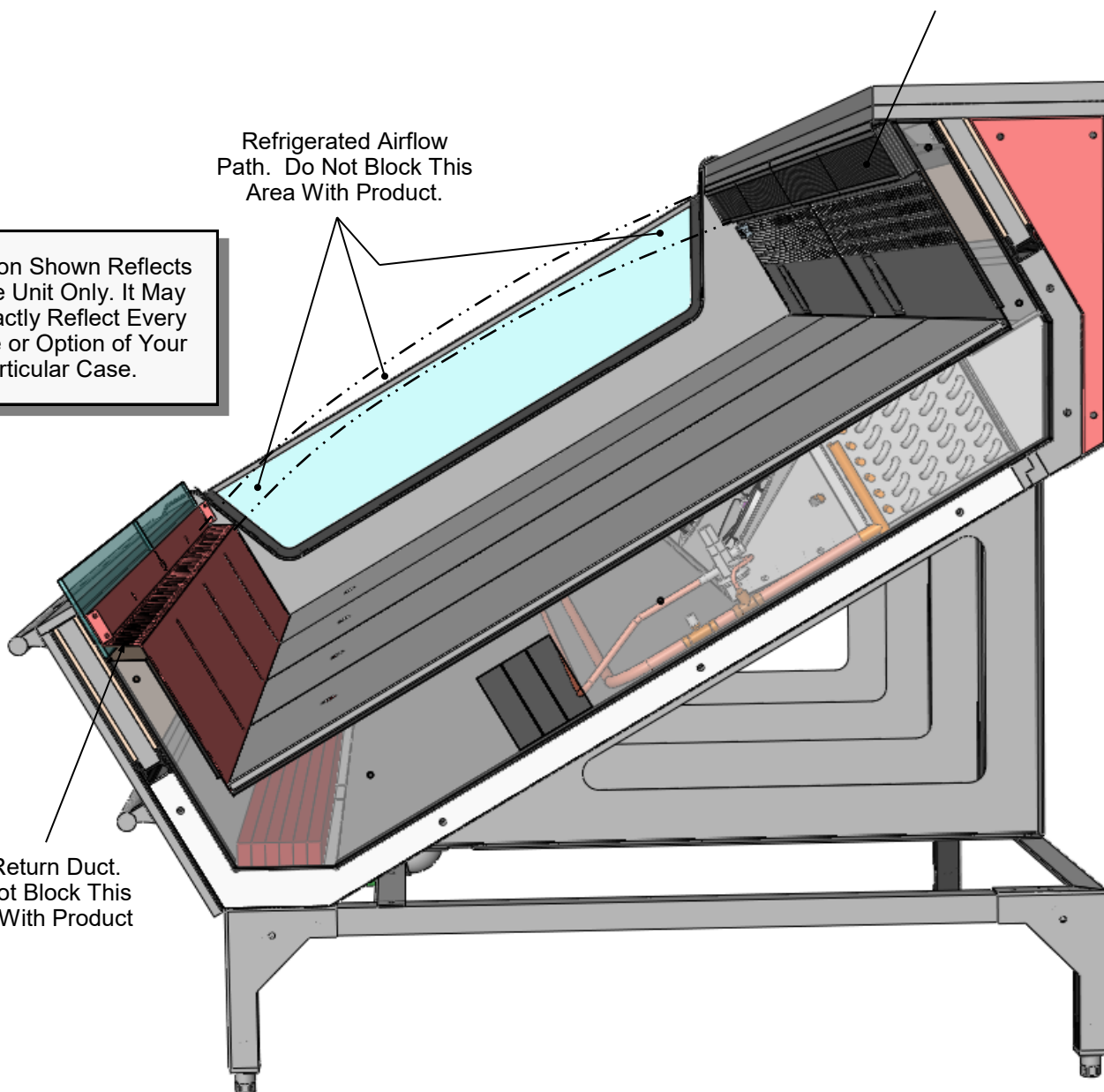
- Refrigerated airflow from honeycomb air diffuser to air return duct passes over product.
- Caution! DO NOT STACK PRODUCT to height that will impede this airflow path!
- Doing so will prevent case from keeping product at proper temperature.

Honeycomb Air Diffusers.
Do Not Block These
Areas With Product

Refrigerated Airflow
Path. Do Not Block This
Area With Product.

Illustration Shown Reflects
Remote Unit Only. It May
Not Exactly Reflect Every
Feature or Option of Your
Particular Case.

Air Return Duct.
Do Not Block This
Area With Product



EVAPORATOR AREA: DECK PAN REMOVAL / REFRIGERANT COMPONENTS FOR FSIB8R ONLY

Caution! Hazardous moving parts.

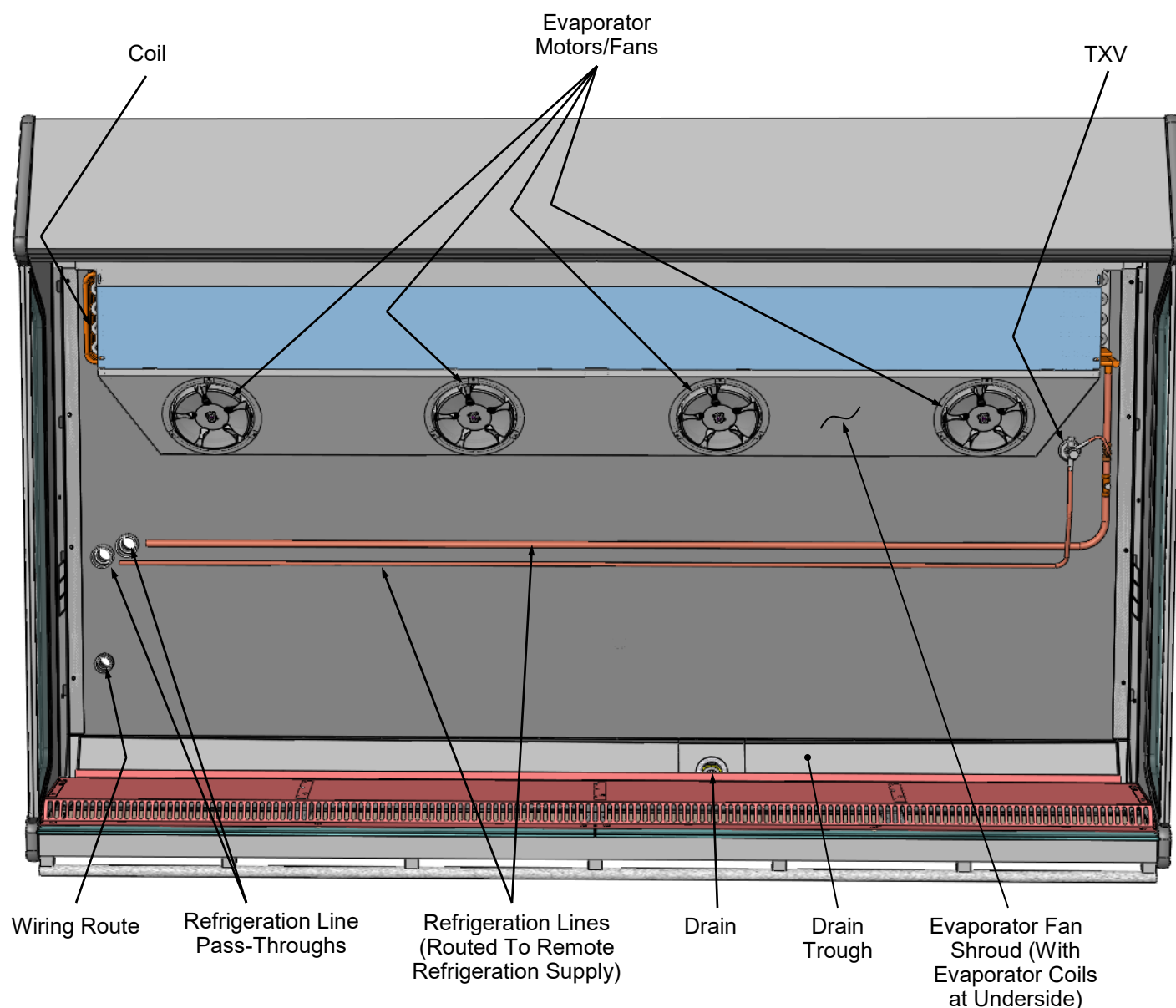
- **Authorized service personnel ONLY** should access this area.
- **Do not operate unit with covers removed.**
- **Fan blades may be exposed when deck panel is removed.**
- **Disconnect power before removing deck panel.**

