

FROZEN FOOD/ ICE CREAM

C A S E S

MODEL: KRZH



KOLD AIR TECHNOLOGY SYSTEM

KATS

By **Hill PHOENIX**

INSTALLATION & OPERATION

HANDBOOK

Hill PHOENIX
E X C E L L E N C E[®]

A **DOVER**™ COMPANY



Welcome to the **KATS** display case family. We're very pleased you joined us.

This installation and operation handbook has been especially prepared for everyone involved with **KATS** display cases – owners, managers, installers and maintenance personnel.

You'll find this book different than traditional manuals. The most dramatic difference is the use of many more illustrated instructions to make it easier to read and to help you get the most from this innovative new design. When you follow the instructions you should expect remarkable performance, attractive fits and finish, and long case life.

We are interested in your suggestions for improvement both in case design and in this handbook. Please call/write to:

Hill PHOENIX
Marketing Services Department
1925 Ruffin Mill Rd.
Colonial Heights, VA 23834
Tel: 804-526-4455
Fax: 804-526-7450
or visit our web site at
www.hillphoenix.com

We wish you the very best in outstanding food merchandising and a long trouble-free operation.

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GENERAL INFORMATION

DESCRIPTION OF CASES: The refrigerated display cases described in this handbook are part of the **Hill PHOENIX, KATS** design series. Specifically covered in this manual is model KRZH reach-in freezer.

STORE CONDITIONS: **Hill PHOENIX** cases are designed to operate in an air conditioned store with a system that can maintain 75°F (24°C) store temperature and 55 percent (maximum) relative humidity (CRMA conditions). Case operation will be adversely affected by exposure to excessively high ambient temperatures and/or humidity.

REFRIGERATION SYSTEM OPERATION: Air cooled condensing units require ventilation for efficient performance of condensers. Machine room temperatures must be a minimum of 65°F in winter and a maximum of 95°F in summer. Minimum condensing temperatures should be no less than 70°F.

RECEIVING CASES: Examine fixtures carefully for shipping damage and shortages. For information on shortages contact the Service Parts Department at 1-800-283-1109.

APPARENT DAMAGE: A claim for obvious damage must be noted on the freight bill or express receipt and signed by the carriers agent, otherwise the carrier may refuse the claim.

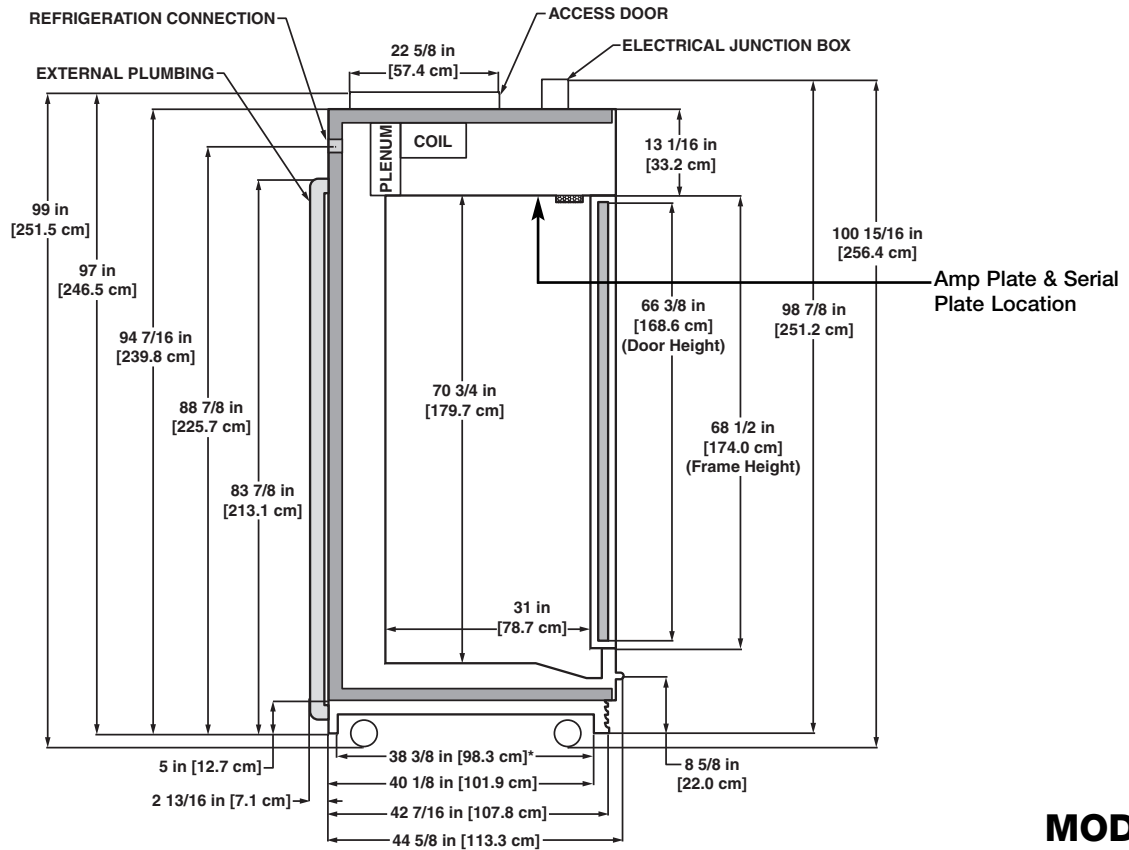
CONCEALED DAMAGE: If damage is not apparent until after the equipment is unpacked, retain all packing materials and submit a written request to the carrier for inspection within 15 days of receipt of equipment.

LOST ITEMS: This equipment has been carefully inspected to insure the highest level of quality. Any claim for lost items must be made to **Hill PHOENIX** within 48 hours of receipt of equipment.

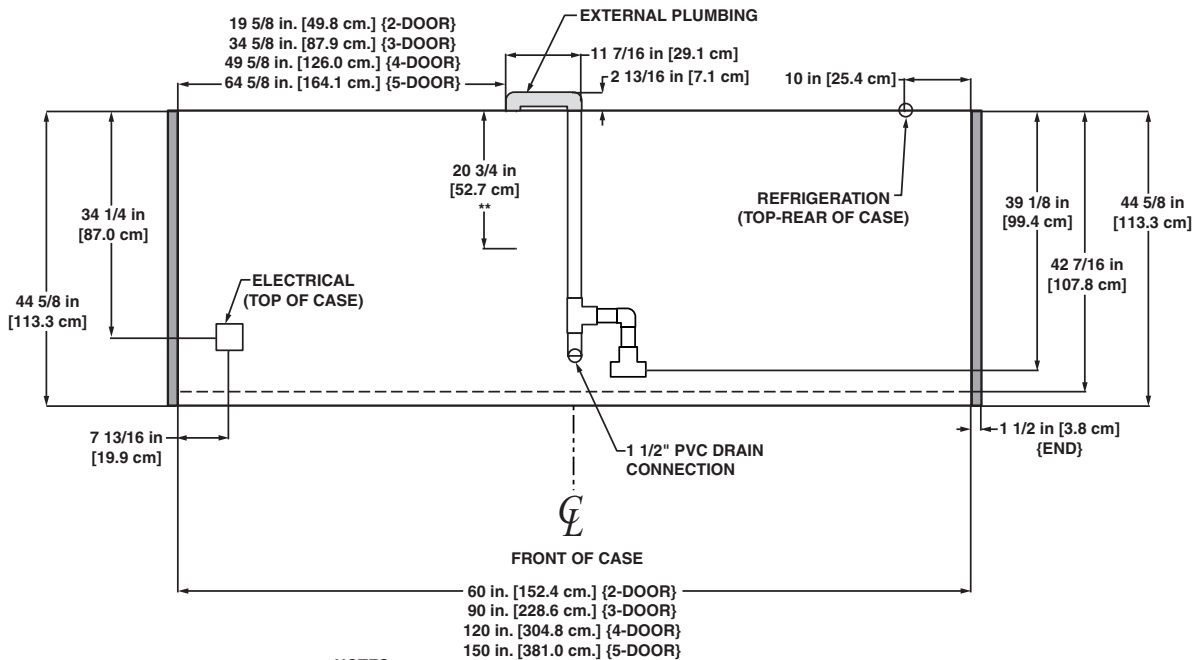
TECHNICAL SUPPORT: If any technical questions arise regarding a refrigerated display case contact our Customer Service Department in Richmond at 1-804-526-4455. For any questions regarding our refrigeration systems or electrical distribution centers contact our Customer Service Department in Conyers at 1-770-285-3200.

CONTACTING FACTORY: Should you need to contact **Hill PHOENIX** regarding a specific fixture, be sure to know the case model number and serial number. This information is on the serial plate located on the top flue panel of the case (see next page for details). Ask for a Service Parts Representative at 1-804-526-4455.





**MODEL
KRZH**

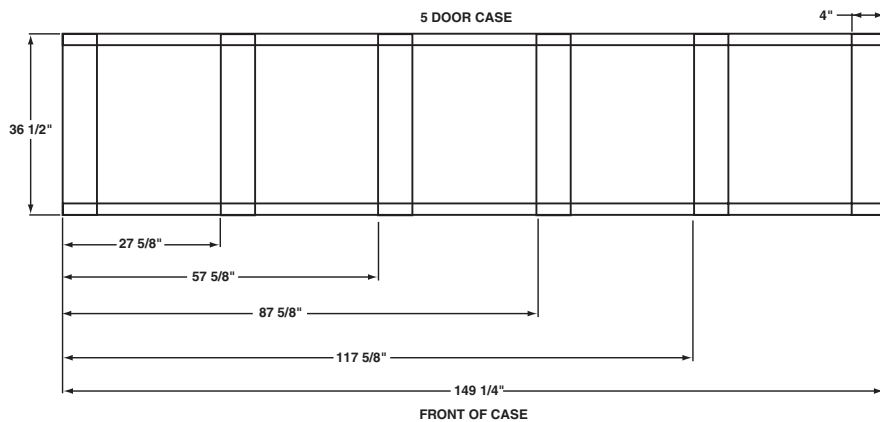
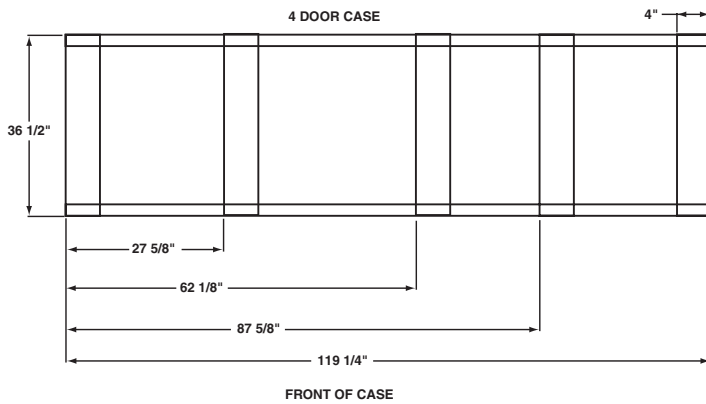
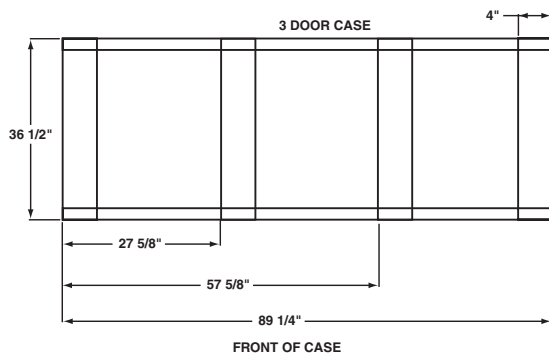
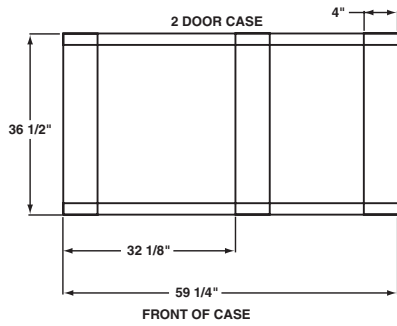


NOTES:

- * STUB-UP AREA
- ** RECOMMENDED STUB-UP CENTERLINE FOR ELECTRICAL AND HUB DRAINS

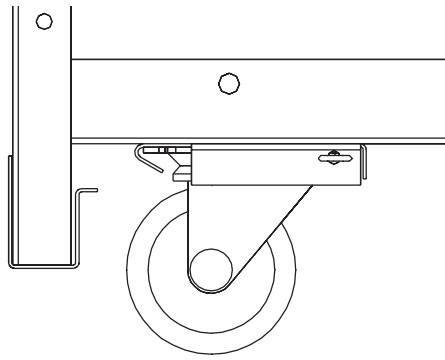
- SUCTION LINE 7/8", LIQUID LINE - 1/2"
- AVAILABLE SHELF SIZES: WIRE SHELVES 16", 18", 20", 22" & 23 1/2"
SOLID SHELVES 18", 20", 22", 24" & 27"