1. Deck Pan Removal

- Illustration below shows merchandiser after deck pans have been removed.
- Store in safe place out of foot traffic while removed from case.

2. Components / Routes

- Illustration below shows components such as refrigeration lines, TXV, drain, drain trough, motors and fans, etc.
- Illustration below shows general layout.



Caution! Hazardous moving parts.

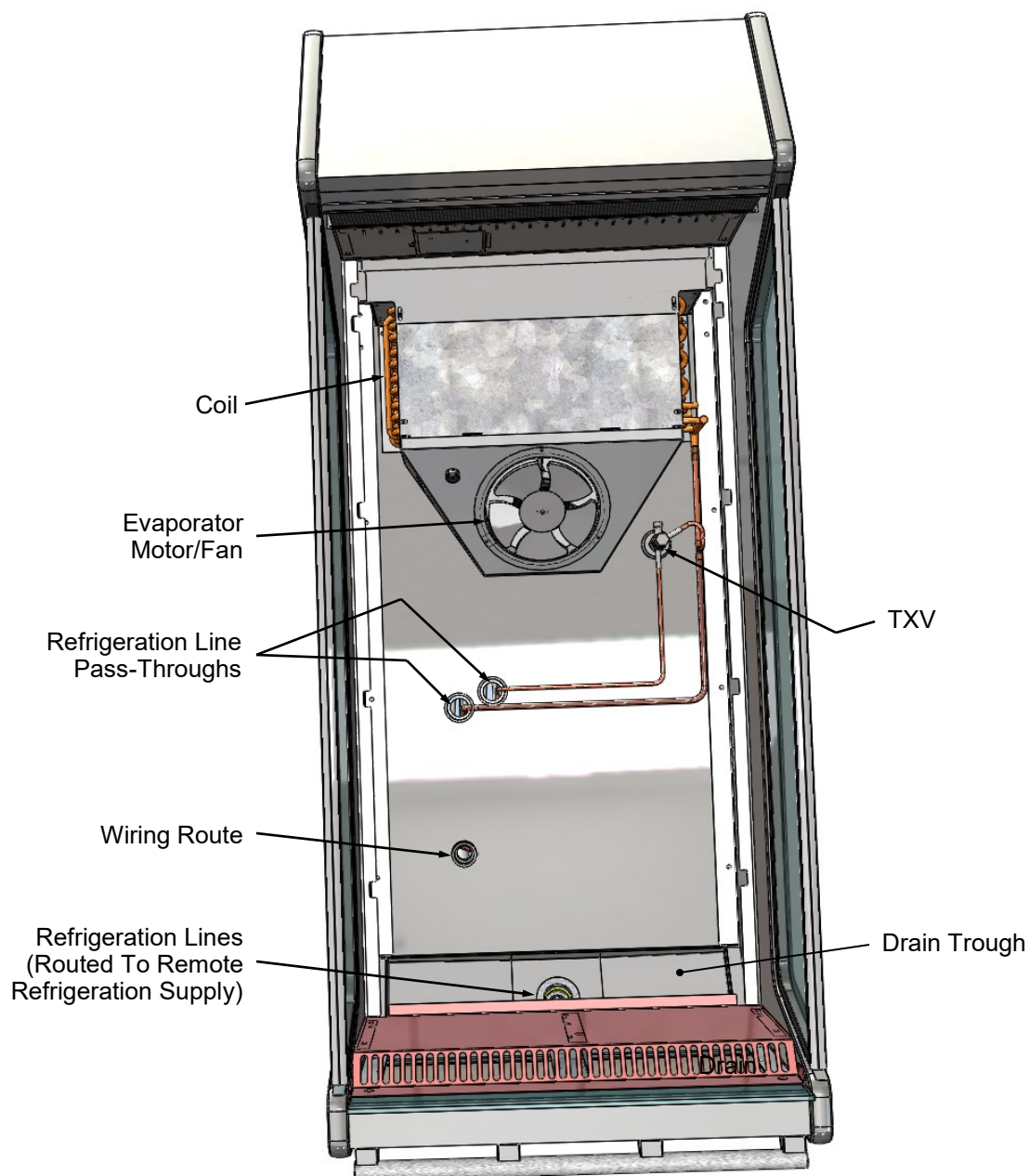
- **Authorized service personnel ONLY** should access this area.
- **Do not operate unit with covers removed.**
- **Fan blades may be exposed when deck panel is removed.**
- **Disconnect power before removing deck panel.**

1. Deck Pan Removal

- Illustration below shows merchandiser after deck pan has been removed.
- Store in safe place out of foot traffic while removed from case.

2. Components / Routes

- Illustration below shows components such as refrigeration lines, TXV, drain, drain trough, motors and fans, etc.
- Illustration below shows general layout.

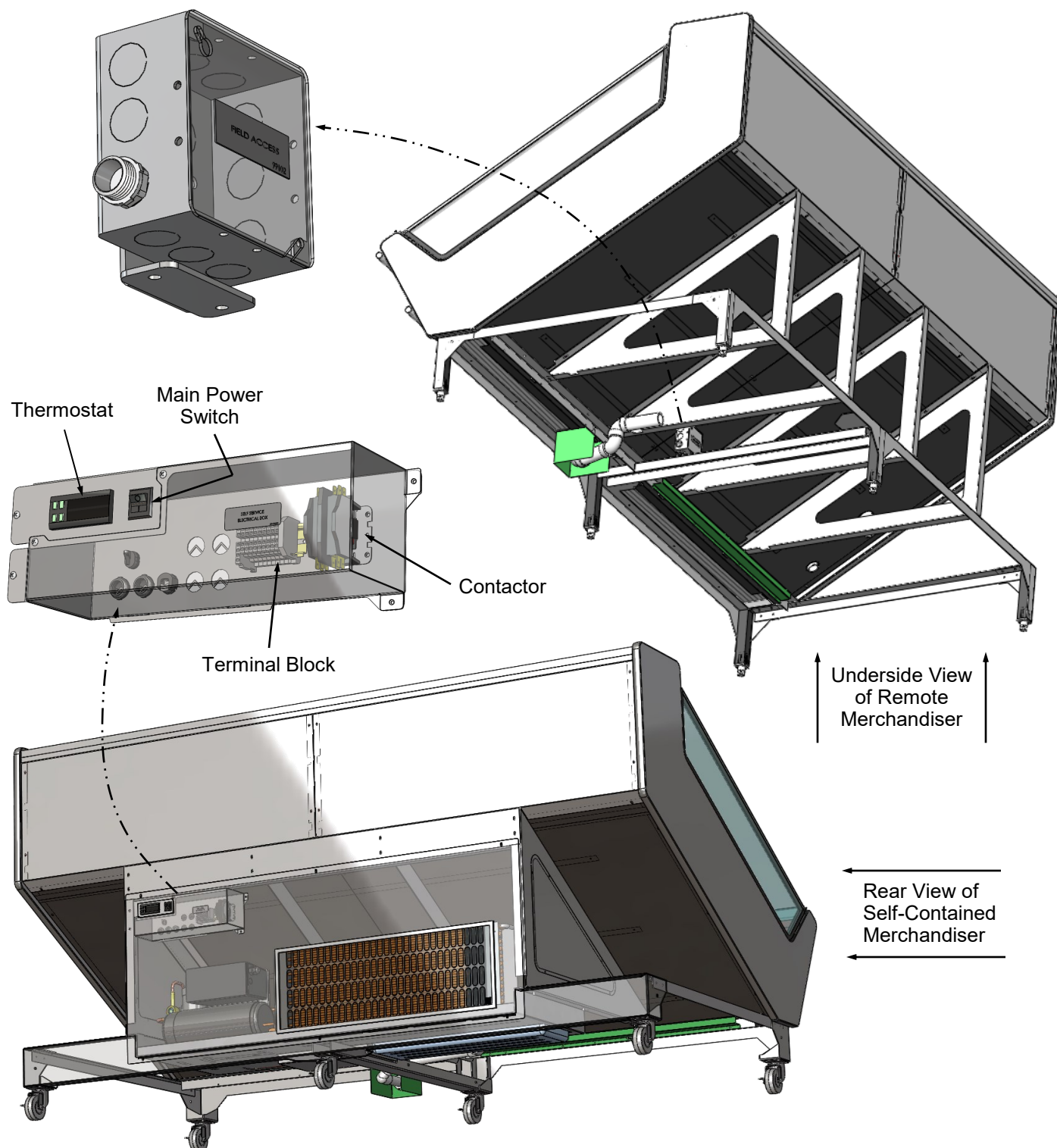


ELECTRICAL LAYOUT: MODEL FSIB8R REMOTE & SELF-CONTAINED UNITS

Caution! Authorized service personnel ONLY should access this area.

Field Access Box

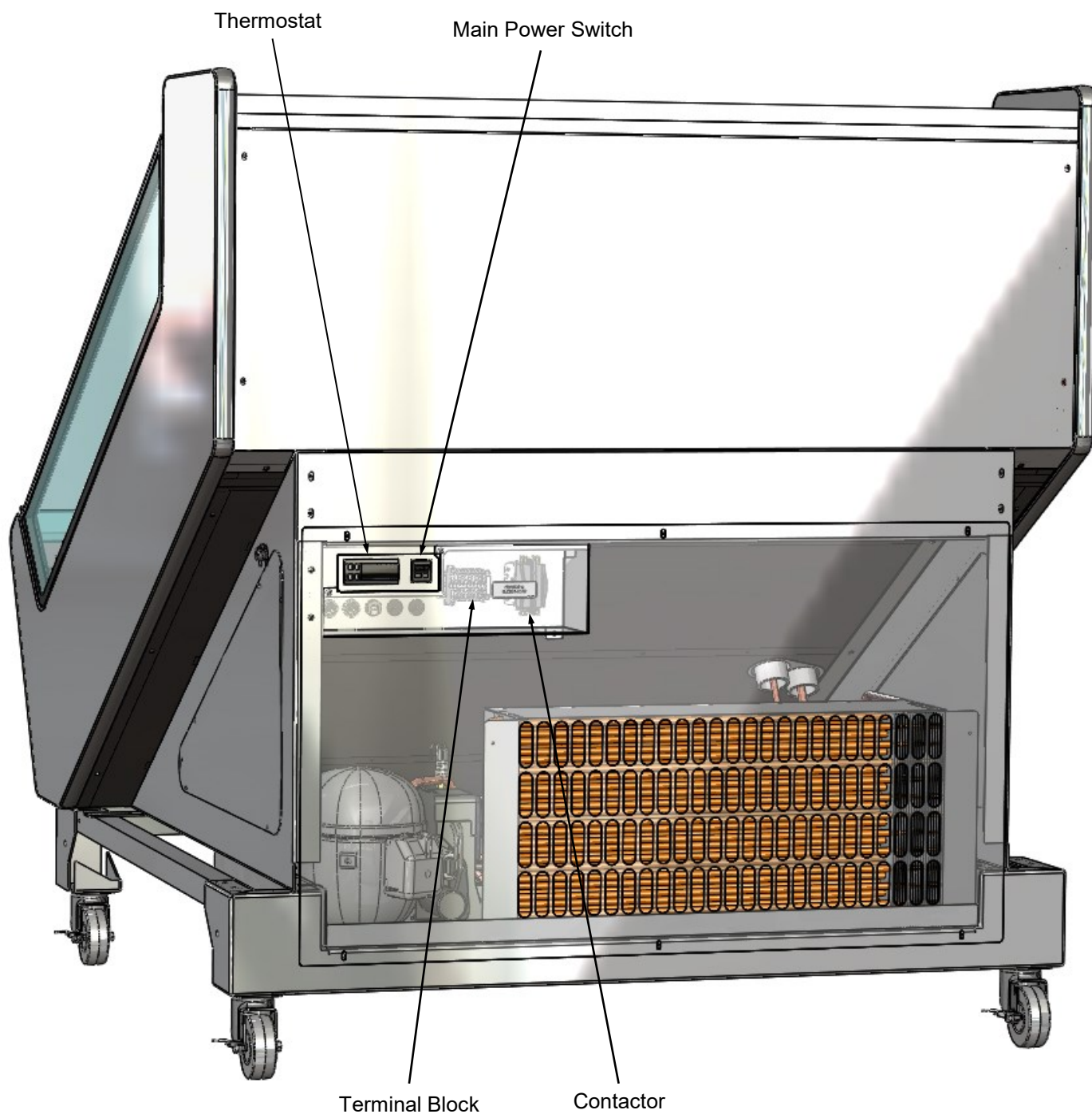
- Illustration below shows field access box for both remote and self-contained units.
- Caution! Authorized service personnel ONLY should access this area.