GENERAL INFORMATION



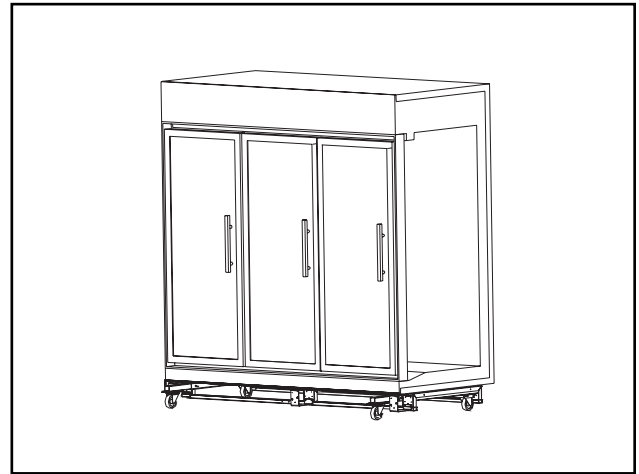
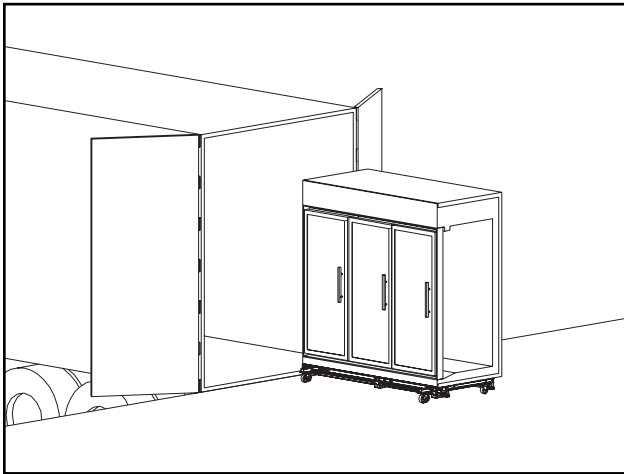
**BASEHORSE
LOCATION FOR
MODEL
KRZH**

CASES MOVE ON CASTERS FOR EASIER INSTALLATION



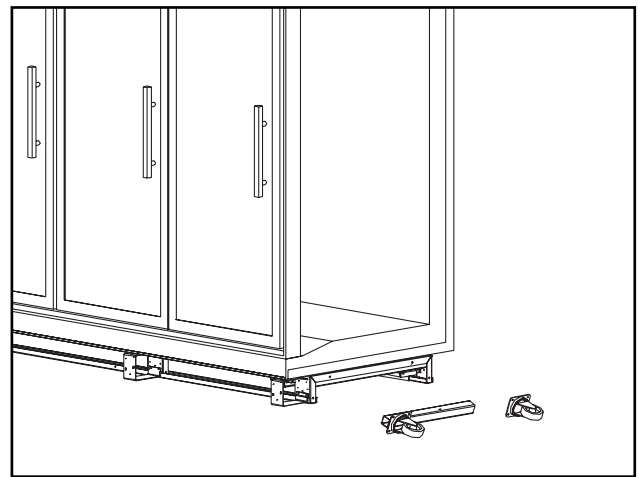
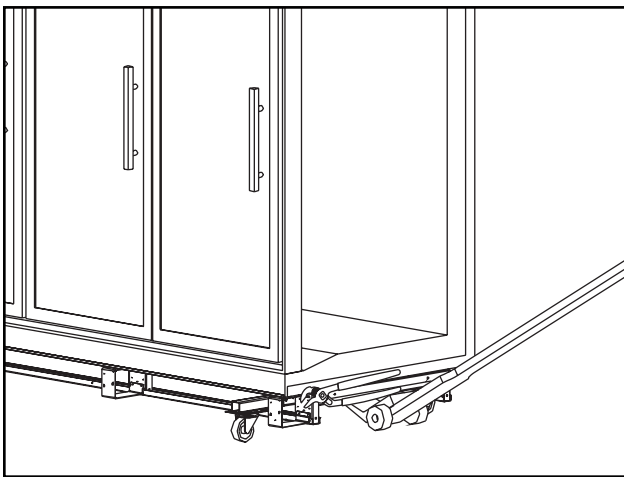
KATS cases are manufactured and shipped to stores with casters installed on the base frame to make the job of moving cases easier for everyone involved with the manufacturing, shipping and installation process.

Casters not only speed up the process, but they also reduce the chance of damage from raising and lowering cases with "J" bar to place them on dollies, skates or rollers. In most situations, one or two persons can move the case with ease.



ROLL OUT OF TRUCK. When there is a truck - level delivery dock (with 8' ft. minimum opening), cases may be rolled directly from the truck to the store floor. [CAUTION] If skid boards are required to unload cases, casters should be removed prior to sliding them down the skid; after which they can be reinstalled on case.

ROLL TO LINEUP POSITION. Casters may remain in place to move the cases to staging areas around the store, prior to final installation. When ready for final line-up, roll the case to set position, then remove casters.



REMOVE COTTER PIN. Removing the casters is easy. Simply flatten and hammer out cotter pins then lift the case with "J" bar, and the casters will fall off.

CASTERS MAY BE DISCARDED.

[CAUTION] Make certain hands are out of the way.

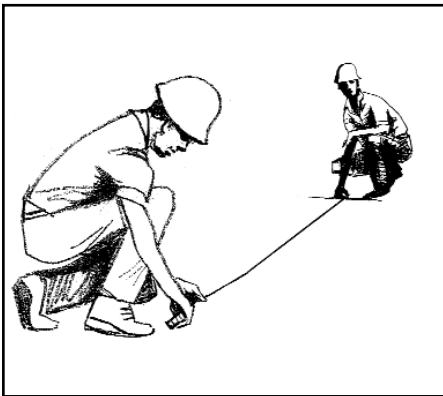
LINE UP & TRIM OUT

Now that cases have been positioned and leveled, you may proceed to trim-out case lineup. Trim parts have been designed to be applied easily with only a small number of fasteners required. Most external parts are adjustable to achieve almost invisible, snug-fitting joints and a high level of excellence in fit and finish.



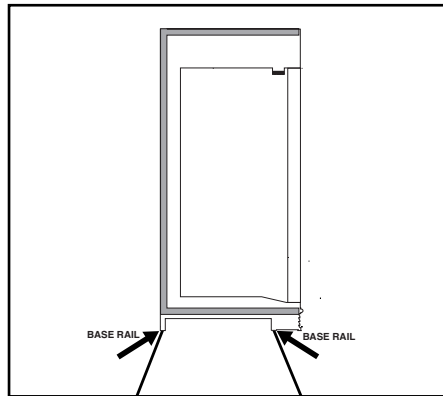
Consult With General Contractor

Ask the general contractor if there have been changes in the building dimensions since the print you are using was issued. Also, ask the points of reference from which you should take dimensions to locate the cases.



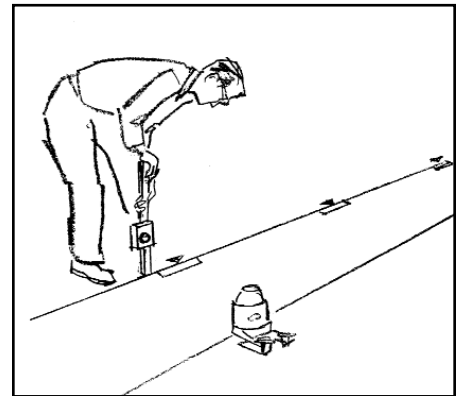
Snap Chalk Lines

Mark floor where cases are to be located for the entire lineup.



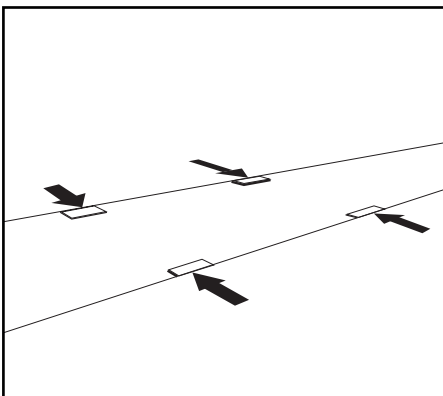
Snap Lines On Base Rail Locations

Snap lines where base rails are positioned, not the front or back edges of the cases. See case cross section drawing, page 3, for rail location dimensions.



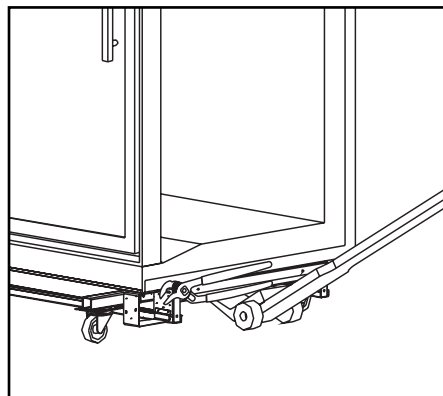
Level Floor. Use Laser Transit

Leveling is necessary to assure proper case alignment. Locate highest point on chalk line as reference for determining height of shim-pack levelers. A laser transit is recommended for precision.



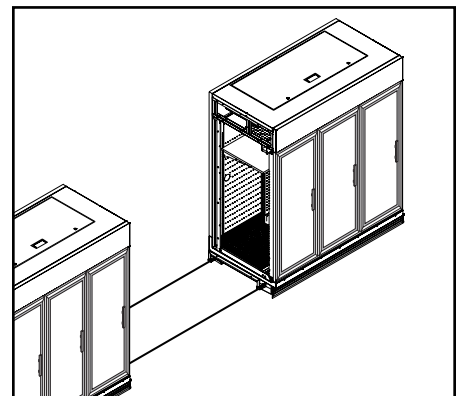
Set Shims On Basehorse Locations

Locate basehorse positions along chalk lines. Spot shim packs at each basehorse location.



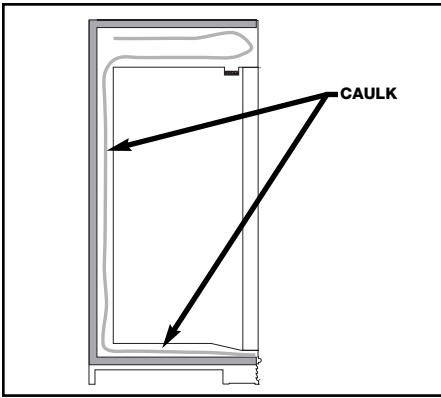
Position First Case In Lineup, Remove Casters, Level

Roll first case into position. Raise case from end under cross support using "J" bar. Remove cotter pins, casters, and outriggers. [CAUTION! Keep hands from under case] Level case on shims.



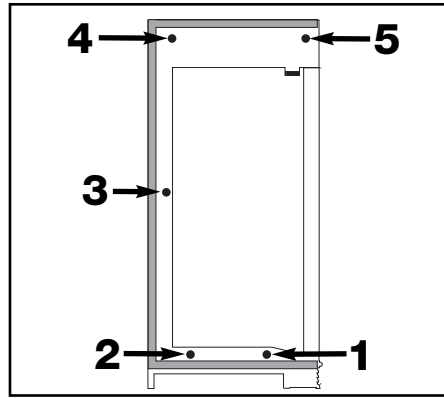
Position Next Case In Line Up

Roll case approximately 6' from adjoining case. Remove casters on the end nearest to the next case. Allow casters to remain on opposite end to assist in pushing cases together - then remove them.



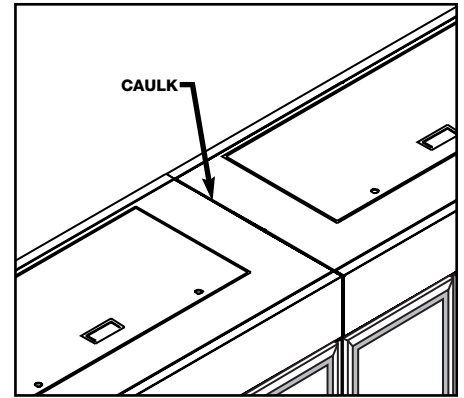
Remove Shipping Accessories From Case. Add Sealant.

Remove anything from case that may interfere with case joining (eg. shipping braces). Run a bead of sealant around entire end before pushing cases tightly together.