Caution! Authorized service personnel ONLY should access this area.

Self-Service Access Box

- Illustration below shows field access box for both remote and self-contained units.
- Caution! Authorized service personnel ONLY should access this area.

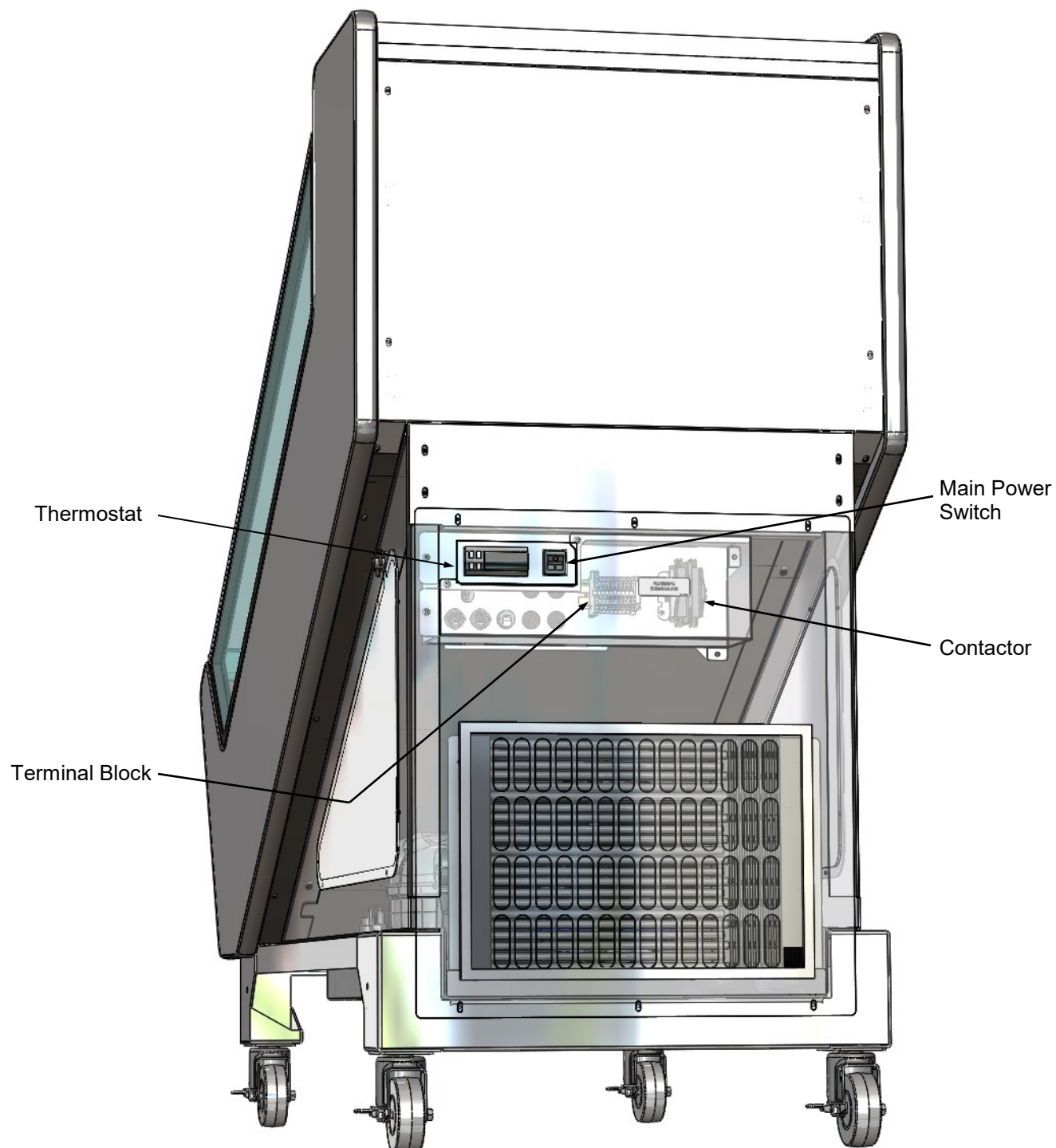


ELECTRICAL LAYOUT: MODEL FSIB2R SELF-CONTAINED UNITS ONLY

Caution! Authorized service personnel ONLY should access this area.