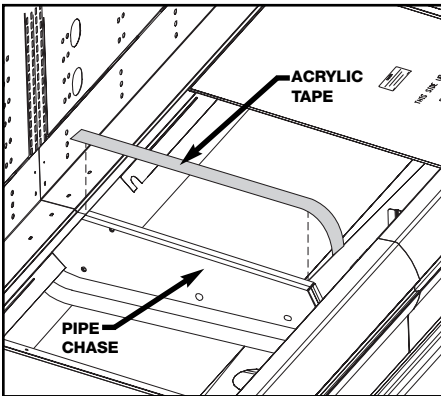
Bolt Cases Together Using Bolt Holes Provided

Push cases tightly together. Bolt cases together through the four holes provided. Tighten until all margins are equal; do not over tighten.



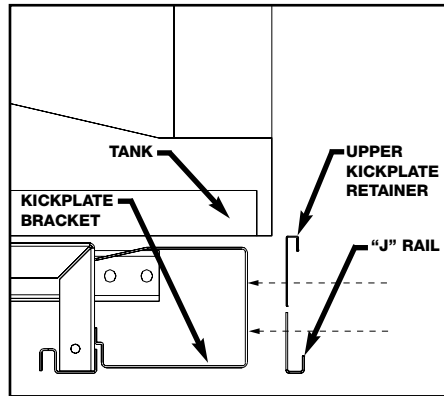
Add Sealant to Top Case Joint.

Once cases are pushed tightly together and bolted run a bead of sealant along the top joint.



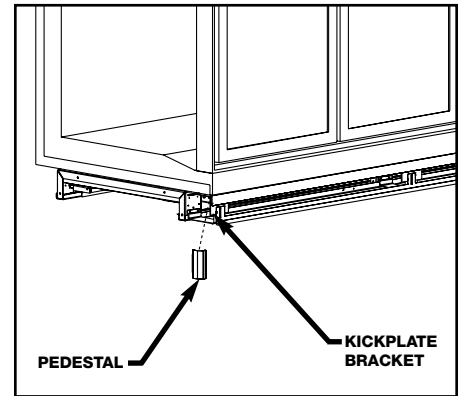
Caulk Pipe Chase, Install Acrylic Tape

Seal joints along pipe chase seam with the caulk provided. Apply acrylic tape over pipe chase seam. Tape is found with the ship loose items and acts as a watershed preventing water from settling in case joint.



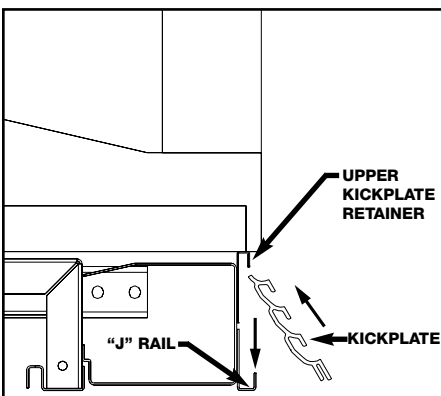
Install Upper Kickplate Retainer & "J" Rail

Attach the upper kickplate retainer by placing it against the bottom of the tank. Line up the retainer with the kickplate bracket and attach with the screws provided. Set the "J" rail flush to the floor and attach it to the kickplate bracket with the screws provided.



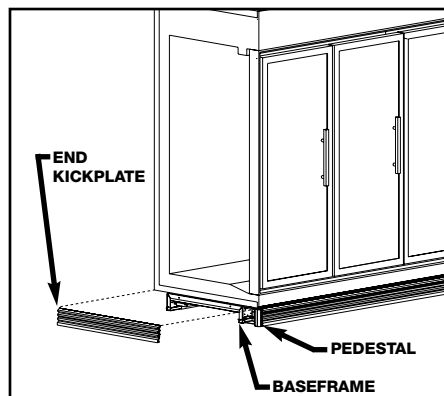
Install Pedestals

The pedestals line-up at the corner of the case that is located at the end of a line-up. Attach the pedestal to the kickplate bracket with the screws provided.



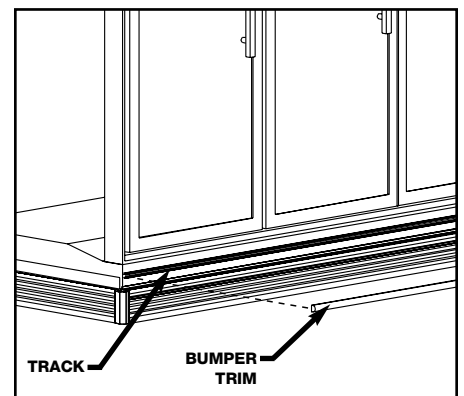
Insert Kickplate

Insert top of kickplate into the upper kickplate retainer. Slide the kickplate up into retainer then down on the "J" rail.



Install End Kickplate

End kickplates are installed only on cases with ends. Fit the end kickplate under the end and secure it to the baseframe.



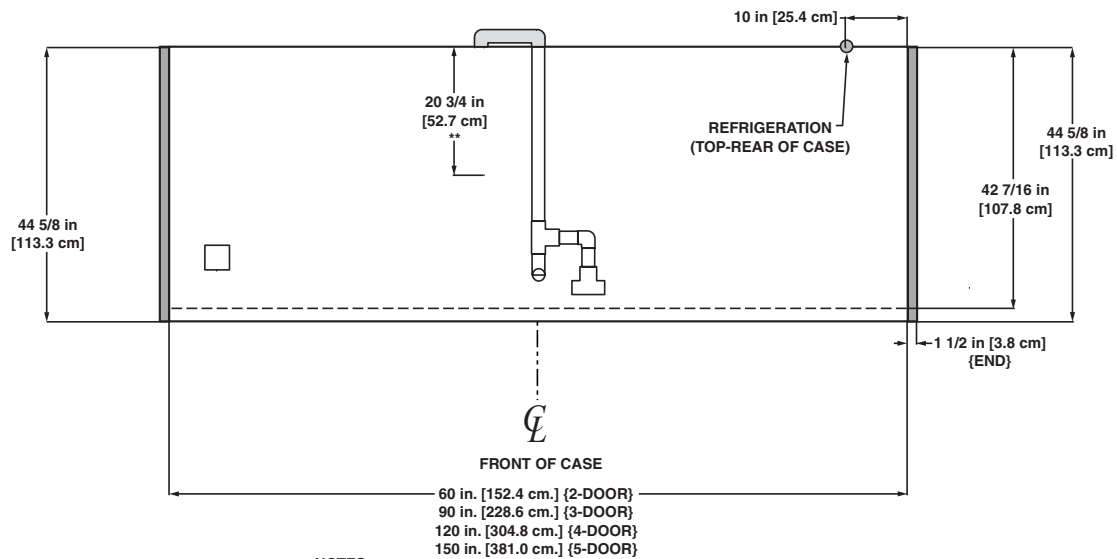
Install Bumper Trim

Insert the bumper trim into the track that is mounted to the front panel of the case.

REFRIGERATION PIPING

Refrigeration components and the coil outlet hole are located to provide the best access for installation and maintenance. As the diagrams below indicates, the coil outlet hole is positioned on top of the case on the rear, right hand side. This hole will have be drilled by the contractor on site. After penetrating the case top make certain the hole is sealed afterward with canned-foam sealant and white RTV.

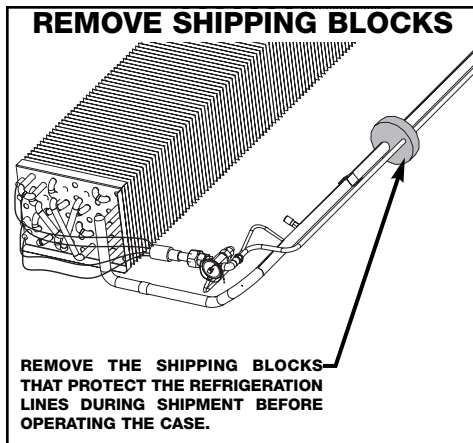
The expansion valve and other controls are located just under the top access hatch. Pull open the hatch and lift off the end evaporator cover on the left hand side to access the refrigeration controls.



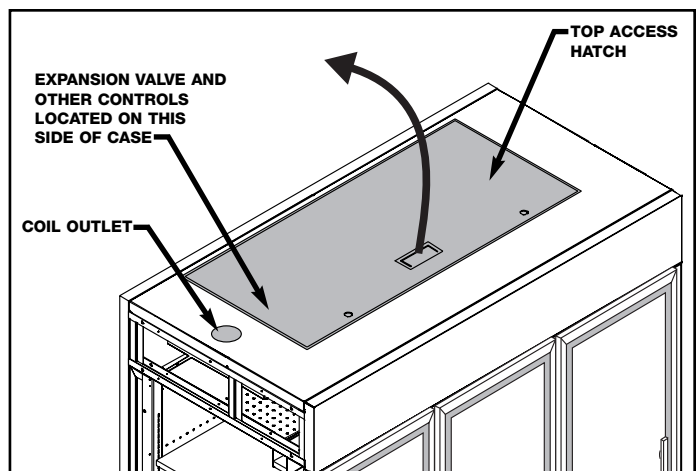
NOTES:

- * STUB-UP AREA
- ** RECOMMENDED STUB-UP CENTERLINE FOR ELECTRICAL AND HUB DRAINS
- SUCTION LINE 7/8", LIQUID LINE - 1/2"
- AVAILABLE SHELF SIZES: WIRE SHELVES 16", 18", 20", 22" & 23 1/2"
SOLID SHELVES 18", 20", 22", 24" & 27"

MODEL KRZH



REFRIGERATION ACCESS

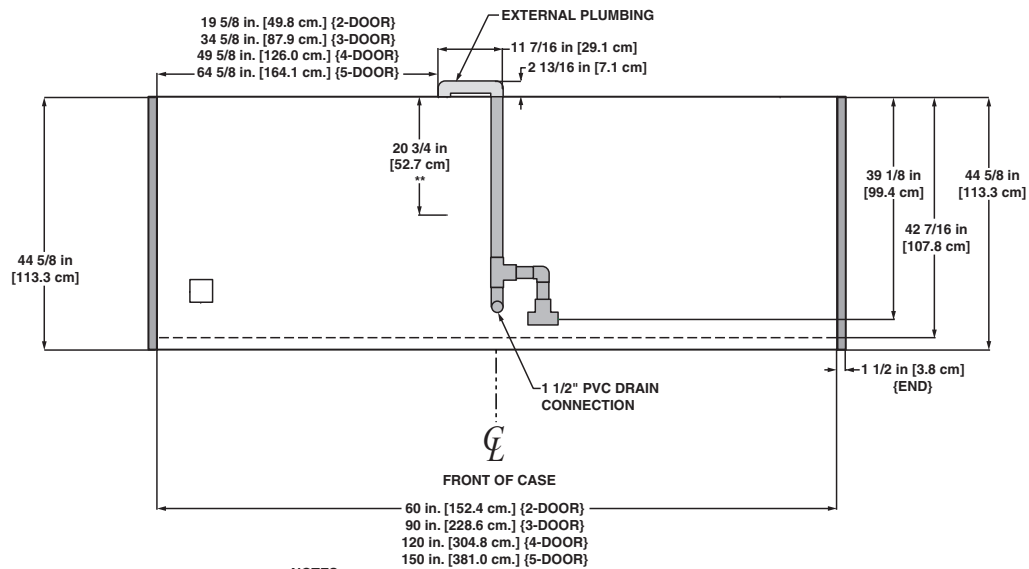


PLUMBING

The drain outlet is located front and center of the cases for convenient access. The drain outlet on the KRZH is molded out of ABS material. The "P" trap, furnished with the case, is constructed of schedule 40 PVC pipe. Care should be given to assure that all connections are water tight and sealed with the appropriate PVC cement, ABS cement, or pipe dope.

The kickplate is shipped loose with the case for field installation, therefore you should have open access to the drain line area. If the kickplate has been installed, you will find it very easy to remove. See instructions below, or the line-up and trim out section of this manual on page 7.

The lines can be run left or right of the tee with the proper pitch to satisfy local drainage requirements.

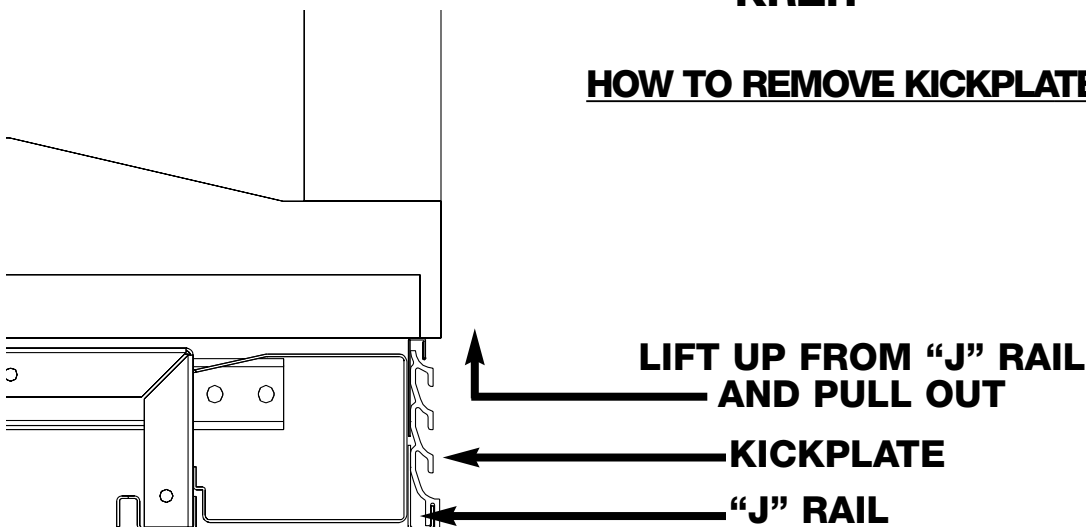


NOTES:

- * STUB-UP AREA
- ** RECOMMENDED STUB-UP CENTERLINE FOR ELECTRICAL AND HUB DRAINS

MODEL KRZH

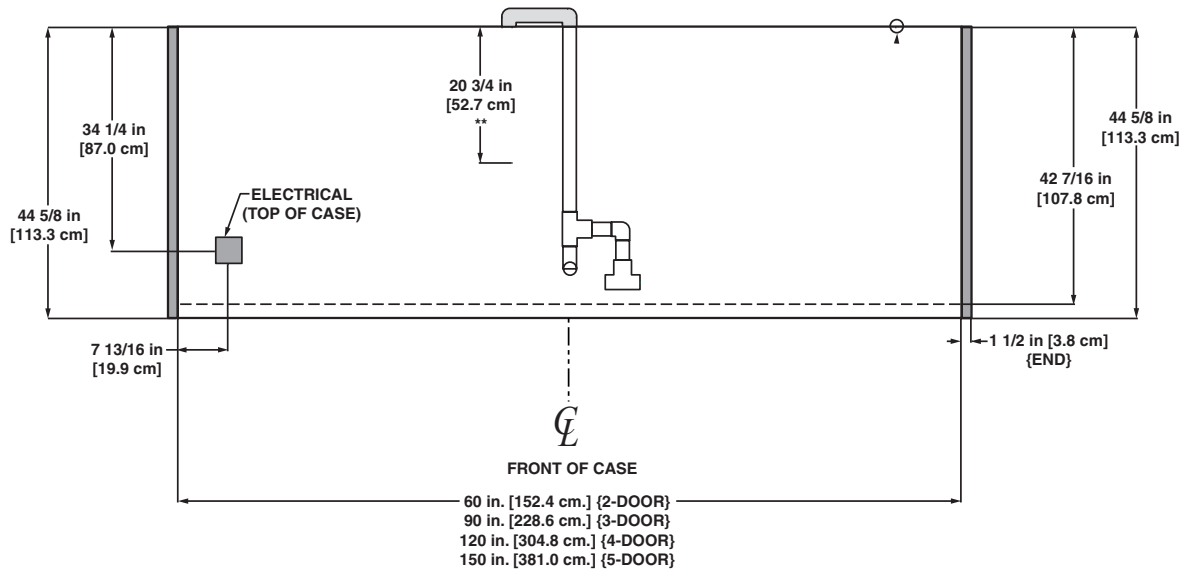
HOW TO REMOVE KICKPLATE



ELECTRICAL HOOKUP

Electrical hookups are made to a junction box located at the top, left of the case. For case-to-case wiring, run “green-field”, or other conduit, between junction boxes.

When connecting to the junction box on the bottom left side of the case, field wiring should exit the junction box from the right hand side, furthest away from case wiring, increasing room inside for wire connecting.



NOTES:

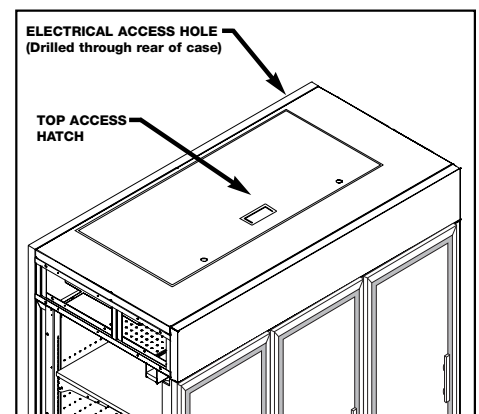
* STUB-UP AREA

** RECOMMENDED STUB-UP CENTERLINE FOR ELECTRICAL AND HUB DRAINS

MODEL KRZH

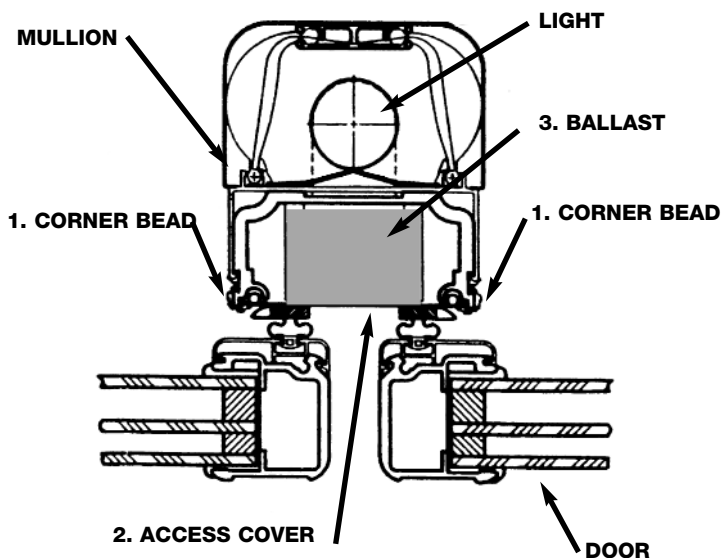
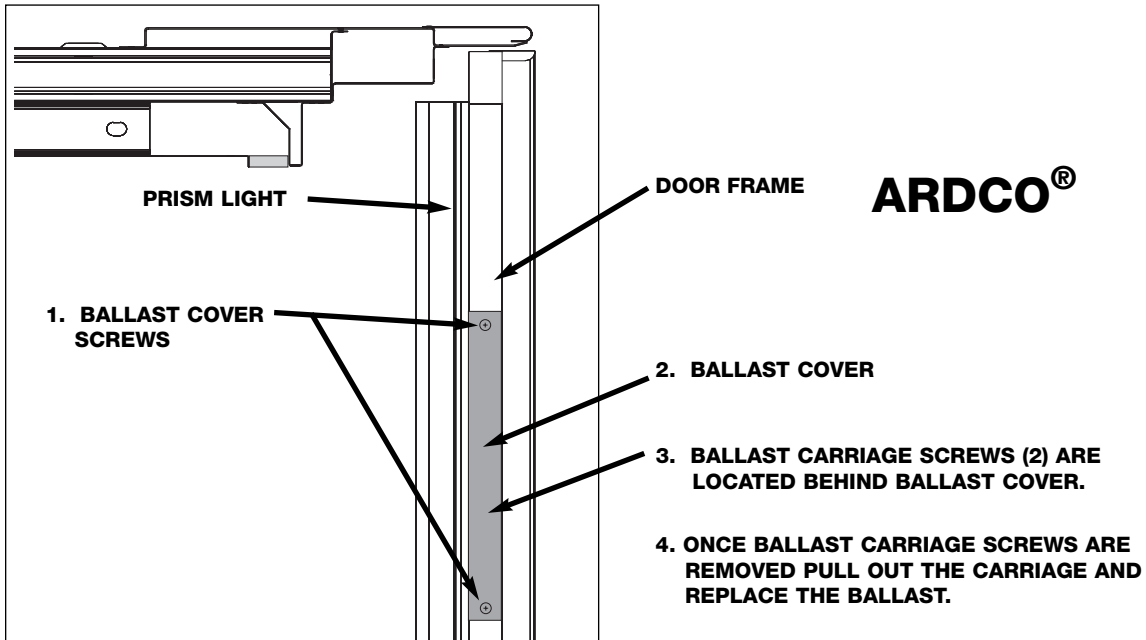
WIRING NUMBERS AND COLORS

COMPONENT	WIRE NUMBER	COLOR CODING
EVAPORATOR FANS, 120 VOLT	3	WHITE
	4	BLACK
DOOR & FRAME ANTI-COND. HEATERS, 120 VOLT	15	WHITE
	16	BLACK
LIGHTS, 120 VOLT	11	WHITE
	12	BLACK
ANTI-CONDENSATE HEATERS, 120 VOLT	13	WHITE
	14	BLACK
TEMPERATURE CONTROL, 120 VOLT	19	YELLOW
	20	YELLOW
DEFROST TERMINATION CONTROL, 120 VOLT	21	PURPLE
	23	ORANGE
DEFROST HEATERS, 208/240 VOLTS	L1	RED
	L2	BLUE
EQUIPMENT GROUNDING CONDUCTOR	-	GREEN



BALLASTS ACCESS

The electronic ballasts that operate the vertical prism door lights are located in the door frame for both Ardco® and Anthony®.



ANTHONY®

STEPS TO REPLACE THE BALLAST

ARDCO®

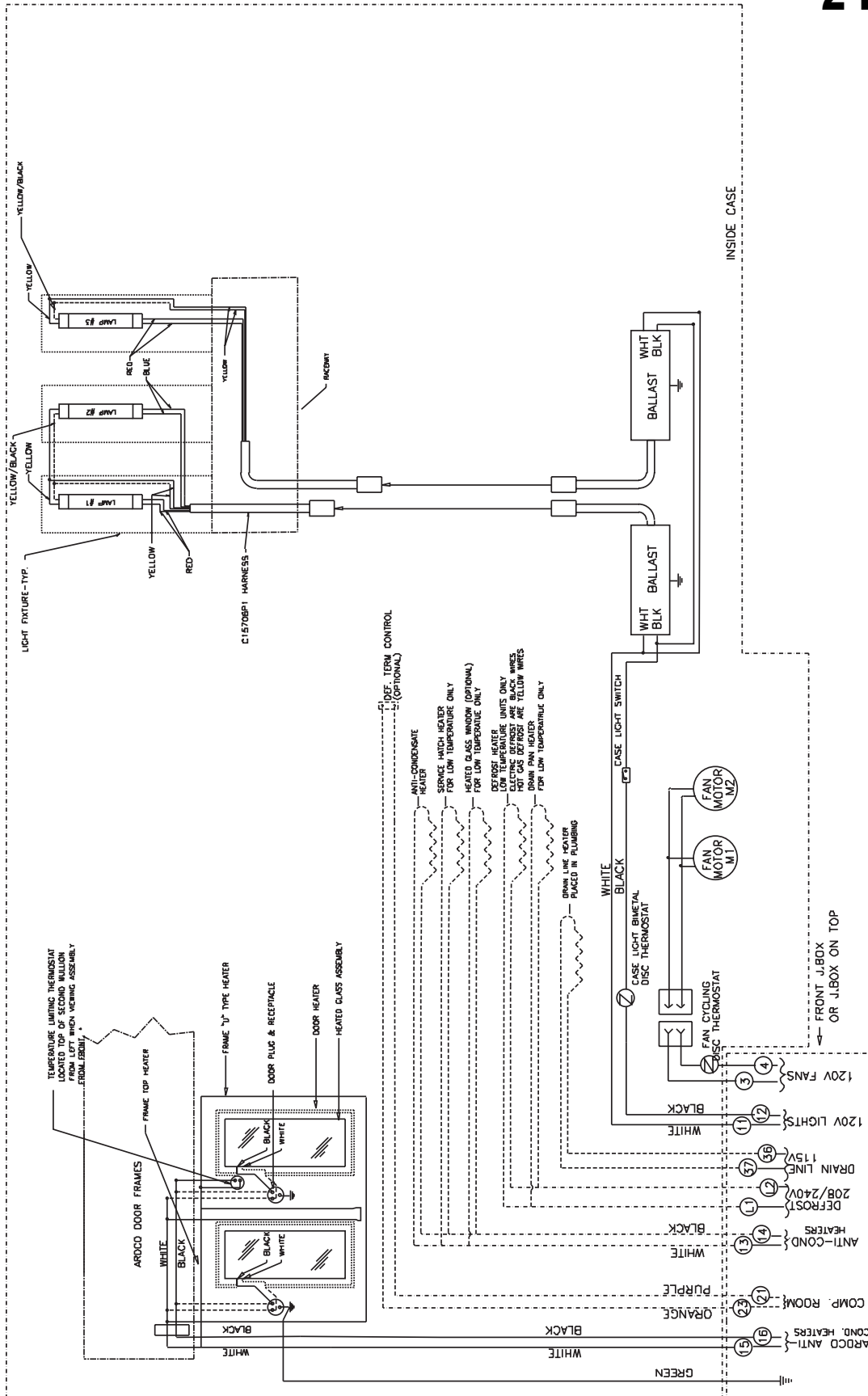
1. REMOVE SCREWS IN BALLAST COVER
2. REMOVE BALLAST COVER
3. REMOVE SCREWS IN BALLAST CARRIAGE
4. REPLACE BALLAST