Self-Service Access Box

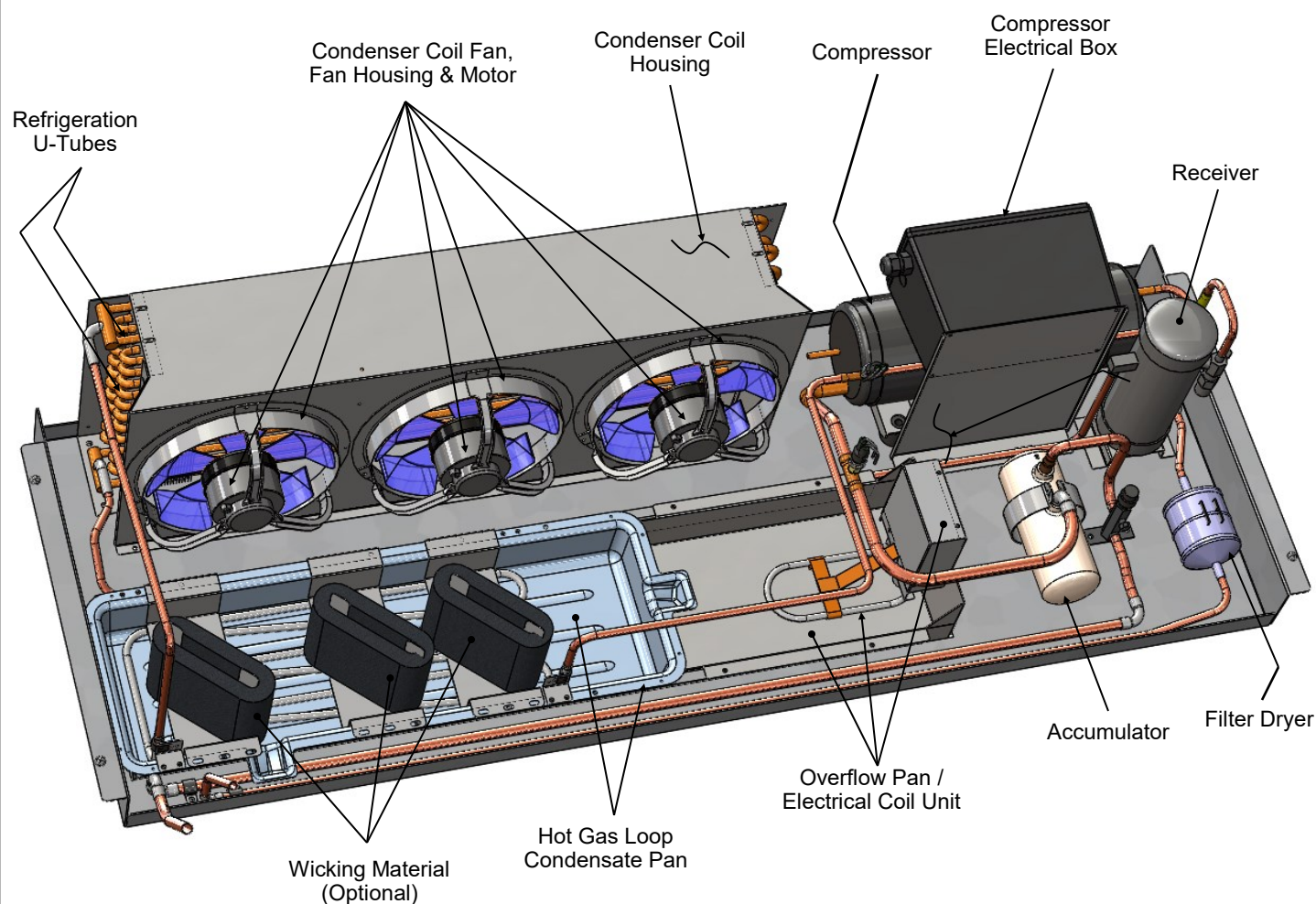
- Illustration below shows field access box for both remote and self-contained units.
- Caution! Authorized service personnel ONLY should access this area.



CONDENSER PACKAGE LAYOUT: MODEL FSIB8R SELF-CONTAINED UNITS ONLY

Refrigeration Package Layout

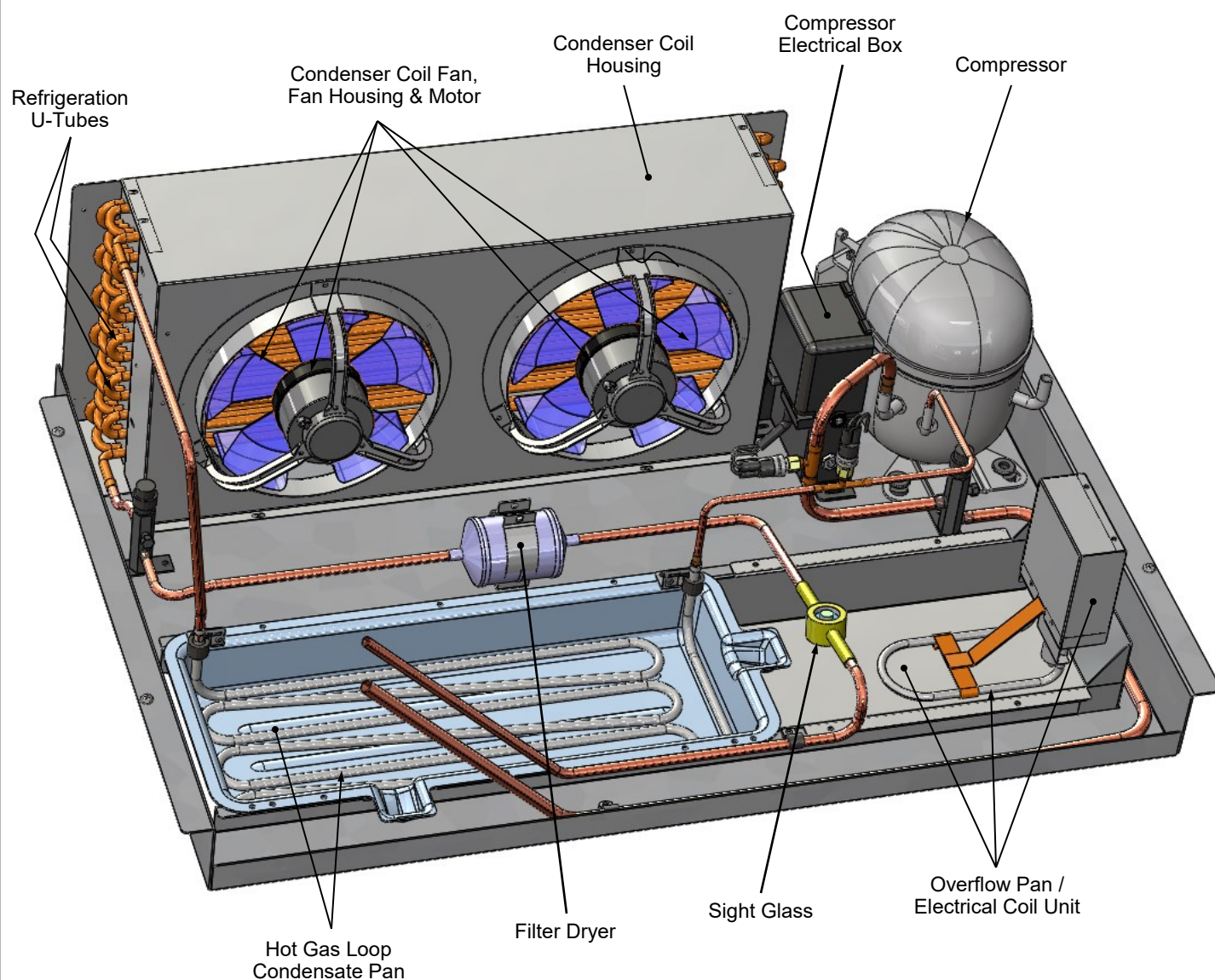
- **Note:** Due to design variables, refrigeration package component layout can vary in location.
- Illustration below may not reflect every feature or option of your particular case.