ANTHONY®

1. REMOVE CORNER BEADS (2)
2. REMOVE ACCESS COVER
3. REPLACE BALLAST

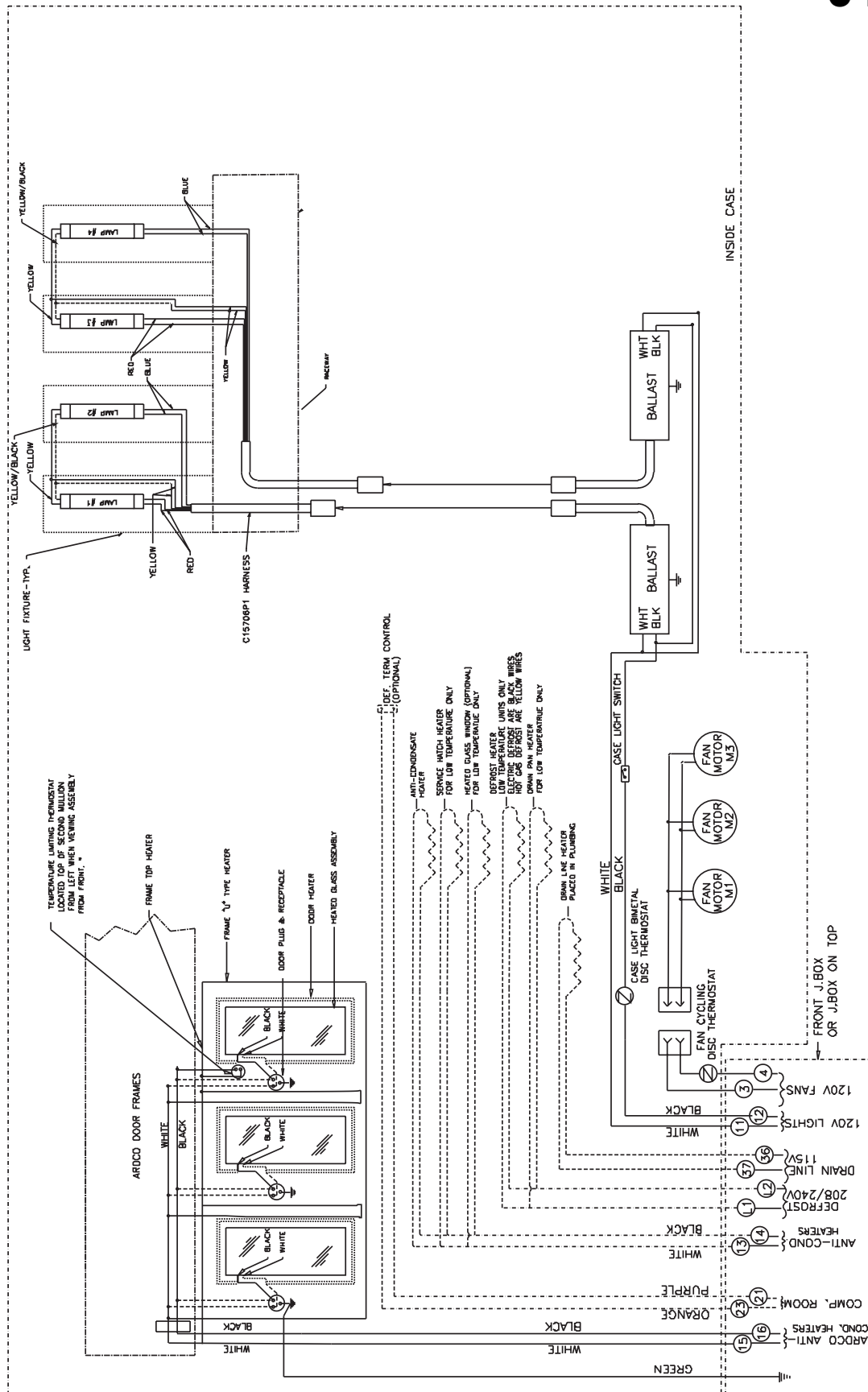
WIRING DIAGRAMS-

MODEL
KRZH
2 DOOR



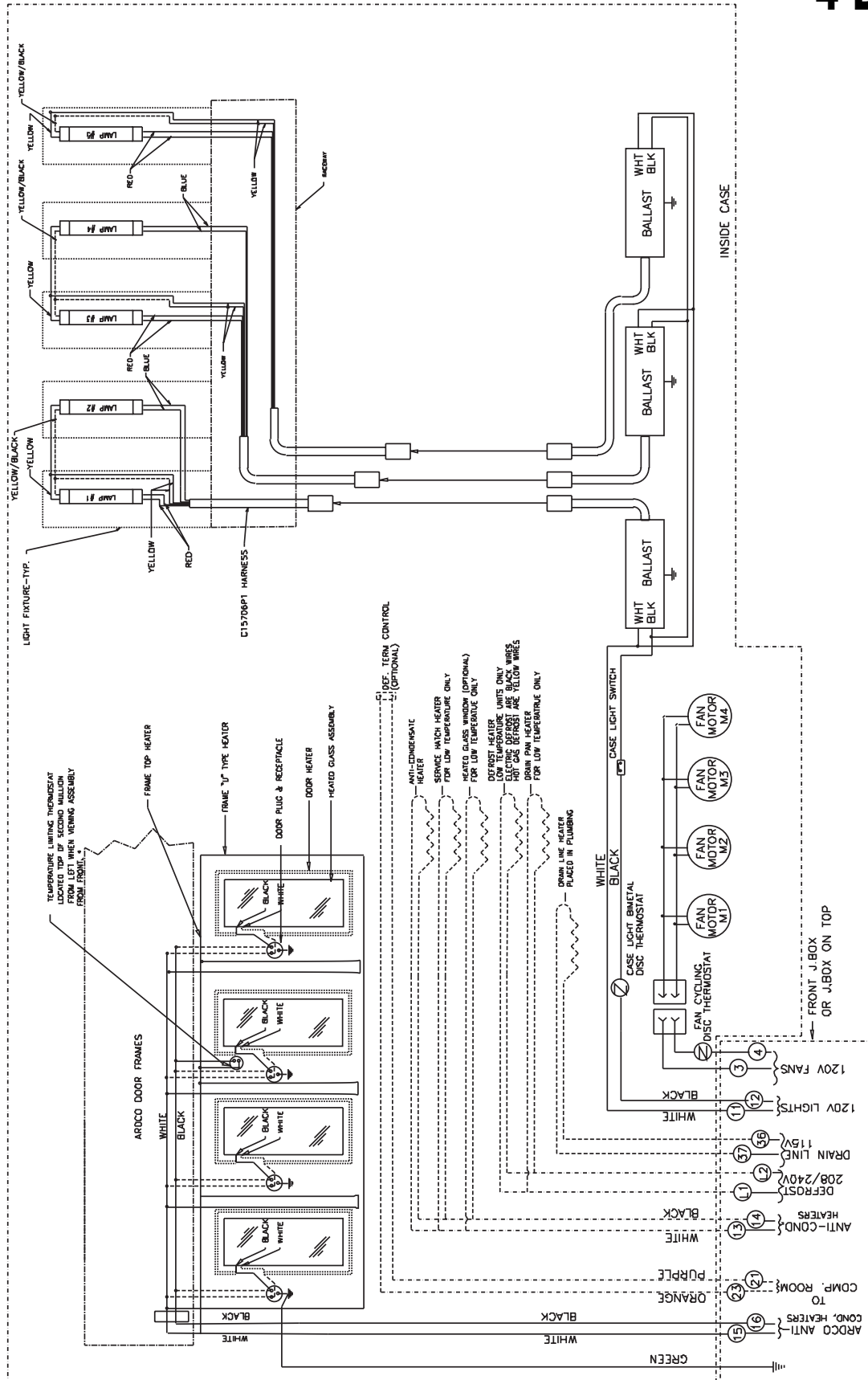
WIRING DIAGRAMS-

MODEL KRZH 3 DOOR



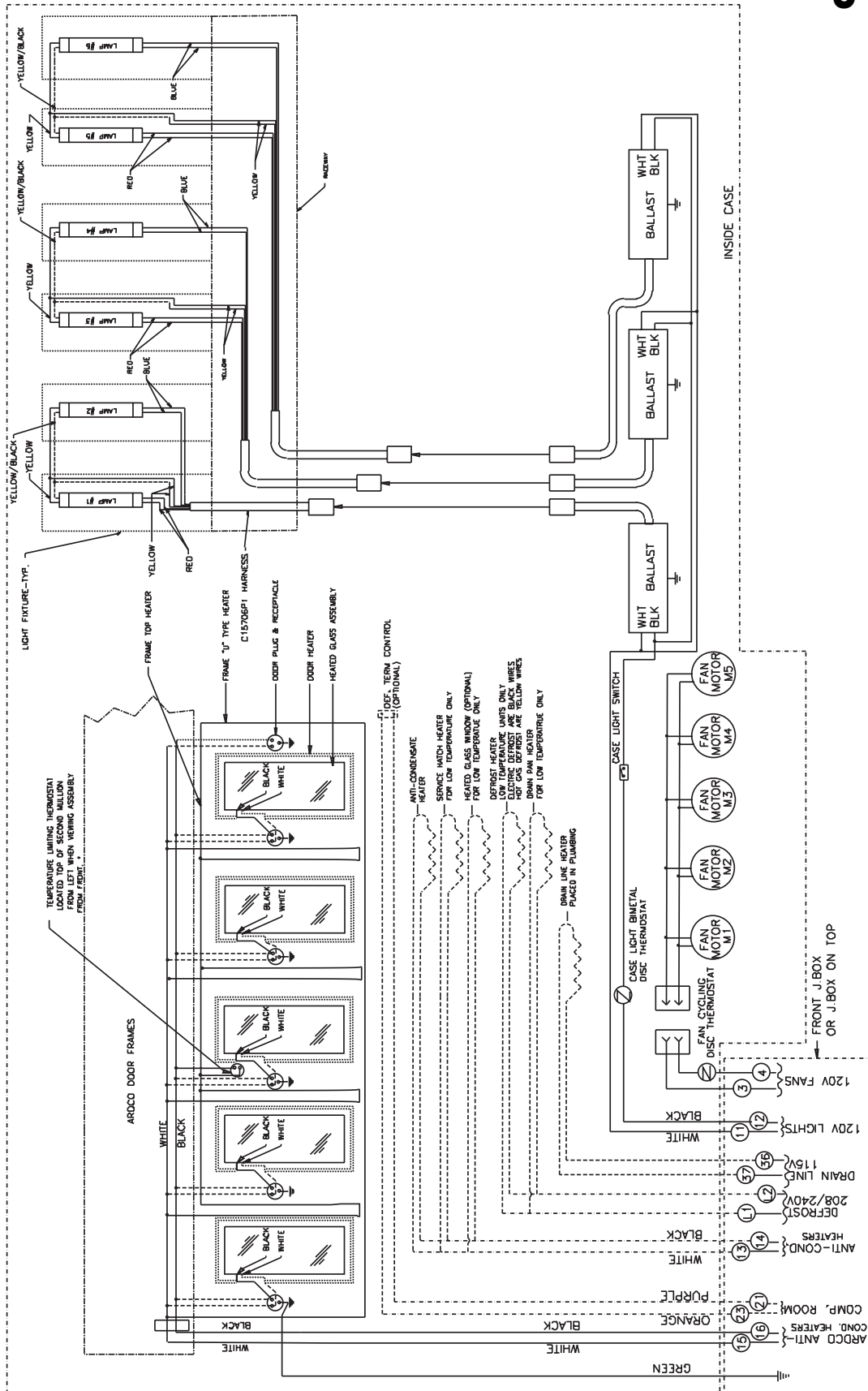
WIRING DIAGRAMS-

**MODEL
KRZH
4 DOOR**

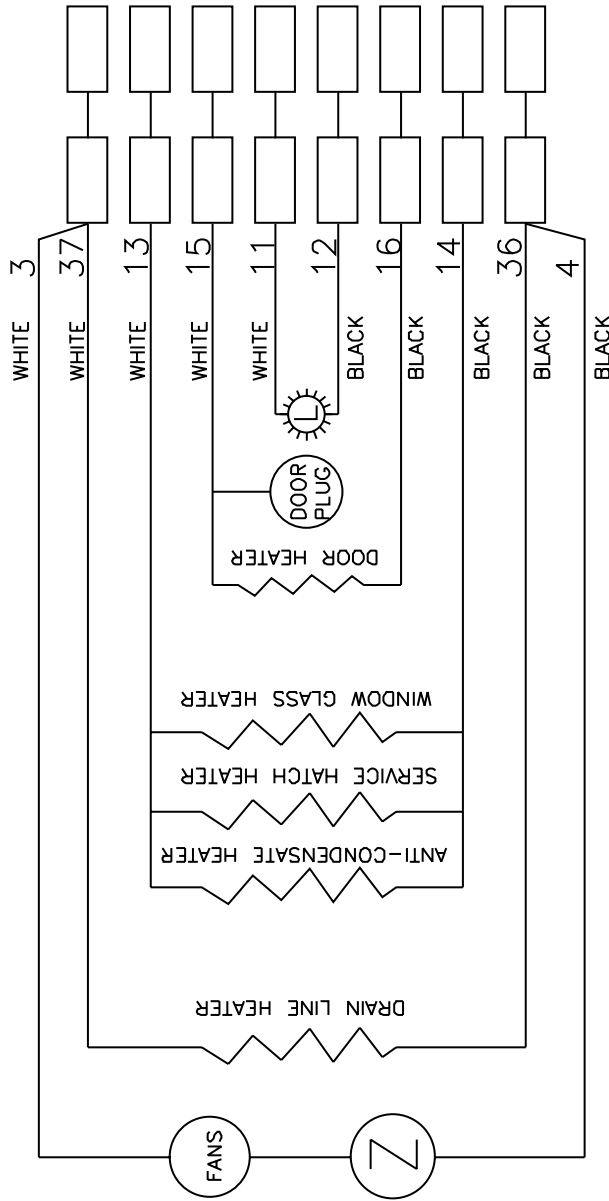


WIRING DIAGRAMS-

MODEL KRZH 5 DOOR



WIRING DIAGRAMS- TERMINAL BLOCK



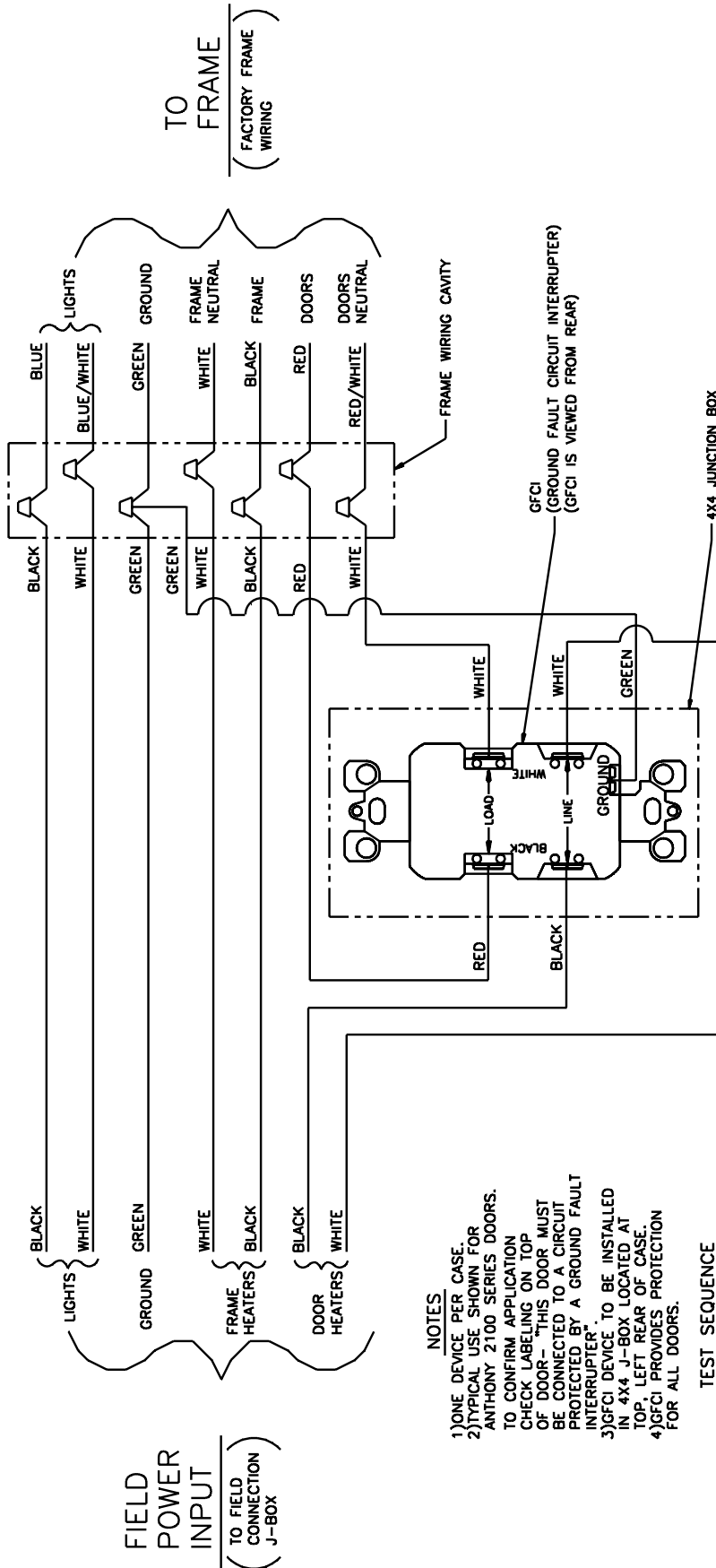
NOTE: ALL COMPONENTS SHOWN ARE 120V/60Hz

NOTE: GROUND WIRES NOT SHOWN!

NOTE: L1 AND L2 FOR DEFROST WIRES NOT SHOWN, AND SHOULD NOT BE EMPLOYED ONTO TERMINAL BLOCKS.

WIRING DIAGRAMS-

GFI



- NOTES**
- 1) ONE DEVICE PER CASE.
 - 2) TYPICAL USE SHOWN FOR ANTHONY 2100 SERIES DOORS. TO CONFIRM APPLICATION CHECK LABELING ON TOP OF DOOR—THIS DOOR MUST BE CONNECTED TO A CIRCUIT PROTECTED BY A GROUND FAULT INTERRUPTER.
 - 3) GFCI DEVICE TO BE INSTALLED IN 4x4 J-BOX LOCATED AT TOP, LEFT REAR OF CASE.
 - 4) GFCI PROVIDES PROTECTION FOR ALL DOORS.

- TEST SEQUENCE**
- 1) APPLY POWER TO DOOR HEATERS
 - 2) CONFIRM CURRENT OF DOOR ON TESTER.
 - 3) DEPRESS BLACK "TEST" BUTTON ON GFCI.
 - 4) CONFIRM THAT DOOR HEATERS DE-ENERGIZED BY AMPMETER ON TESTER GOING TO ZERO.
 - 5) RESET GFCI BY DEPRESSING RED "RESET" BUTTON ON GFCI.
 - 6) CONFIRM CURRENT ON TESTER.

Glass Door Reach-in Frozen Food/Ice Cream Merchandiser

KRZH - 2, 3, 4 & 5-door reach in freezer

Electrical Data

Model	Fans per Case	Anti-Condensate Heaters								
		Standard Fans		120 Volts		208 Volts		240 Volts		
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts	
KRZH	2-door	2	2.20	167	6.06	727	0.86	179	0.99	238
	3-door	3	3.30	250	8.48	1018	0.86	179	0.99	238
	4-door	4	4.40	333	10.82	1298	0.86	179	0.99	238
	5-door	5	5.50	417	12.88	1545	0.86	179	0.99	238

¹ NOTE: - - - not an option on this case model.

Lighting Data

Model	Door	Maximum Lighting	
		120 Volts	
		Amps	Watts
KRZH	2-door	1.88	226
	3-door	2.50	300
	4-door	3.13	376
	5-door	3.75	450

Defrost Heater Data