CONDENSER PACKAGE LAYOUT: MODEL FSIB4R SELF-CONTAINED UNITS ONLY

Refrigeration Package Layout

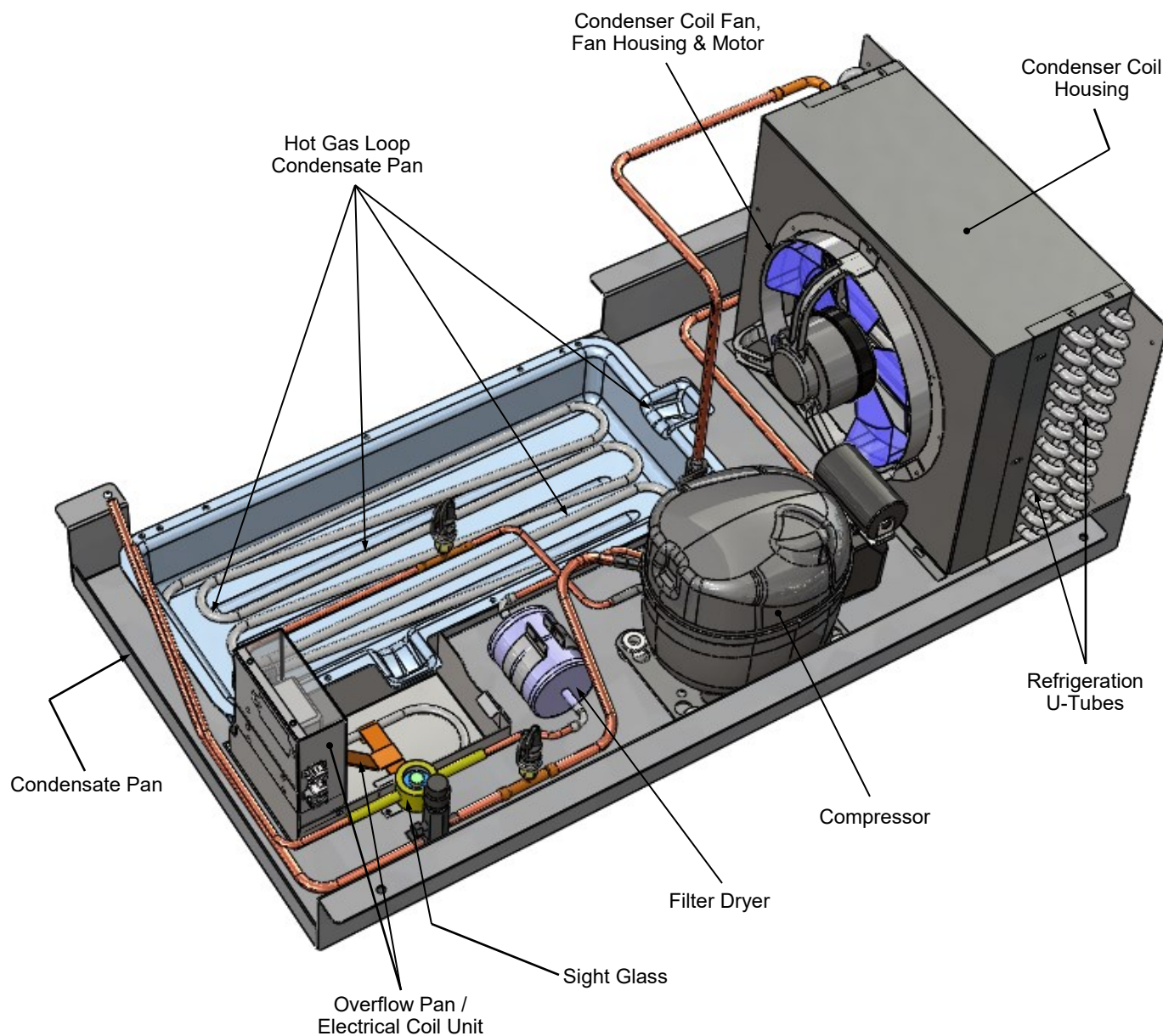
- **Note:** Due to design variables, refrigeration package component layout can vary in location.
- Illustration below may not reflect every feature or option of your particular case.



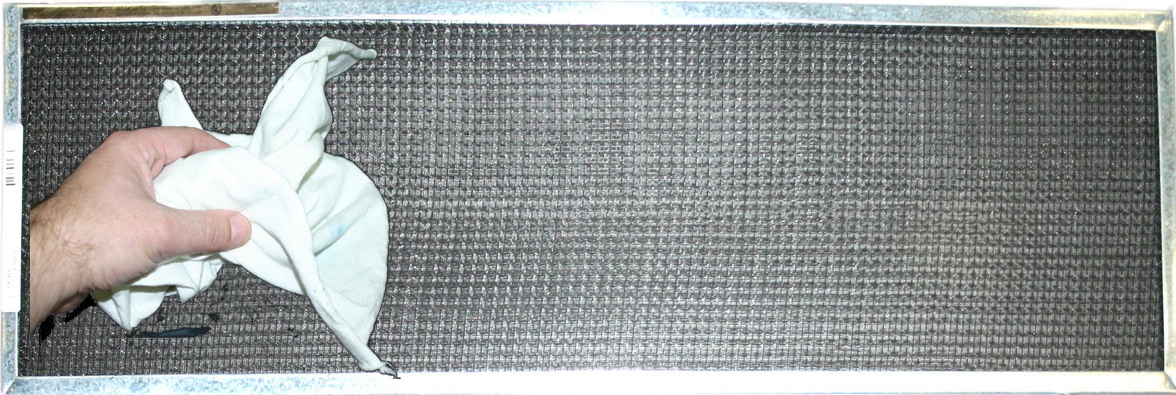
CONDENSER PACKAGE LAYOUT: MODEL FSIB2R SELF-CONTAINED UNITS ONLY

Refrigeration Package Layout

- **Note:** Due to design variables, refrigeration package component layout can vary in location.
- Illustration below may not reflect every feature or option of your particular case.