Model	Door	Defrost Heaters ² Hot Gas Defrost				Defrost Heaters Electric Defrost			
		208 Volts		240 Volts		208 Volts		240 Volts	
		Amps	Watts	Amps	Watts	Amps	Watts	Amps	Watts
KRZH	2-door	1.92	400	2.22	533	5.77	1200	6.66	1593
	3-door	1.92	400	2.22	533	7.69	1600	8.88	2128
	4-door	1.92	400	2.22	533	12.02	2500	13.87	3355
	5-door	2.40	500	2.78	666	15.39	3200	17.75	4260

²Note: Hot gas defrost requires electric assist heaters.

Guidelines & Control Settings

Model	BTUH/door ⁴	Evaporator (°F)	Superheat Set Point @ Bulb (°F)	Discharge Air (°F)	Return Air (°F)	Discharge Air Velocity ⁵ (FPM)
KRZH - F ³	1850	-12	3-5	-8	-3	420
KRZH - C ³	2200	-22	3-5	-12	-7	420

³ F = Frozen food, C = Ice cream.

⁴ BTUH's/door listed are for parallel operation. Conventional ratings may be approximated by multiplying listed rating by 1.04.

⁵ Average discharge air velocity at peak of defrost.

Defrost Controls

Model	Defrosts Per Day	Run-Off Time (min)	Electric Defrost		Timed Off Defrost		Hot Gas Defrost		Reverse Air Defrost	
			Fail-safe (min)	Termination Temp. (°F)	Fail-safe (min)	Termination Temp. (°F)	Fail-safe (min)	Termination Temp. (°F)	Fail-safe (min)	Termination Temp. (°F)
KRZH	1	13 - 15	60	73	- - - ⁶	- - -	24	73	- - -	- - -

⁶ NOTE: - - - not an option on this case model.

Low Temperature Defrost Schedule

No. Per Day	Hours
1	10 pm
2	6 am - 10 pm**

** Or immediately after store closing hour

All measurements are taken per CRMA specifications.



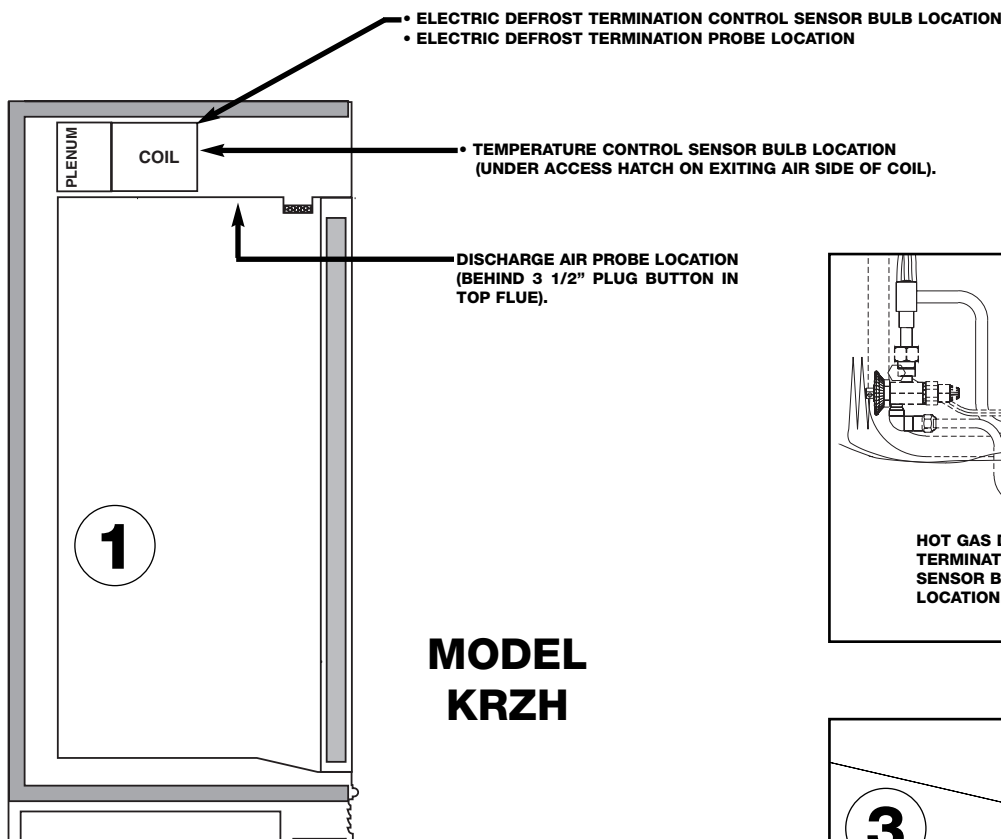
DEFROST AND TEMP CONTROL

This case is equipped with either Electric or Hot Gas defrost at the owners option. The sensor bulb and probe for electric defrost termination control is located on the top, center of the coil at the rear. The sensor bulb for temperature control is located on the right side of the evaporator behind the end cover, as shown in illustration 1 below. The discharge air probe is located behind a 3 1/2" plug button on the top flue panel also shown in illustration 1. The hot gas defrost termination sensor bulb and probe are attached to the dump line, as shown in diagram 2, which is in

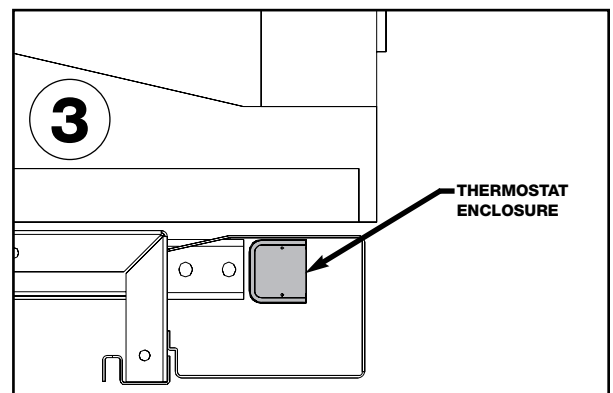
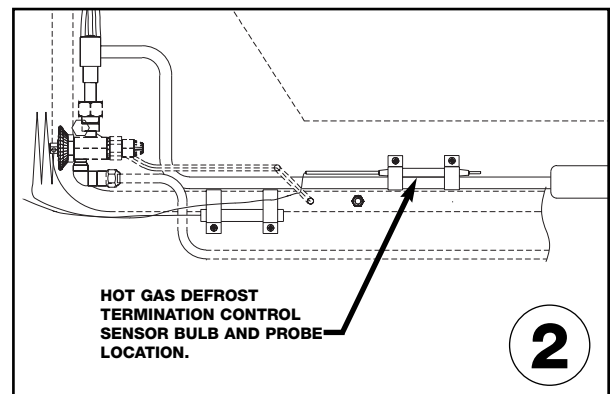
the top, left hand side of the case.

The defrost termination control thermostat and the temperature control thermostat are both located in thermostat enclosures behind the kickplate on the left hand side of the case, as shown in diagram 3.

It is important to consult the control setting guidelines shown on page 18 before setting defrost times. Further adjustment may



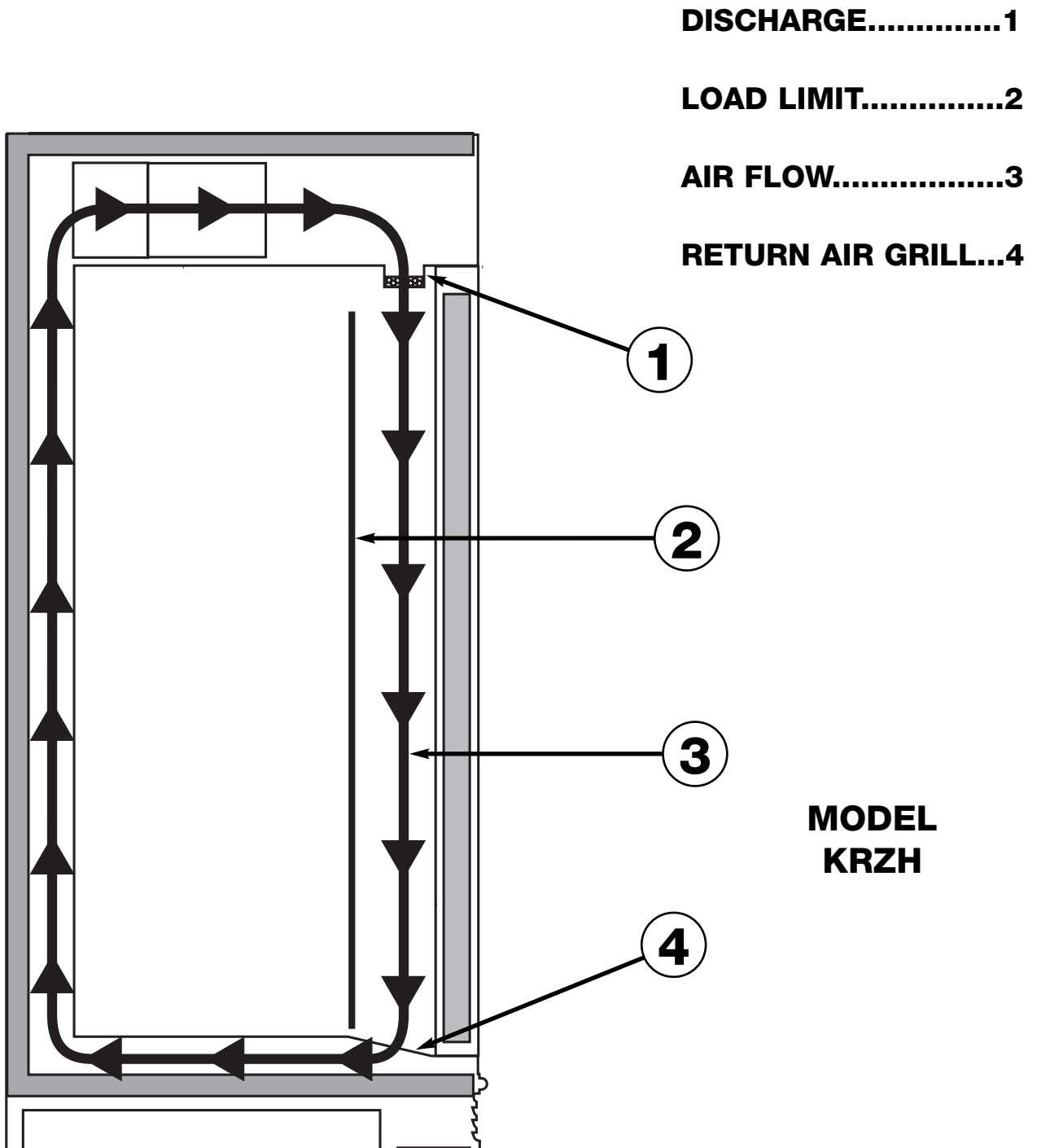
**MODEL
KRZH**



AIR FLOW AND PRODUCT LOADING

Cases have been designed to provide maximum product capacity within the refrigerated air envelope. It is important that you do not overload the food product display so that it impinges on the air flow pattern.

Overloading will cause malfunction and the loss of proper temperature levels, particularly when discharge and return air sections are covered. Please keep products within the load limit line shown on the diagram.

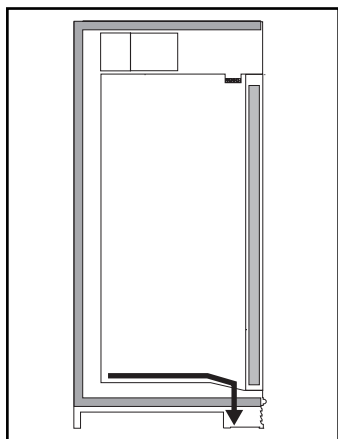


USE AND MAINTENANCE

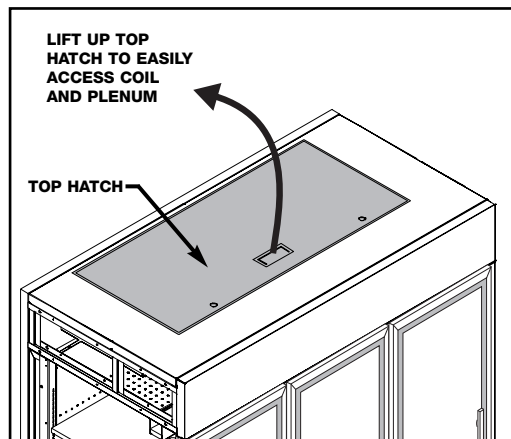
CASE CLEANING

Case is designed to facilitate cleaning. There is no mechanical or electrical controls in the product area to hamper routine cleaning. All surfaces pitch to a deep-drawn drain trough that angles toward the front and center of case where the 2" waste outlet is located for easy access.

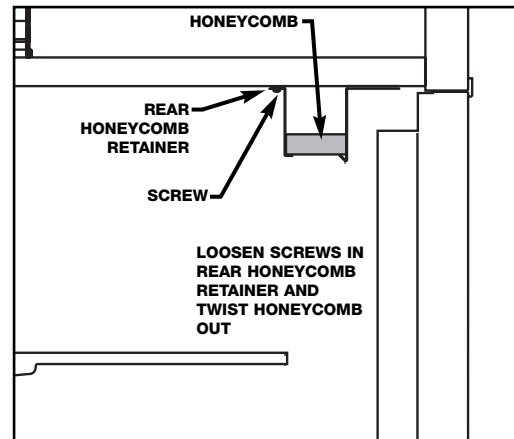
The coil and fan plenum are located outside the product area to keep food fluids from entering, diminish downtime, and reduce shrink. If cleaning is required, make certain fan plenum is properly closed after cleaning to avoid air leaks.



POSITIVE DRAIN OFF



COIL CLEANING



CLEAN HONEYCOMB

CLEANING PROCEDURES

- A periodic cleaning schedule should be established to maintain proper sanitation, insure maximum operating efficiency, and avoid the corrosive action of food fluids on metal parts that are left on for long periods of time. We recommend cleaning once a week.
- To avoid shock hazard, be sure all electrical power is turned off before cleaning. In some installations, more than one disconnect switch may have to be turned off to completely de-energize the case.
- Check waste outlet to insure it is not clogged before starting the cleaning process and avoid introducing water faster than the case drain can carry it away.
- Avoid spraying cleaning solutions directly on fans or electrical connections.
- Provide a temporary separator between those cases which are being cleaned and those which are not.
- Allow cases to be turned off long enough to clean any frost or ice from coil and flue areas.
- Remove and clean discharge honeycomb. You may need to use spray detergent and a soft, long bristle brush.
- Use mild detergent and warm water. When necessary, water and baking soda solution will help remove case odors. Avoid abrasive scouring powders or pads.
- Remove front panels and clean underneath the case with a broom and a long handled mop. Instructions for removing the front panels can be found on page 6 of this manual.
- Use warm water and a disinfecting cleaning solution when cleaning underneath the cases.
- When cleaning antifog doors please refer to Appendix A, on page 26, for more details.

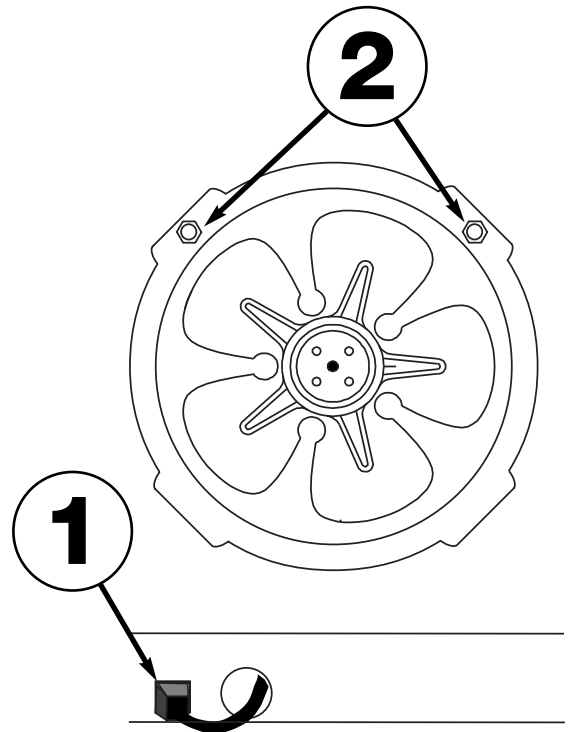
USE AND MAINTENANCE

FANS

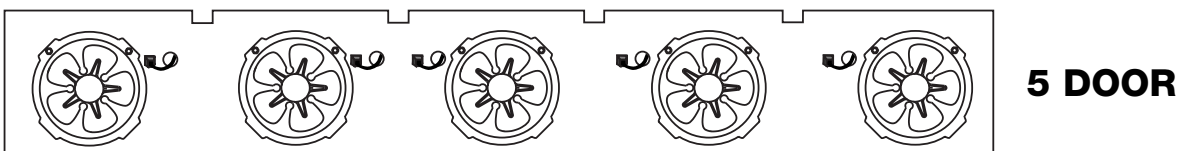
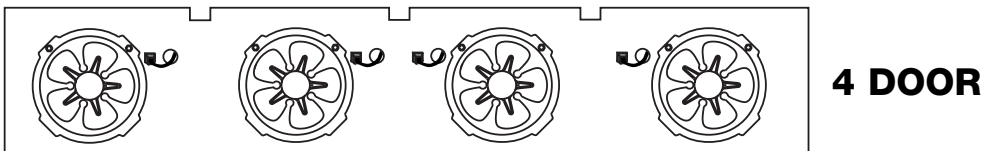
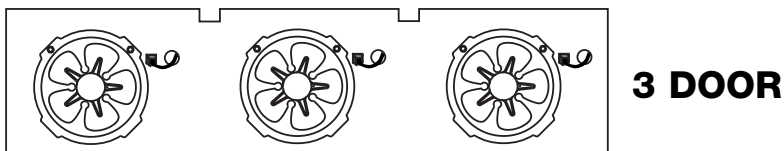
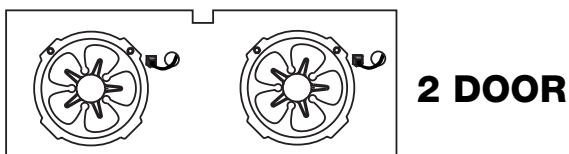
The evaporator fans are equipped with 25 watt fan motors, 1550 RPM's, with a clockwise rotation when viewed from the shaft end. The fan blades are 8" in diameter and the blades are pitched to 31 degrees as indicated on the chart below. **It is important that the blade pitch be maintained as specified. Do not attempt a field modification by altering the blades.**