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

FREQ.	INSTRUCTIONS
Daily	Acrylic: Acrylic sneeze guard must be cleaned with a mild soap and water solution and a soft cloth. Caution! Never use ammonia-based cleaners on acrylic. Incorrect cleaning agents or abrasive cleaning cloths cause surface to 'cloud' over time.
Daily	Sides, Top, Rear Plenum, etc.: Clean with a warm soap and water solution and soft cloth.
Weekly	Magnetic Condenser Coil Filter (Self-Contained Units Only): • This filter helps prevent dust particles from entering condenser coil. • It is accessible at case rear. • Clean magnetic condenser coil filter by following either of these steps: 1. As 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. 2. If not using dishwasher, remove magnetic condenser coil filter from case. Use a rag or soft-bristled brush to wipe off excess dust particles from filter. Submerge in warm, soapy water. Use soft-bristled brush to remove dust, dirt, grease and grime that may collect on filter. Rinse thoroughly. 3. Dry with soft cloth or paper towel (as shown below) or allow to air dry. Replace. 

GENERAL CLEANING SCHEDULE - TO BE PERFORMED BY STORE PERSONNEL (INTERIOR)

FREQ.	INSTRUCTIONS
Weekly	<u>Decks:</u> • Clean with a warm soap and water solution and soft cloth. • If necessary, entirely remove from case, and submersed in warm, soapy water. Use soft-bristled brush to remove food particles, dust, grease or grime. Rinse thoroughly. Dry. Return to case.

GENERAL CLEANING SCHEDULE - TO BE PERFORMED BY TRAINED SERVICE PROVIDERS ONLY

FREQ.	INSTRUCTIONS
Weekly	<u>Drains:</u> Keep drains clean and free of debris which could clog the drain and rob the case of needed refrigeration. After removing decks, vacuum tub under deck or flush with water if necessary.
Monthly	<u>Evaporator Fan Shroud Area (Under Decking):</u> <i>Caution! Due to rotating fans in area, turn off case and disconnect power (or remove plug from wall outlet) before beginning.</i> 1) Turn off power. 2) Remove product from case. 3) Remove decking from case. 4) Wipe down fan shroud, evaporator fan blades, TXV, refrigeration lines, tub, drain trough and drain with cloth dipped in warm soap and water solution. 5) Return decking to case. 6) Return product to case. 7) Restore power to case.
Quarterly	<u>Condensing Coil (Self-Contained Units Only):</u> • Remove magnetic condenser coil filter. • Remove rear panel (by lifting it up and off). • Condenser coil brush may be used to dislodge dust, dirt and debris from condenser coil. • Slide condensing package out from underside of case (taking care to NOT slide out too far and damage hoses). • Use air pressure or industrial strength vacuum; clean dust and dirt that may collect on condenser coil. DO NOT allow dust to become airborne. Use wet cloths or paper towels to cover area where dust will fly when air pressure is applied. • <i>Caution! Coil fins are sharp. Handle with care!</i> • Replace lower panel in reverse order it was removed. • See sample condenser coil cleaning brushes at right.
Quarterly	<u>Honeycomb Air Diffuser (Service Technicians Only):</u> • See next page in this operating manual for cleaning specifics.



GENERAL CLEANING SCHEDULE - HONEYCOMB AIR DIFFUSERS (SERVICE TECHNICIANS ONLY)

1. Honeycomb Air Diffuser Removal

- Honeycomb air diffuser cleaning is to be performed quarterly.

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

Caution! Use care not to dislodge the heating wire (that prevents condensation on the lamp assembly).

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

C. Carefully pry downward and away from the honeycomb retainer. Clean honeycomb with warm water and soap solution. Submerge if necessary.

Use brush to dislodge stubborn or sticky residue.
Dry by using vacuum's blow mode (vs. suction mode).

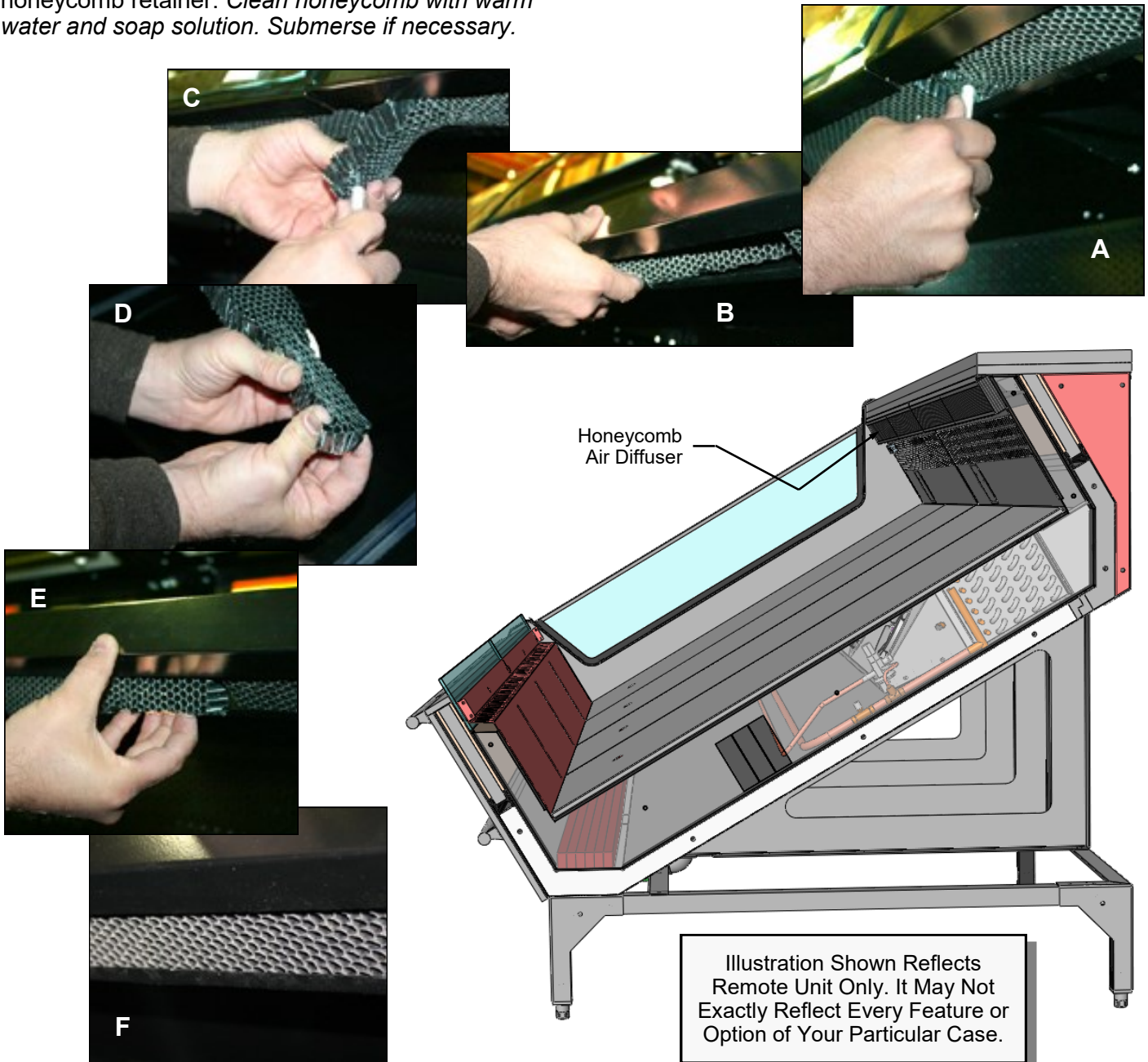
2. Honeycomb Air Diffuser Installation

D. Squeeze honeycomb to allow it to fit into the honeycomb retainer.

E. Carefully slide honeycomb into place.

F. Adjust honeycomb so that it fits flat against retainer. It must not be wavy or out of position.

Note: For honeycomb air diffusers in other locations, these same general instructions apply.



TROUBLESHOOTING - TO BE PERFORMED BY TRAINED SERVICE PROVIDERS ONLY

CONDITION	TROUBLESHOOTING
Case Not Lining Up	See POSITIONING & ALIGNING / ADJUSTING LEVELERS / LOCKING CASTERS IN PLACE section in this manual for instructions on properly aligning case (alongside other cases) and adjusting levelers.
Water Is On The Floor	Caution! Water on flooring can cause much damage! Until cause is determined (and repaired), follow these procedures: • Use wet-dry vacuum (or mop & bucket) to remove standing water. • Use 'catch pans' for water to drain into. Swap out regularly until case has drained. • When power to case is restored, condensate pan should function properly and water will no longer overflow onto flooring. • Note: See <i>Drain, Hose and Bracket Placement Illustrations</i> sheet in this manual for views of different condensate systems used in display cases.
	Check that the drain trap is free of debris.
	Check that the drain hose is correctly positioned over condensate pan (or floor drain, for remote units).
	Check store conditions. • To prevent condensation in NSF/ANSI Type I environments, maximum conditions are to be 55% relative humidity / 75° Fahrenheit. • For NSF/ANSI Type II environments, maximum conditions are to be 55% relative humidity / 80° Fahrenheit. • 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.
	Check condensate pan float for proper operation (electric condensate trays).
	Check that condensate pan is properly plugged in or connected.
	Caution! Wicking material (if any) on your particular hot gas loop condensate tray may be dirty or worn and need replacement. • Slide condensate package out from under unit. • After refrigeration system has been carefully slid out, replace wicking material with new. If wicking material is not available, contact Structural Concepts. See toll-free number at last page of this operating manual. • See CONDENSER PACKAGE LAYOUT (SELF-CONTAINED UNITS ONLY) section in manual for wicking material illustration.

TROUBLESHOOTING - TO BE PERFORMED BY TRAINED SERVICE PROVIDERS ONLY, CONTINUED

CONDITION	TROUBLESHOOTING
Fan Emits Loud 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 (self-contained units).
	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 to terminal blocks

TROUBLESHOOTING - TO BE PERFORMED BY TRAINED SERVICE PROVIDERS ONLY, CONTINUED

CONDITION	TROUBLESHOOTING
Digital Control Display Is Blank	Check that the MAIN power switch is on (self-contained units only).
	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 (self-contained units only).
	Check the circuit breaker box for tripped circuits.
Control Display Is Flashing	See your case's thermostat label (near temperature controller) for your model's required settings.
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. See OVERVIEW / TYPE / COMPLIANCE / WARNINGS / PRECAUTIONS / WIRING / PLUGS - PAGE 2 of 2 in manual for adverse conditions/spacing issue parameters.
	Check that condenser coil has been cleaned.
	Check that magnetic air filter (attached to rear grille) has been cleaned. See GENERAL 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.
Condensing Unit Is Not Operating	Check that the power is turned on.
	Determine if temperature controller settings are properly set. See your case's serial label for your model's specified settings. See SERIAL LABEL LOCATION & INFORMATION LISTED / TECH INFO & SERVICE section in manual for label location, etc.

TROUBLESHOOTING - CONDENSING SYSTEM (BY TRAINED SERVICE PROVIDERS ONLY)

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

TROUBLESHOOTING - EVAPORATOR SYSTEM (BY TRAINED SERVICE PROVIDERS ONLY)

CONDITION	TROUBLESHOOTING
Low Suction Pressure	Check if sight glass is flashing or showing low charge.
	Check that expansion valve (TXV) isn't restricted. Check element charge.
	Check that liquid line or filter isn't restricted. Check that refrigeration lines and/or hoses are not kinked on either high or low sides.
	Check that evaporator fan motors are working.
	Check that superheat is between 6 °F to 8 °F.
	Check that there is no air recirculation around evaporator coil.
	Check that evaporator coil is not iced up.
High Suction Pressure	Check for refrigerant overcharge.
	Check that compressor reed valves aren't bad. Look for high suction/low head pressure. Perform pump down.
	Check that the "cooling load" isn't high. Product must be pre-chilled before placing in refrigerated section of case.
	Check that case is at least <u>15-feet</u> from exterior doors, overhead HVAC vents or any air curtain disruption.
	Check that unit is not exposed to direct sunlight via windows or any other heat source (ovens, fryers, etc.).
	Check that superheat adjustment isn't low.
	Check TXV bulb installation a. Poor thermal contact. b. Warm location.

- Sample serial label is shown. A variety of models is displayed on serial label for illustration purposes only. Your case's serial label will reflect only one model.
- For additional technical information and service, see the *TECHNICAL SERVICE* page in this manual for instructions on contacting Structural Concepts' Technical Service Department.

--- 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® ir33 Platform



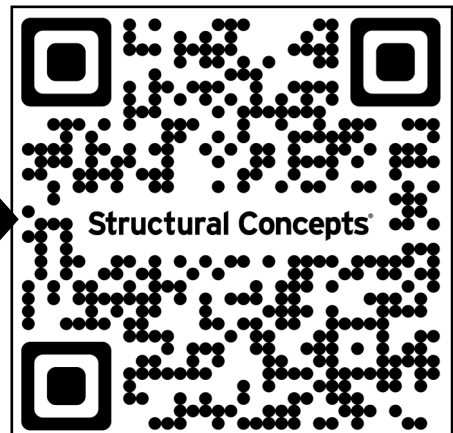
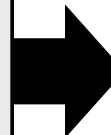
Carel® iJF Platform



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 AM to 8:00 PM 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.