Fan motors may be changed with an easy two-step process without lifting up the plenum, thereby avoiding the necessity to unload the entire product display to make a change:

1. Unplug the fan motor, easily accessible out side the plenum
2. Remove two fasteners, then lift out the entire fan basket



Model	KRZH			
	2 Door	3 Door	4 Door	5 Door
No. Fans	2	3	4	5
Blade Pitch	31°	31°	31°	31°



PARTS ORDERING

Procedure

1. Contact the Service Parts Department

Hill PHOENIX
1925 Ruffin Mill Road
Colonial Heights, Virginia 23834
Tel: 800-283-1109
Fax: 804-526-3897

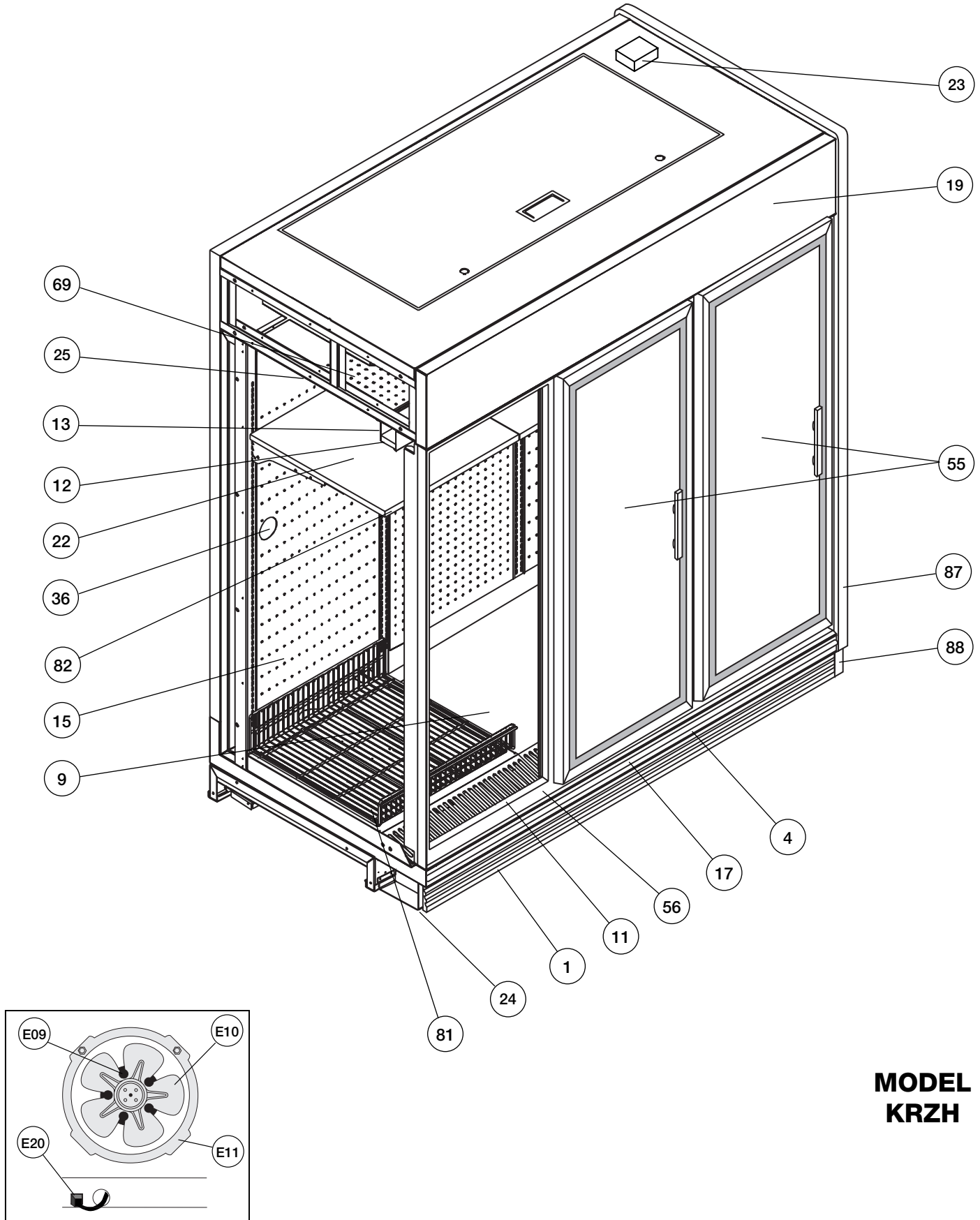
2. Provide the following information about the part you are ordering:

- Model number and serial number of the case on which the part is used.
- Length of part, if applicable, I.E. 60", 90", 120", or 150".
- Color of part if painted, or color of polymer part.
- Whether part is for left hand or right hand application.
- Whether shelves are with or without lights.
- Quantity

*Serial plate is located on top flue panel on the left hand side of the case (See illustrations on page 3).

3. If parts are to be returned for credit, ask the Parts Department to furnish you with a Return Materials Authorization Number.

PARTS ORDERING



**MODEL
KRZH**

Model KRZH

Location Number	Part Descriptions
1	Kickplate, Storm Grey
4	Color Band, Painted Custom Color or Stainless
9	Deck Pan, Painted, Unpainted
11	Front Baffle, Aluminum
12	Honeycomb, 1"x 4"x 48"
13	Honeycomb Retainer, Painted
15	Upper Rear Baffle, Center or End
17	Bumper Trim, Polymer Custom Color
19	Cornice, Painted Custom Color
22	Shelves, Specify Solid or Wire
23	Electrical Junction Box, (mounted on bottom left front or on top left rear)
24	"J" Rail, for Kickplate
25	Top Flue Panel, Painted
36	Plug Button, White or Black
55	Door, Specify Mask Color, Ardco or Anthony, Door Handle Type, Low or Medium Temperature Application, Left or Right Hand Swing
56	Door Frame, Ardco or Anthony, Low or Medium Temperature Application
69	Coil
81	Bottom Wire Racks
82	Tag Moulding, PVC or Aluminum
87	End Assembly, Solid, Custom Color, Identify Left or Right hand, Color of Panel, and Color of End Trim Color
88	End Kickplate, Painted, Stainless Steel
E01	Defrost Heaters (Not Shown)
E02	Anti-Condensate Heaters (Not Shown)
E09	Fan Motor - STATE HIGH EFFICIENCY OR STANDARD
E10	Fan Blade
E11	Fan Basket, 8"
E20	Fan Cord-Set, High Efficiency or Standard

APPENDIX - A

CLEANING INSTRUCTIONS FOR ANTIFOG COATING

Antifog Coating Cleaning Instructions (ANTIFOG B):

Materials

CAUTION:

1. Only use deionized or distilled water with 2% cleaning solution (P/N 05-14700-0001) to clean the antifog coating. Do not apply cleaning solution full strength! Do not use commercial glass cleaners containing ammonia or alcohol.
2. Only use soft lint-free wipers, such as Kimwipes or Soft-Tech paper wipers. Do not use cloth rags or standard paper towels--these are abrasive and may damage the coating.
3. Do not use abrasive compounds to clean the coating. Do not use razor blades or sharp instruments to remove residue from the coating.

Initial Cleaning (New Doors)

- Remove protective plastic film on the inside surface of the door.
- Apply diluted cleaning solution to the coating surface.
- Using gentle pressure, wipe glass over the entire surface with soft wipers once in the horizontal direction, followed by once in the vertical direction.
- Gently dry the surface of the coating with new wipers.
- Repeat the above cleaning and drying cycle two more times.

Periodic Maintenance Cleaning

- Apply diluted cleaning solution to the coating surface.
- Using gentle pressure, wipe the entire surface of the glass with soft wipers.
- If the solution freezes on the surface of the glass, do not attempt to scrape off the ice from the coating surface with force; either allow the inside surface of the door to warm up, or apply more deionized water on the coating surface until the ice has melted enough to be removed by gentle force.
- Gently dry the surface of the coating with new wipers.
- Please note that a newly cleaned freezer door glass will initially form a frost layer that will take several hours to completely dissipate.

WARRANTY

HEREINAFTER REFERRED TO AS MANUFACTURER

FOURTEEN MONTH WARRANTY. MANUFACTURER'S PRODUCT IS WARRANTED TO BE FREE FROM DEFECTS IN MATERIAL AND WORKMANSHIP UNDER NORMAL USE AND MAINTENANCE FOR A PERIOD OF FOURTEEN MONTHS FROM THE DATE OF ORIGINAL SHIPMENT. A NEW OR REBUILT PART TO REPLACE ANY DEFECTIVE PART WILL BE PROVIDED WITHOUT CHARGE, PROVIDED THE DEFECTIVE PART IS RETURNED TO MANUFACTURER. THE REPLACEMENT PART ASSUMES THE UNUSED PORTION OF THE WARRANTY.

This warranty does not include labor or other costs incurred for repairing, removing, installing, shipping, servicing, or handling of either defective parts or replacement parts.

The fourteen month warranty shall not apply:

1. To any unit or any part thereof which has been subject to accident, alteration, negligence, misuse or abuse, operation on improper voltage, or which has not been operated in accordance with the manufacturer's recommendation, or if the serial number of the unit has been altered, defaced, or removed.
2. When the unit, or any part thereof, is damaged by fire, flood, or other act of God.
3. Outside the continental United States.
4. To labor cost for replacement of parts, or for freight, shipping expenses, sales tax or upgrading.
5. When the operation is impaired due to improper installation.
6. When installation and startup forms are not properly complete or returned within two weeks after startup.

THIS PLAN DOES NOT COVER CONSEQUENTIAL DAMAGES. Manufacturer shall not be liable under any circumstances for any consequential damages, including loss of profit, additional labor cost, loss of refrigerant or food products, or injury to personnel or property caused by defective material or parts or for any delay in its performance hereunder due to causes beyond its control. The foregoing shall constitute the sole and exclusive remedy of any purchases and the sole and exclusive liability of Manufacturer in connection with this product.

The Warranties are Expressly in Lieu of All Other Warranties, Express of Implied and All Other Obligations or Liabilities on Our Part. The Obligation to Repair or Replace Parts or Components Judged to be Defective in Material or Workmanship States Our Entire Liability Whether Based on Tort, Contract or Warranty. We Neither Assume Nor Authorize Any Other Person to Assume for Us Any Other Liability in Connection with Our Product.

MAIL CLAIM TO:

Hill PHOENIX
Display Merchandisers
1925 Ruffin Mill Road
Colonial Heights, VA 23834
804-526-4455

Hill PHOENIX
Refrigeration Systems &
Electrical Distribution Products
709 Sigman Road
Conyers, GA 30013
770-285-3200

Warning **Maintenance & Case Care**

When cleaning cases the following must be performed PRIOR to cleaning:

To avoid electrical shock, be sure all electric power is turned off before cleaning. In some installations, more than one switch may have to be turned off to completely de-energize the case.

Do not spray cleaning solution or water directly on fan motors or any electrical connections.

All lighting receptacles must be dried off prior to insertion and re-energizing the lighting circuit.

Please refer to the Use and Maintenance section of this installation manual.

804-526-4455

Hill PHOENIX
E X C E L L E N C E[®]

A  DOVER[™] COMPANY

1925 Ruffin Mill Road, Colonial Heights, VA 23834

Due to our commitment to continuous improvement all specifications are subject to change without notice.

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Visit our web site at www.hillphoenix.com

